



THE SECRETARY OF THE INTERIOR  
WASHINGTON

ORDER NO. 3338

Subject: Discretionary Programmatic Environmental Impact Statement to Modernize the Federal Coal Program

**Sec. 1 Purpose.** The Department of the Interior (Department) is entrusted with overseeing Federal land and resources for the benefit of current and future generations. This responsibility includes advancing the safe and responsible development of our energy resources, while also promoting the conservation of our Federal lands and the protection of their scientific, historic, and environmental values for generations to come. The production of federally managed coal presently accounts for approximately 41 percent of the coal produced in the Nation. However, the existing regulatory and programmatic scheme for leasing that coal has been in place, with only relatively minor adjustments, since 1979. It was established at a time when market conditions, environmental concerns, and energy infrastructure were considerably different from today. To help determine whether and how the current system for developing Federal coal should be modernized, this Secretarial Order directs the Bureau of Land Management (BLM) to prepare a discretionary Programmatic Environmental Impact Statement (PEIS) that analyzes potential leasing and management reforms to the current Federal coal program. The PEIS will provide a vehicle for the Department to undertake a comprehensive review of the program and consider whether and how the program may be improved and modernized to foster the orderly development of BLM administered coal on Federal lands in a manner that gives proper consideration to the impact of that development on important stewardship values, while also ensuring a fair return to the American public. This Order does not apply to the coal program on Indian lands as that program is distinct from the BLM's program and is subject to the unique trust relationship between the United States and federally recognized Indian tribes and government-to-government consultation requirements, nor does it apply to any action of the Office of Surface Mining Reclamation and Enforcement (OSMRE) or the Office of Natural Resources Revenue (ONRR).

**Sec. 2 Background.**

a. Summary of the Federal Coal Program.

The BLM has responsibility for coal leasing on approximately 570 million acres where the coal mineral estate is owned by the Federal Government. The owner of the surface estate of these lands varies and may be the BLM, other Federal agencies, state and local governments, or private landowners. Under authorities, such as the Mineral Leasing Act (MLA), the Mineral Leasing Act for Acquired Lands, and the Federal Land Policy and Management Act, the BLM regulates the leasing and development of this coal. Other Department bureaus, in particular OSMRE and ONRR, also have responsibilities in administering coal mining operations. The OSMRE and those states that have regulatory primacy under the Surface Mining Control and Reclamation Act

(SMCRA) have regulatory responsibilities over surface coal mining and reclamation operations. The ONRR collects, disburses, and verifies revenues from the lease, including bonus bids, royalties, and rental payments, and distributes those funds evenly between the Federal Treasury and the states where the coal resources are located.

The BLM issued coal leasing regulations in 1979 that contemplated two separate competitive coal leasing processes: regional leasing, where the BLM selects tracts within a region for competitive sale, and leasing by application, where the public nominates a particular tract of coal for competitive sale. The regional leasing system has not been used since the 1980s, and currently all BLM coal leasing is done by application. Leasing by application begins with BLM review of an application to ensure completeness, that it conforms to existing land use plans, and that it contains sufficient geologic data to determine the fair market value of the coal. The Agency then prepares an environmental analysis in compliance with the National Environmental Policy Act (NEPA). At the same time, the BLM will also consult with tribal governments and appropriate Federal and state agencies, and will determine whether the surface owner consents to leasing in situations where the surface is not administered by the BLM.

Preparations for the actual lease sale begin with the BLM formulating, after obtaining public comment, an estimate of the fair market value of the coal. This number is kept confidential and is used to evaluate the bids received during the sale. Sealed bids are accepted prior to the date of the sale and are publicly announced during the sale. The winning bid is the highest bid that meets or exceeds the coal tract's presale estimated fair market value, assuming that the bidder meets all eligibility requirements and has paid the appropriate fees and payments.

The BLM receives revenue from coal leasing in three ways: (1) a bonus that is paid at the time BLM issues a lease; (2) rental fees; and (3) production royalties. The royalty rates are set by regulation at a fixed 8 percent for underground mines and not less than 12.5 percent for surface mines. All receipts from a lease are shared equally with the state in which the lease is located.

Over the last few years, approximately 41 percent of the Nation's annual coal production has come from Federal land. Federal coal produced from the Powder River Basin in Montana and Wyoming accounts for over 85 percent of that Federal coal production. Federal coal was used to generate about 14 percent of the Nation's electricity in 2015. Coal is also used for other critical processes, including making steel (metallurgical coal).

As of Fiscal Year 2014, the BLM administered 310 Federal coal leases, encompassing 475,692 acres in 10 states, with an estimated 7.75 billion tons of recoverable Federal coal reserves. Over the last decade, the BLM has held 39 coal lease sales and managed leases that produced approximately 4.4 billion tons of coal and \$10.3 billion in revenue. The recoverable reserves of Federal coal currently under lease are estimated to be sufficient to continue production from federal leases at current levels for 20 years, which does not take into account projections from the Energy Information Administration (EIA) showing that demand for coal is declining.

b. Open Conversation about Modernizing the Coal Program.

On March 17, 2015, I called for "an honest and open conversation about modernizing the Federal coal program." The last time the Federal coal program underwent comprehensive review was in

the mid-1980s, and market conditions, infrastructure development, and national priorities have changed considerably since that time. My call also responded to continued concerns from numerous stakeholders about the Federal coal program, including concerns raised by the Government Accountability Office (GAO), the Department's Office of Inspector General (OIG), Members of Congress, and interested stakeholders. The concerns raised by the GAO and OIG centered on whether taxpayers are receiving fair market value from the sale of coal. Other commenters raised concerns that the current Federal leasing structure lacks transparency and competition and is therefore not ensuring that the American taxpayer receives a fair return from Federal coal resources. These groups also questioned whether the leasing program results in over-supply of a commodity that has significant environmental and health impacts, including impacts on global climate change.

In response to my call for a conversation to address these concerns, the BLM held 5 listening sessions on the Federal coal program in the summer of 2015. Sessions were held in Washington, D.C.; Billings, Montana; Gillette, Wyoming; Denver, Colorado; and Farmington, New Mexico. The Department heard from 289 individuals during the sessions and received over 92,000 written comments before the comment period closed on September 17, 2015. The oral and written comments revealed several recurring themes:

- Concern about global climate change and the impact of coal production and use.
- Concern about the loss of jobs and local revenues if coal production is reduced.
- Support for increased transparency and public participation in leasing and royalty decisions and concern about whether the structure of the leasing program does not provide for adequate competition or a fair return to the taxpayer for the use of federal resources.
- Support for increasing the coal royalty rate, because: (1) the royalty rate should account for the environmental costs of coal production; (2) the royalty rate should match the rate for offshore Federal leases; and (3) taxpayers are not receiving a fair return.
- Support for maintaining or lowering royalty rates, because: (1) the coal industry already pays more than its fair share because existing Federal rates are too high given current market conditions; (2) raising rates will lower production and revenues; and (3) raising rates will cost jobs and harm communities.
- Support for streamlining the current leasing process, so that the Federal coal program is administered in a way that better promotes economic stability and jobs, especially in coal communities which are already suffering from depressed economic conditions.

Of these concerns, three aspects of the current coal program received the most attention. First, numerous stakeholders are concerned that American taxpayers are not receiving a fair return on public coal resources. Second, many stakeholders are concerned that the Federal coal program conflicts with the Administration's climate policy and our national climate goals, making it more difficult for us to achieve those goals. Third, there are numerous and varying concerns about the structure of the Federal coal program in light of current market conditions, including how implementation of the Federal leasing program affects current and future coal markets, coal-dependent communities and companies, and the reclamation of mined lands. These three main concerns are addressed in more detail below.

i. Concerns about Fair Return. In 2013, both GAO and OIG issued reports expressing concerns about the Federal coal program, particularly with respect to the leasing process and fair market value. In response, in 2014 the BLM developed new protocols and issued policy guidance, as well as a manual and handbook, to implement these changes. Nevertheless, stakeholders have expressed concerns that the BLM's response, while helpful, was insufficient to rectify fundamental weaknesses in the program with respect to fair return.

These concerns arise, at least in part, because there is currently very little competition for Federal coal leases. About 90 percent of lease sales receive bids from only one bidder, typically the operator of a mine adjacent to the new lease, given the investment required to open a new mine. While the BLM conducts a peer-reviewed analysis to determine the "fair market value" of the coal and will not sell a lease unless the bid meets or exceeds that value, commenters have questioned whether an accurate fair market value can be identified in the absence of a truly competitive marketplace.

Commenters also raised concerns about the royalty rates set in Federal leases, which are set by regulation at a fixed 8 percent for underground mines and not less than 12.5 percent for surface mines. Many stakeholders believe that these rates do not adequately compensate the public for the removal of the coal and the externalities associated with its use. Still others have suggested that the impact of Federal coal sales, which currently represent approximately 41 percent of total domestic production, artificially lowers market prices, further reducing the amount of royalties received.

Stakeholders also criticize the Federal coal program for obtaining even lower returns through certain types of leasing actions, such as lease modifications, and through royalty rate reductions, which may result in royalty rates as low as 2 percent. In addition, stakeholders have noted that the \$100 acre minimum bid requirement, which is rarely applicable due to fair market value requirements, but occasionally relevant, is outdated.

ii. Concerns about Climate Change. The second broad category of concerns about the Federal coal program relates to its impacts on climate change. The United States has pledged to the United Nations Framework Convention on Climate Change (UNFCCC) to reduce its greenhouse gas (GHG) emissions by 26-28 percent below 2005 levels by 2025. The Obama Administration has made, and is continuing to make, unprecedented efforts to reduce GHG emissions in line with this target through numerous measures. Numerous scientific studies indicate that reducing GHG emissions from coal use worldwide is critical to addressing climate change.

At the same time, as noted above, the Federal coal program is a significant component of overall United States' coal production. Federal coal represents approximately 41 percent of the coal produced in the United States, and when combusted, it contributes roughly 10 percent of the total U.S. GHG emissions.

Many stakeholders highlighted the tension between producing very large quantities of Federal coal while pursuing policies to reduce U.S. GHG emissions substantially, including from coal combustion. Critics also noted that the current leasing system does not provide a way to systematically consider the climate impacts and costs to taxpayers of Federal coal development.

iii. Concerns about Market Conditions. Stakeholders raised various concerns about the implications of current and future coal market conditions. As reported by EIA, between 2008 and 2013, United States' coal production fell by 16 percent, as declining natural gas prices and other factors made coal less competitive as a fuel for generating electricity. In 2015, United States' coal production was roughly 900 million short tons (MMst), 10 percent lower than 2014—the lowest level since 1986. Worldwide, demand for coal appears to be softening as well, with EIA projecting a 21 percent decline in total U.S. coal exports in 2015 from the previous year. As a result, a number of mines in the U.S. have idled production, several major coal companies have entered Chapter 11 bankruptcy, many coal miners have been laid off, and coal-dependent communities have suffered. The EIA and other projections of future coal production show anticipated continuing declines.

Stakeholders have urged the BLM to change the Federal coal program to take these significant market changes into account, although the recommended changes vary. Some suggest that the program should attempt to improve the economic viability of the coal industry and help coal-dependent communities by reducing royalties and streamlining the leasing and permitting processes. Others raise concerns that the program has contributed to low coal prices by incentivizing over-production through non-competitive sales that oversupply the market.

Some have focused on how current market conditions threaten reclamation of lands disturbed by coal mining and may leave state and Federal governments with billions of dollars of unfunded reclamation liabilities. Specifically, many coal companies “self-bond” to meet reclamation bonding requirements, and some stakeholders have asserted that these companies may no longer have the funds to support reclamation activities, and/or they may attempt to shed reclamation obligations in bankruptcy.

Stakeholders also expressed various views regarding exports of Federal coal. Some see export markets as a possible way to maintain or expand Federal coal production, while others view the production of coal for export as a less valuable activity than coal production for domestic use. Still others expressed concern that the export of U.S. coal will contribute to GHG emissions worldwide, which undermines our climate objectives. A number of stakeholders expressed concern that exports, or the potential for exports, were not adequately considered as part of leasing decisions or fair market value determinations.

c. Previous Comprehensive Reviews.

The Department has previously conducted two separate comprehensive reviews of the Federal coal program. In the late 1960s, there were serious concerns about speculation in the coal leasing program. A BLM study discovered a sharp increase in the total Federal acreage under lease and a consistent decline in coal production. In response, the Department undertook the development of a planning system to determine the size, timing, and location of future coal leases, and the preparation of an environmental impact statement (EIS) for the entire Federal coal leasing program. The short-term actions included a complete moratorium on the issuance of new coal prospecting permits, and a moratorium with limited exceptions on the issuance of new Federal coal leases. New leases were issued only to maintain existing mines or to supply reserves for production in the near future, where “near future” meant that development and production were to commence within 3 and 5 years, respectively. The moratorium was scaled

back over time, but was not completely lifted until 1981, after a PEIS had been completed, a new leasing system had been adopted through regulation, and litigation was resolved.

In 1982, concerns about the Federal coal program arose again, this time related to allegations that the Government did not receive fair market value from a large lease sale in the Powder River Basin under the new procedures adopted as part of the programmatic review in the 1970s. Among other reports on the issue, in May 1983, GAO issued a report concluding that the Department had received roughly \$100 million less than it should have for the leases sold, although the Department disputed this conclusion. In response, in July 1983, Congress directed the Secretary to appoint members to a commission, known as the Linowes Commission, to investigate fair market value policies for Federal coal leasing. Congress also, in the 1984 Appropriations Act, directed the Office of Technology Assessment (OTA) to study whether the Department's coal leasing program was compatible with the nationally mandated environmental protection goals.

As part of the 1984 Appropriations Bill, Congress imposed a moratorium on the sale or lease of coal on public lands, subject to certain exceptions, starting in 1983 and ending 90 days after publication of the Linowes Commission's report. The Linowes Commission published the *Report of the Commission on Fair Market Value Policy for Federal Coal Leasing* in February 1984. The OTA report, *Environmental Protection in the Federal Coal Leasing Program*, was released in May 1984. The principal thrust of these reports was that the Department should: (1) temper its pace of coal leasing; (2) improve and better document its procedures for receiving fair market value; and (3) take care to balance competing resource uses in making lease decisions.

Interior Secretary William P. Clark extended the suspension of coal leasing (with exceptions for emergency leasing and processing preference right lease applications, among other things), while the Department completed its comprehensive review of the program. This review included proposed modifications to be made by the Department in response to the Linowes Commission and OTA reports. Secretary Clark announced on August 30, 1984, that the Department would prepare an EIS supplement to the 1979 Final Environmental Statement for the Federal Coal Management Program. The Department issued the Record of Decision for the PEIS supplement in January 1986, in the form of a Secretarial Issue Document. That document recommended continuation of the leasing program with modifications. In conjunction with those modifications, Interior Secretary Donald Hodel lifted the leasing moratorium in 1987.

**Sec. 3 Authorities.** This Order is issued under statutory authority that includes, but is not limited to, the Mineral Leasing Act, 30 U.S.C. §§ 181 *et seq.*; the Mineral Leasing Act for Acquired Lands, 30 U.S.C. §§ 351 *et seq.*; the National Environmental Policy Act, 42 U.S.C. §§ 4321 *et seq.*; the Surface Mining Control and Reclamation Act, 30 U.S.C. §§ 1201 *et seq.*; and the Federal Land Policy and Management Act, 43 U.S.C. §§ 1701 *et seq.*

**Sec. 4 Discretionary Programmatic Environmental Impact Statement.** Given the broad range of issues raised over the course of the past year (and beyond) and the lack of any recent analysis of the Federal coal program as a whole, a more comprehensive, programmatic review is in order, building on the BLM's public listening sessions. Accordingly, to meaningfully address the breadth and complexity of the issues raised by commenters regarding the Federal coal

program, I hereby direct the BLM to conduct a broad, programmatic review of the Federal coal program it administers through the preparation of a PEIS under NEPA.

The Department is authorized to undertake this effort in its stewardship role as a proprietor and sovereign regulator which is charged by Congress with managing and overseeing mineral development on the public lands, not only for the purpose of ensuring safe and responsible development of mineral resources, but also to ensure conservation of the public lands, the protection of their scientific, historic, and environmental values, and compliance with applicable environmental laws. Additionally, the Department has the statutory duty to ensure a fair return to the taxpayer and broad discretionary authority to decide where, when, and under what terms and conditions, mineral development should occur, including with regard to the issuance of Federal coal leases.

Although I am not proposing any regulatory action at this time, the purpose of the PEIS is to identify, evaluate, and potentially recommend reforms to the Federal coal program. This review will enable the Department to consider how to modernize the program to allow for the continued development of Federal coal resources while addressing the substantive issues raised by the public, other stakeholders, and the Department's own review of the comments it has received.

While the precise issues to be assessed in the PEIS will be determined through the public scoping process, the PEIS should at a minimum address the following topics:

a. How, When and Where to Lease. The regional leasing program authorized in the 1979 regulations has not worked as envisioned and, instead, BLM has conducted leasing only in response to industry applications. Given concerns about the lack of competition in the lease-by-application system, as well as consideration of environmental goals, the PEIS should examine whether the current regulatory framework should be changed to provide a better mechanism or mechanisms to decide which coal resources should be made available and how the leasing process should work.

As part of this evaluation, the PEIS should explicitly examine the issue of when to lease. Some leasing programs for other Federal resources operate with an established schedule for leasing or consideration of leasing (*e.g.*, BLM holds onshore oil and gas lease sales on a quarterly basis if parcels are available; offshore oil and gas leasing occurs using a schedule established in a five-year plan). The PEIS should examine whether scheduled sales should be used for Federal coal.

The PEIS should also examine where to lease. In other contexts, the Department has identified areas to promote certain kinds of resource development. For example, the BLM's Solar PEIS (Western Solar Plan) amended land use plans across six southwestern states and established preferred locations for solar development. The PEIS should examine whether a similar approach would be useful for coal to minimize potential user conflicts and streamline leasing decisions.

b. Fair Return. The PEIS should address whether the bonus bids, rents, and royalties received under the Federal coal program are successfully securing a fair return to the American public for Federal coal, and, if not, what adjustments could be made to provide such compensation. As part of this analysis, the PEIS should examine whether the decision to lease large amounts of relatively low cost coal artificially drives down pricing in the U.S. market and, if so, how the taxpayer may best be compensated for the reduced royalties due to artificially low

prices. The PEIS should also examine whether the BLM estimates of fair market value for purposes of establishing minimum bids successfully substitute for competition in the bidding process, and if not, how to better estimate fair market value.

c. Climate Impacts. With respect to the climate impacts of the Federal coal program, the PEIS should examine how best to assess the climate impacts of continued Federal coal production and combustion and how to address those impacts in the management of the program to meet both the Nation's energy needs and its climate goals, as well as how best to protect the public lands from climate change impacts.

d. Socio-Economic Considerations. Beyond the issue of fair market value, the PEIS should assess whether the current Federal coal leasing program adequately accounts for externalities related to Federal coal production, including environmental and social impacts. It should more broadly examine how the administration, availability, and pricing of Federal coal affect regional and national economies (including job impacts), and energy markets in general, including the pricing and viability of other coal resources (both domestic and foreign) and other energy sources. The impact of possible program alternatives on the projected fuel mix and cost of electricity in the United States should also be examined.

e. Exports. The PEIS should address whether leasing decisions should consider whether the coal to be produced from a given tract would be for domestic use or export. In consultation with other applicable executive branch offices, the PEIS should examine how to estimate export potential, particularly given potential differences between the estimates of industry and independent economic experts about the prospects for exports in a given circumstance.

f. Energy Needs. Finally, the PEIS should examine the degree to which Federal coal supports, or should support, fulfilling the energy needs of the United States. The evaluation should include an assessment of how the administration, availability, and pricing of Federal coal impacts electricity generation in the United States, particularly in light of other regulatory influences, and what other sources of energy supply (including efficiency) are projected to be available.

**Sec. 5 Pause on the Issuance of New Federal Coal Leases for Thermal (Steam) Coal.** Lease sales and lease modifications result in lease terms of 20 years and for so long thereafter as coal is produced in commercial quantities. Continuing to conduct lease sales or approve lease modifications during this programmatic review risks locking in for decades the future development of large quantities of coal under current rates and terms that the PEIS may ultimately determine to be less than optimal. This risk is why, during the previous two programmatic reviews, the Department halted most lease sales with limited exceptions for small sales, emergencies and other situations involving potential economic hardship. Considering these factors and given the extensive recoverable reserves of Federal coal currently under lease, I have decided that a similar policy is warranted here. A pause on leasing, with limited exceptions, will allow future leasing decisions to benefit from the recommendations that result from the PEIS while minimizing any economic hardship during that review.



a. Pursuant to my discretionary authority under the Mineral Leasing Act (e.g., 30 U.S.C § 201) and other statutes, and based on the reasons discussed herein, I conclude that further evaluation, additional receipt of public input, and comprehensive consideration of the Federal coal program is warranted, and accordingly, I hereby direct BLM to apply the following limitations on the issuance of Federal coal leases until the completion of the PEIS:

(i) No new applications for thermal (steam) coal leases or lease modifications will be processed, subject to the enumerated exclusions in Section 6 of this Order; and

(ii) For pending applications, no lease sales will be held, leases issued, or modifications approved for thermal (steam) coal, subject to the enumerated exclusions in Section 6 of this Order. At an applicant's request, preparatory work on pending applications may continue (including the preparation of NEPA analyses), but no final decision on whether to hold a lease sale will be made unless one of the exceptions listed in Section 6 of this Order applies.

b. This pause in holding lease sales, issuing coal leases, and approving lease modifications will apply to applications for both surface and underground thermal coal, but it does not apply to metallurgical coal. Metallurgical coal is produced at far fewer mines and in much smaller quantities than thermal coal, and recoverable metallurgical coal reserves may not be sufficient to support current production levels for that resource during the pause. In addition, metallurgical coal is required for key applications, such as steelmaking, for which substitutes are not readily available. Given that the Federal mineral estate includes comparatively very small quantities of metallurgical coal, we expect potential impacts from any leasing activities for metallurgical coal during the review period to be very limited.

c. This pause does not constitute a decision on the merits of any application, but is merely a deferral of the decision to allow the PEIS to be considered in making future final decisions. The pause applies only to the Federal mineral estate administered by the BLM and does not apply to coal leases on tribal or allotted lands, which are regulated by the Bureau of Indian Affairs under a different regulatory structure. The pause applies only to lease sales and modifications. It does not apply to other BLM actions related to the Federal coal program, including the processing and issuance of coal exploration licenses, the issuance of renewal leases when required by the terms of existing leases, and the development and implementation of resource management plans. Similarly, the pause does not apply to any actions undertaken by ONRR, OSMRE, or any other agency, office, or bureau with duties related to the development, production or reclamation of Federal or non-Federal coal resources.

**Sec. 6 Exclusions.** Nothing in this Order will be deemed to prohibit or restrict:

- a. emergency leasing as defined in 43 C.F.R. § 3425.1-4;
- b. lease modifications, as defined in 43 C.F.R. § 3432.1, that do not exceed 160 acres or the number of acres in the original lease, whichever is less;
- c. lease exchanges as defined in 43 C.F.R. §§ 3435.1, 3436.1, and 3436.2;
- d. the rights of preference right lease applicants based on prospecting permits issued prior to August 4, 1976; and


- e. the sale and issuance of new thermal coal leases by application, 43 C.F.R. Subpart 3425, or the issuance of thermal coal lease modifications, 43 CFR Subpart 3432, under pending applications for which the environmental analysis under NEPA has been completed and a Record of Decision or Decision Record has been issued by the BLM or the applicable Federal surface management agency as of the date of this Order. This exception extends to previously issued Records of Decision or Decision Records that have been (or may be) vacated by judicial decision and are undergoing re-evaluation in accordance with the judicial decision. Before holding any lease sale or issuing any lease under this exception, the BLM must confirm and ensure that the applicable NEPA document for a project is adequate and includes, at a minimum, an analysis of the direct and indirect greenhouse gas emissions resulting from the proposed leasing action.

**Sec. 7 Implementation.**

- a. The Director of the BLM is responsible for implementation of this Order. This responsibility may be delegated as appropriate.
- b. The Director will expeditiously initiate the NEPA scoping process by inviting Federal, State, and local agencies, Indian tribes, and the public to help identify the environmental issues and reasonable alternatives to be examined in the PEIS. Upon completion of the scoping process, the Director will provide a scoping report to me along with a proposed schedule for the completion of the PEIS.

**Sec. 8 Effect of the Order.** This Order is intended to provide for a comprehensive review of the Federal coal program and allow for the Department to improve the program going forward. This Order and any resulting report or recommendation are not intended to, and do not, create any right or benefit, substantive or procedural, enforceable at law or equity by a party against the United States, its departments, agencies, instrumentalities or entities, its officers or employees, or any other person. To the extent there is any inconsistency between the provisions of this Order and any Federal laws or regulations, the laws or regulations will control.

**Sec. 9. Effective Date.** This Order is effective immediately and will remain in effect until its provisions are amended, superseded, or revoked, whichever occurs first.

  
Secretary of the Interior

Date: **JAN 15 2016**



# Federal Coal Program

## Programmatic Environmental Impact Statement - Scoping Report



### *Our Vision*

To enhance the quality of life for all citizens through the balanced stewardship of America's public lands and resources.

### *Our Mission*

To sustain the health, diversity, and productivity of the public lands for the use and enjoyment of present and future generations.

# **FEDERAL COAL PROGRAM PROGRAMMATIC EIS SCOPING REPORT**

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## **VOLUME I - SCOPING REPORT**

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## ACRONYMS AND ABBREVIATIONS

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Full Phrase

AR5	IPCC 2013–2014 Fifth Assessment Report
BLM	Bureau of Land Management
BOEM	Bureau of Ocean Energy Management
Btu	British thermal units
CEA	Council of Economic Advisers
CEQ	Council on Environmental Quality
CFR	Code of Federal Regulations
CO <sub>2</sub>	carbon dioxide
CO <sub>2</sub> e	CO <sub>2</sub> equivalent
PEIS	programmatic environmental impact statement
CPP	Clean Power Plan
DME	Office of Valuation Services, Division of Minerals Evaluation
EIA	Energy Information Administration
EIS	environmental impact statement
EPA	Environmental Protection Agency
FCLAA	Federal Coal Leasing Amendments Act of 1976
FLPMA	Federal Land Policy and Management Act of 1976
FMV	fair market value
GAO	Government Accountability Office
GW	gigawatts
INDC	US 2025 Intended Nationally Determined Contribution
IPM	Integrated Planning Model
LBA	lease-by-application
LCOE	levelized cost of electricity

MSHA	Mine Safety and Health Administration
NCA3	2014 National Climate Assessment, Climate Change Impacts in the United States
NEPA	National Environmental Policy Act of 1969
NO <sub>x</sub>	nitrogen oxides
NRC	National Research Council
OIG	US Department of the Interior, Office of Inspector General
ONRR	Office of Natural Resource Revenue
OSMRE	Office of Surface Mining Reclamation and Enforcement
OVS	Office of Valuation Services
RA	regulatory authority
SMCRA	Surface Mining Control and Reclamation Act of 1977
SO	BLM State Office
SO <sub>2</sub>	sulfur dioxide
TWh	terawatt hours
UNFCCC	United Nations Framework Convention on Climate Change
USC	United States Code
USGS	US Geological Survey

## **Volume I**

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# EXECUTIVE SUMMARY

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## BACKGROUND

In addition to its responsibilities for managing 247 million acres of land and other resources, the Bureau of Land Management (BLM) is responsible for managing coal leasing on approximately 570 million acres where the coal mineral estate is owned by the Federal Government. The BLM manages these resources on behalf of their owners, the American people. This responsibility includes advancing the safe and responsible development of energy resources while promoting the conservation and protection of scientific, historic, and environmental values of our lands for generations to come.

The BLM currently administers 306 coal leases encompassing over 475,000 acres in 10 states, with an estimated 7.4 billion tons of recoverable coal. Over the last decade, BLM-administered leases have produced over 4 billion tons of coal, resulting in the collection of over \$10 billion in Federal revenue that is shared with the state from which the mineral was mined. The recoverable coal currently under lease is estimated to be enough to continue production at current levels for approximately 20 years.

In 2015, 42 percent of all coal produced in the United States came from publicly owned land, primarily in the Powder River Basin in Wyoming. Between 80 and 90 percent of the coal produced in the United States is used for electricity generation. In recent years there has been a consistent decline in coal-fired electricity generation and, consequently, a decline in coal production. Coal-fired electricity made up 50 percent of US generation in 2005 and by 2015 had declined to 33 percent. Coal production fell from 1.13 billion to less than 0.9 billion tons during this same time period.<sup>1,2</sup> In 2015, US coal production

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<sup>1</sup> US EIA. 2016. 2016 Annual Coal Report. November 3, 2016. Available at <http://www.eia.gov/coal/annual/>

<sup>2</sup> US EIA. 2012. Coal Rank and Minding Method, 1949-2011. September, 2012. Available at <https://www.eia.gov/coal/data.php#production>

experienced one of the steepest declines in history, and it is projected to decline by an additional 15 percent in 2016.<sup>3</sup> Several major coal companies have instituted bankruptcy proceedings. Some of these companies have since emerged or are in the process of emerging from bankruptcy.

The last time the Federal coal program received a comprehensive review was in the mid-1980s, and most of the existing regulations were promulgated in the late 1970s and have been only slightly modified since that time. The direct, indirect, and cumulative impacts of the Federal coal program have not been fully analyzed under the National Environmental Policy Act (NEPA) in over thirty years. This has led to calls from a variety of sources for review of many facets of the program, including return to the American taxpayer, climate change considerations, resource protection mandates, and process efficiency.

The Secretary of the Interior is authorized to lease coal as she finds “appropriate and in the public interest” (30 United States Code [USC], Subsection 201[a][1]). Consideration of the implications of Federal coal leasing for climate change, as an extensively documented threat to the health and welfare of the American people, falls squarely within the factors to be considered in determining the public interest. Moreover, this consideration is critical in the development of land use plans where the Secretary must “weigh long-term benefits to the public against short-term benefits” (43 USC, Subsection 1712[c][7]). Such consideration is an important part of the Secretary’s responsibility under the Federal Land Policy and Management Act (FLPMA) to manage “the public lands and their various resource values so that they are utilized in the combination that will best meet the present and future needs of the American people” (43 USC, Subsections 1701[a][7]; 1702[c]).

When resource extraction from public lands is determined to be appropriate, it is also incumbent upon the Department of the Interior to ensure that the public receives the appropriate compensation for the use of its resources. “No bid [on a coal lease tract] shall be accepted which is less than the fair market value, as determined by the Secretary, of the coal subject to the lease. Prior to his determination of the fair market value of the coal subject to the lease, the Secretary shall give opportunity for and consideration to public comments on the fair market value” (30 USC, Subsection 201[a][1]). This requirement to receive fair market value (FMV) places a floor on the monetary return the public must receive once the Secretary determines that it is appropriate and in the public interest to lease a coal tract. In other words, in determining where, when, and how to lease a coal tract, the Secretary must ensure that the sale of this public resource fairly compensates the public by receiving the highest price a willing seller would realize when leasing to a willing buyer—as would any party seek in selling resources in a commodity market.

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<sup>3</sup> US EIA. 2016. Short-Term Energy Outlook. December 2016. Available at [http://www.eia.gov/outlooks/steo/pdf/steo\\_full.pdf](http://www.eia.gov/outlooks/steo/pdf/steo_full.pdf)



## ISSUE IDENTIFICATION

In the spring of 2015, Secretary of the Interior Sally Jewell called for “an honest and open conversation about modernizing the Federal coal program.” The Department of the Interior subsequently held listening sessions around the country that summer. Hundreds of individuals attended the hearings in person. The Department heard from 289 individuals during the sessions and received over 94,000 written comments. Through these sessions, the areas of concern to a wide variety of interests became clearer.

As a result, in early 2016 Secretary Jewell issued Secretarial Order 3338 directing the BLM to prepare a Programmatic Environmental Impact Statement (PEIS) under the NEPA to identify and analyze potential leasing and management reforms for the Federal coal program. The PEIS provides the BLM with an efficient and effective tool to consider a wide range of reasonable reform alternatives, evaluate the impacts of those alternatives with a focus on cumulative effects, and provide meaningful opportunities for public engagement to inform future agency decision-making.

This scoping report is the first step in the process of reviewing these complex and interrelated issues. It will be followed by a Draft PEIS that will further analyze and refine the reform options presented here and identify a menu of draft alternatives. Following public comment on that Draft PEIS, a Final PEIS will be produced with a recommended roadmap for reforming the Federal coal program. The final report is expected to be completed in early 2019.

In the spring of 2016, the BLM published a Notice of Intent to prepare a programmatic environmental impact statement to review the Federal coal program and to conduct public scoping meetings. That notice initiated the formal public scoping process for the PEIS, calling for public information and comment. In particular, the Notice of Intent posed questions to the public on the following issues identified as areas of concern in the Secretarial Order:

- How, when, and where to lease
- Fair return
- Climate impacts
- Socioeconomic considerations
- Exports
- Energy needs

The Department of the Interior held six public meetings during the summer of 2016 in all regions of the country, including key areas of Federal coal production. These meetings were attended by about 2,000 people and were also either live-streamed or made available in audio. In addition to oral comments provided at the meetings, about 214,402 written comments (654

unique) were received during the comment period, as well as expert reports and analyses.

Invitations have been extended to 72 potential “Cooperating Agencies” as defined by the NEPA that would function as partners with the BLM in preparing the PEIS. The BLM also has reached out to all federally recognized tribes to determine their interest in formal consultation on the PEIS. An initial meeting with Cooperating Agencies was held on December 13, 2016, and consultation with interested tribes was initiated in the same month.

## **NATURE OF SCOPING REPORT**

This report is the result of the BLM’s review and consideration of the materials and analyses received through the listening sessions, public scoping process, or otherwise available. Based on this review, it appears that modernization of the Federal coal program is warranted. While energy markets, communities, environmental conditions, and national priorities have changed dramatically, the program has remained fairly static in its administration over the last thirty years.

This modernization should focus on ensuring a fair return to Americans for the sale of their public coal resources; addressing the coal program’s impact on the challenge of climate change; and improving the structure and efficiency of the coal program in light of current market conditions, including impacts on communities.

In each of these areas additional analysis is necessary prior to the recommendation of specific policy choices, in order to provide a complete understanding of the likely impacts of various policies on energy markets, electricity prices, employment, and other critically important issues. These issues will be the focus areas of analysis for the PEIS going forward. However, it is possible at this stage in the process to identify the most promising policies for consideration. This report sets out these currently available policy ideas for addressing these important issues, and the additional data and technical work needed to decide specifically how to move forward. In addition, there are some simpler good government improvements that can be made without significant additional analysis which the scoping report outlines as well.

This report provides context for considering reform opportunities, and it presents preliminary reform options and an analytical framework that will form the basis for the PEIS. This report sets out reform options organized by policy objectives that align with the Secretarial Order, and it expands upon the reform options based on input received. This report also identifies reform options received during the scoping process that are not recommended for further analysis and sets out the reasons for those recommendations. The reform options that will be carried forward for further consideration by the BLM include:

**Fair Return**

- Increase royalty rate
- Implement FMV determination process changes (i.e., transparency and consistency)
- Limit the use and increase the transparency of royalty rate reductions
- Increase rental rate
- Raise minimum bonus bid
- Implement inter-tract or modified inter-tract bidding processes to increase competition among bidders
- Evaluate current performance bonding amounts; increase bonding levels as necessary
- Convene a royalty policy commission

**Reduce/Account for Greenhouse Gas Emissions**

- Account for carbon-based externalities through royalty rate increase or royalty adder
- Require compensatory mitigation for greenhouse gas emissions
- Lease per a carbon budget
- Create incentives for methane capture
- No new leasing, except for limited lease modifications

**Improve Resource Protection and Management**

- Improve application of unsuitability criteria; modify criteria as necessary
- Develop strategic leasing plans that address landscape scale issues, multiple use, and mitigation planning
- Account for additional coal-related externalities, such as public health and environmental impacts
- Strengthen lease applicant qualification requirements
- Apply environmental protections to existing leases
- Develop regional mitigation strategies for existing and new coal development to address public health and environmental impacts
- Develop best management practices for resource protection

**Increase Lease Process Efficiency**

- Develop strategic leasing plans that allow for tiering of future lease decisions
- Create a pre-application process

- Create a standardized lease application form and develop an electronic application platform
- Establish a single team to develop FMV estimates
- Work with other agencies to evaluate means for eliminating overlapping requirements and redundant processes
- Improve transparency in the leasing process

The BLM believes that there are a number of these options that represent more modest reforms that could be combined with almost any combined option package or future alternative, or implemented as standalone actions. These options represent beneficial program modernization activities and good government practices.

For fair return, these include FMV determination process changes aimed at transparency and consistency, limiting the use of royalty rate reductions and improving the transparency associated with the use of royalty rate reductions, rental rate adjustments to reflect inflation, minimum bonus bid adjustments to reflect inflation, and evaluation of current performance bonding amounts. For greenhouse gas emissions, this includes creating incentives for methane capture.

For resource protection and management, this includes strengthening requirements for companies bidding on leases, all of which would require coordination with the Office of Surface Mining Reclamation and Enforcement (OSMRE). These requirements include prohibiting leasing to self-bonded companies, ensuring sufficient financial resources, ensuring companies have not been cited for major violations of environmental regulations in connection with other operations, and verifying companies have been fulfilling reclamation obligations in connection with other operations. It also includes developing best management practices for resource protection and improving planning to avoid land use conflicts, such as through the modification and improved application of unsuitability criteria or through the development of strategic coal leasing plans.

For lease process efficiency, these include standardizing lease application forms, developing an electronic platform for the submission of applications, working with other agencies to evaluate means for eliminating redundant processes, and improving transparency.

At the Secretary's direction in connection with Order 3338, the BLM is in the process of developing guidance to implement several of these improvements. Additional reforms may be implemented prior to completion of the Final PEIS if further analysis supports taking action on a more expedited timeframe.

To demonstrate how the various options could be combined to develop alternatives in the PEIS, the report sets out three possible option combination packages. Because each option presents its own range of analytic issues and

because that complexity may be compounded by interactions among the reform options if they are implemented in combination, additional analysis is needed before these or other combinations of options can be included as alternatives for consideration in the PEIS. The Draft PEIS also will analyze a “no action” and a “no leasing” alternative.

## Possible Option Combination Package #1

### 1. Fair Return

*Increase the royalty rate to reflect the fair return for coal produced on Federal land.* The BLM would identify the most appropriate metric and corresponding royalty rate for Federal coal, reflecting on analysis already conducted by other groups such as the Council of Economic Advisers (CEA).

### 2. Climate Change/Resource Protection

*Require compensatory mitigation for Federal coal leases.* The BLM would require lessees to carry out or fund activities that proportionally offset climate-related impacts, including through investment in a fund managed by an entity that takes on the liability to proportionally offset those greenhouse gas emissions and climate-related impacts. Contribution to the fund would be tied to the units of coal produced. Funds could be used for activities including, but not limited to, carbon offsets, carbon sequestration, climate adaptation, and community resilience.

### 3. Leasing Process

- a. *Develop strategic leasing plans and utilize modified inter-tract bidding on a \$/ton or \$/British thermal unit (Btu) basis.* Strategic leasing plans would be developed based on regular reviews of projected domestic coal demand (e.g., over a 5-year window) and the role of Federal coal resources in meeting domestic energy needs. These plans would set lease sales on a regular schedule to accommodate a modified inter-tract bidding system. The BLM would determine a maximum tonnage of coal or maximum number of Btus to be leased consistent with projected demands. Under a modified inter-tract leasing process, all interested companies would bid among themselves for the right to produce a specified quantity of coal in the location of their choice, assuming it is suitable for mining and consistent with the approved land use plan and strategic leasing plan. To the extent that auctions become more competitive through the use of modified inter-tract bidding, resulting in increased bonus bids, the need for a higher royalty rate could be revisited on a periodic basis.

- b. *Develop regional mitigation strategies.* Regional mitigation strategies would be developed by the BLM to identify and facilitate compensatory mitigation opportunities at the regional scale, allowing for pre-planning for, and advanced investment in, mitigation opportunities.
4. Community Assistance
    - a. *Explore use of compensatory mitigation funds to invest in affected communities experiencing reduced coal production.* The BLM would seek to use compensatory mitigation funds to invest in economic diversification and workforce development efforts.
    - b. *Direct a portion of Federal coal revenues to community assistance.* The BLM would seek to secure Congressional authorization to direct a portion of increased Federal coal revenues toward investments in impacted communities that support economic diversification, job training, mine reclamation, and other community priorities.

## **Possible Option Combination Package #2**

### **1. Fair Return**

*Increase the royalty rate to reflect the fair return for coal produced on Federal land.* The BLM would identify the most appropriate metric and corresponding royalty rate for Federal coal, reflecting on analysis already conducted by other groups. Because a carbon-based royalty adder, as described under 2, could be instituted in combination with or independent of a potential royalty rate increase based on fair return principles, the BLM will analyze the effects of such changes both individually and cumulatively.

### **2. Climate Change/Resource Protection**

*Apply a royalty adder to account for carbon-based environmental and societal costs of coal production and use (\$/ton of coal).* A royalty adder would tie climate costs directly to production/consumption. As a price mechanism, a royalty adder would provide price certainty to mining operators and downstream purchasers. A royalty adder would apply only to new and renewed leases and, therefore, would be necessarily phased in over time. The BLM would conduct analysis to identify the most appropriate royalty adder taking into account downstream regulations and substitution effects, and reflecting on analysis already completed by other groups. The BLM would also assess the net impact on revenues from such changes, including any potential reduction in bonus bids and production.

### 3. Leasing Process

*Develop strategic leasing plans and utilize modified inter-tract bidding on a \$/ton or \$/Btu basis.* Strategic leasing plans would be developed based on regular reviews of projected Federal coal demand (e.g., over a 5-year window) and could serve a variety of purposes that meet a number of policy objectives, including addressing resource management concerns at a landscape level and helping to streamline future leasing actions. These plans would set lease sales on a regular schedule to accommodate a modified inter-tract bidding system. The BLM would determine a maximum tonnage of coal or maximum number of Btus to be leased consistent with projected demands. Under a modified inter-tract leasing process, all interested companies would bid among themselves for the right to produce a specified quantity of coal in the location of their choice, assuming it is suitable for mining and consistent with the approved land use plan and strategic leasing plan. To the extent that auctions become more competitive through the use of modified inter-tract bidding, resulting in increased bonus bids, the need for a higher royalty rate could be revisited on a periodic basis.

### 4. Community Assistance

- a. *Direct a portion of Federal coal revenues to community assistance.* The BLM would seek to secure Congressional authorization to direct a portion of increased Federal coal revenues toward investments in impacted communities that support economic diversification, job training, mine reclamation, and other community priorities.
- b. *The states' portion of increased revenues would be available to invest in impacted communities experiencing reduced coal production.* The additional revenues generated by a royalty rate adder would be split with states consistent with current law and could be used by states to support economic diversification efforts in communities and related activities.

## Possible Option Combination Package #3

### I. Fair Return

*Increase the royalty rate to reflect the fair return for coal produced on Federal land.* The BLM would identify the most appropriate metric and corresponding royalty rate for Federal coal, reflecting on analysis already conducted by other groups.

### 2. Climate Change/Resource Protection

- a. *Periodically evaluate and ensure that coal production and associated life-cycle emissions are consistent with the need to reduce net domestic greenhouse gas emissions 80 percent below 2005 levels by 2050.* This

tracks to a straight-line reduction from the US 2025 Intended Nationally Determined Contribution (INDC),<sup>4</sup> and it is also consistent with the long-term pathway set forth in the US Mid-Century Strategy for Deep Decarbonization.<sup>5</sup> The BLM would limit the amount of Federal coal leased at a given time based on a carbon budget. The Federal coal leasing levels would be premised on a carbon budget that is commensurate with Federal coal's appropriate contribution to meeting economy-wide greenhouse gas emission reduction targets. In other words, the total amount of coal offered and made accessible under Federal leases would contain lifecycle carbon dioxide (CO<sub>2</sub>) emission levels that are less than or equal to the anticipated emissions from Federal coal under an INDC strategy.<sup>6</sup> The BLM would also need to evaluate the effectiveness of applying INDC-based limits to Federal coal leasing if and when no similar limitations are applied to substitute non-Federal energy sources to address concerns over emissions shifting to non-Federal coal sources. This potential shifting to non-Federal coal sources could reduce the environmental benefit of such limits (i.e., due to emissions leakage).

- b. *Develop strategic leasing plans.* Strategic leasing plans would incorporate the carbon budget and set lease sales on a regular schedule to accommodate a modified bidding system (see 3a below). These strategic plans could help meet a variety of policy objectives, including addressing resource management concerns at a landscape level and helping to streamline future leasing actions.

### 3. Leasing Process

*Use modified inter-tract bidding on a \$/ton or \$/Btu basis.* The BLM would determine a maximum tonnage of coal or carbon or maximum number of Btus to be leased consistent with the defined carbon budget. Under a modified inter-tract leasing process, all interested companies would bid among themselves for the right to produce a specified quantity of coal in the location of their choice, assuming it is suitable for mining and consistent with the approved land use plan and strategic leasing plan. To the extent that auctions become more competitive through the use of modified inter-tract

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<sup>4</sup> Actions described by the United States under the UNFCCC in December 2015 to achieve the long-term goals of the Paris Agreement: to hold the increase in global average temperature to well below 2°C, to pursue efforts to limit the increase to 1.5°C, and to achieve net zero emissions in the second half of this century.

<sup>5</sup> The White House. 2016. US Mid-Century Strategy for Deep Decarbonization. November 2016. Available at [https://www.whitehouse.gov/sites/default/files/docs/mid\\_century\\_strategy\\_report-final.pdf](https://www.whitehouse.gov/sites/default/files/docs/mid_century_strategy_report-final.pdf)

<sup>6</sup> One way to implement this approach would be for the BLM to use an economy-wide model to estimate least cost compliance strategies for meeting INDCs. The BLM could use the model output to derive anticipated Federal coal consumption levels over a 20-year period, and then use that level, in conjunction with reserves already under lease, as a limit on the amount of reserves that are leased.



bidding, resulting in increased bonus bids, the need for a higher royalty rate could be revisited on a periodic basis.

#### 4. Community Assistance

*Direct a portion of Federal coal revenues to investments in communities experiencing economic impacts from reduced coal production.* The BLM would seek to secure Congressional authorization to direct a portion of increased Federal coal revenues toward investments in communities that support economic diversification, job training, mine reclamation, and other community priorities.

#### **No Action Alternative**

Under the no action alternative, the Federal coal program would continue to be administered in the manner in which it is administered currently. Leasing would be conducted through lease-by-applications (LBAs). The current means of determining FMV, royalty rate reductions, minimum bonus bids, and rental rates would remain unchanged. The no action alternative would not address concerns raised by numerous parties about the Federal coal program, including concerns raised by the Government Accountability Office (GAO), the Department of the Interior's Office of Inspector General (OIG), members of Congress, interested stakeholders, and the public.

#### **No Leasing Alternative**

Under a no leasing alternative, the BLM would issue no new leases for Federal coal, except for lease modifications within the defined acreage limitations (960 acres or less<sup>7</sup>). Existing coal already under lease would not be impacted. Administration of existing leases would remain unchanged, including existing royalty rates and rental rates. The BLM may also consider combining the no new leasing alternative with other reform options aimed at modernizing the administration of existing leases as part of separate reform packages or alternatives.

These options and option combination packages are based on the best judgment brought to bear based on the comments received and with the data at hand. The development of the PEIS will involve detailed analysis of these options and option combination packages. Of particular relevance will be analyzing effects on energy markets, the energy economy, communities, and the environment. As additional data becomes available during preparation of the PEIS, these options and option combination packages may be revised.

With this in mind, the key areas of analysis for the PEIS, many of which were identified as priorities by the Secretarial Order, include: return to the taxpayer, climate impacts/greenhouse gas emissions, socioeconomic considerations, energy needs (including coal production and exports, as well as substitution effects), energy prices,

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<sup>7</sup>As defined in section 432 of the Energy Policy Act of 2005.

other environmental impacts (e.g., water quality and wildlife), and health impacts. The BLM will use the best available science to support its analyses in the PEIS and employ sophisticated power sector modeling to determine the potential outcomes of options and option combination packages. In conducting this analysis, the BLM will also rely on Cooperating Agency expertise and the thoughtful work completed and underway by stakeholders and the public.

This report is intended to provide an educated starting point for the work on the PEIS, and a path forward for continuing to involve and tap the expertise of the public who care about and know about these public lands and resources.

# CHAPTER I

## INTRODUCTION

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The Bureau of Land Management (BLM) has undertaken scoping as part of its comprehensive review of the Federal coal program and has prepared this scoping report consistent with National Environmental Policy Act of 1969 (NEPA) requirements at Title 40 of the Code of Federal Regulations (CFR), Subpart 1501.7. Scoping is the process by which the BLM solicits internal and external input on the issues, impacts, and potential alternatives that will be addressed in an environmental impact statement (EIS), as well as the extent to which those issues and impacts should be analyzed in the NEPA document.

The objectives of this scoping report are to:

1. Provide an overview of the scoping process for the BLM's Coal Programmatic Environmental Impact Statement (PEIS)
2. Provide a summary of the comments received through the scoping process
3. Provide baseline information regarding the Federal coal program and establish the context in which the BLM will consider potential reform options
4. Present preliminary reform options for the Federal coal program that the BLM will carry forward for further analysis and that may form the basis for the alternatives in the PEIS.
5. Present a preliminary analytical framework for the PEIS

The scoping report is organized into the following chapters:

Chapter 2. Background—Provides background information on the BLM's development of the PEIS, including listening sessions held in 2015, Secretarial Order 3338, and the Notice of Intent.

Chapter 3. Public Involvement and Public Scoping Process—Describes the scoping process undertaken for the PEIS.

Chapter 4. Summary of Comments Received—Provides summaries of the comments received through the scoping process.

Chapter 5. Federal Coal Leasing Program—Describes the Federal coal program and provides baseline information intended to provide context for the BLM’s consideration of potential program reform options. This chapter includes: authorities, other Federal agency roles and responsibilities, historical information, state of the coal industry information, coal leasing and production data, market projections for coal, greenhouse gas emissions, socioeconomic considerations, and an overview of the Federal coal leasing process.

Chapter 6. Programmatic Environmental Impact Statement—Provides the BLM’s preliminary synthesis of information provided through the scoping process, which will provide the foundation for the Draft PEIS. This chapter includes: a purpose and need statement, preliminary reform options that meet identified policy objectives to be carried forward for further consideration by the BLM, a rationale for dismissing some options from further consideration, a framework for developing program reform alternatives, issues for analysis, an analytical approach, analytical considerations, and a schedule for completion of the PEIS.

# CHAPTER 2

## BACKGROUND

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### 2.1 INTRODUCTION

The activities that the BLM conducted prior to the initiation of the official NEPA process are described in this chapter.

### 2.2 LISTENING SESSIONS

On March 17, 2015, Secretary Jewell called for “an honest and open conversation about modernizing the Federal coal program.” As previously described, the last time the Federal coal program underwent comprehensive review was in the mid-1980s, and market conditions, infrastructure development, scientific understanding, and national priorities have changed considerably since that time. The Secretary’s call was also motivated by concerns raised by numerous parties about the Federal coal program, including concerns raised by the Government Accountability Office (GAO)<sup>8</sup>, the Department’s Office of Inspector General (OIG)<sup>9</sup>, members of Congress, interested stakeholders, and the public. The concerns raised by the GAO and OIG centered on whether taxpayers are receiving fair market value (FMV) for leasing Federal coal on public lands. Other commenters raised concerns that the current Federal leasing structure lacks transparency and competition, while also raising questions regarding current market conditions for the coal industry generally and related implications for Federal resources. Stakeholders also questioned whether the leasing program results in over-supply of a commodity that has significant environmental and health impacts, including impacts on global climate change.

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<sup>8</sup> GAO. 2013. Coal Leasing: BLM Could Enhance Appraisal Process, More Explicitly Consider Coal Exports, and Provide More Public Information. GAO 14-140. December 2013. Available at <http://www.gao.gov/products/GAO-14-140>.

<sup>9</sup> OIG. 2013. Coal Management Program, US Department of the Interior, Report No. CR-EV-BLM-0001-2012. June 2013. Available at <https://www.doioig.gov/sites/doioig.gov/files/CR-EV-BLM-0001-2012Public.pdf>

In response to the Secretary’s call for a conversation to address these concerns, the BLM held five listening sessions regarding the Federal coal program in the summer of 2015. These listening sessions offered the public the opportunity to comment on how the BLM can best carry out its responsibility to ensure that taxpayers receive a fair return for leasing the coal resources managed by the BLM on their behalf. The details of the public listening sessions are provided below in **Table 2-1**. In total, 1,068 individuals attended the listening sessions, and all of the listening sessions were live-streamed. The BLM heard oral comments from 289 individuals during the sessions.

**Table 2-1  
Listening Sessions**

<b>Location</b>	<b>Venue</b>	<b>Date</b>	<b>Number of Attendees</b>
Washington, DC	South Main Interior Building 1951 Constitution Ave. NW	July 29, 2015	114
Billings, Montana	BLM Montana/Dakotas State Office 5001 Southgate Drive	August 11, 2015	365
Gillette, Wyoming	Campbell County Library 2101 South 4-J Road	August 13, 2015	308
Golden, Colorado	Marriott Denver West 1717 Denver West Boulevard	August 18, 2015	161
Farmington, New Mexico	Courtyard Marriott 560 Scott Avenue	August 20, 2015	120
<b>Total</b>			<b>1,068</b>

In coordination with the listening sessions, the BLM collected written input on reform of the Federal coal program. In total, 94,045 submissions were received before the comment period closed on September 17, 2015, as reflected in **Table 2-2**, below. The oral and written comments reflected several recurring themes. First, numerous stakeholders expressed concern that American taxpayers are not receiving a fair return for the leasing of public coal resources. Second, many stakeholders expressed concern that the Federal coal program conflicts with the Administration’s climate policy and the country’s national climate goals, making it more difficult to achieve those goals. Third, there were numerous and varying concerns raised about the structure of the Federal coal program in light of current market conditions, including how implementation of the Federal leasing program affects current and future coal markets, coal-dependent communities and companies, and the reclamation of mined lands.

**Table 2-2  
Listening Session Submissions**

<b>Type of Written Comment</b>	<b>Number of Submissions</b>	<b>Percent of Total</b>
Form letters from all sources (12 groups)*	92,846	98.7
Written comments submitted at the listening session meetings	1,001	1.1
Other written comments	198	0.2
<b>Total written comments</b>	<b>94,045</b>	<b>100</b>

\* Form letter campaigns were initiated by 12 different organizations

### **2.3 SECRETARIAL ORDER**

In response to the broad range of issues raised over the course of the past few years and through the listening sessions, on January 15, 2016, the Secretary of the Interior issued Order No. 3338. The Order directs the BLM to carry out the following:

- 1) A formal, comprehensive review of the Federal coal program through a discretionary programmatic EIS under NEPA;
- 2) A pause on significant new coal leasing decisions on public lands while the programmatic review is underway, with limited, enumerated exemptions and exclusions;
- 3) A series of good government reforms to improve transparency and program administration, including the establishment of a public database to account for the carbon emissions from fossil fuels on public lands by the US Geological Survey (USGS).

The Order states:

“Given the broad range of issues raised over the course of the past year (and beyond) and the lack of any recent analysis of the Federal coal program as a whole, a more comprehensive, programmatic review is in order, building on the BLM’s public listening sessions[.]

...

[T]he purpose of the P[rogrammatic] EIS is to identify, evaluate, and potentially recommend reforms to the Federal coal program. This review will enable the Department to consider how to modernize the program to allow for the continued development of Federal coal resources while addressing the substantive issues raised by the public, other stakeholders, and the Department’s own review of the comments it has received.

...

The PEIS will provide a vehicle for the Department to undertake a comprehensive review of the program and consider whether and how the program may be improved and modernized to foster the orderly development of BLM administered coal on Federal lands in a manner that gives proper consideration to the impact of that development on important stewardship values, while also ensuring a fair return to the American public.”

The Order directs the Director of the BLM to expeditiously initiate the NEPA scoping process by inviting Federal, state, and local agencies; Indian tribes; and the public to help identify the environmental issues and reasonable alternatives to be examined in the PEIS. Upon completion of the scoping process, the Director of the BLM is required to provide a scoping report to the Secretary of the Interior along with a proposed schedule for the completion of the PEIS.

## 2.4 NOTICE OF INTENT

On March 30, 2016, in accordance with NEPA, the BLM published a Notice of Intent to prepare a programmatic environmental impact statement to review the Federal coal program and to conduct public scoping meetings<sup>10</sup> in the *Federal Register* announcing its intent to prepare a PEIS to review the Federal coal program and beginning the formal scoping period. The Notice of Intent, included as **Appendix A**, announced the city and states of the planned public scoping meetings, stated that specific dates and locations would be announced at least 15 days in advance of each meeting, and listed various methods of commenting.

The Notice of Intent provided background on the Federal coal program, a preliminary set of issues that were expected to be addressed in the PEIS, and potential modifications to the Federal coal program suggested by stakeholders during the listening sessions that could be considered in the PEIS. While the full set of issues to be assessed in the PEIS would be defined through the public scoping process, the Notice of Intent included the following preliminary set of issues:

- How, when, and where to lease
- Fair return
- Climate impacts
- Other impacts
- Socioeconomic considerations

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<sup>10</sup> BLM. 2016. Notice of Intent to Prepare a Programmatic Environmental Impact Statement to Review the Federal Coal Program and to Conduct Public Scoping Meetings. *Federal Register* 81(61):17720. March 30, 2016. Available at <https://www.gpo.gov/fdsys/pkg/FR-2016-03-30/pdf/2016-07138.pdf>



- Exports
- Energy needs

These issues were originally identified in the Secretarial Order but expanded to include additional topics and details raised in the listening sessions.

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# CHAPTER 3

## PUBLIC INVOLVEMENT AND PUBLIC SCOPING

### PROCESS

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#### 3.1 INTRODUCTION

Public involvement entails “the opportunity for participation by affected citizens in rulemaking, decision making, and planning with respect to the public lands, including public meetings or hearings...or advisory mechanisms, or other such procedures as may be necessary to provide public comment in a particular instance” (Federal Land Policy and Management Act (FLPMA), Section 103(d), 43 USC 1702(d)). Council on Environmental Quality (CEQ) regulations and BLM land use planning regulations both provide for specific points of public involvement in the NEPA processes to address local, regional, and national interests (40 CFR 1506.6; 43 CFR Subpart 1610). Guidance for implementing public involvement can be found in the BLM NEPA Handbook H-1790-1<sup>11</sup> Public involvement requirements of both NEPA and the FLPMA will be satisfied through this PEIS process.

Scoping is an early and open process for determining the issues to be addressed and identifying the significant issues related to a proposed action (40 CFR 1501.7). Information collected during scoping may also be used to develop the alternatives to be addressed in a NEPA document. The process has two components: internal scoping and external scoping.

*The National Environmental Policy Act requires that there be an early and open process for determining the scope of the issues to be addressed by a study.*

Internal scoping is the use of the BLM and Cooperating Agency staff to help determine what needs to be analyzed in a NEPA document conducted through

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<sup>11</sup> BLM. 2008. Handbook H-1790-1—BLM National Environmental Policy Act. Washington, DC. January 2008.

an interdisciplinary process. External scoping is a public process designed to reach beyond the BLM. External scoping involves notification and opportunities for feedback from other agencies, organizations, tribes, local governments, and the public. Its aim is to identify the concerns of high importance to the public. Internal and external scoping help ensure the following:

- That issues are identified early and are properly studied
- That issues of no concern do not consume time and effort
- That the proposed action and alternatives are balanced, thorough, and implementable

The BLM follows the public involvement requirements documented in CEQ regulations implementing NEPA (40 CFR 1501.7 (scoping) and 1506.6 (public involvement)). The BLM also follows public involvement requirements described in the Department of the Interior regulations implementing NEPA (43 CFR, Part 46).

The BLM solicits comments from relevant agencies and the public, organizes and analyzes all comments received, and then distills them to identify issues that will be addressed during the NEPA process. These issues help define the scope of analysis for the EIS and are used to develop alternatives to the proposed action.

*A Notice of Intent, an official legal notice published in the Federal Register, announces that a Federal agency is beginning the preparation of an EIS and often includes information about the public scoping process.*

### 3.2 PUBLIC SCOPING

The formal public scoping period began on March 30, 2016, with the publication of a Notice of Intent in the *Federal Register* (see **Chapter 3**, Notice of Intent, included as **Appendix A**).

The Notice of Intent provided an overview of the project and advertised six public scoping meetings. The BLM advertised the scoping meeting locations and times on the project website and through local media, including press releases and newspaper advertisements. A sample newspaper advertisement is included in **Appendix B**, Scoping Materials.

### 3.3 SUMMARY OF SCOPING MEETINGS

The BLM hosted six public scoping meetings to provide the public with opportunities to learn about the project and the NEPA process and to offer comments. The Notice of Intent announced that the BLM would hold public scoping meetings at locations across the

*1,943 individuals attended scoping meetings held in 6 locations throughout the US from May through June 2016.*

country. The actual dates, meeting locations and times, and instructions for providing comments were announced via a press release (see **Appendix B**) and the project website: <https://www.blm.gov/programs/energy-and-minerals/coal/coal-peis>. The details of the public scoping meetings are provided in **Table 3-1**, below.

**Table 3-1  
Public Scoping Meetings**

<b>Location</b>	<b>Venue</b>	<b>Date</b>	<b>Live-streamed?</b>	<b>Number of Attendees</b>
Casper, Wyoming	Casper Events Center One Events Drive	May 17, 2016	Yes	268
Salt Lake City, Utah	Salt Palace Convention Center 90 South West Temple	May 19, 2016	No (audio only)	550
Knoxville, Tennessee	Tennessee Theatre 604 South Gay Street	May 26, 2016	No (audio only)	115
Seattle, Washington	Sheraton Seattle Downtown 1400 6th Avenue	June 21, 2016	Yes	309
Grand Junction, Colorado	Avalon Theatre 645 Main Street	June 23, 2016	No (audio only)	354
Pittsburgh, Pennsylvania	Pittsburgh Convention Center 1000 Fort Duquesne Boulevard	June 28, 2016	Yes	47
<b>Total</b>				<b>1,943</b>

Note: Meetings were from 8 a.m. to 4 p.m., except for Casper, which was 8:30 a.m. to 4 p.m., and Pittsburgh, which was 11 a.m. to 7 p.m.

Each meeting began with a two-hour sign-in and speaker sign-up period. During this time, attendees had the opportunity to sign into the meeting and register their contact information for the mailing list. Attendees could also sign up for two-minute speaking slots by getting a speaker card (see **Appendix B**). Speaker cards were numbered sequentially so that attendees would speak in the order that they arrived.

*Scoping Meetings included a PowerPoint Presentation with background information on the Federal coal program and an opportunity for public comment on a first-come, first-served basis.*

After the registration period, the BLM's contractor, Environmental Management and Planning Solutions (EMPSi), provided welcoming remarks, including an explanation of the meeting format. This was followed by a PowerPoint

presentation given by the BLM (see **Appendix B**). The presentation included background information on the Federal coal program, explained the issues that the PEIS will consider, and provided specific topics for which the BLM is seeking public input. In addition, background information on the reform of the Federal coal program (including a Questions and Answers sheet and Secretarial Order 3338) was provided in handouts (see **Appendix B**).

At the conclusion of the presentation, EMPSi opened the meeting to public comments. Attendees who wished to speak were offered the opportunity according to the number on their speaker cards; these were given out sequentially, on a first-come, first-served basis, determined by sign-in order. Once all speakers with speaker cards had spoken, the BLM offered the opportunity for anyone else to speak. Meetings ended when there were no more attendees who wished to speak.

As noted in **Table 3-2**, below, the meetings in Casper, Seattle, and Pittsburgh were live-streamed. The meetings in Salt Lake City, Knoxville, and Grand Junction were available for listening via a phone conference line. Information on how to access these meetings was made available to the public on the project website.

**Table 3-2**  
**Remote Access of Public Scoping Meetings**

<b>Location</b>	<b>Live-stream Attendees</b>
Casper, Wyoming	1,102
Seattle, Washington	420
Pittsburgh, Pennsylvania	147
<b>Location</b>	<b>Audio Attendee (number of phone lines)</b>
Salt Lake City, Utah	214
Grand Junction, Colorado	24
Knoxville, Tennessee	93

### 3.4 TRIBAL CONSULTATION

The United States has a unique legal relationship with American Indian tribal governments as set forth in the Constitution of the United States, treaties, Executive Orders (e.g., Executive Order 13175), federal statutes, federal policy, and tribal requirements, which establish the interaction that must take place between federal and tribal governments. An important basis for this relationship is the trust responsibility of the United States to protect tribal sovereignty, self-determination, tribal lands, tribal assets and resources, and treaty and other federally recognized and reserved rights. Additionally, tribal consultation is required by the National Historic Preservation Act (54 USC 300101, et seq.). Tribal consultation is undertaken by the BLM to identify the cultural values,

religious beliefs, traditional practices, and legal rights of Native American people, which could be affected by the BLM's actions on Federal lands.

Given the national focus of the PEIS and potential for decisions made through the PEIS to impact resources and values of Tribes across the United States, the BLM sent letters to all federally recognized tribes asking if they wanted to consult with the BLM on the PEIS. The BLM sent Tribal consultation invitation letters on October 3, 2016, to 212 tribal entities (see **Table 3-3**) and initiated tribal consultation with interested tribes in December 2016.

**Table 3-3**  
**Tribal Consultation Invitees**

<b>Tribal Invitee</b>	<b>State</b>
Absentee Shawnee Tribe	OK
Alabama Quassarte Tribal Town	TX
Alabama-Coushatta Tribe	TX
All Indian Pueblo Council	NM
Apache Tribe of Oklahoma	OK
Arctic Slope Regional Corporation	AK
Assiniboine Sioux Tribe	MT
Atqasuk Corporation	AK
Atqasuk Village	AK
Blackfeet Tribal Business Council	MT
Blue Lake Rancheria	CA
Bureau of Indian Affairs	MT
Caddo Nation	OK
Canoncito Navajo Band, Tohajiilee Chapter	NM
Catawa Indian Nation	SC
Cherokee Nation	OK
Cheyenne River Sioux Tribe	SD
Cheyenne-Arapaho Tribes	OK
Chickasaw Nation	OK
Chippewa Cree Tribe	MT
Choctaw Nation of Oklahoma	TX
Citizen Potawatomi Nation	OK
City of Anaktuvuk Pass	AK
City of Atqasuk	AK
City of Barrow	AK
City of Kaktovik	AK
City of Nuiqsut	AK
City of Point Hope	AK
City of Wainwright	AK
Colorado River Indian Tribes	AZ
Comanche Nation	OK
Confederated Salish and Kootenai Tribes	MT
Confederated Tribes of the Gosute Reservation	UT
Cook Inlet Region, Inc.	AK

**Table 3-3  
Tribal Consultation Invitees**

<b>Tribal Invitee</b>	<b>State</b>
Crow Creek Sioux Tribe	SD
Crow Tribe	MT
Cully Corporation, Inc.	AK
Delaware Nation	OK
Delaware Tribe of Indians	OK
Eastern Band of Cherokee Indians	NC
Eastern Shawnee Tribe	MO
Euchee Tribe of Indians	OK
Five Sandoval Indian Pueblos	NM
Flandreau Santee Sioux Tribe	SD
Fort Belknap Indian Community	MT
Fort Mohave Tribe	CA
Fort Peck Tribes	MT
Fort Sill Apache Tribe of Oklahoma	OK
Gila River Indian Community Council	AZ
Hopi Tribal Council	AZ
Inupiat Community of the Arctic Slope	AK
Iowa Tribe of Kansas and Nebraska	KS
Iowa Tribe of Oklahoma	OK
Jena Band Choctow Indians	LA
Jicarilla Apache Nation	NM
Kaktovik Inupiat Corporation	AK
Kansas Kickapoo Tribe	KS
Kaw Nation	OK
Kialegee Tribal Town	OK
Kickapoo Traditional Tribe of Texas	TX
Kickapoo Tribe of Oklahoma	OK
Kiowa Tribe of Oklahoma	OK
Kuukpik Corporation	AK
Little Shell Tribe of Chippewa Indians	MT
Lower Brule Sioux Tribe	SD
Lower Sioux Indian Community	MN
Mescalero Apache Tribe	NM
Miami Nation	OK
Mississippi Band of Choctaw Indians	MS
Modoc Tribe	OK
Morongo Band Mission Indians	CA
Muscogee (Creek) Nation	OK
Naqragmiut Tribal Council	AK
Native Village of Barrow Inupiat Traditional Government	AK
Native Village of Kaktovik	AK
Native Village of Nuiqsut	AK
Native Village of Point Hope	AK
Native Village of Point Lay	AK
Navajo Nation	AZ



**Table 3-3  
Tribal Consultation Invitees**

<b>Tribal Invitee</b>	<b>State</b>
Navajo Nation Council	AZ
Navajo Nation Division of Natural Resources	AZ
Navajo Nation Oil and Gas Company	AZ
Navajo Nation, Aneth Chapter	UT
Navajo Nation, Mexican Water Chapter	AZ
Navajo Nation, Oljato Chapter	UT
Navajo Nation, Red Mesa Chapter	UT
Navajo Nation, Teecnospos Chapter	AZ
Navajo Nation, Alamo Chapter	NM
Navajo Nation, Baahaali Chapter	NM
Navajo Nation, Baca/Prewitt Chapter	NM
Navajo Nation, Becenti Chapter	NM
Navajo Nation, Beclabito Chapter	NM
Navajo Nation, Burnham Chapter	NM
Navajo Nation, Casamero Lake Chapter	NM
Navajo Nation, Chichiltah Chapter	NM
Navajo Nation, Churchrock Chapter	NM
Navajo Nation, Counselor Chapter	NM
Navajo Nation, Coyote Canyon Chapter	NM
Navajo Nation, Crownpoint Chapter	NM
Navajo Nation, Crystal Chapter	NM
Navajo Nation, Gadii ahi/To'Koi Chapter	NM
Navajo Nation, Hogback Chapter	NM
Navajo Nation, Huerfano Chapter	NM
Navajo Nation, Iyanbito Chapter	NM
Navajo Nation, Lake Valley Chapter	NM
Navajo Nation, Little Water Chapter	NM
Navajo Nation, Manuelito Chapter	NM
Navajo Nation, Mariano Lake Chapter	NM
Navajo Nation, Mexican Springs Chapter	NM
Navajo Nation, Minerals Department	AZ
Navajo Nation, Nageezi Chapter	NM
Navajo Nation, Nahodishgish Chapter	NM
Navajo Nation, Naschitti Chapter	NM
Navajo Nation, Nenahnezad Chapter	NM
Navajo Nation, Newcomb Chapter	NM
Navajo Nation, Ojo Encino Chapter	NM
Navajo Nation, Pinedale Chapter	NM
Navajo Nation, Pueblo Pintado Chapter	NM
Navajo Nation, Ramah Chapter	NM
Navajo Nation, Red Lake #18 Chapter	NM
Navajo Nation, Red Rock Chapter	NM
Navajo Nation, Rock Springs Chapter	NM
Navajo Nation, San Juan Chapter	NM
Navajo Nation, Sanostee Chapter	NM

**Table 3-3  
Tribal Consultation Invitees**

<b>Tribal Invitee</b>	<b>State</b>
Navajo Nation, Sheepsprings Chapter	NM
Navajo Nation, Shiprock Chapter	NM
Navajo Nation, Smith Lake Chapter	NM
Navajo Nation, Standing Rock Chapter	NM
Navajo Nation, Thoreau Chapter	NM
Navajo Nation, Toadlena/Two Grey Hills Chapter	NM
Navajo Nation, Tohatchi Chapter	NM
Navajo Nation, Torreon Chapter	NM
Navajo Nation, Tsayatoh Chapter	NM
Navajo Nation, Twin Lakes Chapter	NM
Navajo Nation, Upper Fruitland Chapter	NM
Navajo Nation, Whitehorse Lake Chapter	NM
Navajo Nation, Whiterock Chapter	NM
Navajo Utah Commission	UT
National Council of American Indians (NCAI)	Washington, DC
Nez Perce Tribe	ID
North Slope Borough	AK
Northern Arapahoe Nation	WY
Northern Cheyenne Tribe	MT
Nunamiut Corporation, Inc.	AK
Oglala Sioux Tribe	SD
Ohkay Owingeh	NM
Olgoonik Corporation	AK
Osage Nation	OK
Otoe-Missouria Tribe	OK
Ottawa Tribe	OK
Pala Band Mission Indians	CA
Pamunkey Tribe	VA
Pawnee Nation of Oklahoma	OK
Peoria Tribe of Indians	OK
Poarch Band of Creek Indians	AL
Ponca Nation	OK
Prairie Band Potawatomi Nation	KS
Pueblo of Acoma	NM
Pueblo of Cochiti	NM
Pueblo of Isleta	NM
Pueblo of Jemez	NM
Pueblo of Laguna	NM
Pueblo of Nambe	NM
Pueblo of Picuris	NM
Pueblo of Pojoaque	NM
Pueblo of San Felipe	NM
Pueblo of San Ildefonso	NM
Pueblo of Sandia	NM
Pueblo of Santa Ana	NM

**Table 3-3  
Tribal Consultation Invitees**

<b>Tribal Invitee</b>	<b>State</b>
Pueblo of Santa Clara	NM
Pueblo of Santo Domingo	NM
Pueblo of Taos	NM
Pueblo of Tesuque	NM
Pueblo of Zia	NM
Pueblo of Zuni	NM
Pyramid Lake Paiute Tribe	NV
Quapaw Tribe	OK
Quechan Tribe	AZ
Rosebud Sioux Tribe of Indians	SD
Sac & Fox Nation of Missouri in Kansas & Nebraska	KS
Sac and Fox Tribe	OK
Salt River-Pima Maricopa Indian Community	AZ
San Carlos Apache Tribe	AZ
Santee Sioux Tribe of Nebraska	NE
Seminole Nation	OK
Seminole Tribe of Florida	FL
Seneca-Cayuga Tribe	OK
Shawnee Tribe	OK
Shoshone Bannock Tribes	ID
Shoshone Tribe of Wind River Indian Reservation	WY
Sisseton-Wahpeton Oyate Tribes	SD
Soboba Band Mission Indians	CA
Southern Ute Tribe	CO
Spirit Lake Sioux Nation	ND
Standing Rock Sioux Tribe	ND
Thlopthlocco Tribal Town	OK
Three Affiliated Tribes: Mandan, Hidatsa, and Arikara Nation	ND
Tikigaq Corporation	AK
Tohono O'Odham Nation of Arizona	AZ
Tonkawa Tribe	OK
Turtle Mountain Band of Chippewa	ND
Ukpeagvik Inupiat Corporation	AK
United Keetoowah Band of Cherokees	OK
Ute Indian Tribe	UT
Ute Mountain Ute	CO
Wainwright Traditional Council	AK
White Mesa Ute Administration	UT
White Mountain Apache Tribe	AZ
Wichita & Affiliated Tribes	OK
Wyandotte Nation	OK
Yankton Sioux Tribe Bus. & Claims Committee	SD
Ysleta del Sur Pueblo	TX
<b>Total number of Tribal invitations: 212</b>	

### 3.5 COOPERATING AGENCIES

The Cooperating Agency role derives from NEPA, which calls on Federal, state, and local governments to cooperate with the goal of achieving “productive harmony” between humans and their environment (42 USC, Sections 4321-4347). The CEQ regulations that implement NEPA authorize the lead Federal agency to invite State, local, and tribal governments, as well as other Federal agencies, to serve as Cooperating Agencies in the preparation of environmental impacts statements (40 CFR, Subparts 1501.5, 1501.6).

The Cooperating Agency relationship is distinctive, moving beyond consultation to engage officials and staff of other agencies and levels of government in working partnerships. The Cooperating Agencies share skills and resources to help shape the BLM environmental analyses to better reflect the policies, needs, and conditions of their jurisdictions and the citizens they represent. The benefits of enhanced collaboration among agencies in preparing NEPA analyses are as follows:

- Disclosing relevant information early in the analytical process
- Applying available technical expertise and staff support
- Avoiding duplication with other Federal, state, tribal, and local procedures
- Establishing a mechanism for addressing intergovernmental issues

State agencies, local governments, tribal governments, and other Federal agencies may serve as Cooperating Agencies. Cooperating Agency eligibility is defined as any Federal agency other than a lead agency that has jurisdiction by law or special expertise with respect to any environmental impact. A state or local agency with similar qualifications may be a Cooperating Agency. When the effects are on a reservation, an Indian tribe may by agreement with the lead agency become a Cooperating Agency (40 CFR, Subpart 1508.5).

“Jurisdiction by law” means agency authority to approve, veto, or finance all or part of the proposal (40 CFR, Subpart 1508.15). “Special expertise” means statutory responsibility, agency mission, or related program experience (40 CFR, Subpart 1508.26).

In accordance with 40 CFR, Subpart 1501.6, the BLM requested participation of Cooperating Agencies in the preparation of the PEIS. This included Federal agencies with jurisdiction by law or special expertise. In addition, the BLM invited state government representation from those states and counties where active coal leases exist. The BLM invited a total of 72 agencies that were eligible for Cooperating Agency status. The BLM requested a response by October 26, 2016. **Table 3-4** lists the Federal, state and local agencies that were invited as Cooperating Agencies.

**Table 3-4  
Cooperating Agency Invitees**

<b>Federal Invitees</b>
Fish and Wildlife Service
Office of Surface Mining Reclamation and Enforcement
Bureau of Ocean Energy Management
Environmental Protection Agency
US Forest Service
Bureau of Indian Affairs
Office of Valuation Services
Energy Information Administration
Office of Natural Resources Revenue
National Park Service
US Geological Survey
<b><i>Total invitations sent to Federal entities: 11</i></b>
<b>State Invitees</b>
Alabama
Arkansas
Colorado
Kentucky
Montana
North Dakota
New Mexico
Ohio
Oklahoma
Utah
Washington
West Virginia
Wyoming
<b><i>Total invitations sent to state entities: 13</i></b>
<b>County Invitees</b>
Jefferson County, Alabama
Tuscaloosa County, Alabama
Walker County, Alabama
Scott County, Arkansas
Sebastian County, Arkansas
Delta County, Colorado
Garfield County, Colorado
Gunnison County, Colorado
Las Animas County, Colorado
Moffat County, Colorado
Rio Blanco County, Colorado
Routt County, Colorado
Clay County, Kentucky
Floyd County, Kentucky
Leslie County, Kentucky
Big Horn County, Montana
Fallon County, Montana
Musselshell County, Montana

**Table 3-4  
Cooperating Agency Invitees**

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Richland County, Montana  
 Rosebud County, Montana  
 McLean County, North Dakota  
 Mercer County, North Dakota  
 Williams County, North Dakota  
 McKinley County, New Mexico  
 San Juan County, New Mexico  
 Morgan County, Ohio  
 Perry County, Ohio  
 Haskell County, Oklahoma  
 Latimer County, Oklahoma  
 Le Flore County, Oklahoma  
 Carbon County, Utah  
 Emery County, Utah  
 Kane County, Utah  
 Salt Lake County, Utah  
 Sanpete County, Utah  
 Sevier County, Utah  
 Lewis County, Washington  
 Wayne County, West Virginia  
 Campbell County, Wyoming  
 Carbon County, Wyoming  
 Converse County, Wyoming  
 Lincoln County, Wyoming  
 Sweetwater County, Wyoming  
 Uinta County, Wyoming

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***Total invitations sent to county entities: 48***

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***Total invitations sent: 72***

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In accordance with the Department of the Interior regulations implementing NEPA, the BLM must consider any request by an eligible government entity to participate as a Cooperating Agency (43 CFR, Subpart 46.225[c]). The request must be evaluated against Cooperating Agency eligibility criteria—jurisdiction by law or special expertise. Note that Campbell County, Wyoming, and the State of Wyoming requested to be Cooperating Agencies in their scoping comment letters; these groups were also included on the invitation list.

All designated Cooperating Agencies will sign memoranda of understanding with the BLM. The BLM held an initial meeting with Cooperating Agencies in December 2016.

### **3.6 FUTURE PUBLIC INVOLVEMENT ACTIVITIES**

Future public involvement for this NEPA effort includes public review and comment on the Draft PEIS and public review of the Final PEIS. The BLM will continue to conduct public outreach via newsletters, news releases, the project website, and other media throughout the PEIS process.

# CHAPTER 4

## SUMMARY OF COMMENTS RECEIVED

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### 4.1 COMMENT ANALYSIS PROCESS

All written submissions postmarked or received on or before September 15, 2016, are documented in this scoping summary report. Submissions received after this date are not incorporated in this report, but these and any other comments received throughout the PEIS process will be considered in the development of the PEIS and alternatives formulation, as appropriate.

Written comments were collected via the following methods:

- Project e-mail account at BLM\_WO\_Coal\_Program\_PEIS\_Comments@blm.gov
- E-mail account at blm\_wo\_coal\_comments@blm.gov
- US Postal Service
- Delivered in person at public scoping meetings or to the Washington, DC office of BLM

The most common format used for submissions was e-mail. A list of commenters is provided in **Appendix C**, List of Commenters.

The public could also provide verbal comments at the scoping meetings, which were documented by a court reporter. A transcript of all verbal comments was provided for each meeting, and these comments were also considered in the comment analysis process.

The BLM screened each written submission to determine if it was a form letter or a unique submission. Form letters are typically created by an organization and then circulated to individuals for submittal to the BLM. Unique submissions are those with distinct, unique text and not part of a form letter. The BLM worked

with representatives from organizations initiating form letter campaigns to ensure that all copies of form letters were received.

A copy of all unique submissions and a representative copy of each form letter were made available for public review on the project website on September 29, 2016.

All unique submissions were assigned a submission tracking identifier and commenter information, and submission text was entered into a comment analysis database. The text of each unique submission was then reviewed to determine if it contained substantive comments. Although all comments received through the scoping process have been considered by the BLM, substantive comments are defined in the BLM NEPA Handbook (Section 6.9.2.1) as comments that do one or more of the following:

- Raise issues that the BLM has not considered or reinforce issues that the BLM has already identified
- Present data or information that can be used when developing alternatives
- Present reasonable alternatives or reform options
- Present data or information that the BLM can use when it considers the impacts of the alternatives
- Raise concerns using reasoning; they may include concerns regarding public land resources, BLM-administered lands, or mineral estate in the project area

In accordance with the BLM NEPA Handbook (Section 6.9.2.1), comments that are not considered substantive include:

- Those in favor of or against an action without any reasoning, such as “I don’t like \_\_\_\_\_,” without providing any rationale
- Those without justification or supporting data, such as “allow more development”
- Those that provide background supporting information not directly related to the action

All substantive comments were categorized according to issue topic categories, as detailed below. Details for unique submissions are included below, in **Section 4.2**, Summary of Unique Submissions, followed by information on form letters and petitions received in **Section 4.3**, Form Letter Summary.

*The BLM received 1,118 unique submissions via email, mail, and at public meetings.*



Information from these comments, including key issues, data, and other information from the public, was queried to prepare this scoping summary report.

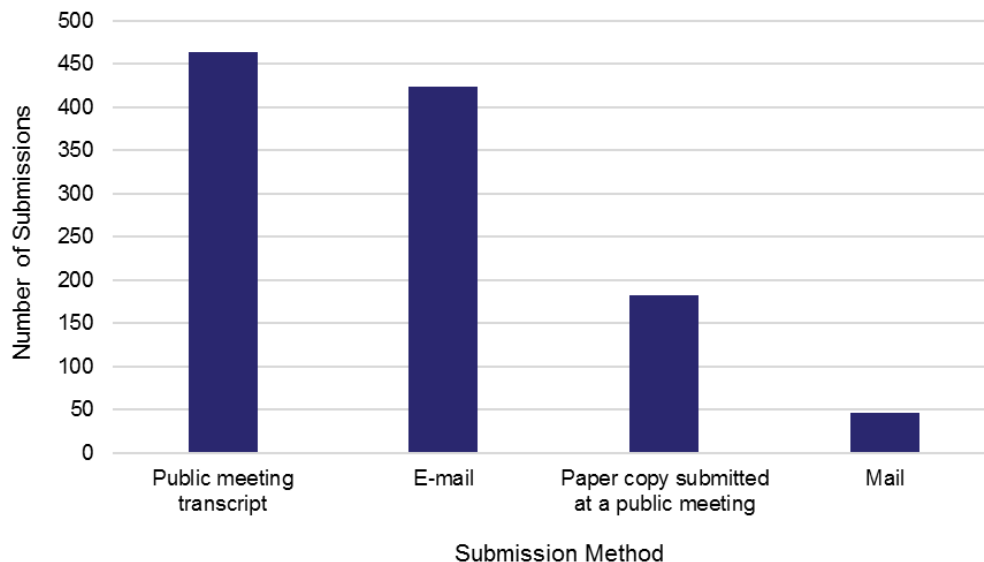
## 4.2 SUMMARY OF UNIQUE SUBMISSIONS

The BLM received 1,118 unique submissions out of 214,866 total submissions. **Table 4-1** and **Figure 4-1**, below, show the submission methods for the unique submissions. Of the 1,118 unique submissions, most were comments offered verbally at the public meetings (41.5 percent of total submissions), followed by comments submitted by e-mail (37.9 percent of total submissions). When multiple copies of a submission were received from different sources (e.g., submitted via e-mail and mail) only the original copy was included in the totals.

**Table 4-1**  
**Submissions by Methods of Submittal**

Submission Method	Count	Percent of Total
E-mail	424	37.9
Mail	47	4.2
Paper copy submitted at a public meeting	183	16.4
Public meeting transcript	464	41.5
<b>Total Submissions</b>	<b>1,118</b>	<b>100</b>

Note: Includes unique submissions only



**Figure 4-1. Submissions by Methods of Submittal Count**

**Figure 4-2** and **Table 4-2**, below, show the affiliation for each submission. Most submissions (68.5 percent) were provided by individuals, followed by organizations (nonprofit and citizen's groups; 18.0 percent). Letters received via mail or e-mail were considered to represent an organization, government, or other group when commenters signed them using official titles from these groups. (Note that speakers at the public scoping meeting often cited affiliation with organizations or other groups, and their comments were therefore classified as representing these groups. The BLM recognizes that these commenters may not be official representatives of these groups, so submissions from organizations may be over-represented.) **Appendix C**, List of Commenters, includes the organization affiliation, if provided, by commenters. The 1,118 unique submissions were submitted by 1,239 commenters.<sup>12</sup>

**Table 4-3** and **Figure 4-3**, below, show the location of commenters by state for unique submissions; 309 commenters (25.5 percent) did not provide state location information. Most of these commenters submitted their comments by e-mail and, therefore, did not have location information associated with their entry. Of the commenters who did provide location information, most were from Washington (15.0 percent), followed by Colorado (12.6 percent). The largest numbers of commenters were from those locations where public meetings were held and very well attended, with the exception of the state of Montana.

**Table 4-2**  
**Submissions by Affiliation**

<b>Affiliation</b>	<b>Count</b>	<b>Percent of Total</b>
Anonymous	1	0.1
Elected official	20	1.8
Federal government	8	0.7
Individual	766	68.5
Local government	34	3.0
Organization (nonprofit or citizens groups)	201	18.0
Private industry	57	5.1
State government	21	1.9
Trade group	7	0.6
Tribal government	3	0.3
<b>Total Submissions</b>	<b>1,118</b>	<b>100</b>

Note: Includes unique submissions only

<sup>12</sup> There are more commenters than submissions because some submissions had multiple commenters associated with them.

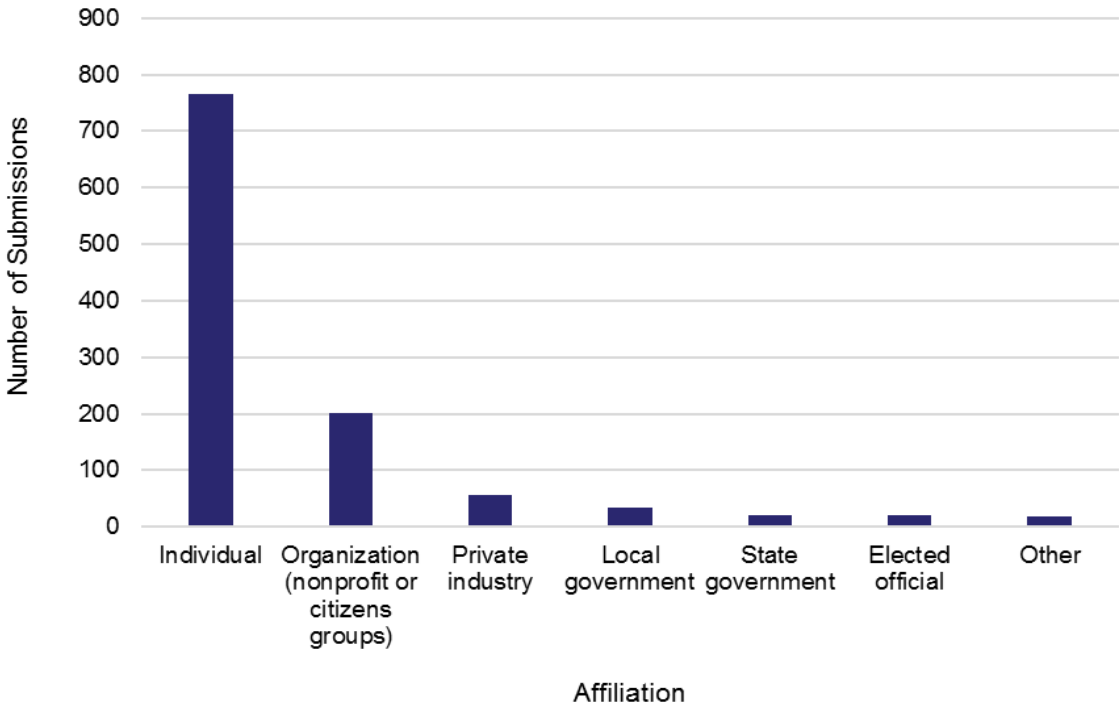


Figure 4-2. Submissions by Affiliation

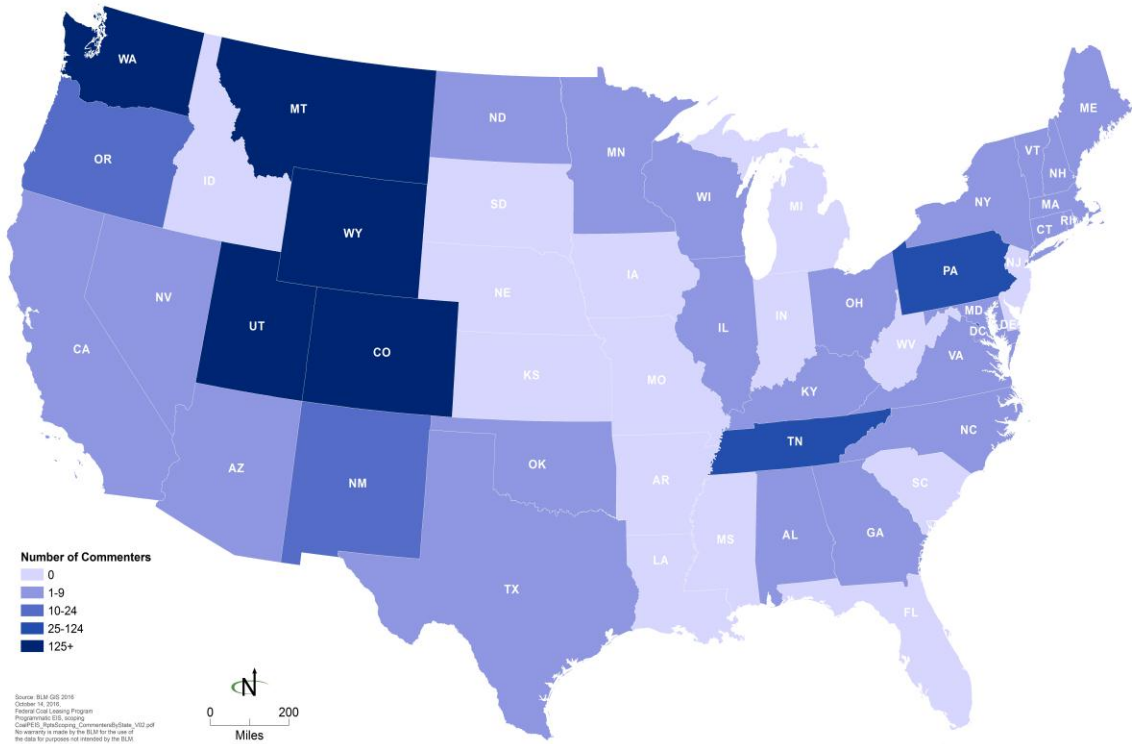


Figure 4-3. Commenters by Geographic Area

**Table 4-3  
Commenters by Geographic Area**

<b>Location</b>	<b>Number of Commenters</b>	<b>Percentage of Total Commenters</b>
Alabama	6	0.5
Arizona	3	0.2
California	7	0.6
Colorado	156	12.6
Connecticut	1	0.1
Georgia	1	0.1
Illinois	3	0.2
Kentucky	9	0.7
Maine	1	0.1
Maryland	2	0.2
Massachusetts	1	0.1
Minnesota	1	0.1
Montana	147	11.9
Nevada	2	0.1
New Hampshire	1	0.1
New Mexico	10	0.8
New York	7	0.6
North Carolina	2	0.2
North Dakota	4	0.3
Ohio	2	0.2
Oklahoma	1	0.1
Oregon	17	1.4
Pennsylvania	25	2.0
Rhode Island	1	0.1
Tennessee	38	3.1
Texas	4	0.3
Utah	131	10.6
Vermont	1	0.1
Virginia	7	0.6
Washington	182	14.7
Washington, DC	16	1.3
West Virginia	1	0.1
Wisconsin	2	0.2
Wyoming	138	11.1
No state information provided	309	25.0
<b>Total Commenters</b>	<b>1,239</b>	<b>100</b>

Note: Includes unique submissions only. Some submissions had more than one commenter.

### 4.3 FORM LETTER SUMMARY

In addition to unique submissions, organizations submitted form letters. In total, the BLM received 213,748 form letter submissions from 19 form letter campaigns; details of the form letter submissions are shown in **Table 4-4**, below.

*The BLM received over 213,000 copies of form letters in 19 form letter campaigns*

A representative example of each form letter was entered into the comment analysis database and substantive comments were categorized as described for unique submissions. Letters that represented slight variations of the form letter without significant additional information were treated as form letters. When additional substantive comments were added to the form letter, these letters were entered into the comment-tracking database as a form letter with added text. The additional substantive comments were categorized according to issue topic categories, as described for unique submissions.

**Table 4-4**  
**Form Letter Submissions**

<b>Initiating Organization</b>	<b>Number of Submissions</b>
American Coalition for Clean Coal Electricity	1,416
Care 2 Petitions	24,102
Center for Biological Diversity	14,104
Count on Coal MT	675
EarthJustice	36,907
Friends of the Earth and Friends of the Earth Action	9,816
Grand Junction meeting -North Fork Valley Letter	43
Keep Electricity Affordable.org	499
National Wildlife Federation	12,538
NextGen Climate Change	1,552
Physicians for Social Responsibility	1,351
The Sierra Club	98,603
The Wilderness Society	10,518
Unknown- maximize returns on Federal coal	27
Unknown- concerns with increased royalty rates	9
Unknown- reconsider the increase in royalty rates	19
Western Organization of Resource Councils	366
Western Values Project	713
WildEarth Guardians	490
<b>Total submissions</b>	<b>213,748</b>

Note: The initiating organizations were identified for all but 3 of the form letters. For letters where no organization was identified, a description of the main letter content is included above.

Petitions were also submitted to the BLM. A petition is a letter typically circulated by an organization and then signed by multiple individuals. In total, the BLM received 91,567 signatures from five petition campaigns; details of petition submissions are included in **Table 4-5**, below. For submissions where an initiating organization was identified, this organization is included. In two instances, no organization was identified; these entries are marked as “unknown.”

**Table 4-5**  
**Petition Submissions**

<b>Initiating Organization</b>	<b>Number of Signatures</b>
Care2 Petition	2,369
The Climate Reality Project	41,987
The Sierra Club	43,559
Unknown	286
Unknown	3,366
<b>Total submissions</b>	<b>91,567</b>

#### 4.4 SUMMARY OF COMMENTS

The BLM classified all substantive comments under an identified issue category (note some comments were categorized into more than one issue category) and also tagged comments if they contained references or data or a policy option for consideration. In total, 459 comments contained a reference or data and 130 contained a policy option.

*In total, 459 comments contained a reference or data, 130 contained a policy option, and 3,199 related to an issue category.*

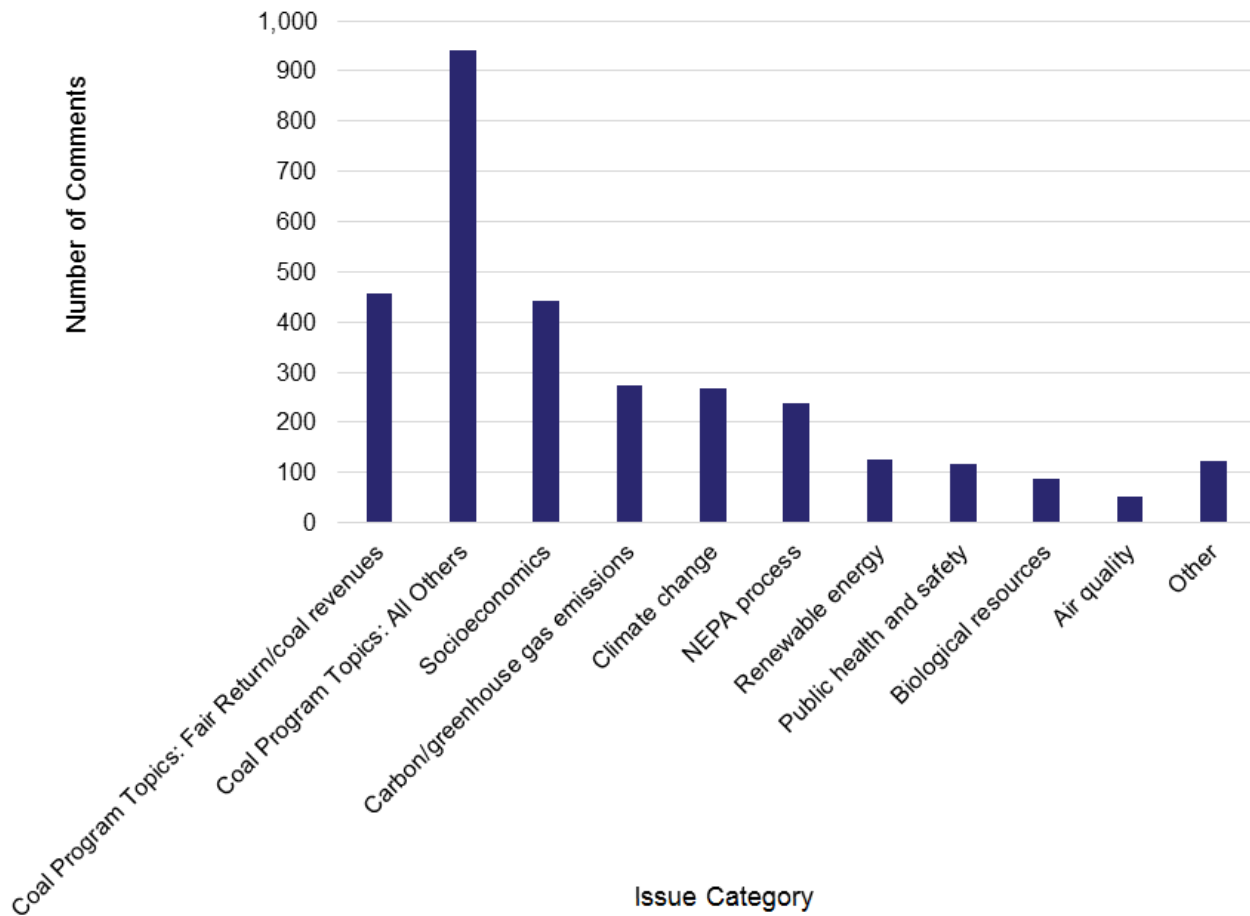
The BLM identified 33 issue categories relevant to the reform of the Federal coal program. Issue categories were developed based on topics identified in the Notice of Intent and traditional BLM resource topics. The issue categories can be found in **Table 4-6**, below.

**Table 4-6** and **Figure 4-4**, Comments by Issues Category, below, show the number and percentage of comments received by issue category. The BLM categorized 3,199 comments in total. The largest number of comments (14.6 percent) was assigned to the fair return/coal revenue category. Other significant categories included socioeconomics (14.0 percent), climate change (8.6 percent), and general comments on coal (8.7 percent). **Section 4.6**, Comment Summaries, provides a detailed analysis of the comments received for each issue category.

**Table 4-6  
Comments by Issue Category**

<b>Issue Category</b>	<b>Number of Comments</b>	<b>Percentage of Issue Comments</b>
<b>1. NEPA process</b>		
1.1 Scoping meeting	23	0.7
1.2 Cooperating Agency relationship	11	0.3
1.3 Range of alternatives	59	1.8
1.4 Other general	151	4.7
<b>2. Air quality</b>	52	1.6
<b>3. Climate change</b>	276	8.6
<b>4. Carbon/greenhouse gas emissions</b>		
4.1 Social cost of carbon	125	3.9
4.2 Carbon capture	16	0.5
4.3 Life cycle emissions	27	0.8
4.4 National carbon reduction goals	109	3.4
<b>5. Coal program topics</b>		
5.1 General comment on coal	278	8.7
5.2 Coal land use planning decisions	33	1.0
5.3 Coal leasing pause	104	3.3
5.4 Specific coal lease application	17	0.5
5.5 Coal leasing process	205	6.4
5.6 Coal bonding	75	2.3
5.7 Fair return/coal revenues	466	14.6
5.8 Coal exports	72	2.3
5.9 Coal reclamation	107	3.3
5.10 Coal mitigation	35	1.1
5.11 Coal transportation/rights-of-way	17	0.5
5.12 Methane capture	11	0.3
5.13 Surface owner rights	12	0.4
<b>6. Environmental justice</b>	18	0.6
<b>7. Public health and safety</b>	124	3.9
<b>8. Socioeconomics</b>	449	14.0
<b>9. Tribal interests and concerns</b>	18	0.6
<b>10. State's interests and concerns</b>	15	0.5
<b>11. Visual resources</b>	2	0.1
<b>12. Water resources</b>	40	1.3
<b>13. Biological resources</b>	91	2.8
<b>14. Other resource impacts</b>	33	1.0
<b>15. Renewable Energy</b>	128	4.0
<b>Total Comments</b>	<b>3,199</b>	<b>100</b>

Note: Some comments were coded in more than one category.



**Figure 4-4. Comments by Issues Category**

#### 4.5 ISSUES TO BE ADDRESSED PER THE NOTICE OF INTENT

As noted in **Section 2.4**, the Notice of Intent identified issues likely to be addressed in the PEIS. A cross-walk<sup>13</sup> of issue codes and issue topics identified in the Notice of Intent is included in **Table 4-7**. Comments related to the procedural requirements of the NEPA process did not correspond directly with the Notice of Intent issue topics and are not included here. Some comment issues fell within more than one Notice of Intent issue topic.

<sup>13</sup> Table showing the relationship between two other tables.



**Table 4-7  
Issue Cross-Walk**

<b>Notice of Intent Issue</b>	<b>Comment Issue Category</b>
How, when, and where to lease	5.2. Coal Land Use Planning Decisions, 5.4. Specific Coal Lease Applications, 5.5. Coal Leasing Process, 5.6. Coal Bonding, 5.9. Coal Reclamation, 5.13. Surface Owner Rights
Fair return	4.1. Social Cost of Carbon, 5.5. Coal Leasing Process, 5.7. Fair Return/Coal Revenues
Climate impacts	3. Climate Change, 4.1. Social Cost of Carbon, 4.2. Carbon Capture, 4.3. Life Cycle Emissions, 4.4. National Carbon Reduction Goals, 5.12. Methane Capture
Other impacts	2. Air Quality, 5.11. Coal Transportation, 7. Public Health and Safety, 9. Tribal Interests and Native American Religious Concerns, 10. State's Interests and Concerns, 11. Visual Resources, 12. Water Resources, 13. Biological Resources, 15. Other Resource Impacts
Socioeconomic Considerations	4.1. Social Cost of Carbon, 6. Environmental Justice, 8. Socioeconomics
Exports	5.8 Coal Exports
Energy needs	5.1. General Comments on Coal, 5.3. Coal Leasing Pause, 15. Renewable Energy

#### **4.6 COMMENT SUMMARIES**

The following sections include a summary of the comments received organized by comment type and issue category. A complete listing of comments can be found in **Appendix D**, Comments by Issue Category.

##### **4.6.1 Data and References**

The BLM received approximately 449 comments that included data for consideration or citations to references for review. In addition, many commenters attached reference materials, white papers, or other data to their submissions for review. The BLM has considered this information in the development of this Scoping Report and will conduct an in-depth review of this information as part of the development of the PEIS, as relevant. To aid review of this material, the agency has compiled an annotated bibliography, providing an overview of the recommended literature and other documents (see **Appendix E**, Annotated Bibliography).

##### **4.6.2 Policy Options**

Approximately 130 comments suggested options for updating or revising Federal coal leasing and permitting policies. Many commenters suggested options for ensuring a fair return to taxpayers from Federal coal leasing. Examples of these options included updating the process and factors for the BLM's determinations of FMV, increasing or decreasing the royalty rate, updating the process and factors for setting bonus bid amounts, and changing the BLM's leasing process to increase competition. Additional comments suggested options for updating the Federal coal program to help achieve US

carbon emission reduction goals. Options suggested to meet this objective included quantifying greenhouse gas emissions and the social cost of carbon, limiting the amount of Federal coal leased according to a carbon budget, using Federal revenues to incentivize clean energy technologies, and requiring mitigation of climate impacts. Some commenters advocated for increasing coal exports, while others suggested that exporting Federal coal should not be allowed.

Other commenters suggested options for improving protection and management of public lands in the coal program, such as updating the coal unsuitability criteria, increasing mitigation requirements, strengthening bonding requirements, and increasing reclamation requirements. Some commenters submitted options for facilitating the economic transition of communities currently dependent on Federal coal development. These options included ideas for allocating Federal funding to support programs like community services, career re-training, and miner pensions. Some commenters suggested that the BLM end the coal leasing program altogether, while others suggested streamlining the leasing program to maximize leasing.

**Table 6-1**, Options Proposed for Analysis by Policy Objective, outlines the reform options that the BLM is proposing to carry forward for analysis in the PEIS and use as the basis for alternatives development. The options are organized by the policy objectives described in the Need for Federal Action in **Section 6.1.1**. Some options suggested by commenters are not proposed to be carried forward for analysis in the PEIS. **Chapter 5** explains the BLM's rationale for eliminating these options from further consideration.

### 4.6.3 Issue I NEPA Process

#### **Scoping Process**

Commenters expressed concern over the locations of the scoping meetings. They stated that meetings should be held in states and communities where coal mining occurs. Specifically, additional meetings were requested in Wyoming and Montana. Some commenters also felt that meetings should be held in areas likely to feel the impacts of climate change. In addition, some commenters stated that the “first-come, first-served” system used at meetings did not allow everyone an opportunity to speak.

#### **Cooperating Agency Relationship**

Commenters stressed the importance of including local governments and other Department of the Interior agencies as cooperators during the NEPA process. Specifically, Campbell County, Wyoming, and the State of Wyoming requested Cooperating Agency status.

#### **Range of Alternatives**

Commenters suggested many different alternatives and their elements to consider during the PEIS process. Some suggestions included no new Federal

coal leasing, reduction in royalty rates, greenhouse gas mitigation and reduction, new leasing framework, a no action alternative, a transition to renewable energy, and consideration of the social cost of carbon in royalty rates.

One commenter stated that the BLM should consider a true range of alternatives, rather than setting up alternatives at extreme ends of the spectrum. Another commenter stated that a no action alternative would be inconsistent with current climate change policy and that it should be rejected.

#### ***NEPA Process—Other General***

Commenters expressed concern over the purpose and need for the BLM's reform of the Federal coal program. Some stated that rationale for program review is unfounded and current regulations are adequate, and the BLM has denied reasons for review in the past. Other commenters stated that the PEIS is appropriate and that the program is due for a reform.

Commenters noted the following specific concerns:

- Evaluation of the coal program at a landscape level is redundant, because federally mined coal already includes NEPA at multiple stages.
- In recently completed reviews, the Inspector General of the Department of the Interior and the GAO had only modest recommendations to improve the coal management program, and there were not enough to suggest a PEIS.
- The BLM does not have the authority to reform the Federal coal program, because other laws and agencies have set the regulations. Specifically, commenters argued that the Mineral Leasing Act requires that coal should be mined for maximum economic recovery, that the BLM does not have the authority to adjust mineral royalty rates, and that fees or taxes that apply to the sale of coal into export markets violate the Export Clause of the Mineral Leasing Act.

Commenters also noted a concern that interim actions undertaken by the DOI might prejudice the ultimate decision. Additional immediate measures for transparency were recommended. In addition, the commenters requested that the BLM pause consideration of any pending or new royalty rate reduction requests or approval of any coal lease or mining plan that would lead to underground mining activities requiring degasification systems, until completion of the PEIS.

Commenters had the following suggestions when conducting the NEPA analysis:

- Ensure sufficient cumulative impacts analysis, including a discussion of oil and gas development and state and private coal development. Review recommendations for approaching substitution impact.
- Limit the PEIS to a 3-year process to avoid delays, and ensure that the scoping report is released by the end of 2016.
- Consider recently finalized regulations and decisions and their impacts on coal mining (e.g., Clean Water Act Rule, Clean Power Plant (CPP), land use plan amendments for greater-sage grouse protection).
- Provide transparency throughout the NEPA process.
- Prepare comprehensive GIS and maps of coal resources and other key data, and make this information available for public review.
- Design a PEIS that could be tiered to and help facilitate a more streamlined leasing process and include specific guidelines on the NEPA process for obtaining a lease.
- Prepare a Reasonably Foreseeable Development Scenario.
- Quantify all coal impacts.
- Involve the Office of Surface Mining Reclamation and Enforcement (OSMRE) and other relevant state and Federal agencies in the NEPA process.

#### **4.6.4 Issue 2 Air Quality**

Commenters stated concern for the impacts that coal mining, burning, and transport can have on air quality, including an increase of pollutants and particulate matter in the air. This would result in poor air quality and unsafe conditions, such as soot, smog, and acid rain due to decreased air quality. Commenters also noted that the secondary impacts of poor air quality, including impacts on visibility, impacts on oceans and aquatic life, and impacts on public health. Some commenters also noted that the combustion of coal exports in other countries impacts North American air quality.

Some commenters suggested that the Clean Air Act (CAA) and other regulations have hurt the coal mining industry and require precisely blended coal to account for natural variations in different coal sources. One commenter stated that many mines do not meet the standards set by the Clean Air Act.

#### **4.6.5 Issue 3 Climate Change**

Commenters expressed concern about the contribution that coal mining and coal use have on climate change and stated that most coal must stay unmined if we are to avoid the worst effects of climate change. Commenters stated that burning coal extracted from public lands represents a significant contribution to greenhouse gas emissions and climate change.

Commenters also expressed concerns about specific direct, indirect, and cumulative impacts related to climate change, including the following:

- Water supply shortages
- More intense severe weather events
- More frequent and intense wildfire
- Impacts on human health
- Impacts on other uses of public lands
- Rising sea levels
- Shorter season for snow sports and reduced snowpack and ice formation
- Ocean acidification and impact on the fishing industry
- Heat waves
- Changing plant and wildlife habitat and ranges
- Invasive species outbreaks
- Extended ranges of disease carriers, like mosquitos and ticks

One commenter stated that climate damages from coal are 5 to 6 times greater than the value of coal, and that more coal has already been leased than is possible to burn without exceeding carbon budgets to meet climate objectives. One commenter suggested modeling climate impacts by alternative and their effect on royalty revenue, coal prices, energy markets, and energy substitution effects. Some commenters stated that climate change should not be considered during the PEIS process, due to the following reasons:

- Human-caused climate change has not been proven and cannot be accurately predicted.
- Climate change is already covered under NEPA and the existing leasing process.
- Coal's impact on climate change is offset by the protection that coal allows humans through affordable heating and cooling, sturdy buildings, and drought protection.

Commenters suggested that the PEIS should evaluate all fossil fuels and their relation to climate change taking into consideration both upstream and downstream greenhouse gas emissions, and that mitigation strategies for climate change should be employed. One commenter stressed the importance of an alternative that balances climate considerations with future energy demands. Commenters stated that the idea of a perfect substitution (replacement of Federal coal with coal from other sources) is not supported by recent findings and that the BLM should not use that assumption in climate change analysis.

#### 4.6.6 Issue 4 Carbon/Greenhouse Gas Emissions

##### *Issue 4.1 Social Cost of Carbon*

Commenters stated that the social cost of carbon should be evaluated when reforming the Federal coal program, suggesting the following:

- The social costs of carbon should be built into coal royalties to reflect the true cost of climate change.
- Social costs should be used to quantify climate impacts of alternatives.
- Annual climate costs of the Federal coal program far outweigh benefits of fossil fuel production.
- A large increase in rates would result in a great benefit to climate and more revenue.
- The cost of coal would be much higher, if accounting for the social cost of carbon.
- Renewable energy is cheaper than coal, when considering the social cost of carbon.

Commenters also noted that there is a recent court decision supporting the use of the social cost of carbon. Commenters also provided specific direction for including the social cost of carbon, recommended models for social cost of carbon analysis, and alternative measures of quantifying carbon cost and other externalities.

Other commenters stated opposition to imposing a social cost of carbon for the following reasons:

- A carbon charge large enough to dramatically curtail Federal coal production could be in violation of the dual mandate to balance environmental goals with Federal revenue generation.
- The social cost of carbon estimates are unrealistically high and technically unsound.
- The BLM does not have the authority to impose a social cost of carbon.
- Imposing the social cost of carbon would have limited effectiveness due to substitution to non-Federal coals or other fossil fuels and due to lack of pass through to end user.
- The social cost of carbon has not undergone notice-and-comment rulemaking.
- Imposing a carbon fee would be double regulation/taxing.

- Imposing a social cost of carbon on producers would increase electricity prices.
- Implementing the social cost of carbon may not be successful, due to lack of competition. If Federal coal auctions are not competitive, firms may lower bids to offset the social cost of carbon.

#### ***Issue 4.2 Carbon Capture***

Commenters stated the following regarding carbon capture related to the PEIS:

- Greenhouse gas emissions associated with coal use can be negated with flue-steam capture.
- Money applied to renewable energy subsidies should be invested in developing carbon capture.
- Storage and carbon capture technology is necessary in order to meet climate goals.

Commenters also noted concerns over the lack of Federal aid in developing carbon capture technology. They cited specific states and coal industries that have examples of efficient power plants and sequestration technology.

#### ***Issue 4.3 Life-Cycle Emissions***

Commenters stated that the PEIS should analyze greenhouse gas emissions and associated impacts from all stages of coal mining and usage. Specifically, consequential life-cycle analysis methods were recommended over attributional life-cycle analysis methods. Other commenters stated that the BLM's review of the Federal coal program is not the appropriate time to analyze life-cycle emissions, since the BLM cannot determine how the coal will be used, and life-cycle analysis studies are inadequate.

#### ***Issue 4.4 National Carbon Reduction Goals***

Commenters expressed concern regarding how the Federal coal program will align with the Administration's greenhouse gas reduction goals reflected in the Paris Agreement and the CPP. Specifically commenters focused on whether continued levels of US coal production was consistent with the Paris Climate Agreement and the commitment to stay under 2 degrees Celsius of warming, and questioned whether coal exports undermine the commitment to end reliance on coal by 2020.

Commenters also cited studies, suggesting that new Federal coal leasing at any significant level is inconsistent with climate goals. Commenters suggested creating a "carbon budget" to help meet emissions reduction goals and implementing a carbon adder for upstream emissions to help meet climate commitments. Commenters also stated that not combusting coal is critical to meeting climate goals and that the BLM should finalize the coal mine methane rule-making, because of the potent impact methane has on climate change.

#### 4.6.7 Issue 5 Coal Issue Topics

##### ***Issue 5.1 General Comment on Coal***

General comments on coal fell under two main categories: commenters who requested a complete cessation of new leases, a reduction in coal mining, or increased regulation of coal mining on Federal lands and those who favored limited modifications to the coal program, continued coal mining, or expansion of coal mining on Federal lands.

Commenters requesting a reduction in mining provided the following rationales and opinions:

- The Federal coal program has not been modified in many years and is due for a reform.
- There is reduced demand for coal due to market and policy conditions and mining on Federal lands needs to be phased out.
- The environmental impacts of coal outweigh the beneficial uses.
- Coal mining contributes to climate change and greenhouse gas emissions.
- A sufficient amount of coal is already leased.

Some commenters also noted the importance of analyzing the impacts from all stages of the coal life. One person noted that current leases should be rescinded. Another person stated that it is better to continue mining on current operations than to start new operations, because new mines and disturbance will have a greater impact.

Commenters who favored maintaining or expanding Federal coal mining provided the following rationales and opinions:

- Coal is a low cost energy source and is necessary to provide reliable and affordable electricity.
- Investments should be made in clean coal technology over alternative energy sources.
- Companies will turn to mining on private lands if Federal lands cannot be mined.
- Studies prepared for Federal coal mining provides valuable information about other natural resources.
- The coal industry is already over regulated.
- Coal demand is cyclical, so recent studies of coal demand may not be representative.
- The US has “cleaner” coal than other countries.



- The low cost energy derived from coal improves the quality of life and allows other industries to be competitive.

### ***Issue 5.2 Coal Land Use Planning Decisions***

Commenters stated that, when making coal land use planning decisions, the BLM should consider other land uses on public lands and lands with environmentally sensitive or special habitat value. Commenters requested that the BLM review and revise unsuitability criteria, implement unsuitability screening criteria at the land use planning level, and document the screening process. Specific areas suggested as unsuitable for leasing were those where the hydrological balance cannot be restored to pre-mining conditions and areas where coal development should be avoided due to high conflicts with wildlife, fisheries, water, air, and protected lands.

### ***Issue 5.3 Coal Leasing Pause***

Some commenters expressed support for the coal leasing pause, stating that it should be extended or made permanent and reasoned that a sufficient amount of coal has already been leased. Other commenters stated opposition to the coal leasing pause. They stated that it should be removed because it negatively impacts the economy, violates other laws, and is an attempt by the administration to stop coal mining. They said that pending leases already include a lengthy NEPA evaluation and should not be subject to the moratorium.

In addition, some commenters stated that the BLM has underestimated the time lag that would be produced by a moratorium. They requested that there be a guarantee that the moratorium would not go beyond the stated 3 years. Others stated that the assumption that a 20-year supply of coal is already under lease, as noted in Order 3338, is based on faulty information.

### ***Issue 5.4 Specific Coal Lease Applications***

Commenters stated concern over both the environmental impacts of leasing and the economic impacts of delays for specific coal lease applications, including at the following: Alton Mine, Bull Mountain Mine, Greens Hollow Coal tract (SUFCO Mine), and the Williams Draw tract (Lila Canyon Mine). Commenters also stated that analysis for one recently leased mine, the Narley Mine No. 3 mine, was inadequate. In addition, commenters provided input on particular coal mining regions. They stated that coal from the North Fork Valley produces less pollution and should be selectively mined and that the Powder River Basin should be recertified as a coal producing region.

### ***Issue 5.5 Coal Leasing Process***

Many commenters stated concerns for the current leasing process. Some stated that the leasing process takes too long and should be streamlined to remove redundancy and unnecessary barriers to development. Other commenters suggested specific changes to the leasing process in order to limit environmental impacts and to ensure a fair and transparent leasing process. Commenters suggested the following changes:

- Discontinue the lease-by-application (LBA) approach, because it does not encourage competitive bids.
- Provide more public notification of pending lease applications, minimum bids, and other leasing decisions.
- Examine leasing at the coal reserve level and reinstate coal producing regions in which regional planning takes into account market conditions and environmental impacts.
- Expand coordination with adjacent Federal landowners before leasing.
- Increase competition among coal companies for Federal coal leases.
- Lease only to companies that demonstrate they are resilient to expected market fluctuation.
- Make companies pay upfront at the time of lease for reclamation and evaluate unmet reclamation obligations before making additional leases.
- Incorporate elements from the Solar PEIS and Oil and Gas Master Leasing Plans into the coal leasing process, such as analyzing appropriate areas to lease on a regional scale.
- Cap coal tonnage or British thermal units and accept bids only until this cap is met.
- Focus lease offerings near existing tracts to limit additional disturbance.
- Wait for adequate market demand and set minimum bid prices.
- Consider lease prices reflecting the opportunity value involved in purchasing an option to mine a public resource in the future, when coal prices may recover from current lows.
- Apply maximum economic recovery standards and prepare a reasonably foreseeable development scenario.

Other commenters said that the current leasing system is sufficient and stated the following:

- The BLM should not exclude operators with greater than 10 years of reserves due to the length of the leasing process and other permitting.
- The BLM should retain the industry-nominated systems, as industry representatives are informed about future market needs.
- Note that conducting lease sales at set times in the past (such as quarterly) did not attract sufficient bids.

- Consider delaying collection of bonus bids until mining begins on the leases and allow a royalty credit for the capital costs to establish a mining operation to increase competition for bids.
- Leave the determination of where to lease to the field office at the local planning level.
- The BLM should acknowledge that bidding by adjacent mine operators is economically logical, due to reduced capital costs and that it does not represent a noncompetitive process.
- The BLM should acknowledge that it has the ability to adjust the lease nomination to ensure adequate competition.
- The BLM should acknowledge that the LBA process and leases with one bid are fair, because the government sets a minimum price.

#### ***Issue 5.6 Coal Bonding***

Commenters expressed concern over the amount of outstanding self-bonded reclamation liability and the self-bonding process in relation to Federal coal leasing, stating that it does not protect taxpayers and allows many companies to avoid reclamation.

Other commenters stated that changes to the self-bonding and reclamation regulations are in conflict with Surface Mining Control and Reclamation Act (SMCRA), and another suggested that the BLM does not have the authority to interfere with the States' ability to regulate surface coal mining and reclamation operations or to apply its discretionary authority over the bonding of such operations. In addition, one commenter stated that the leasing moratorium will impact the bonding of reclamation liability by reducing companies' revenue.

Commenters recommended the following specific changes to coal bonding:

- Eliminate self-bonding.
- Suspend approval of self-bonding for companies filing for bankruptcy.
- Charge a set amount for cost-recovery, based on the type of mine and application at the time of leasing.
- Require coal companies to put down a large deposit at the time of leasing.
- Impose full-cost bonding.
- Hold companies liable for failure to meet reclamation requirements.
- Require companies to purchase insurance to cover reclamation costs.

- Do not permit new leases for companies until all of their mines have been reclaimed.
- Work with the OSMRE to strengthen self-bonding regulations.

#### **Issue 5.7 Fair Return/Coal Revenues**

Commenters expressed concern over the current royalty rates and return to taxpayers. Many commenters stated that royalty rates should be raised, because coal companies are not paying a fair return to taxpayers and exploiting loopholes to undervalue coal. Commenters noted that current rates have been in place for 30 years, and it is time for a review. Some commenters stated that Federal coal sales represent nearly 41 percent of the total domestic production, which artificially lowers market prices, further reducing the amount of royalties received. Commenters also supported specific changes to royalty rates, including the following:

- Increase transparency and public input when determining market values.
- Use royalty rates for coal that match rates for offshore oil and gas.
- Assess royalties on the net delivery price of coal.
- Impose a cap on transportation deductions.
- Develop a comprehensive, coal-specific, costs test analysis tool that would quantify and monetize the full range of damages caused by coal and the true avoided cost value of renewables when used to replace coal.
- Factor in life-cycle and external costs.
- Consider using the social cost of carbon.
- Ban companies from selling coal to subsidiaries to depress rates (captive transactions).

Other commenters stated that there is no rationale to support raising royalty rates and that royalty rates should be decreased. Their concern over raising royalty rates were for the following reasons:

- Many companies currently pay a significant share of revenues in the form in royalties, taxes, and fees.
- The coal market is declining, and companies are already facing economic pressure.
- There is no empirical evidence to support the notion that increasing Federal coal royalty rates will increase Federal coal revenues.
- Coal companies already pay fair rates that benefit many local communities in a struggling economy.

- Coal exports are not a valid basis for reevaluating valuation regulations or royalty rates.
- Higher rates will render many Federal coal operations uneconomic.
- Higher rates will shift emphasis to use of private coal and thereby reduce royalties collected.
- Higher royalty rates will decrease production and return.
- Higher royalty rates will increase the costs of electricity due to companies transferring increased costs to consumers.

Commenters stressed the importance of considering all components of return when evaluating fair return numbers. One commenter stated that wind and solar subsidies should be considered with determining coal rates, and another suggested conducting a full cost-benefit analysis.

Other comments recommended that the BLM reinstate the Royalty Policy Committee and that the Department of the Interior eliminate the current FMV criteria and replace it with a new partnership model between government agencies and private industry.

#### ***Issue 5.8 Coal Exports***

Commenters stated support for Federal coal exports for the following reasons: the BLM would benefit from exporting coal and allowing for a greater return, exports are a lucrative market, exports would help other countries meet their energy needs, and countries would find other coal sources if they were not supplied with US coal. One commenter suggested that the government should assist coal producers in accessing international markets.

Other commenters stated opposition for coal exports for the following reasons:

- Burning coal for domestic use, as opposed to exporting it for foreign use, is cleaner and more efficient.
- Coal exports will discourage other countries from investing in renewable energy sources.
- Exporting federally subsidized coal artificially drives down the price of coal in the global market.
- The United States should not mine public lands to supply other countries with coal.
- It is only the BLM's objective to sell Federal coal to aid in meeting the nation's energy needs.
- Burning coal overseas will still impact domestic air quality and undermine climate policy.

Commenters suggested that impacts related to coal transportation must be evaluated when considering exports, additional fees should be imposed for Federal coal that is shipped out of the United States, and the United States should look at how other federally owned minerals are valued and apply that standard to coal.

Commenters also stated that the PEIS must fully analyze and assess the reasonably foreseeable impacts of coal exports that may occur as a result of future coal management.

One commenter stated that exports need to be considered in market demands, while others stated that exports are so low that even aggressive expansion would have no effect on Federal coal production.

#### ***Issue 5.9 Coal Reclamation***

Commenters stated concern over the coal mine reclamation process, citing the following issues:

- Many mines on Federal lands have still not been reclaimed.
- Reclamation standards are elusive.
- Mining companies get by with no reclamation, due to self-bonding.
- It takes many years for mine reclamation to reach original flora and fauna conditions.
- Reclaimed lands are often susceptible to invasive or nonnative species.

Commenters also suggested the following:

- There should be no new leasing until existing mines are reclaimed and comply with environmental standards.
- A company's history with reclamation should be considered when determining new leases.
- Coal companies should be held responsible for reclamation responsibilities.
- Reclamation planning should begin at the time of the lease.
- Coal companies should be required to put up adequate funds for reclamation.
- Mine reclamation should be as contemporaneous as possible.
- Mine workers should be trained in restoring public lands.
- Reclamation standards should be revised.

Other commenters stated that claims that mining companies do not reclaim lands are unfounded and that reclaimed lands are often more productive and can support multiple uses, such as livestock grazing and wildlife habitat. One commenter stated that the BLM does not have the authority to monitor reclamation.

#### ***Issue 5.10 Coal Mitigation***

Commenters stated support for identifying and analyzing mitigation strategies in the Draft PEIS, specifically suggesting that a new mitigation protocol be developed, compensatory mitigation be implemented, mitigation measures be applied to existing leases, greenhouse gas offset acquisition be required by lessees, and a mitigation fund from coal lease payments be established.

One commenter suggested that the existing climate is a finite resource, so mitigation measures to combat climate change are necessary under the Presidential Memorandum Mitigating Impacts from Natural Resource Development. Another commenter stated support for protecting essential habitat areas and waterways before relying on mitigation measures. One commenter questioned whether any mitigation can offset environmental impacts from coal mining and development.

#### ***Issue 5.11 Coal Transportation***

Commenters expressed concern for the impacts that transportation of coal can have on air quality, water resources, biological resources, visual resources, public health, noise, quality of life, and traffic in local communities. Commenters specifically stated concern for coal dust from trains and long traffic jams at train crossings.

Commenters request that the PEIS provide a detailed analysis and assessment of how Federal coal is transported from mines to the source of consumption and provide the public with information and analysis on what the impacts of this transport are likely to be.

#### ***Issue 5.12 Methane Capture***

Commenters stated that the PEIS should incorporate reduction strategies for mitigating methane emissions. One commenter stated that there should be a pause on production from mines that require a degasification system to vent methane, and others suggested that the BLM should move forward with the Mine Methane Waste Rule. A few commenters also noted that methane hydrates are a potential energy source.

#### ***Issue 5.13 Surface Owner Rights***

Commenters stated that the PEIS should incorporate protections for surface owners, including addressing the uncertainty of future mining beneath private land and consideration of surface landowners in split-estate transactions.

**4.6.8 Issue 6 Environmental Justice**

Some commenters stated that low-income populations will be disproportionately affected by the loss of jobs and the increase in electricity prices as result of Federal coal reform. Others stated that low-income populations, the elderly, children, and communities of color would be disproportionately subjected to adverse environmental, health, and economic impacts from coal mining, downstream activities, and climate change effects.

**4.6.9 Issue 7 Public Health and Safety**

Commenters stated that coal miners suffer health impacts, including respiratory diseases, increased incidence of cancer, and traumatic injury resulting from unsafe mine conditions. In addition, commenters cited concern for the impacts on public health and safety for those who live or work near coal extraction sites, including exposures to toxic pollutants in air and water, such as selenium, benzene, mercury, and arsenic.

Commenters noted that additional, more widespread impacts on human health, including increased risk of respiratory disease, heart disease, and neurological disorders, occur from coal-fired power plant emissions and from health effects related to warming temperatures and climate change. Some commenters also noted that increased health risks are present for children, pregnant women, and senior citizens. Commenters suggested that coal companies should be held accountable for external costs and poor health effects related to mining and stated that all steps of the coal life cycle are harmful to human health.

**4.6.10 Issue 8 Socioeconomics**

Many commenters noted the positive economic impacts that coal mining has had on their communities, including employment, income, and tax and royalty revenue. Commenters also discussed the public projects and services funded by coal revenues.

Conversely, one commenter stated that coal communities are some of the poorest in the nation, and another suggested that Federal coal subsidies unfairly disadvantage coal producers and result in decreased economic contributions. Another commenter stated that federally leased coal mining is less labor intensive than private coal mining and creates fewer jobs.

Commenters stated that Federal coal reforms, such as increased royalty rates, could result in potential bankruptcies for coal companies and socioeconomic impacts, including the following:

- Direct loss of jobs and income in the coal mining industry
- Loss of secondary jobs supported by the industry and employee spending in coal mining communities



- Increased electricity prices, due to higher costs of less reliable alternative energy sources and the subsequent impact of less disposable income to spend elsewhere
- Loss of social benefits that come with providing affordable and reliable power to other industries at all hours (e.g., healthcare and the military)
- Jobs shifting to other countries when domestic coal is no longer competitive

Some commenters also noted that declining coal production would result in disproportionate economic impacts on rural communities.

Other commenters stated that climate change and environmental degradation resulting from coal mining affects certain industries, such as tourism and recreation. Others suggested that coal mining increases health care costs and associated decreases in workforce productivity and that traffic, noise, and pollution impact the quality of life for coal mining communities. Some commenters suggested that transitioning to renewable energy sources now would result in cheaper electricity rates and decreased costs from environmental and health impacts in the long term and would allow for economic diversification in coal mining communities.

Many commenters also recommended that assistance be available to help coal miners transition to other jobs and ensure a just transition of coal-dependent communities to a renewable energy future. One commenter warned that impacts on small businesses must be adequately analyzed to comply with the Regulatory Flexibility Act and the Small Business Regulatory Enforcement Fairness Act.

#### **4.6.11 Issue 9 Tribal Interests and Native American Concerns**

Commenters expressed concern for the impacts that coal mining has on tribal interests and suggested the following be considered during the PEIS process:

- Coal mining impacts on climate change and non-industrialized nations
- Requirements for consulting with tribes
- Environmental impacts on tribal lands
- Limits on coal transportation over tribal land
- Restrictions on mining, in view of religious or cultural sites
- Impacts on fishing rights and tribal traditions

Other commenters expressed concern for the impacts that changes in coal regulation would have on tribal funding from coal mining and stated that it

would further impede coal mining. One commenter stated that this would be an infringement on tribal sovereignty.

#### **4.6.12 Issue 10 State's Interests and Concerns**

Commenters had suggestions related to state involvement during Federal coal reform, including transferring public lands to the states, involving state officials in policy discussions, considering impacts on state resources and local governments, and revisiting Federal/state lease profit split agreements and setting "appropriate use" parameters. One commenter stated that it is important to consider the unique situations in individual states as part of the PEIS process (e.g., amount of coal mined, number of jobs, revenue, etc.).

#### **4.6.13 Issue 11 Visual Resources**

Commenters expressed concern for the impact that coal mining has on visual resources and stated distaste for the scarred landscape.

#### **4.6.14 Issue 12 Water Resources**

Commenters stated concern for water resource impacts, including the following:

- Contamination of surface and underground water sources and related concerns about contaminated domestic water supplies and impacts on wildlife
- Depletion of groundwater sources and impacts on other land uses
- Failure to properly reclaim the mined area, leading to failed water restoration and the associated water resource risks resulting from climate change, such as drought, flooding, and acidification

One commenter suggested that coal mining does not have an impact on water quality, due to National Pollution Discharge Elimination System permitting procedures in place.

#### **4.6.15 Issue 13 Biological Resources**

Commenters stated concern for biological resource impacts, including the following:

- Habitat fragmentation
- Impacts from river sedimentation
- Disturbance of vegetation and wildlife habitats and susceptibility of mined areas to invasive species
- Dangerous metals and compounds impacts on wildlife
- Construction and transportation impacts on wildlife

Many commenters also noted concerns with impacts on aquatic and avian wildlife caused by climate change, including habitat loss and ocean acidification. Conversely, some commenters stated that wildlife coexists with mining operations and often thrives on reclaimed mine lands.

One commenter stated that the BLM is required to initiate consultation with the Fish and Wildlife Service and the National Marine Fisheries Service at the PEIS level.

#### **4.6.16 Issue 14 Other Resource Impacts**

Commenters stated that the analysis should be at multiple scales and should consider impacts on additional resources and resource uses, such as night skies, geological risks like subsidence, other land uses, such as agriculture, and wilderness characteristics. Some commenters stated that reclaimed coal mines have a beneficial impact on grazing, and others noted impacts on adjacent lands, including National Parks, such as Bryce Canyon.

#### **4.6.17 Issue 15 Renewable Energy**

Commenters stated support for investing in renewable energy programs over coal mining operations, due to the decreased environmental impact and efforts to mitigate climate change. They suggested implementing programs to help coal miners transition to renewable energy jobs. Commenters also stated that there is enough coal currently under lease to last through a transition to renewable energy.

Other commenters expressed opposition to renewable energy, stating that solar and wind farms have visual impacts, kill wildlife, and still require mining, because they need rare earth minerals. Commenters also stated that solar and wind energy cannot be supported in the eastern the United States, due to lack of available space; also, it is not an economically feasible, reliable, or consistent energy source. In particular, commenters stated that government subsidies are required to make renewable energy competitive with fossil fuels and that these forms of energy result in reduced tax and royalty contributions. One commenter suggested embracing microgrids instead of large grid interconnections.

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# CHAPTER 5

## FEDERAL COAL LEASING PROGRAM

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The following chapter describes the Federal coal program and provides baseline information intended to provide context for the consideration of program reform opportunities. This chapter includes: authorities, other Federal agency roles and responsibilities, historical information, state of the coal industry information, coal leasing and production data, market projections for coal, greenhouse gas emissions, socioeconomic considerations, and an overview of the Federal coal leasing process. It is important to note that Secretarial Order 3338 specifically stated that the Order does not apply to the coal program on Indian lands, as that program is distinct from the BLM's program and is subject to the unique trust relationship between the United States and federally recognized Indian tribes and government-to-government consultation requirements, nor does it apply to any action of the Office of Surface Mining Reclamation and Enforcement or the Office of Natural Resources Revenue.

### 5.1 AUTHORITIES

The Mineral Leasing Act of 1920, as amended (30 USC 181 et seq.), authorizes and governs leasing of public lands for developing deposits of coal, oil, natural gas, and other minerals. The Mineral Leasing Act gives the BLM responsibility for managing coal leasing on approximately 570 million acres of mineral estate that is owned by the Federal government, where coal development is permissible. Depending on the location, the surface estate of these lands is managed by the BLM, United States Forest Service, private landowners, state landowners, or other Federal agencies. Regulations that govern the BLM's coal leasing program may be found in Parts 3000 and 3400 of Title 43 of the CFR. As described below, other Federal and state agencies are responsible for regulating the environmental effects of coal mining, issuing permits to operators, collecting fees from the development of Federal coal, mine reclamation, and ensuring the health and safety of mine operations.

The Federal Coal Leasing Amendments Act (FCLAA) of 1976, as amended, (P.L. 94-377; 90 Stat. 1083–1092) updated sections of the Mineral Leasing Act, focusing on issues related to FMV and speculation. The FCLAA repealed the noncompetitive preference right leasing system for coal and required all new leases to be sold in a competitive bidding process. The FCLAA banned the BLM from accepting any bid less than the estimated FMV of the lease. It tightened diligent development and continuous operation requirements, and made enforcement of these provisions nondiscretionary. The FCLAA also established the principle of Maximum Economic Recovery, and facilitated the consolidation of leases into logical mining units for maximum economic recovery. To help with recovery of less accessible coal, the law authorized the BLM to make carefully justified and controlled modifications to a company's royalty rate or lease terms.

The FLPMA (43 USC 1701 et seq.) establishes the broad framework under which BLM manages public lands today. FLPMA established a unified, comprehensive, and systematic approach to managing and preserving public lands in a way that protects "the quality of scientific, scenic, historical, ecological, environmental, air and atmospheric, water resource, and archeological values." It established the principles of land use planning to guide the BLM in making its land management decisions. This framework required Federal land managers to balance conflicting demands on the land: productivity, environmental values, recreational opportunities, and economic return. FLPMA also required that the BLM ensure receipt of FMV in return for private extraction of public resources, and tasked the agency with considering likely future land uses, environmental concerns, and the protection of lands with wilderness characteristics when making long-term management decisions.

The SMCRA of 1977 (30 USC 1201 et seq.) is the primary Federal law that regulates the environmental effects of coal mining in the United States. SMCRA essentially created two programs: one for reclaiming pre-SMCRA abandoned mine lands and the other for regulating active coal mines. Title IV of SMCRA established the Abandoned Mine Reclamation Fund, supported by a fee on every ton of coal produced, to reclaim mine lands abandoned before the passage of SMCRA. Title V of SMCRA sets minimum performance standards for environmental protection and public health and safety that apply to surface coal mining and reclamation operations, surface effects of underground coal mining operations, and surface coal mining in special areas or in special circumstances (such as steep slope mining). A person who proposes to conduct surface coal mining and reclamation operations (which include surface effects of underground mining by definition) must apply for and receive a permit, which incorporate provisions of SMCRA and regulations (or the state equivalent), and must post performance bonds to cover the costs of reclamation.

In general, SMCRA establishes a program of cooperative federalism that allows a state or tribal regulatory authority (RA) to assume primary jurisdiction

(primacy) over the regulation of surface coal mining and reclamation operations within its borders once its regulatory program has been approved by the Secretary of the Interior. SMCRA requires that a state or tribal program demonstrate that the state's or tribe's rules and regulations are consistent with regulations issued by the Secretary pursuant to SMCRA. The OSMRE is responsible for ensuring that SMCRA is being enforced directly in Federal program states and tribes and through oversight of primacy states and tribes in order to ensure that each state and tribal RA is enforcing its counterparts to the Federal regulations.

The Energy Policy Act of 2005 (PL 109–58, 119 Stat. 594-1143) included five sections related to the Federal coal program, which involved increasing the cumulative acreage allowed for coal lease modifications, establishing a new mechanism to extend a logical mining unit beyond 40 years, providing new bonding provisions for payment of the remaining balance of a deferred bonus bid, changing the requirements for advance royalty payments, and changing the timing for development plan submission. Draft BLM regulations have been developed to implement those sections but have not yet been finalized (78 FR 49080-103, August 12, 2013). The BLM issued the following interim guidance documents to implement the Energy Policy Act of 2005:

- Advance royalty guidance (Energy Policy Act of 2005 Section 434) is provided in BLM-WO-IM-2006-127.<sup>14</sup>
- Deferred bonus bids guidance (Energy Policy Act of 2005 Section 436) is provided in BLM-WO-IM-2006-045.<sup>15</sup>
- Guidance regarding increased acreage for lease modification (Energy Policy Act of 2005 Section 432), which increased the limitation for lease modifications from 160 acres to 960 acres, is provided in BLM-WO-IM-2006-004.<sup>16</sup>

## 5.2 OTHER FEDERAL AGENCY ROLES AND RESPONSIBILITIES

The OSMRE within the Department of the Interior is responsible for carrying out the requirements of SMCRA in cooperation with states and tribes. OSMRE ensures that coal mines are operated in a manner that protects citizens and the

<sup>14</sup>BLM. 2006. Instruction Memorandum No. 2006-127 Interim Guidance for Implementation of the Energy Policy Act of 2005 for Federal Coal Lease Advance Royalty. March 24, 2006. Washington, DC. Available at [https://www.blm.gov/wo/st/en/info/regulations/Instruction\\_Memos\\_and\\_Bulletins/national\\_instruction/2006/im\\_2006-127\\_\\_.print.html](https://www.blm.gov/wo/st/en/info/regulations/Instruction_Memos_and_Bulletins/national_instruction/2006/im_2006-127__.print.html)

<sup>15</sup>BLM. 2005. Instruction Memorandum No. 2006-045. Interim Guidance for Implementation of The Energy Policy Act of 2005 [P.L. 109-58] for Federal Coal Lease, Deferred Bonus Bonds. November 25 2005. Washington, DC. Available at [https://www.blm.gov/wo/st/en/info/regulations/Instruction\\_Memos\\_and\\_Bulletins/national\\_instruction/2006/im\\_2006-045\\_\\_.print.html](https://www.blm.gov/wo/st/en/info/regulations/Instruction_Memos_and_Bulletins/national_instruction/2006/im_2006-045__.print.html)

<sup>16</sup>BLM. 2005. Instruction Memorandum No. 2006-004. Interim Guidance for Implementation of the Energy Policy Act of 2005 [P.L. 109-58] for Federal Coal Leasing. Washington, DC. September 30, 2016. [https://www.blm.gov/wo/st/en/info/regulations/Instruction\\_Memos\\_and\\_Bulletins/national\\_instruction/2006/im\\_2006-004\\_\\_.html](https://www.blm.gov/wo/st/en/info/regulations/Instruction_Memos_and_Bulletins/national_instruction/2006/im_2006-004__.html)

environment during mining and assures that the land is restored following mining. The OSMRE and the approved State RAs oversee the issuance of mine permits and reclamation bonding. SMCRA provides, however, that approval of mining plans under the Mineral Leasing Act cannot be delegated to the State RAs (30 USC 1273(c)). As a result, OSMRE is responsible for making a recommendation to the Secretary as to whether to approve, disapprove, or approve with conditions a mining plan or mining plan modification (30 CFR part 746). As part of this process, OSMRE notifies the BLM of any mine permit application on Federal lands and provides an opportunity for the BLM's input before it makes a recommendation to the Assistant Secretary of the Interior, Land and Minerals Management. SMCRA also requires OSMRE to work to mitigate the effects of past mining by pursuing reclamation of pre-SMCRA abandoned coal mines. However, despite remarkable achievements in reclamation of many abandoned coal mine sites that existed prior to the enactment of SMCRA, there remain more than \$4 billion worth of high priority health and safety coal-related abandoned sites in OSMRE's Abandoned Mine Land Inventory System (e-AMLIS) to be reclaimed.

The Office of Natural Resource Revenue (ONRR) within the Department of the Interior manages and ensures full payment of revenues owed for the development of the nation's energy and natural resources on the Outer Continental Shelf and onshore Federal and Indian lands. The ONRR collects, accounts for, and verifies natural resource and energy revenues due to states, American Indians, and the US Treasury, which includes product valuation. The ONRR coordinates with other Department of the Interior entities, including the BLM, Bureau of Indian Affairs, and Bureau of Ocean Energy Management (BOEM) to support the Department's management of oil, gas, coal, and other natural resources. The BLM works closely with the ONRR to ensure that the coal lessees are reporting coal production, sales, and inventory, which serve as the basis for revenue collection. The ONRR will notify the BLM if revenues are not being paid, and the BLM will enforce the terms and conditions of the lease, which may result in lease cancellation procedures.

The Mine Safety and Health Administration (MSHA) within the Department of Labor is delegated the responsibility of enforcing the Federal Mine Safety and Health Act of 1977, as amended, (30 USC 801 et seq.) and the Mine Improvement and New Emergency Response Act of 2006 (P.L. 109-236; 120 Stat. 493-505). MSHA works to prevent death, illness, and injury from mining and to promote safe and healthful workplaces for US miners. The agency develops and enforces safety and health rules for all US mines, and it provides technical, educational, and other types of assistance to mine operators. MSHA works cooperatively with industry, labor, and other Federal and state agencies to improve safety and health conditions for all miners in the United States. The BLM coordinates closely with MSHA in approval of the Resource Recovery and Protection Plans (R2P2) for each lease to assure the R2P2 are consistent with MSHA safety requirements and approved safety plans.



Other surface management agencies participate in the Federal coal leasing process. As previously stated, the Mineral Leasing Act gives the BLM responsibility for managing coal leasing on the mineral estate that is owned by the Federal Government. Depending on the location, the surface estate of these lands could be managed by the BLM, United States Forest Service, private landowners, state landowners, or other Federal agencies. The BLM is required to receive consent or concurrence from the appropriate surface management agency before issuing a lease or approving an exploration plan (43 CFR, Subparts 3425.3[b], 3482.2[a][1]). This occurs most frequently with coal reserves underlying National Forest System lands. In these cases, the BLM is required to apply any stipulations provided by the Forest Service to a lease or reject the lease application if the Forest Service does not give its consent.

### **5.3 HISTORICAL PERSPECTIVE**

Prior to passage of the Mineral Leasing Act of 1920, the Coal Lands Acts of 1864 and 1873 provided for the public auction of lands containing coal for private ownership and extraction. The passage of the Mineral Leasing Act took place in the context of a larger national debate about public land management. Until that point, Federal land policy had consistently been aimed at encouraging economic development of natural resources. Homesteading, railroad grants, state land grants, forestry programs, and the patenting process all sought to stimulate settlement, especially in more sparsely populated western lands. By the early 20th century, however, an opposing philosophy of managed development asserted that the public deserved compensation for private profit made on Federal land. The Mineral Leasing Act was the first in a series of laws that sought to balance development with revenue collection and management of leasing scale and location by the Federal government.

In 1920, the Mineral Leasing Act consolidated management of Federal coal resources with oil, natural gas, and certain other minerals and established a system of managed leasing of minerals on Federal lands. This allowed the government and tribes to retain control of public and tribal minerals and property while still encouraging development of the mineral resources they contained. This new program established the expectation that the public should be compensated for minerals mined on public land, and granted the Federal government control over the location and scale of that mining. It introduced the concepts of setting leasing levels, competitive bidding, and production royalties. The Mineral Leasing Act, along with amendments to the Act, forms the basis of the current Federal coal program.

From the passage of the Mineral Leasing Act to the early 1960s, low demand led to very little Federal coal leasing. The coal that was produced was typically in small quantities for railroad or local use, reflecting the absence of any large-scale demand for western coal. The 1960s saw an uptick in Federal coal leasing as interest in western coal began to increase. While from 1920 to 1960 Federal coal leasing averaged slightly more than 4 leases per year, the 1960s averaged 31

leases issued per year. However, many of these leases were speculative. By 1973, over 70 percent of the Federal coal leases ever issued had not produced any coal.

Public opposition to new hydroelectric dams and nuclear power that occurred in the 1960s combined with the formation of the Organization of the Petroleum Exporting Countries (OPEC) spurred increases in oil and gas prices, which positioned coal as the principal power plant fuel in the United States. Additionally, the passage of the CAA of 1970 created new incentives for cleaner burning, low-sulfur western coal. Utilizing this low-sulfur coal allowed coal-fired power plants to attain the standards set forth in the CAA of 1970 without the need to install costly flue-gas desulfurization units. The shift to western coal also spurred the construction and operation of a number of mine mouth power plants (i.e., power plants built on site at the coal mine) in part due to the cost benefits of shipping electricity through power lines compared with shipping coal by rail.

The interest in the vast reserves of western Federal coal brought new scrutiny to the management of the resource. As noted above, many leases in the west were being held in speculation and had not produced any coal. Concerns regarding speculation and nonproductive leases, as well as a lack of a clear regulatory framework, motivated the Department of the Interior to place a moratorium on Federal coal leasing in May 1971. Congress passed both FCLAA in 1976 and SMCRA in 1977. These two acts fundamentally changed the authorizing framework for the Federal coal program, thus requiring a programmatic review of the Federal coal leasing program to establish a new implementing regulatory structure. In 1979, the BLM published the Final Programmatic Environmental Statement Federal Coal Management Program.<sup>17</sup> The final rulemaking was published on July 19, 1979 (44 Fed. Reg. 42584). The results of this effort provided the framework for a largely revised coal leasing program, including guidance for the administration of existing leases, the processing of Preference Right Lease Applications, and the review of Federal lands to determine unsuitability for certain types of mining. The new final regulations established standards and procedures for determining when, where, and how to lease Federal coal (principally through competitive sales under a regional leasing program) and implemented FCLAA, as well as those aspects of SMCRA that were under the BLM's authority. As a result of these reforms, the moratorium was lifted in January of 1981.

The Powder River Basin of Wyoming held its first regional coal lease sale under the new program in 1982. However, irregularities with the sale led to questions as to whether the BLM had realized a FMV for the leases. These concerns prompted Congress to create the Commission on Fair Market Value Policy for

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<sup>17</sup> The 1979 programmatic review document was titled "Programmatic Environmental Statement." The subsequent supplement used the more modern terminology "Programmatic Environmental Impact Statement."

Federal Coal Leasing (known as the Linowes Commission) chaired by economist David F. Linowes, who had recently chaired Congress's Commission on the Fiscal Accountability of the Nation's Resources. Congress instituted another leasing moratorium during the Linowes Commission's review, which concluded 90 days after the publication of the Commission's report in February 1984.<sup>18</sup> The report provided 36 recommended changes to the Federal coal leasing program, some of which were gradually implemented over the next several years, while others were not. A key recommendation of the Linowes Commission was that "[t]he government should establish and announce in a timely fashion a coal leasing schedule to promote predictability and stability of federal leasing actions. In doing so, the government should have the flexibility to change the timing of lease sales and the quantity of coal offered based on its assessment of market conditions." The BLM published a Supplement to the Final Programmatic EIS of 1979 in October 1985 in response to these recommendations.

As a result of the Commission's report, the Department of the Interior revised the coal regulations to incorporate a two-tiered leasing structure. In certified coal producing regions where exploration and new mining was occurring, the BLM, through the Regional Coal Teams, would select tracts for lease sale. In areas outside of coal producing regions, mining companies would apply for specific tracts of lands to be leased (i.e., LBA), generally adjacent to their existing mines, also known as maintenance leasing. Notwithstanding this initial effort to inject competition into the lease sale process by planning in advance what resources were offered for sale in a region, the changes were short lived. Between 1987 and 1990, all six coal producing regions were "decertified" by the BLM, which cited considerations such as weak current and projected coal market conditions, the level of leasing interest in Federal coal and new mine development, public input, and views expressed by the Regional Coal Teams and the affected governors.<sup>19</sup> This had the effect of replacing the competitive regional leasing process with the LBA process.<sup>20</sup> Today, there are no regional

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<sup>18</sup> The coal leasing moratorium was not lifted upon publication of the Commission's report. Interior Secretary William P. Clark extended the suspension of coal leasing (with exceptions for emergency leasing and processing preference right lease applications, among other things) while the Interior completed its comprehensive review of the program. This review included proposed modifications to be made by the Department in response to the Linowes Commission, as well as other reports. Secretary Clark announced on August 30, 1984, that the Department of the Interior would prepare an EIS supplement to the 1979 Final Environmental Statement for the Federal Coal Management Program. The Department issued the Record of Decision for the PEIS supplement in January 1986, in the form of a Secretarial Issue Document. This document recommended continuation of the leasing program with modifications. In conjunction with those modifications, Secretary Donald Hodel lifted the leasing moratorium in 1987.

<sup>19</sup> BLM Handbook, H-3420-1, *Competitive Coal Leasing*, allows a lead state director to request decertification of a designated coal production region if this is the course recommended by the Regional Coal Team. A proposal to decertify a designated coal production region must be announced in the *Federal Register* (H-3420-1, Rel. 3-325).

<sup>20</sup> BLM. 1999. Public Participation in Coal Leasing. Final Rule. *Federal Register* Vol 52. Pp. 239-240. September 28, 1999. Available at <https://www.blm.gov/nhp/news/regulatory/3400-3420/3400-20f.pdf>

lease sales, and all new leasing is done through either the LBA process or lease modifications.

The Federal coal program remained relatively unchanged throughout the 1990s and 2000s. During that time, the Powder River Basin became the primary area of Federal coal leasing and production, and Federal coal commanded a much larger share of national coal production. The Federal coal program was last reviewed in 2013 by the Department of the Interior OIG and the GAO in two separate audits.<sup>21,22</sup> The OIG and GAO focused their specific recommendations on improving existing agency procedures (such as how to conduct FMV appraisals), however, both reviews made clear that Federal coal lease sales continue to suffer from a fundamental lack of competition under the LBA process. While BLM LBA sales are conducted through a competitive bidding process, the GAO noted that in fact, of the 107 tracts leased from 1990 to 2012, “sales for 96 (about 90 percent) involved a single bidder...which was generally the company that submitted the lease application. More than 90 percent of the lease applications BLM received were for maintenance tracts used to extend the life of an existing mine or to expand that mine’s annual production.” Combined, the audits resulted in 21 recommended changes to the BLM’s coal program covering coal leasing and exports, inspection and enforcement activities, transparency of the process, and timely processing of royalty rate reduction applications. The BLM addressed all 21 recommendations in new BLM guidance (including two new manuals and handbooks<sup>23</sup>) and development of additional mine inspector and valuation training.

Many stakeholders expressed concerns that BLM’s corrective actions, while helpful, were insufficient to rectify fundamental weaknesses in the program. To further explore these concerns, Secretary Jewell and the BLM hosted a series of listening sessions in March 2015 across the country to hear from the public their views on what, if any, reforms were seen as needed to the Federal coal program.

In response to the broad range of issues raised over the course of the past few years and through the listening sessions, on January 15, 2016, Secretary Jewell issued Order 3338 (see **Section 2.2**). The Order directs the BLM to carry out the following:

- I. A formal, comprehensive review of the Federal coal program through a discretionary programmatic EIS under NEPA

<sup>21</sup> OIG. 2013. Final Evaluation Report-Coal Management Program. CR-EV-BLM-0001-2012. June 11, 2013 Available at <https://www.doi.gov/sites/doi.gov/files/CR-EV-BLM-0001-2012Public.pdf>;

<sup>22</sup> GAO. 2013. Coal Leasing: BLM Could Enhance Appraisal Process, More Explicitly Consider Coal Exports, and Provide More Public Information. GAO-14-140. Published December 18, 2013. Publicly Released February 4, 2014. Available at <http://www.gao.gov/products/GAO-14-140>.

<sup>23</sup> US EIA. 2016. Changing US Energy Mix Reflects Growing Use of Natural Gas, Petroleum, and Renewables. July 21, 2016. Available at <http://www.eia.gov/todayinenergy/detail.php?id=27172>

2. A pause on significant new coal leasing decisions on public lands while the programmatic review is underway, with limited, enumerated exemptions and exclusions
3. A series of good government reforms to improve transparency and program administration, including establishing a public database to account for the carbon emissions from fossil fuels on public lands

## 5.4 STATE OF THE COAL INDUSTRY

According to the US Energy Information Administration (EIA), US coal consumption declined by more than 12 percent in 2015, relative to 2014, and is now at its lowest level since 1982.<sup>24</sup> New mine starts are very rare, and mining generally occurs in mature basins where there are active mines with known additional reserves. When existing mines need to secure additional coal reserves, it is generally to maintain current production levels necessary to fulfill existing contracts. The greatest percentage of Federal coal can be classified as “thermal” coal and is used for electrical generation. Approximately 33 percent of the nation’s electricity was produced from coal in 2015. Coal produced from Federal leases is generally sold into the domestic market, and at this time, only a small share of coal produced in Federal coal producing states is exported. For instance, coal exports from the Powder River Basin (where most Federal coal is located) were approximately 10 million tons (2.5 percent) out of the 404 million tons produced in 2015.<sup>25</sup> The reasons for a softening market are varied, but include a reduction in coal-fired generating capacity is primarily due to the decrease in natural gas prices, the aging coal fleet, and expanded requirements that coal plants install pollution controls. There has been an increase in coal companies filing for bankruptcy, which began in 2012 and recently included three of the nation’s largest producing companies.

### 5.4.1 Energy in the United States

Coal has been a significant contributor to total US energy consumption since the industrial revolution when steam-powered ships and railroads dominated transportation. In the latter half of the 1800s, coal was first used to generate electricity.<sup>26</sup> However, its role has decreased substantially over the past century (see **Figure 5-1**). At the beginning of the 20<sup>th</sup> century, coal provided for 75 percent of all US energy consumption with biomass and hydroelectric generation also providing significant sources of energy. By the mid-20<sup>th</sup> century coal had dropped to 36 percent of total US energy consumption in large part due to the role of increased demand for petroleum and mass production of the automobile. As natural gas consumption quadrupled over the next half century

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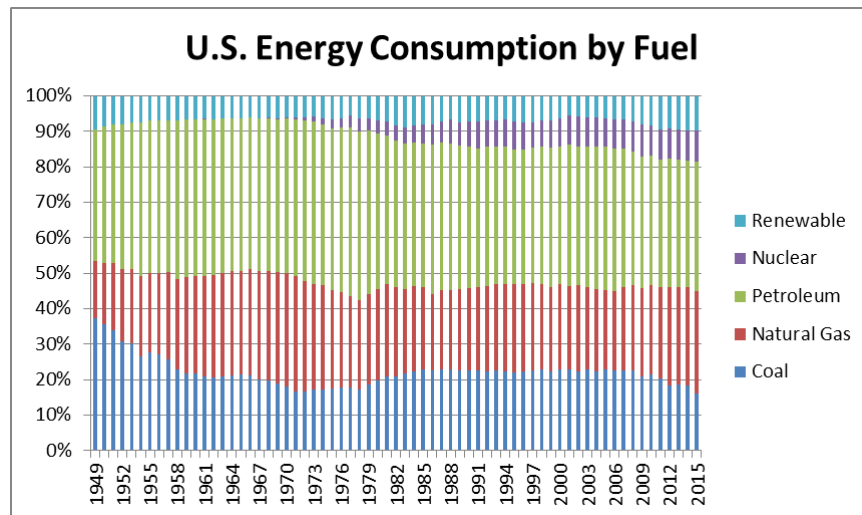
<sup>24</sup> US EIA. 2016. Changing US Energy Mix Reflects Growing Use of Natural Gas, Petroleum, and Renewables. July 21, 2016. Available at <http://www.eia.gov/todayinenergy/detail.php?id=27172>

<sup>25</sup> Woods Mackenzie. 2016. Powder River Basin Coal Supply Summary. June 2016.

<sup>26</sup> US Department of Energy. 2013. A Brief History of Coal Use. February 12, 2013. Available at [http://www.fe.doe.gov/education/energylessons/coal/coal\\_history.html](http://www.fe.doe.gov/education/energylessons/coal/coal_history.html)

and nuclear energy was developed, coal's share of total energy consumption decreased to 23 percent of total energy consumption by 2000.<sup>27</sup>

Since the turn of the century, energy consumption from natural gas has increased by nearly another 20 percent in large part due to advances in hydraulic fracturing. Renewable energy, such as wind and solar, have also become more cost competitive and widely available over the past 5 years. Energy demand growth has also slowed relative to historical averages due to some shifting from a manufacturing-based economy to a services-based economy and demand side energy efficiency breakthroughs. By 2015, coal constituted just 16 percent of total energy consumption in the United States. Early 2016 data suggest that its share will be even smaller as coal production and consumption reached multi-decade lows throughout the first three quarters of the year.<sup>28</sup>



**Figure 5-1. US Energy Consumption by Fuel Type**

Source: EIA 2016<sup>29</sup>

#### 5.4.2 Major Coal Basins and Characteristics

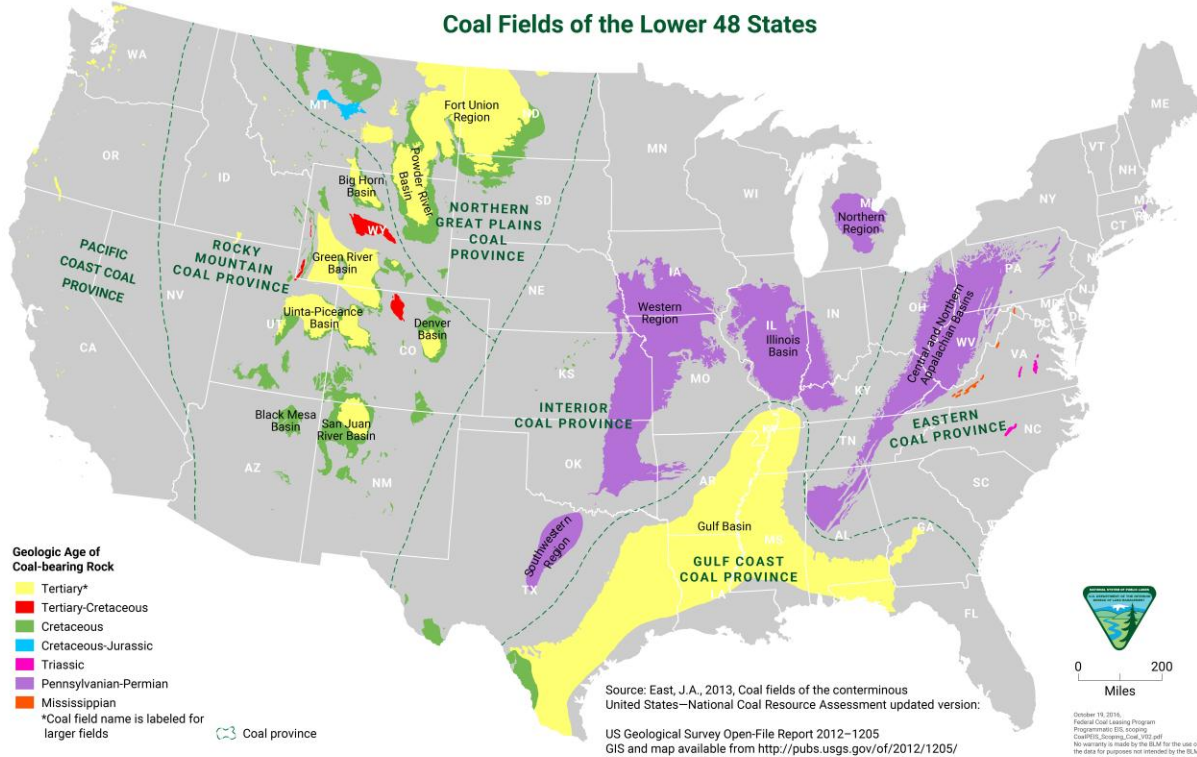
Major coal fields of the United States are shown in **Figure 5-2**. For the purposes of this overview in the scoping report, coal mining in the United States is divided into three primary regions: Appalachian, Interior, and Western.<sup>30</sup> In 2015, 42 percent of all coal produced in the United States came from Federal lands. The vast majority of coal mined on Federal lands (more than 99 percent)

<sup>27</sup> US EIA. 2016. October 2016 Monthly Energy Review. Table I.3. Primary Energy Consumption by Source. Release date October 27, 2016. Available at <http://www.eia.gov/totalenergy/data/monthly/#summary>

<sup>28</sup> Ibid.

<sup>29</sup> US EIA. 2016. October 2016 Monthly Energy Review. Table I.3. Primary Energy Consumption by Source. Release date October 27, 2016. Available at <http://www.eia.gov/totalenergy/data/monthly/#summary>

<sup>30</sup> The regional breakdown in the PEIS may differ from the overview in the scoping report.



**Figure 5-2. Coal Fields of the Lower 48 States**

is located in the western region. Of the 306 active Federal leases in 2015, all but six of those leases were located in the western region.<sup>31</sup> More narrowly, nearly 90 percent of the coal mined on Federal lands occurs in the Powder River Basin located in Wyoming and Montana. Any changes to the Federal coal program will have a more direct impact in the western region and Powder River Basin due to this heavy concentration of leases and production from the Federal estate.

As described below, coal has different characteristics in energy content and environmental properties that vary both within and between basins. The variation in the characteristics of coal typical to each basin can be significant, and, therefore, coals are not perfect substitutes for each other. For example, some western coals have less energy content than some eastern counterparts. Therefore, it takes more tons of these western subbituminous coals as compared with eastern bituminous coals to generate a given amount of electricity. Moreover, some power plants are designed to best accommodate certain ranks of coal. Coal switching is possible at most plants, but they may

<sup>31</sup> BLM. 2016. Total Federal Coal Leases in Effect, Total Acres Under Lease, and Lease Sales by Fiscal Year Since 1990. July 7, 2016. Available at [http://www.blm.gov/wo/st/en/prog/energy/coal\\_and\\_non-energy/coal\\_lease\\_table.html](http://www.blm.gov/wo/st/en/prog/energy/coal_and_non-energy/coal_lease_table.html)

need modifications (such as increased material handling capacity) to accommodate a different coal rank.

Production from the western coal region is largely comprised of the Powder River Basin subbituminous coal and other western bituminous coals. Among coal nationwide, the Powder River Basin is the single largest producing basin. In 2015, approximately 44 percent of United States coal production came from the Powder River Basin.<sup>32</sup> It is generally the lowest cost coal to produce due to thick coal seams reaching up to 400 feet and the proximity of the coal seams to the earth's surface, which allows surface mining generally. The subbituminous coal has lower heat content generally ranging from 8,200 to 8,900 Btu (British thermal units)/lb and lower sulfur content.<sup>33</sup> Due to both its low-heating value per ton and its distance from the eastern United States, where many coal-fired power plants are located, transportation costs become more significant for this basin.

Other Federal coal production occurs in the western bituminous region comprised of mines in Colorado, Utah, Arizona, southwestern Wyoming, and New Mexico. These western bituminous coals generally have higher mining costs due to thinner seams generally in the 5-15 feet range, though they tend to have higher heat content on average than the Powder River Basin coal. Outside of the Powder River Basin states of Wyoming and Montana, Colorado and Utah are the next highest producing coal states on Federal lands. They are generally considered to be high-quality coals, having high energy value and low sulfur content (averaging around 11,000 Btu/lb), and many have a 1.2 pound or less of sulfur dioxide content (SO<sub>2</sub>/mmBtu). Like the Powder River Basin, the western bituminous region is mainly utilized as thermal coal as well. However, there is one mine that produces a significant amount of metallurgical coal. Metallurgical coal is generally higher in carbon content and calorific value and is used in the production of steel rather than electricity generation purposes.

The Appalachian region is generally characterized as having three basins: the southern Appalachian, central Appalachian, and northern Appalachian coal basins. Coal produced in these basins generally have higher mining costs than the rest of the country as the coal seams are, on average, thinner and deeper relative to other regions. This results in high strip ratios for surface mines (the amount of material/earth that must be removed in order to remove a unit of coal), which drives up capital and operating cost, or underground mining operations which also drive up costs. The region is predominantly bituminous coal with high energy and low sulfur content. Higher energy content allows power plants to consume less coal to extract a given amount of energy. It also

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<sup>32</sup> US EIA. 2016. Coal Production and Number of Mines by State and Mine Type, 2015 and 2014. Annual Coal Report. November 3, 2016. Available at <https://www.eia.gov/coal/data.php#production>

<sup>33</sup> A small amount of bituminous coal occurs within the Powder River Basin in the Bull Mountain coalfield. See Woods Mackenzie. 2016. Powder River Basin Coal Supply Summary. June 2016.



has the advantage of being located in the east, where the majority of electricity demand and coal generation occurs, making transportation from mine to power plant relatively less expensive. Nevertheless, the Appalachian region is generally characterized as the highest cost coal of the major regions with the southern basin being the highest, followed by central and northern Appalachian basin coals.

The Interior region is largely comprised of the Illinois Basin, Gulf Lignite, and Western Region (Interior) coals. The Illinois Basin is the largest producing basin in this region and is comprised of bituminous coal with slightly less heat content than Appalachian coals on average. The coal seams are most often in the 1- to 10-foot thickness range and are generally located at depths less than 1,000 feet. Coal mining costs are lower in this region relative to the Appalachian due to more favorable seam thickness, mining conditions, and advances in long-wall mining technology. The coal mines also have the advantage of being at the center of the coal transportation network with all four major rail lines having a presence in the area, as well as the Ohio and Mississippi River barge traffic. Gulf lignite coal generally has much lower heat content and is, therefore, usually only transported short distances or used at mine mouth power plants.

The Western Region of the Interior is small in terms of production capacity and coal reserves. It is mainly comprised of Kansas and Oklahoma. These are bituminous coals that have high heat content and high sulfur content with a relatively high extraction cost. Oklahoma has some coal mines located on Federal leases that account for approximately 0.1 percent of Federal coal production.

#### **5.4.3 Maintenance Leasing**

Since the last remaining certified coal producing region was decertified in 1990, all Federal coal leasing has been made up of maintenance leases issued through the LBA process where tracts are nominated by an applicant (see **Section 5.3**). The areas where the BLM currently manages leases support a mature industry (i.e., existing mines that are well-established with all necessary infrastructure, equipment, rail facilities, etc.) and where opening new mines has proved to be cost prohibitive. This has led to the majority of existing lease sales only receiving one bid, typically from the operator of a mine adjacent to the new lease. While the Mineral Leasing Act, as amended, requires competitive leasing, the nature of the current coal industry is not generally conducive to multiple bidders bidding against each other for the same tract. The BLM, however, takes a number of steps in the LBA process to create as competitive an environment as possible.

In those unique areas where a lessee for an existing mine applies for a lease and other mines are nearby or adjacent, the BLM routinely reconfigures the proposed lease tract to try to make the tract attractive as a potential maintenance lease for those other nearby or adjacent mines, in addition to the applicant. However, the majority of coal mines do not adjoin or abut another

coal mine, and even if the mines adjoin or abut, the prospective lease might not be reconfigured for increased competition due to local physical limitations in geology and ownership.

The BLM recognizes that to remain truly competitive in a one-bidder environment, the pre-sale estimate of the tract's FMV must not only be factually supported and defensible, but also kept confidential. For a bidder to successfully win a Federal coal lease sale, the bid must meet or exceed the BLM's pre-sale estimated FMV. The BLM follows established appraisal methods in estimating the value, and the Office of Valuation Services (OVS), Division of Mineral Evaluation (DME) reviews each evaluation to assure it follows established procedures, is rational, and is supported by facts.

The BLM's pre-sale estimated FMV functions similarly to a "reserve value" in an auction. The result is that even if a sale receives only one bid, the bidder is "playing against the house" with the BLM's confidential pre-sale FMV estimate representing the lowest possible bid that can be accepted. After the coal lease sale, the BLM reviews the bids received and if none meets or exceeds the pre-sale estimated FMV (as reviewed by OVS), the BLM will reject all bids and may, at its discretion, re-offer a lease sale. Therefore, the lease applicant is cognizant of the real possibility that the years of planning and NEPA review and associated costs may result in not being awarded the lease if they do not provide a sufficient bid.

As seen in **Figure 5-3** below, over the period from 1990 to 2015, the BLM has generally leased Federal coal at approximately the same rate it has been mined. This trend supports the goal of the FCLAA to restrict speculation in Federal coal reserves. Leasing Federal coal at a rate that exceeds the rate at which it has been mined would be an indicator of increased speculation. Since 2012, the amount of Federal coal leased has been significantly less than the amount of Federal coal mined. This drop in leasing levels is reflective of the decline in the US and global coal market (see **Section 5.4.5**).

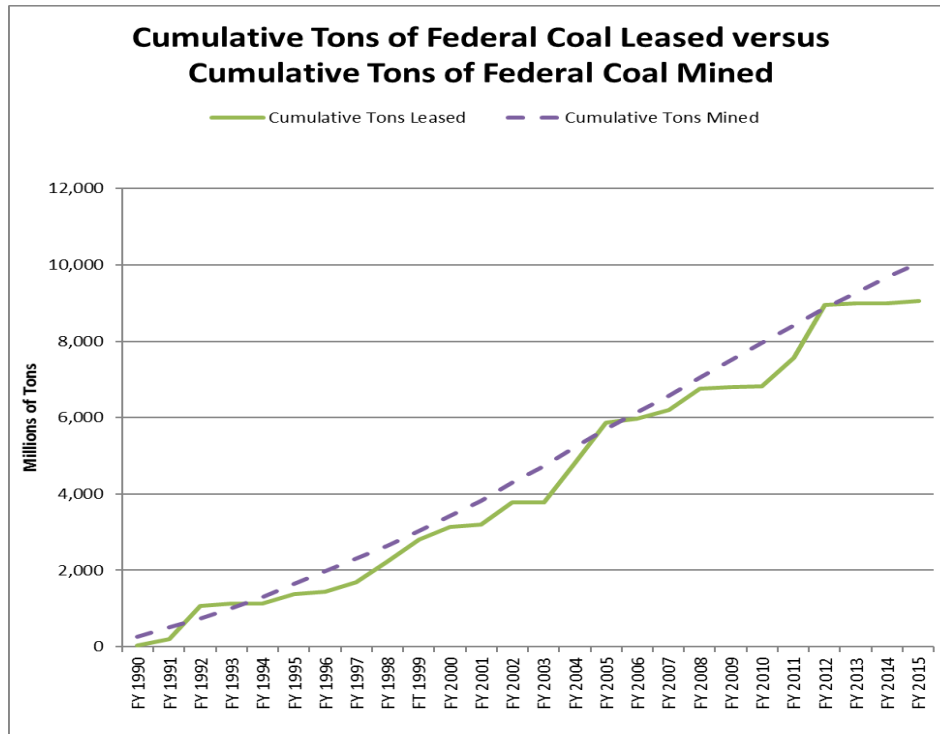
#### 5.4.4 Reserves

The United States leads the world in demonstrated reserve base for coal. As of 2016, the EIA estimated the United States had 477 billion tons of a demonstrated reserve base with approximately 255 billion tons being identified as recoverable.<sup>34</sup> Recoverable reserves at currently producing mines are approximately 18.3 billion tons.

Averaged across all Federal leases, at the end of 2015, there were approximately 20 years of production of Federal coal reserves under lease, assuming continued production at recent levels (approximately 375,000,000

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<sup>34</sup> US EIA. 2016. US Coal Reserves. November 4, 2016. Available at <http://www.eia.gov/coal/reserves/>



**Figure 5-3. Cumulative Tons of Federal Coal Leased Versus Mined**

Source: BLM 2016<sup>35</sup>

tons/year in 2015).<sup>36</sup> It is important to put this number into context, however, since it represents an average.

Mines under existing lease in the Powder River Basin, which accounts for nearly 90 percent of the total annual Federal coal production, cumulatively hold approximately 25 years of Federal reserves, assuming current production levels.<sup>37,38,39,40</sup> But for states and especially for individual mines, both within and outside of the Powder River Basin, there is quite a lot of variation in the years of remaining Federal reserves.

For instance, since Kentucky has a relatively small amount of leased Federal reserves (approximately 4.8 million tons) and low annual Federal production

<sup>35</sup> BLM. 2016. Total Federal Coal Leases in Effect, Total Acres Under Lease, and Lease Sales by Fiscal Year Since 1990. July 7, 2016. Available at [https://www.blm.gov/wo/st/en/prog/energy/coal\\_and\\_non-energy/coal\\_lease\\_table.html](https://www.blm.gov/wo/st/en/prog/energy/coal_and_non-energy/coal_lease_table.html)

<sup>36</sup> Office of Natural Resource Revenue. 2016. Production Data. Available at <https://www.onrr.gov/About/production-data.htm>;

<sup>37</sup> Ibid.

<sup>38</sup> BLM. 2016. Powder River Basin Coal. May 20, 2016. Available at [https://www.blm.gov/wy/st/en/programs/energy/Coal\\_Resources/PRB\\_Coal/deq\\_aqd.html](https://www.blm.gov/wy/st/en/programs/energy/Coal_Resources/PRB_Coal/deq_aqd.html),

<sup>39</sup> BLM. 2016. Powder River Basin Coal Production. May 6, 2016. Available at [https://www.blm.gov/wy/st/en/programs/energy/Coal\\_Resources/PRB\\_Coal/production.html](https://www.blm.gov/wy/st/en/programs/energy/Coal_Resources/PRB_Coal/production.html),

<sup>40</sup> BLM. 2014. Powder River Basin Coal Review. August 12, 2014. Available at [https://www.blm.gov/wy/st/en/programs/energy/Coal\\_Resources/PRB\\_Coal/prbdocs.html](https://www.blm.gov/wy/st/en/programs/energy/Coal_Resources/PRB_Coal/prbdocs.html)

(approximately 29,000 tons in 2016), the state has nearly 160 years of production remaining in Federal coal leases, assuming current production levels. Utah, on the other hand, has approximately 96 million tons of Federal reserves leased with an annual Federal production of about 12 million tons in 2016. This amounts to approximately 8 years of remaining Federal reserves, assuming current production levels.<sup>41</sup>

The BLM estimates that, as of September 2016, there are approximately 7.4 billion short tons of coal reserves available under existing leases (see **Table 5-1**).<sup>42</sup>

**Table 5-1**  
**Coal Reserves on Federal Lands**

<b>Estimated Recoverable Coal Reserves on Federal Lands (End of FY 2016)</b>	
	<b>Quantity (1000 tons)</b>
Powder River Basin	6,393,976
Colorado	422,678
Utah	96,255
All Other	487,638
<b>Total</b>	<b>7,400,547</b>

Source: Department of Interior 2016<sup>43</sup>

#### 5.4.5 Production

The BLM currently administers 306 coal leases encompassing over 462,000 acres in 10 states, with an estimated 7.4 billion tons of recoverable coal. Between 80 and 90 percent of coal produced in the United States is used for domestic electricity generation, with the remainder primarily being exported and used for industrial purposes.<sup>44,45,46</sup> In 2015, US coal production levels experienced one of its steepest declines since recordkeeping began. Production levels decreased from over 1 billion tons in 2014 to just under 0.9 billion tons in 2015.<sup>47</sup>

<sup>41</sup> BLM. 2016. Total Federal Coal Leases in Effect, Total Acres Under Lease, and Lease Sales by Fiscal Year Since 1990. July 7, 2016. Available at [https://www.blm.gov/wo/st/en/prog/energy/coal\\_and\\_non-energy/coal\\_lease\\_table.html](https://www.blm.gov/wo/st/en/prog/energy/coal_and_non-energy/coal_lease_table.html)

<sup>42</sup> US Department of Interior. 2016. Agency Financial Report Fiscal Year 2016. Available at [https://www.doi.gov/sites/doi.gov/files/uploads/doi\\_fy\\_2016\\_afr.pdf](https://www.doi.gov/sites/doi.gov/files/uploads/doi_fy_2016_afr.pdf)

<sup>43</sup> Ibid.

<sup>44</sup> US EIA. 2013. Monthly Generation Data by State, Producer Sector and Energy Source; Months through December 2013. Available at <http://www.eia.gov/electricity/monthly/>

<sup>45</sup> US EIA. 2013. Electric Power Monthly, September 2013 publication date, data for July 2013. Tables 1.6.A, 1.7.A, and 5.6.A. Available at <https://www.eia.gov/electricity/monthly/>

<sup>46</sup> In 2015, domestic coal purchases per EIA Form 923 equaled about 85 percent of coal production (MSHA, Form OSM-1).

<sup>47</sup> US EIA. 2015. Annual Coal Report. Coal Production and Number of Mines by State and Mine Type, 2015 and 2014. Available at <https://www.eia.gov/coal/data.php#production>

**Table 5-2** includes Federal coal production data provided by the ONRR for the years 2006, 2010, and 2015, which show a decline of approximately 81 million tons between 2010 and 2015. Coal exports are described in **Sections 5.4.6 and 5.5.3**).

**Table 5-2**  
**Federal Coal Production (tons)**

<b>State</b>	<b>2006</b>	<b>2010</b>	<b>2015</b>
Colorado	20,811,927	16,137,065	6,591,181
Montana	18,072,165	17,741,873	14,477,637
North Dakota	3,196,317	338,405*	5,261,915
Oklahoma	725,099	516,450	498,360
Utah	10,097,980	6,219,884	5,469,603
WY	369,856,067	397,535,690	313,790,093
Other*	22,435,709	18,396,804	29,472,084
<b>Grand Total</b>	<b>445,195,265</b>	<b>456,886,171</b>	<b>375,560,873</b>

Source. United States Extractive Industries Transparency Initiative (USEITI). 2015<sup>48</sup>

\*"Other" reflects coal produced on Federal leases, but state and county information is withheld in order to not reveal proprietary data. For example, North Dakota production from Mercer County is withheld in 2010 due to proprietary data concerns, and instead placed in the "other" category.

According to the most recent EIA Short-Term Outlook, 2016 coal production is expected to decrease by 138 million tons (15 percent), which would be the largest annual decline based on data going back to 1949.<sup>49</sup> These reductions have been felt most sharply in the Appalachian basin, particularly Central Appalachian coal, but are also observed in other basins with significant declines in the Powder River Basin production. These reduced production levels are driven by a variety of factors, including low natural gas prices, which drives some displacement of coal-fired electric generation by natural gas-fired generation.<sup>50</sup> In addition to low natural gas prices, reduced electricity demand growth, pollution control requirements, and a number of other reasons are cited by the EIA and industry for recent coal plant retirements that totaled 41 gigawatts (GW) between 2010 and 2015.<sup>51,52</sup> The coal plants anticipated to retire between 2015 and 2022 accounted for 30 GW and 56 million tons of 2014 coal deliveries. From the Powder River Basin alone, over 32 million tons of 2014 Powder River Basin deliveries (9 percent) were to plants expected to

<sup>48</sup> United States Extractive Industries Transparency Initiative (USEITI). 2015. Federal Production by Location.

Available at <https://useiti.doi.gov/downloads/federal-production/>

<sup>49</sup> US EIA. 2016. Short-Term Outlook. December 6, 2016. Available at <https://www.eia.gov/forecasts/steo/report/coal.cfm>

<sup>50</sup> Ibid.

<sup>51</sup> See for example, US EIA. 2014. Planned coal-fired power plant retirements continue to increase. March 30, 2014. Available at <http://www.eia.gov/todayinenergy/detail.php?id=15491>

<sup>52</sup> US EIA. 2015 Form 860. Schedule 3 "Generator Data (Retired and Canceled Units)"

retire by 2022. These drivers, along with other market and regulator drivers, are discussed in more detail below.

Coal prices have fallen in recent years, in large part due to shrinking demand. As annual coal production in 2016 is expected to be more than 24 percent lower than 2014 levels, producers have focused on minimizing coal production costs and closing higher cost mines over the past several years.<sup>53</sup> Lower petroleum prices have also helped reduce mining cost. The nationwide average delivered coal price was \$2.38/mmBtu in 2012, but dropped to \$2.14/mmBtu by 2016.<sup>54</sup>

#### 5.4.6 Main Drivers of Coal Demand

The demand for US coal is driven by a variety of market and regulatory factors. Electricity demand growth, installed coal-fired generating capacity, the relative prices of alternative fuel sources, coal demand from the domestic metallurgical and industrial markets, net US exports of coal, and existing and proposed environmental rules all affect the future supply and demand for US coals, which in turn affect coal pricing. The price of US coals drives domestic coal production. Several of the market and regulatory drivers impacting coal-fired electricity production and, consequently, demand for US coal production are highlighted below.

##### **Market Drivers**

###### *Natural Gas Price*

The availability and the price of natural gas is one of the single biggest drivers of US coal demand. As noted above, the bulk of coal demand in the United States stems from electricity generation. As a fuel for electricity generation, coal primarily competes with natural gas generation, as both are dispatchable resources that can be ramped up or down in response to market dynamics. Together, the two fuel sources account for approximately two-thirds of the electricity generated in the United States.

The breakthroughs in the cost and performance of hydraulic fracturing technology in the late 2000s increased the supply of domestic natural gas for electricity generation while lowering the cost. The Henry Hub natural gas spot price dropped significantly following this technology maturation. Prices were near \$13.00/mmBtu in June of 2008, but had dropped to less than \$3/mmBtu in June of 2015.<sup>55</sup> Natural gas gross withdrawals rose by more than 25 percent over this time frame.<sup>56</sup>

<sup>53</sup> US EIA. 2016. Short-Term Energy Outlook. US Coal Production Figure. December 2016. Available at <http://www.eia.gov/forecasts/steo/data.cfm?type=figures>

<sup>54</sup> US EIA. 2016. Short-term Energy Outlook. December 6, 2016. Available at <http://www.eia.gov/beta/steo/#?v=8>

<sup>55</sup> US EIA. 2016. Henry Hub Natural Gas Spot Price. Available at <https://www.eia.gov/dnav/ng/hist/rngwhhdd.htm>

<sup>56</sup> US EIA. 2016. Natural Gas Gross Withdrawals and Production. Available at [https://www.eia.gov/dnav/ng/ng\\_prod\\_sum\\_a\\_EPG0\\_FGW\\_mmcf\\_a.htm](https://www.eia.gov/dnav/ng/ng_prod_sum_a_EPG0_FGW_mmcf_a.htm)

The lower natural gas price enabled natural gas-fired generation to become more competitive with coal-fired generation. In 2005, coal-fired generation accounted for approximately 50 percent of the domestic electricity generation, and natural gas generation was less than 20 percent. In 2015, with the increased supply and reduced price of natural gas, each fuel constituted approximately one-third of US electricity generation.<sup>57</sup> The reduction in natural gas price also spurred a significant build out in new natural gas-fired combined-cycle power plants. Since the beginning of 2012, 24 GW of new natural gas-fired combined-cycle power plants have been built while less than 5.9 GW of coal-fired power plants have been added to the grid during the same period.<sup>58</sup> New natural gas combined-cycle generation units have seen significant decreases in the expected levelized cost of electricity (LCOE). EIA's Annual Energy Outlook projections for the technology LCOE dropped to below \$50/MWh in some regions while the projected LCOE for new conventional coal remains near \$100/MWh. The combined drop in fuel cost and generating technology cost for natural-gas generation makes it difficult for new coal generation to compete.<sup>59,60</sup>

#### *Renewable Energy*

Wind and solar generation have also grown significantly in recent years and have provided another source of competition for fossil-fuels in electricity generation. These technologies have low variable operating costs and will, therefore, once built, generally be deployed before any fossil-fuel source. The combined total generation from these two sources in 2005 provided less than 1 percent of the country's electricity generation, but represented more than 5 percent by 2015.<sup>61</sup> The growth is driven by improvements in performance and reductions in the cost of the renewable energy technology. Policy measures, such as renewable energy tax credits and state renewable energy portfolio standards, create an additional push for the expansion of renewable energy generation. The 2016

<sup>57</sup> US EIA. 2016. Net Generation for All Sectors, Annual. Electricity Data Browser. Available at <http://www.eia.gov/electricity/data/browser/#!/topic/0?agg=2,0,1&fuel=vtvv&geo=g&sec=g&linechart=ELEC.GEN.AL-L-US-99.A~ELEC.GEN.COW-US-99.A~ELEC.GEN.NG-US-99.A~ELEC.GEN.NUC-US-99.A~ELEC.GEN.HYC-US-99.A~ELEC.GEN.WND-US-99.A~ELEC.GEN.TSN-US-99.A&columnchart=ELEC.GEN.ALL-US-99.A~ELEC.GEN.COW-US-99.A~ELEC.GEN.NG-US-99.A~ELEC.GEN.NUC-US-99.A~ELEC.GEN.HYC-US-99.A~ELEC.GEN.WND-US-99.A&map=ELEC.GEN.ALL-US-99.A&freq=A&ctype=linechart&ltype=pin&rtype=s&maptype=0&rse=0&pin=>

<sup>58</sup> US EIA. 2015. Form EIA 860 Data – Schedule 3, “Generator Data.” Available at <http://www.eia.gov/electricity/data/eia860/>

<sup>59</sup> The White House. 2016. US Mid-Century Strategy for Deep Decarbonization. November 2016. p.26. Available at [https://www.whitehouse.gov/sites/default/files/docs/mid\\_century\\_strategy\\_report-final.pdf](https://www.whitehouse.gov/sites/default/files/docs/mid_century_strategy_report-final.pdf).

<sup>60</sup> EIA. 2016. Levelized Cost and Levelized Avoided Cost of New Generation Resources in the Annual Energy Outlook 2016. Available at [http://www.eia.gov/outlooks/aeo/pdf/electricity\\_generation.pdf](http://www.eia.gov/outlooks/aeo/pdf/electricity_generation.pdf)

<sup>61</sup> US EIA. 2016. Net Generation for All Sectors, Annual. Electricity Data Browser. Available at <http://www.eia.gov/electricity/data/browser/#!/topic/0?agg=2,0,1&fuel=vtvv&geo=g&sec=g&linechart=ELEC.GEN.AL-L-US-99.A~ELEC.GEN.COW-US-99.A~ELEC.GEN.NG-US-99.A~ELEC.GEN.NUC-US-99.A~ELEC.GEN.HYC-US-99.A~ELEC.GEN.WND-US-99.A~ELEC.GEN.TSN-US-99.A&columnchart=ELEC.GEN.ALL-US-99.A~ELEC.GEN.COW-US-99.A~ELEC.GEN.NG-US-99.A~ELEC.GEN.NUC-US-99.A~ELEC.GEN.HYC-US-99.A~ELEC.GEN.WND-US-99.A&map=ELEC.GEN.ALL-US-99.A&freq=A&ctype=linechart&ltype=pin&rtype=s&maptype=0&rse=0&pin=>

Annual Energy Outlook reference case anticipates that renewable energy generation will continue to grow by 3.6 percent per year on average between 2015 and 2040.<sup>62</sup> This growth in renewable energy generation is expected to add to the downward pressure on coal demand. Both wind and solar generation have seen precipitous drops in projected LCOE for new generation, both dropping to averages well below \$100/MWh and, therefore, less than new coal, in the latest Annual Energy Outlook reference case.<sup>63</sup>

#### *Electricity Demand*

Electricity demand has leveled off in recent years in the wake of the 2009 recession due to both slower economic growth and advancements in demand-side energy efficiency. Demand growth has slowed every decade since the 1950s when it was above 10 percent per year, but it has reached new lows since the 2009 recession with some years even experiencing negative demand growth.<sup>64</sup> The 2016 Annual Energy Outlook reference case anticipates average growth of 0.9 percent from 2015 to 2040.<sup>65</sup> As the largest source for coal demand, this slow rate of electricity demand growth limits the opportunity for increased coal production.

#### *Exports*

The high price and high demand for coal in Asian markets at the beginning of the decade has rapidly subsided. The Newcastle, Australia benchmark thermal coal price was approximately \$145/ton in 2011, but experienced continued and steady decline down to \$53/ton in June of 2016.<sup>66</sup> Slow global economic growth, decoupling of electricity demand with China's gross domestic product, protectionist policies regarding China's domestic coal industry, aggressive air pollution mitigation policies in China's 13<sup>th</sup> Five-Year Plan that involve promoting non-coal alternatives, and a cancellation of most of the proposed Northwest coal export terminals have combined to significantly lower the expected levels of US coal exports.<sup>67</sup>

Current total US coal export capacity is 234 million tons per year nationwide with 180 million tons being located on the East or Gulf Coast. Most US coal

<sup>62</sup> US EIA. 2016. Annual Energy Outlook. Electricity Supply, Disposition, Prices, and Emissions. Available at <http://www.eia.gov/outlooks/aeo/data/browser/#/?id=8-AEO2016&cases=ref2016&sourcekey=0>

<sup>63</sup> The White House. 2016. US Mid-Century Strategy for Deep Decarbonization. November 2016. p.26. Available at [https://www.whitehouse.gov/sites/default/files/docs/mid\\_century\\_strategy\\_report-final.pdf](https://www.whitehouse.gov/sites/default/files/docs/mid_century_strategy_report-final.pdf)

<sup>64</sup> US EIA. 2016. Annual Energy Outlook 2016 with projections to 2040. MT-15. August 2016. Available at [http://www.eia.gov/forecasts/aeo/pdf/0383\(2016\).pdf](http://www.eia.gov/forecasts/aeo/pdf/0383(2016).pdf)

<sup>65</sup> Ibid.

<sup>66</sup> Williams-Derry, C. 2016. The Rise and Fall of the Asian Coal Bubble. Sightline Institute. Available at [http://web.law.columbia.edu/sites/default/files/microsites/climate-change/williams\\_derry\\_the\\_rise\\_and\\_fall\\_of\\_the\\_asian\\_coal\\_bubble.pdf](http://web.law.columbia.edu/sites/default/files/microsites/climate-change/williams_derry_the_rise_and_fall_of_the_asian_coal_bubble.pdf)

<sup>67</sup> Climate Home. 2016. China's Five Year Plan to Radically Tighten Air Pollution Targets. November 3, 2016. Available at <http://www.climatechangenews.com/2016/03/11/chinas-five-year-plan-to-radically-tighten-air-pollution-targets/>



exports have been non-Federal coals and non-western coals and only use a fraction of this export capacity.<sup>68</sup> In 2015, coal export levels were 74 million tons.<sup>69</sup> Moreover, most of the coal exported is metallurgical coal and is exported from terminals in the eastern United States or the Gulf Coast.<sup>70</sup> Significant ramp-up in coal exports would require increased export infrastructure. Of the six large coal export terminals proposed since 2010 when Asian coal prices were enticing supplier interest, not one has been built or permitted. Moreover, support and permits for all but one of the projects have been withdrawn as international demand has weakened and resistance from local communities has increased. The one remaining project, Millennium Bulk Longview Terminal, is down to just one backer after Arch Coal sold its position in the project in 2016.<sup>71</sup> Moody's financial services notes that export potential will remain capped by port capacity limitations.<sup>72</sup>

#### *Rail Availability*

Rail shipments account for 67 percent of the coal shipped in the United States to power plants.<sup>73</sup> Western coal mines are primarily served by the Union Pacific and BNSF carriers, while Norfolk Southern and CSX are the dominant carriers in the eastern United States. In 2015, coal shipments accounted for 37 percent of the freight shipments in the rail industry and about 17 percent of the rail industry revenues.<sup>74</sup> With the fast growth of oil production in the Bakken Shale region, competition for rail space between coal and oil had sharpened in recent years and made it more difficult at times for coal companies to connect with utility consumers. Some power customers are beginning to hedge their coal deliveries by railroads with barge and truck delivery capability. However, in the arid west where most Federal coal is found, transportation distance from the mine is generally too great for truck transportation to be competitive with railways, and waterways are too limited in their occurrence and flowrates for

<sup>68</sup> Institute for Energy Economics and Financial Analysis. 2014. No Need for New US Coal Ports: Data Shows Oversupply in Capacity. November 19, 2014. Available at <http://www.ieefa.org/wp-content/uploads/2014/11/Sanzillo-port-capacity.pdf>

<sup>69</sup> US EIA. 2016. Today in Energy. US coal exports declined 23% in 2015, as coal imports remained steady. March 7, 2016. Available at <http://www.eia.gov/todayinenergy/detail.php?id=25252>

<sup>70</sup> US EIA. Coal Data Browser. Export quantity to total world of All coal 2015. Available at [http://www.eia.gov/beta/coal/data/browser/#!/topic/41?agg=2,1,0&rank=ok&linechart=COALEXP\\_QTY.TOT-TOT-TOT.A&columnchart=COALEXP\\_QTY.TOT-TOT-TOT.A&map=COALEXP\\_QTY.TOT-TOT-TOT.A&freq=A&start=2001&end=2015&ctype=map&ltype=pin&rtype=s&pin=&rse=0&motype=0](http://www.eia.gov/beta/coal/data/browser/#!/topic/41?agg=2,1,0&rank=ok&linechart=COALEXP_QTY.TOT-TOT-TOT.A&columnchart=COALEXP_QTY.TOT-TOT-TOT.A&map=COALEXP_QTY.TOT-TOT-TOT.A&freq=A&start=2001&end=2015&ctype=map&ltype=pin&rtype=s&pin=&rse=0&motype=0)

<sup>71</sup> Sightline Institute. 2016. Arch Coal Backs Out of Longview Export Terminal. May 27, 2016. Available at <http://www.sightline.org/2016/05/27/arch-coal-backs-out-of-longview-export-terminal/>

<sup>72</sup> Zubets-Anderson, A. . 2016. "Bankruptcy and Financing Rating Agency's Perspective." Moody' Investor Service. Presented at the US Coal in the 21st Century: Markets, Bankruptcy, Finance and Law conference. Columbia Center on Global Energy Policy and the Sabin Center for Climate Change Law. September 2016. Summary Available at [http://web.law.columbia.edu/sites/default/files/microsites/climate-change/panel\\_summaries\\_-\\_us\\_coal\\_in\\_the\\_21st\\_century.pdf](http://web.law.columbia.edu/sites/default/files/microsites/climate-change/panel_summaries_-_us_coal_in_the_21st_century.pdf)

<sup>73</sup> US EIA. 2014. Today in Energy. Railroad deliveries continue to provide the majority of coal shipments to the power sector. June 11, 2014. Available at <http://www.eia.gov/todayinenergy/detail.cfm?id=16651>

<sup>74</sup> Association of American Railroad. 2016. Railroads and Coal. July 2016. Available at <https://www.aar.org/BackgroundPapers/Railroads%20and%20Coal.pdf>

barge transport to be viable. If competition for rail space among commodities continues to stiffen, it will put increasing upward pressure on delivered coal prices. The more recent downturn in oil prices and expansion in western rail capacity have alleviated some of the competition for rail space.

### ***Current and Future Policy and Regulatory Drivers***

#### *Paris Agreement*

On December 12, 2015, 196 Parties to the United Nations Framework Convention on Climate Change (UNFCCC or Paris Agreement) adopted a framework to coordinate climate change mitigation and adaptation efforts. The Paris Agreement aims to limit global warming to less than 2 degree Celsius by limiting the amount of greenhouse gas emissions and by increasing the amount of sequestration. This goal is put into operation through each country's submission of emission reduction goals, referred to as intended nationally determined contributions (INDCs). Countries will report their reduction targets every 5 years starting in 2020. Although emission reduction and climate change abatement strategies are still forthcoming to establish and achieve the INDCs, significant reductions in fossil fuel consumption are one likely component of many such plans and necessary to remain below the 2 degree Celsius target.<sup>75</sup>

The EIA does not yet model the Agreement explicitly in its International Energy Outlook, as it is still awaiting more clarity on implementation strategies. However, as Federal, regional, or state emission reduction programs that reflect parallel carbon dioxide (CO<sub>2</sub>) reduction efforts are codified into law through regulations, such as the CPP, Regional Greenhouse Gas Initiative, or Assembly Bill 32, they are captured in the EIA Annual Energy Outlook. The Paris Agreement is anticipated to apply downward pressure to coal consumption both domestically and internationally.

#### *US-China Bilateral Agreement*

The US-China Bilateral Agreement announced in November 2014 reflected significant commitments to CO<sub>2</sub> reductions by two of the world's largest CO<sub>2</sub> emitters, as well as two of the largest coal producers, consumers, and holders of reserves. The United States agreed to an emission reductions target of 26-28 percent below 2005 levels by 2025. China committed to peaking emissions around 2030. The two sides intend to cooperate on advanced coal technologies, nuclear energy, shale gas, and renewable energy to help optimize the energy mix

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<sup>75</sup> Currently, the United States has committed to reduce net greenhouse gas emissions in the range of 17 percent by 2020 and 26-28 percent by 2025, relative to 2005 levels. This target is consistent with a straight-line emissions reduction pathway from 2020 to deep, economy-wide emission reductions of 80 percent or more by 2050. See International Energy Agency. 2015. Energy and Climate Change. p.150. Available at <https://www.iea.org/publications/freepublications/publication/WEO20>

and to reduce emissions, including from coal, in both countries.<sup>76</sup> These reduction targets would put additional downward pressure on coal demand.

*North America Climate, Clean Energy, and Environment Partnership Action Plan*

On June 29, 2016, the leaders of Canada, Mexico, and the United States announced a plan to pursue 50 percent clean power generation collectively by 2025. These carbon-free emissions sources would include renewable energy, nuclear generation, demand reduction through energy efficiency, and potential carbon capture and storage technologies. These carbon-free or low-carbon technologies would reduce the need for some carbon-intensive electricity generating sources, such as coal-fired power plants. The realization of this clean energy target would likely put downward pressure on domestic coal production relative to current projected levels.

*Morocco Conference of the Parties (2016) and Mid-Century Strategy*

On November 16, 2016, the United States submitted its Mid-Century Strategy for Deep Decarbonization to the United Nations Convention on Climate Change at the Conference of Parties hosted in Morocco.<sup>77</sup> The submission was consistent with the Paris Agreement's requirement to submit climate action plans called INDCs to keep global temperatures from rising by more than 2 degrees Celsius. While not policy prescriptive, the technical document highlights key opportunities and challenges for reducing CO<sub>2</sub> emissions 80 percent below 2005 levels by 2050. The Mid-Century Strategy for Deep Decarbonization illustrates pathways that include a deep decarbonization of the electricity sector that includes a decrease in coal's share of electricity generation. The amount of the decrease is expected to vary significantly depending on the future commercial deployment of carbon capture and sequestration, with enhanced use of carbon capture and sequestration associated with greater use of coal.

*Clean Power Plan and the Carbon Pollution Standards*

On August 3, 2015, the US Environmental Protection Agency (EPA) finalized the CPP as the first ever US national standards to address carbon pollution from existing power plants. Power plants are historically the largest source of greenhouse gas emissions in the United States, accounting for about 30 percent of the total. Coal has been the dominant fuel for power plants, and coal-fired power plants are, on average, the most carbon-intensive sources of electricity generation.

The CPP requires that states develop and implement plans to ensure the power plants in their state—either individually, together, or in combination with other measures—achieve the emission requirements starting in 2022, with full

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<sup>76</sup> The White House. 2016. US-China Joint Announcement of Climate Change. November 11, 2014. Available at <https://www.whitehouse.gov/the-press-office/2014/11/11/us-china-joint-announcement-climate-change>

<sup>77</sup> The White House. 2016. US Mid-Century Strategy for Deep Decarbonization. November 2016. p.26. Available at [https://www.whitehouse.gov/sites/default/files/docs/mid\\_century\\_strategy\\_report-final.pdf](https://www.whitehouse.gov/sites/default/files/docs/mid_century_strategy_report-final.pdf)

implementation by 2030. The rule is also anticipated to trigger additional investment in demand-side energy efficiency, resulting in less overall demand for electricity generation. On February 9, 2016, the US Supreme Court issued a stay of the regulation, halting its implementation until the litigation concludes. On September 27, 2016, oral arguments were held in front of a 10-judge panel at the DC Circuit Court of Appeals.

While the CPP addressed emissions from existing power plants, the EPA also finalized the Carbon Pollution Standards on the same day in 2015 to reduce emissions from new, modified, and reconstructed sources.<sup>78</sup> This rule established standards for electric utility steam-generating units (generally coal-fired), along with stationary combustion turbines, that reflect the degree of emissions limitation achievable and consistent with the Clean Air Act requirements.

#### *Mercury Air Toxics Standard*

The EPA Mercury Air Toxics Standard was finalized in 2012, and its compliance requirements began in 2015 and 2016. The rule puts limits on toxic air pollution, including mercury, arsenic, and metals, from fossil-fuel-fired power plants. To comply with the rule's emission standards, many sources would need to install capital-intensive pollution control equipment, such as flue gas desulfurization or dry sorbent injection.

#### *Cross-State Air Pollution Rule*

On July 6, 2011, the EPA finalized the Cross-State Air Pollution Rule under section 110 of the Clean Air Act to protect downwind states from upwind sources of air pollution in other states. The rule places limits on the amount of SO<sub>2</sub> and nitrogen oxides (NO<sub>x</sub>) emissions that the eastern states' power fleet may emit in a given year. It allows for limited emissions trading, but provides a mechanism to ensure that each state meets a specific level of reductions. Phase I of the rule went into effect in 2015, and phase 2 is scheduled to go into effect in 2017. In September of 2016, the EPA issued an update to the Cross-State Air Pollution Rule to incorporate the 2008 ozone National Ambient Air Quality Standards, which resulted in different, often tighter, state ozone-season NO<sub>x</sub> emission limits for some of the affected states. By limiting the emissions of a pollutant associated with combusting coal, the rule is anticipated to put downward pressure on coal demand.

#### *Coal Ash*

In December 2014, the EPA finalized national regulations to provide a comprehensive set of requirements for the safe disposal of coal combustion residuals, commonly known as coal ash, from coal-fired power plants. The rule establishes technical requirements for coal combustion residual landfills and

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<sup>78</sup> 80 FR 64510

surface impoundments under Subtitle D of the Resource Conservation and Recovery Act.

#### *Effluent Limitations Guidelines*

On September 30, 2015, the EPA finalized a revision to the discharge limitations for toxics in power plant wastewater. The rule will likely drive additional investment for some coal steam power plants to reduce current discharge rates to levels commensurate with the new regulatory requirements.

#### *Clean Water Act 316(b)*

This EPA rulemaking required certain impingement and entrainment safeguards at power plants for cooling water intake. This rule covered roughly 1,065 existing facilities that are designed to withdraw at least 2 million gallons per day of cooling water. The EPA estimates that 544 power plants are affected by this rule.

#### *State Regulations and Programs*

In addition to Federal and international drivers, there are numerous state drivers to reduce greenhouse gas emissions that may affect coal demand as well. For instance, California's Assembly Bill 32 is an economy-wide greenhouse gas emission reduction program for the state aimed at reducing greenhouse gas emissions to 1990 levels by 2020. The regional greenhouse gas initiative is a collective effort among nine New England and Mid-Atlantic states to reduce emissions from the power sector. Many states have clean energy and renewable energy incentives as well. As of late 2015, 29 states and the District of Columbia have renewable energy portfolio standards to support the development of renewable energy. New York State announced in August 2016, a new Clean Energy Standard that requires the utilities to procure 50 percent of the state's electricity from eligible clean energy sources by 2030. Similarly, in March 2016, Oregon adopted legislation that requires two large investor-owned utilities operating in the state to supply 50 percent of the state's electricity from renewable sources by 2040. The law also requires these utilities to phase out electricity from coal by 2030.

## **5.5 MARKET PROJECTIONS**

A variety of government and private sector sources of energy market projections are available and will be considered as the PEIS process continues. Due to the large number of variables and assumptions inherent in forecasting energy markets, projections vary from model to model and from year to year as data is updated. The Energy Information Administration (EIA) notes that multiple organizations issue projections for the coal sector and compares projections for some key metrics in a report.<sup>79</sup> For the purposes of this scoping report, the BLM provides summaries of the projections from models used by the EIA and EPA. These are projections from particular versions and platforms

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<sup>79</sup> US EIA. 2016. Annual Energy Outlook 2016. CP7 Available at [http://www.eia.gov/outlooks/aeo/section\\_comparison.cfm](http://www.eia.gov/outlooks/aeo/section_comparison.cfm)

of those models, but the BLM notes that subsequent or alternative versions may contain different projections as assumptions are periodically updated. For instance, a 2017 version of a model may contain information and assumptions not known and, therefore, not included in the 2016 version. These are not predictions, but projections under one reasonable set of assumptions and current best available data.

On September 8, 2016, the Columbia School of Law's Sabin Center also hosted a workshop titled "US Coal in the 21<sup>st</sup> Century: Markets, Bankruptcy, Finance and Law," with panelist from financial, consulting, non-profit, government, and academic sectors. Panelists generally highlighted the growing market headwinds against coal, primarily due to lower cost gas and renewable generation, and mid- and long-term outlooks that showed coal demand well below historical levels.<sup>80</sup> These findings are consistent with some of the recent modeling and forecasts by the EIA and the EPA discussed below.

### 5.5.1 Energy Information Administration

The EIA Annual Energy Outlook released in 2016 provides projections for energy markets, including US coal and electricity markets using the National Energy Modeling System model. The most recent version contained a reference case reflecting the known technology and regulatory environment.<sup>81</sup> The outlook contains projections for the energy sectors through 2040. The 2016 reference case included a mass-based version of the CPP implementation. The Annual Energy Outlook projections for US coal consumption, production, and prices from the reference case are discussed below.

In the Annual Energy Outlook 2016 reference case, coal's share of total US electricity generation is projected to drop from 33 percent in 2015 to 21 percent in 2030 and 18 percent in 2040. Total coal production is projected to fall from 896 million tons in 2015 down to 827 million tons in 2022 when CPP compliance begins, and drop down to 664 million tons in 2030 at full CPP compliance.<sup>82</sup>

In the near term, coal generation resumes its role as the largest source of US electricity, but natural gas generation is projected to surpass it by the late 2020s in the reference scenario. Renewable generation is also projected to surpass coal generation by 2030 due to a combination of environmental policies, Federal

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<sup>80</sup> A summary of the panel discussions conducted during the US Coal in the 21<sup>st</sup> Century: Markets, Bankruptcy, Finance and Law workshop, as well as presentations offered by the panelists in PDF and PPT format, can be found in Volume 2 of this scoping report.

<sup>81</sup> The EIA Annual Energy Outlook also includes a variety of side cases that offer projections under alternative market, macroeconomic, and regulatory assumptions.

<sup>82</sup> US EIA. 2016. Annual Energy Outlook 2016 Early Release: Annotated Summary of Two Cases. May 17, 2016. Available at [https://www.eia.gov/forecasts/aeo/er/pdf/0383er\(2016\).pdf](https://www.eia.gov/forecasts/aeo/er/pdf/0383er(2016).pdf)

tax incentives, and declining capital cost.<sup>83</sup> The reference case projects 45 GW of US coal-fired power plant retirements in the near term (by end of 2016) due to low natural gas prices and implementation of the EPA's Mercury and Air Toxics Standard. This leaves 226 GW of coal remaining in service in 2016. Another 56 GW of that capacity is projected from coal-fired power plant retirements by 2040, leaving 170 GW of coal-fired power plant capacity in service. The United States is projected to be a small net exporter of coal through the 2040 time horizon.<sup>84</sup>

In the western coal markets, where over 99 percent of Federally mined coal is located, the Annual Energy Outlook reference case projects the most significant decline in coal production, with levels dropping from current levels near 500 million tons to 378 million tons in 2030 and 329 million tons in 2040.<sup>85</sup> This drop accounts for 52 percent of the projected nationwide decline in coal production by 2030.

The 2016 Annual Energy Outlook projects that real average mine mouth coal prices rise due to falling productivity as geological conditions become less favorable. In the reference scenario, 2015 average mine mouth prices of \$33.80 per short ton are expected to remain mostly flat at \$33.84 through 2030 and then up to \$38.68 by 2040.<sup>86,87</sup> For the western states, where coal prices are below the nationwide average due to a variety of factors, including more favorable geology, reference case prices are anticipated to climb from 2015 levels of \$18.7 per ton to \$19 per ton in 2030 and \$21.6 per ton in 2040.<sup>88</sup>

## 5.5.2 Environmental Protection Agency

The EPA maintains an application of the Integrated Planning Model (IPM) to analyze the impact of power sector regulations. The IPM is a linear programming, least-cost optimization model of the US power sector developed by ICF consulting. It provides forecasts of least-cost capacity expansion and electricity dispatch to meet energy demand subject to market and regulatory

<sup>83</sup> US EIA. 2016. Annual Energy Outlook. Forecast Data. Available at <http://www.eia.gov/forecasts/aeo/data/browser/#!/?id=8-AEO2016&region=0-0&cases=ref2016&start=2014&end=2040&f=A&linechart=ref2016-d032416a.6-8-AEO2016&sourcekey=0>

<sup>84</sup> US EIA. 2016. Annual Energy Outlook 2016 Early Release: Annotated Summary of Two Cases. May 17, 2016. Available at [https://www.eia.gov/forecasts/aeo/er/pdf/0383er\(2016\).pdf](https://www.eia.gov/forecasts/aeo/er/pdf/0383er(2016).pdf)

<sup>85</sup> US EIA. 2016. Annual Energy Outlook 2016. Table: Coal Supply, Disposition, and Prices. Available at [http://www.eia.gov/forecasts/aeo/data/browser/#!/?id=15-AEO2016&cases=ref2016~ref\\_no\\_cpp&sourcekey=0](http://www.eia.gov/forecasts/aeo/data/browser/#!/?id=15-AEO2016&cases=ref2016~ref_no_cpp&sourcekey=0)

<sup>86</sup> 2015 prices available EIA. 2015. Annual Coal Report. Available at <http://www.eia.gov/coal/annual/pdf/acr.pdf>. Projected 2030 and 2040 prices available in US EIA 2016. See: US EIA. 2016 Annual Energy Outlook in Coal Supply, Disposition, and Prices Table. Available at <http://www.eia.gov/outlooks/aeo/data/browser/#!/?id=15-AEO2016&cases=ref2016&sourcekey=0>

<sup>87</sup> Projected 2030 and 2040 prices available in US EIA 2016. See: US EIA 2016. Annual Energy Outlook in Coal Supply, Disposition, and Prices Table. Available at <http://www.eia.gov/outlooks/aeo/data/browser/#!/?id=15-AEO2016&cases=ref2016&sourcekey=0>

<sup>88</sup> US EIA. 2016. Annual Energy Outlook 2016. Coal Production and Minemouth Prices by Region. Available at [http://www.eia.gov/outlooks/aeo/data/browser/#!/?id=94-AEO2016&cases=ref2016~ref\\_no\\_cpp&sourcekey=0](http://www.eia.gov/outlooks/aeo/data/browser/#!/?id=94-AEO2016&cases=ref2016~ref_no_cpp&sourcekey=0)

factors. It captures a wide range of issues related to the power sector, including fuel markets such as coal. The model is widely used by the government and industry to assess policy and market influences.<sup>89</sup>

The EPA's Regulatory Impact Analysis for the CPP was informed by IPM modeling conducted that reflects market and regulatory outlooks, as well as the final CPP emission limitations.<sup>90</sup> This scenario includes projections on coal production and consumption through a 2050 time frame, as coal is an instrumental commodity to power sector operations, and, thus, its demand is shaped by power-sector regulations. The EPA application of IPM to reflect the CPP provides projections for the power sector comparable to the Annual Energy Outlook reference scenario. The IPM projections are specific to US thermal coal markets.

In the EPA's modeling of the mass-based CPP, nationwide coal generation was projected to be 28 percent and 25 percent of electricity generation in 2030 and 2040, respectively. These levels reflected more demand-side energy efficiency and more renewable generation relative to today's levels, which allow for a more balanced nationwide generation portfolio. This coal-fired generation totaled 1,144 Terawatt hours (TWh) in 2030 and 1,092 TWh in 2040 and corresponded to about 685 and 692 million tons of US coal production in those same years.<sup>91</sup>

Under this model, renewable electricity generation is projected to be a larger share of total electricity generation by 2040. There is also a significant amount of coal-fired power plant retirements due to an aging fleet, more competitive capital cost for competing technologies, lower gas prices, and lower demand growth. The EPA modeling projects 174 GW remaining in service in the CPP scenario in 2030 and 170 GW in 2040.

In the western coal basins, the EPA application of IPM projected coal production decreasing from current levels of 484 million tons to 317 million tons in the CPP scenario by 2030. The decrease is driven, in part, by increased inter-basin competition as eastern interior coal becomes more competitive due to advances in low-cost, long-wall mining technologies and because of less consumer sensitivity to the higher sulfur content of interior coal as more plants install flue-gas desulfurization equipment.

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<sup>89</sup> US EPA. 2013. Documentation for Base Case v.5.13 Modeling Framework. Chapter 2: Modeling Framework. November 27, 2013. Available at <https://www.epa.gov/airmarkets/documentation-base-case-v513-modeling-framework>

<sup>90</sup> US EPA. 2015. Regulatory Impact Analysis for the Clean Power Plan Final Rule. Table 3-11. October 23, 2015. Available at <https://www.epa.gov/sites/production/files/2015-08/documents/cpp-final-rule-ria.pdf>

<sup>91</sup> The uptick in production in spite of the drop in coal-fired power plant electricity generation is due to increased demand from industrial sources and exports in 2040.



Projected coal prices are similar to the Annual Energy Outlook 2016 outlook. For western coals they are in the \$20/ton to \$24/ton range, and nationwide they are in a \$35/ton to \$40/ton range for years 2030 to 2040.<sup>92</sup> Western coal prices remain the lowest in the country on a per ton and a per Btu basis among all major coal producing regions reflecting the high productivity and low production cost characteristic of that region.<sup>93</sup>

### 5.5.3 Coal Exports

Global coal pricing is US dollar-denominated. As the US dollar strengthens relative to other currencies, US coal becomes more expensive relative to coal exported from competing countries. As the US dollar weakens, US coal becomes relatively more competitive.

Coal exports accounted for a small share, approximately 8 percent, of total US coal production in 2015 at 74 million tons.<sup>94,95</sup> The majority of that export is metallurgical coal, primarily used for industrial purposes, which comes from non-Federal lands. The amount of thermal coal, the predominant coal type produced on Federal lands, exported was 28 million tons or approximately 3 percent of total US production in 2015.<sup>96</sup> The 2016 EIA Annual Energy Outlook projections for total coal export going forward are relatively flat through 2030 and then increase upward by approximately 20 million tons, from current levels of 74 million tons, and constitute approximately 15 percent of total US production in 2040.<sup>97</sup> The US thermal coal portion of coal exports is projected to follow a similar trajectory but increase at a higher rate, reaching 56 million tons or approximately 9 percent of total production by 2040.<sup>98</sup> This uptick from 2015 levels is partially due to reduced US demand. But even with the reduced US demand, these projected steam coal export levels reflect a relatively small portion of US production and do not exceed 2012 tonnage export levels.<sup>99</sup>

In all scenarios examined, projected coal exports have declined from prior year projections and are anticipated to remain a small source of demand for US coal

<sup>92</sup> All EPA IPM coal prices are listed in \$ per short ton.

<sup>93</sup> US EPA. 2015. Analysis of the Clean Power Plan. August 3, 2015. Available at <https://www.epa.gov/airmarkets/analysis-clean-power-plan>

<sup>94</sup> US EIA. 2015. Annual Coal Report 2015. November 2016. Available at <http://www.eia.gov/coal/annual/pdf/acr.pdf>

<sup>95</sup> US EIA. 2016. Today in Energy. US coal exports declined 23% in 2015, as coal imports remained steady. March 7, 2016. Available at <http://www.eia.gov/todayinenergy/detail.php?id=25252>

<sup>96</sup> US EIA. 2016. Coal Data Browser. Available at

[http://www.eia.gov/beta/coal/data/browser/#!/topic/41?agg=2,1,0&rank=ok&linechart=COAL.EXPORT\\_QTY.TOT-TOT-TOT.A&columnchart=COAL.EXPORT\\_QTY.TOT-TOT-TOT.A&map=COAL.EXPORT\\_QTY.TOT-TOT-TOT.A&freq=A&start=2001&end=2015&ctype=map&ltype=pin&rtype=s&pin=&rse=0&maptype=0](http://www.eia.gov/beta/coal/data/browser/#!/topic/41?agg=2,1,0&rank=ok&linechart=COAL.EXPORT_QTY.TOT-TOT-TOT.A&columnchart=COAL.EXPORT_QTY.TOT-TOT-TOT.A&map=COAL.EXPORT_QTY.TOT-TOT-TOT.A&freq=A&start=2001&end=2015&ctype=map&ltype=pin&rtype=s&pin=&rse=0&maptype=0)

<sup>97</sup> US EIA. 2016. 2016 Annual Energy Outlook. Available at [http://www.eia.gov/forecasts/aeo/data/browser/#!/?id=15-AEO2016&region=0-0&cases=ref2016~ref\\_no\\_cpp&start=2013&end=2040&f=A&sourcekey=0](http://www.eia.gov/forecasts/aeo/data/browser/#!/?id=15-AEO2016&region=0-0&cases=ref2016~ref_no_cpp&start=2013&end=2040&f=A&sourcekey=0)

<sup>98</sup> US EIA. 2016. Annual Energy Outlook 2016. Table: World Steam Coal Flows by Importing Regions and Exporting Countries. Available at <http://www.eia.gov/forecasts/aeo/data/browser/#!/?id=96-AEO2016&cases=ref2016&sourcekey=0>

<sup>99</sup> US EIA. 2016. Imports Data. Available at <http://www.eia.gov/coal/data.php#imports>

production. US coal export is generally viewed as a swing supplier of international markets, meaning it is one of the last suppliers to serve international markets after other exporting countries are at capacity, and one of the first exporting countries to pull back supply as demand goes down. Export demand has a significant degree of uncertainty related to currency valuations, international economic growth, climate policy, and trade protectionist policies from importing countries. In addition, the upward reaches of US steam coal export are limited in the near and medium term by export terminal capacity in the northwestern United States.<sup>100</sup>

## 5.6 GREENHOUSE GAS EMISSIONS

Greenhouse gas emissions trap heat in the atmosphere and, as emissions and atmospheric concentrations have increased, are associated with an increase of 1.5 degrees Fahrenheit in average global temperatures over the past century.<sup>101</sup> These increases in global mean temperature drive changes in climate and weather patterns. CO<sub>2</sub> is the most abundant form of greenhouse gas. CO<sub>2</sub> enters the atmosphere through the burning of fossil fuels, such as coal, natural gas, and oil, and accounts for 82 percent of total US greenhouse gas emissions in 2014. Other greenhouse gases, such as methane, are emitted during the production of fossil fuels. Each greenhouse gas has a different atmospheric lifetime and radiative forcing (heat trapping) potential. Their emission volumes can be converted to a CO<sub>2</sub> equivalent (CO<sub>2</sub>e) to normalize the greenhouse effect across different pollutants.

In 2014, total US emissions were 6,870 million metric tons of CO<sub>2</sub>e.<sup>102</sup> Electricity generation was the largest greenhouse gas emitting sector in the United States, accounting for 30 percent, or 2,081 million metric tons, of CO<sub>2</sub>e in 2014.<sup>103</sup> US coal production and combustion were responsible for more than 1,720 million metric tons, or about 25 percent, of US greenhouse gas emissions.<sup>104</sup> Most of these coal-related emissions (1,570 million metric tons) occur at the point of combustion within the electricity sector. Industrial CO<sub>2</sub>e emissions from coal combustion added another 75 million tons of CO<sub>2</sub>e. Coal extraction activities (without considering combustion emissions) account for

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<sup>100</sup> Zubets-Anderson, A. . 2016. "Bankruptcy and Financing Rating Agency's Perspective." Moody' Investor Service. Presented at the US Coal in the 21st Century: Markets, Bankruptcy, Finance and Law conference. Columbia Center on Global Energy Policy and the Sabin Center for Climate Change Law. September 2016. Summary Available at [http://web.law.columbia.edu/sites/default/files/microsites/climate-change/panel\\_summaries\\_-\\_us\\_coal\\_in\\_the\\_21st\\_century.pdf](http://web.law.columbia.edu/sites/default/files/microsites/climate-change/panel_summaries_-_us_coal_in_the_21st_century.pdf)

<sup>101</sup> US EPA. 2016. Climate Change: Basic Information. Available at <https://www.epa.gov/climatechange/climate-change-basic-information>

<sup>102</sup> US EPA. 2016. Greenhouse Gas Inventory Report: 1990-2014. Table 2-11. April 15, 2016. Available at <https://www3.epa.gov/climatechange/Downloads/ghgemissions/US-GHG-Inventory-2016-Main-Text.pdf>

<sup>103</sup> Ibid.

<sup>104</sup> Ibid.

approximately 68 million metric tons of CO<sub>2</sub>e.<sup>105</sup> Abandoned underground coal mines added another 6.3 million metric tons of CO<sub>2</sub>e emissions.

The domestic electricity sector drives between 80 and 90 percent of the US coal consumption each year. Coal combustion for electricity is more carbon intensive than other fossil fuels, accounting for 75 percent of the CO<sub>2</sub> emissions from the electricity sector even though it accounts for only 39 percent of the total electricity generated in 2014.<sup>106</sup>

With respect to federally owned coal, as stated, 42 percent of total US coal production occurred on Federal lands in 2015.<sup>107,108</sup> Using data available at the time, a report by Stratus Consulting states that in 2012 the combustion of Federal coal and coalbed methane emissions resulting from Federal coal production together accounted for nearly 770 million metric tons of CO<sub>2</sub>e emissions, or over 10 percent of total US greenhouse gas emissions.<sup>109</sup> Estimates by BLM using more recent data suggest that as of 2014, CO<sub>2</sub> emissions attributable to federal coal accounted for 11 percent of total US greenhouse gases and a recent report noted that they account for 13 percent of all US energy-related CO<sub>2</sub> emissions.<sup>110</sup>

Greenhouse gas emissions associated with coal production can generally be divided into two broad categories: upstream emissions associated with the mining and transportation of the coal, and downstream emissions associated with the combustion of the coal. The greenhouse gas implications of each category are discussed below.

### 5.6.1 Upstream Emissions

Measuring the level and source of greenhouse gas emissions from coal production and consumption starts with emissions released during coal mining. These upstream greenhouse gas emissions primarily occur in the form of methane released from coal seams to the atmosphere in the coal mining

<sup>105</sup> US EPA. 2016. Inventory of US Greenhouse Gas Emissions and Sinks: 1990 – 2014. April 15, 2016. pp.1-17. Available at <https://www.epa.gov/sites/production/files/2016-04/documents/us-ghg-inventory-2016-main-text.pdf>

<sup>106</sup> US EIA. 2015. Table I.1. Total Electric Power Industry Summary Statistics, 2015 and 2014. Available at [http://www.eia.gov/electricity/annual/html/epa\\_01\\_01.html](http://www.eia.gov/electricity/annual/html/epa_01_01.html).

Although 2015 US greenhouse gas inventory data is not yet available, 2015 EIA generation data suggest that coal generation dropped to 33 percent of total electricity generation. See EIA 2016. 2016 Annual Energy Outlook. Table IFI-3. November 2016. Available at [http://www.eia.gov/forecasts/aeo/pdf/0383\(2016\).pdf](http://www.eia.gov/forecasts/aeo/pdf/0383(2016).pdf)

<sup>107</sup> US Extractive Industries Transparency Initiative. 2015. Full dataset. Table I. Available at <https://useiti.doi.gov/downloads/federal-production/>

<sup>108</sup> US EIA. 2016. Annual Coal Report. November 3, 2016. Available at <http://www.eia.gov/coal/annual/>

<sup>109</sup> Stratus Consulting. 2014. Greenhouse Gas Emissions from Fossil Energy Extracted from Federal Lands and Waters: An Update. Prepared for The Wilderness Society. December 23, 2014. Available at [https://cdn.americanprogress.org/wpcontent/uploads/2015/03/WildernessSociety\\_GHGEmissions\\_12-23Revisions.pdf](https://cdn.americanprogress.org/wpcontent/uploads/2015/03/WildernessSociety_GHGEmissions_12-23Revisions.pdf)

<sup>110</sup> Gillingham et. al. 2016. Federal Minerals Leasing Reform and Climate Policy. The Hamilton Project. Brookings. December 2016.

process. Methane is a potent greenhouse gas that has approximately 25 times more warming potential than carbon dioxide over a 100-year life period. It is the second-most prevalent greenhouse gas from human activities in the United States and accounts for approximately 10 percent of all US greenhouse gases. Coal mining accounts for approximately 9 percent of total US methane emissions.<sup>111</sup> The amount of average methane release associated with removing a ton of coal varies significantly depending on whether it occurs at an underground or at a surface mine. Underground mines contain more methane, as they are under more geological pressure. In 2015, the United States had 305 underground coal mines and 529 surface mines operating.<sup>112</sup> Using EPA and EIA data results in estimates for the amount of greenhouse gas emissions from coal mine methane and post-mining processing per ton of coal mined of 0.02 tons of CO<sub>2</sub>e per ton of coal mined for surface mines and approximately 0.16 tons of CO<sub>2</sub>e per ton of coal mined for underground mines.<sup>113,114</sup>

While methane is the largest greenhouse gas source from coal production, other mining operations add to the emission total. Diesel, which emits CO<sub>2</sub> when combusted, is a primary energy source for mining operations and is often used to move coal by trucks on-site. Electricity, most often dependent on the combustion of a fossil fuel, is also used to power mine operations. Coal production-associated emissions are small relative to emissions associated with combustion, averaging 2.7 percent of the lifecycle CO<sub>2</sub> emissions.<sup>115</sup>

Transportation of coal from the mine to the point of consumption, generally a power plant, is another significant source of greenhouse gas emissions. Coal is most frequently transported by rail, but river barges and trucks play a significant role as well. These modes of transportation rely on diesel fuel, which emits CO<sub>2</sub> when combusted. The greenhouse gas emissions associated with transportation are more significant for western coals, where more than 99 percent of Federal coal is located, as they have a greater distance to travel on average to reach their end use. In Wyoming, approximately 90 percent of the coal is shipped out of the state by rail. Transportation-associated emissions are small relative to emissions associated with combustion, averaging 1.7 percent of coal's lifecycle

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<sup>111</sup> US EPA. 2016. Overview of US Greenhouse Gas Emissions. Available at <https://www.epa.gov/ghgemissions/overview-greenhouse-gases#methane>

<sup>112</sup> US EIA. 2016. Annual Coal Report. Table I. November 3, 2016. Available at <http://www.eia.gov/coal/annual/>

<sup>113</sup> Based on emissions data at <https://www.epa.gov/sites/production/files/2016-04/documents/us-ghg-inventory-2016-main-text.pdf> at page 160

<sup>114</sup> Coal production data from US EIA. 2016. Annual Coal Report. Table I. November 3, 2016. Available at <http://www.eia.gov/coal/annual/>

<sup>115</sup> Foley, J. H. and P. Howard. 2016. Illuminating the Hidden Cost of Coal. New York University School of Law Institute of Policy Integrity. p. A-13. Available at [http://policyintegrity.org/files/publications/Hidden\\_Costs\\_of\\_Coal.pdf](http://policyintegrity.org/files/publications/Hidden_Costs_of_Coal.pdf)

CO<sub>2</sub> emissions.<sup>116</sup> However, when taking into account specific mine location and transportation distance and method, the share of greenhouse gas emission associated with transportation from a particular mine or basin may be higher.

### 5.6.2 Downstream Emissions

The most significant greenhouse gas impacts associated with coal occur at the point of combustion, estimated at 95.6 percent of coal's lifecycle CO<sub>2</sub>e emissions.<sup>118</sup> As stated, coal is the most CO<sub>2</sub> emissions-intensive fossil fuel, accounting for over 70 percent of CO<sub>2</sub> emissions from the power sector.

Coal's carbon intensity is significantly higher than natural gas's carbon intensity at the site of combustion. Taking into account the heat rate of coal plants versus that of natural gas combined-cycle plants, the average emission rate of a coal plant at 2,215 lbs of CO<sub>2</sub>/MWh is more than double that of a gas-fired combined-cycle plant at 902 lbs of CO<sub>2</sub>/MWh. Coal-fired electricity generation has been the most significant contributor to CO<sub>2</sub> emissions from the power sector, and that is projected to continue under the latest Annual Energy Outlook reference case scenarios. CO<sub>2</sub> content can vary significantly on a per ton basis for different coal types, such as subbituminous or bituminous. However, on an energy basis, CO<sub>2</sub> emission factors from coal are fairly consistent across coal types and geography, occupying a narrow range of 205 – 215 lbs CO<sub>2</sub> per mmBtu.<sup>117</sup>

In 2015, Federal coal accounted for 42 percent of total US coal production at 375 million tons with nearly all of this supplying the US electricity generation. Greenhouse gas emissions from coal-fired electricity generation have been decreasing due primarily to market drivers reducing coal-fired electricity consumption in recent years and are expected to reach new lows in 2016.

Future coal production will likely be influenced by these same market drivers as well as existing state, regional, and Federal policies that partially address some of the externalities associated with CO<sub>2</sub> emissions at the point of combustion. These include programs like California's Assembly Bill 32, the Northeast's Regional Greenhouse Gas Initiative, and the EPA's CPP. A small amount of Federal coal is also exported and combusted outside of the United States, but export markets are limited as is port capacity. As discussed in more detail in **Section 5.5.3**, exports are anticipated to remain a small portion of demand for US coal in future years.<sup>118</sup>

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<sup>116</sup> Spath, P. L., M. K. Mann, and D. R. Kerr. 1999. Life Cycle Assessment of Coal-fired Power Production. Report no. NREL/TP-570-25111. National Renewable Energy Lab. June 1999. Golden, Colorado. Available at <http://www.nrel.gov/docs/fy99osti/251119.pdf>

<sup>117</sup> US EIA. 2016. Frequently Asked Questions. How much carbon dioxide is produced when different fuels are burned? June 14, 2016. Available at <https://www.eia.gov/tools/faqs/faq.cfm?id=73&t=11>

<sup>118</sup> US EIA. 2016. 2016 Annual Energy Outlook. Table: Coal Supply, Disposition, and Prices. Available at [http://www.eia.gov/forecasts/aeo/data/browser/#/?id=15-AEO2016&region=00&cases=ref2016~ref\\_no\\_cpp&start=2013&end=2040&f=A&sourcekey=0](http://www.eia.gov/forecasts/aeo/data/browser/#/?id=15-AEO2016&region=00&cases=ref2016~ref_no_cpp&start=2013&end=2040&f=A&sourcekey=0)

### 5.6.3 Quantifying Greenhouse Gas Emissions on Federal Lands

As part of Secretarial Order 3388, the Secretary instructed the Department of the Interior, through the USGS, to establish and maintain a public database to account for the annual carbon emissions from fossil fuels developed on Federal lands. Although not complete, this data source is under development and will be one potential database informing the Draft and Final PEIS.

The USGS is designing this database to report both emissions and sinks for CO<sub>2</sub>, methane, and nitrous oxide resulting from the coal production on Federal lands by state. The database aims to combine ONRR, BLM, and BOEM data along with EPA emissions data to estimate total greenhouse gas emissions from fossil fuel extracted on Federal lands. It also aims to use USGS data to measure biological sequestration on Federal lands that serve as emissions sinks. By subtracting the sequestration estimates from the emission estimates, this tool can provide a net emissions value for Federal lands. An initial public release of the data is expected in mid-2017. This data will provide additional refinement and verification of coal lifecycle emission estimates.

## 5.7 SOCIOECONOMIC CONSIDERATIONS

The PEIS will evaluate a number of potential changes to the Federal coal program. Some of these potential changes could have impacts on the livelihoods and fiscal soundness of coal-dependent communities, particularly those near the Powder River Basin, due to the heavy concentration of leases and production from the Federal lands there. Appalachian coal communities could also be affected, as changes in the demand for predominantly western Federal coal in turn can affect the market for Appalachian coal. This section provides baseline socioeconomic information relevant to the PEIS.

### 5.7.1 Communities Dependent on Coal Extraction

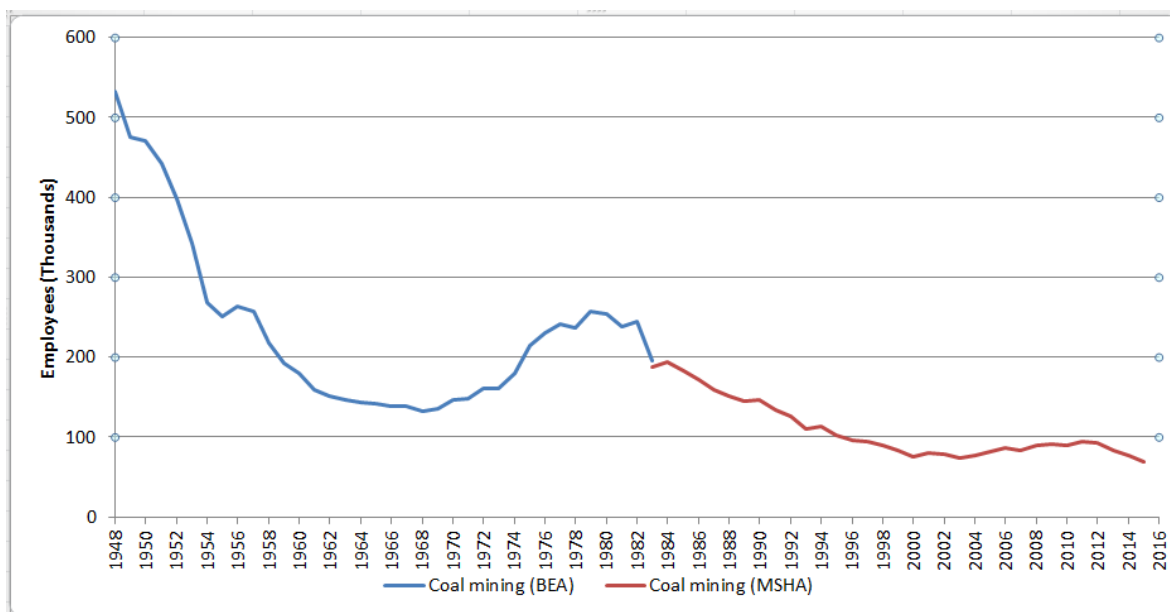
#### **Community Impacts**

Viewed globally, the development potential of energy resources has been interpreted through two very different frameworks. The positive view holds that investment in mineral extraction literally unlocks buried treasure, leading to a “virtuous cycle of socioeconomic change.”<sup>119</sup> A more skeptical view (the “resource curse”) suggests that the wealth generated by mineral extraction may not be shared locally and that an emphasis on resource extraction may deter development in other economic sectors. Recent research is clarifying the conditions that encourage local and regional economic gains from mining activity.<sup>120</sup>

<sup>119</sup> Bridge, G. 2004. “Contested Terrain: Mining and the Environment”. *Annual Review of Environment and Resources* 29, no. 1(2004): 225.

<sup>120</sup> Cust, J. and S. Poelhekke. 2015. “The Local Economic Impacts of Natural Resource Extraction”. *Annual Review of Resource Economics* 7(1): 251–68.

Since World War II, US coal mining employment has been in a long-term decline, falling from 533,000 jobs in 1948 to 78,000 in 2000.<sup>121</sup> Technological change, resulting in rising productivity per worker, has been the primary driver of the decline.<sup>122</sup> The downward trend was interrupted by a demand-driven employment boom in the 1970s (employment rose 74 percent in the period 1970 – 1980), followed by a bust in the 1980s.<sup>123</sup> The employment boom resulted not only from an increase in coal mining operations, but also from construction of a number of coal-fired generating plants (see **Figure 5-4**).



**Figure 5-4. Coal Mining – Employment, 1948 – 2015**

Sources:

Bureau of Economic Analysis 2016<sup>124</sup>

MSHA 2016<sup>125</sup>

Most studies of the community-level effects of US coal mining expansion come from this boom/bust cycle of the 1970s and 1980s. Many communities underwent rapid change. As a result of construction of the coal-fired Intermountain Power Project—with a proposed capacity of 3,000 megawatts—

<sup>121</sup> Bureau of Economic Analysis. 2016. National Income and Products Accounts (NIPA) Tables 6.4A and 6.4C. Available at: <http://www.bea.gov/iTable/iTable.cfm?ReqID=9&step=1#reqid=9&step=3&isuri=1&903=192>.

<sup>122</sup> Betz, M. R., M. Farren, and L. Lobao. 2015. “Coal Mining, Economic Development, and the Natural Resources Curse”. *Energy Economics* 50(107):105-116. Available at <https://mpr.aub.uni-muenchen.de/58016/>

<sup>123</sup> Ibid.

<sup>124</sup> Bureau of Economic Analysis. 2016. National Income and Products Accounts (NIPA) Tables 6.4A and 6.4C. Available at: <http://www.bea.gov/iTable/iTable.cfm?ReqID=9&step=1#reqid=9&step=3&isuri=1&903=192>.

<sup>125</sup> MSHA (United States Department of Labor Mine Safety Health Administration). 2016. Coal Mine and Employment Data. Accessed September 2016. Available at <http://arlweb.msha.gov/OpenGovernmentData/OGIMSHA.asp>.

the population of Delta, Utah rose from 1,930 people in 1980 to 6,670 in 1984 at the height of construction, and declined to 3,000 by 1990.<sup>126</sup>

Many boomtowns experienced an acute shortage of infrastructure and services, particularly housing. Studies from the 1970s painted a negative picture of widespread social disruption, sometimes termed the “Gillette Syndrome.” Effects included “dramatic increases in divorce, depression[,] . . . criminal activity, mental disorders, and other social problems.”<sup>127</sup> Later research suggested a more complex picture, recognizing recovery and adaptation to changing circumstances, in addition to tempering the overly negative characterization of social change under rapid energy development.<sup>128</sup>

As shown in **Figure 5-5**, there are major regional differences in the trends of both coal employment and production. Nationwide coal industry employment fell some 50 percent between 1987 and 2014 while nationwide production rose slightly. The dramatic change is in western coal production. Western production doubled between 1987 and 2008, but then began to decline. It is the far lower labor intensity of western coal operations, dominated by the Powder River Basin, over eastern coal that made it possible for production to increase while national employment fell dramatically (see **Section 5.4.5** for more information).<sup>129</sup> Today the western coal industry, faced with declining employment, is following the trend seen earlier in Appalachia and other eastern coal regions.<sup>130</sup>

Many of the social effects of abruptly lower coal production noted from the bust of the 1980s are evident today as part of a longer-term decline in coal employment and production. Simple models of the economy assume labor mobility; as jobs disappear in one region or sector, workers relocate to more favorable labor markets. For a variety of reasons, the reality is far more complex; many factors work to keep people in place, even after mines have cut back production or closed. In coal country, as in many other rural areas centered on resource extraction, communities reflect a distinctive way of life that involves social ties and cultural values as much as economic activities. The

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<sup>126</sup> Brown, R. B., S. F. Dorins, and R. S. Krannich. 2005. “The Boom-bust-recovery Cycle: Dynamics of Change in Community Satisfaction and Social Integration in Delta, Utah”. *Rural Sociology* 70 (1):31. Available at <http://www.sublettewyo.com/ArchiveCenter/ViewFile/Item/71>

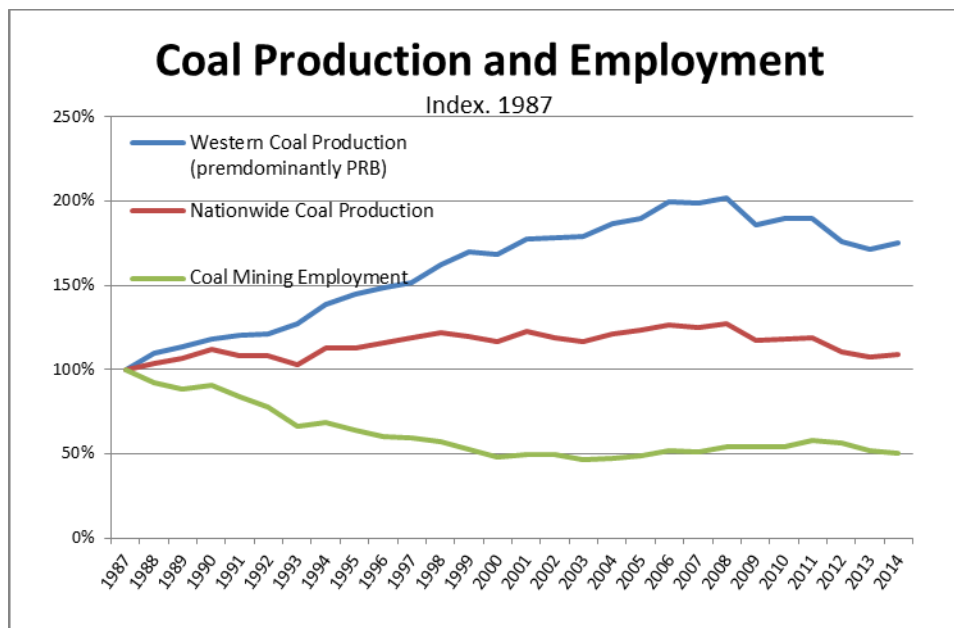
<sup>127</sup> Smith, M. D., R. S. Krannich, and L. M. Hunter, “Growth, Decline, Stability, and Disruption: A Longitudinal Analysis of Social Well-Being in Four Western Rural Communities”. *Rural Sociology* 66(3):427.

<sup>128</sup> Brown, R. B., S. F. Dorins, and R. S. Krannich. 2005. “The Boom-bust-recovery Cycle: Dynamics of Change in Community Satisfaction and Social Integration in Delta, Utah”. *Rural Sociology* 70(1):31. Available at <http://www.sublettewyo.com/ArchiveCenter/ViewFile/Item/71>

<sup>129</sup> US EIA. 2016. Coal data browser. Coal produced per labor hour. Available at <http://www.eia.gov/coal/annual/pdf/table21.pdf>.

<sup>130</sup> For example, coal production in the western United States was 6.5 percent lower in 2015 relative to 2014. See US EIA. 2015. 2015 Annual Coal Report. Available at <http://www.eia.gov/coal/annual/>.





**Figure 5-5. Coal Employment and Production, 1987 – 2015**

Sources:

Employment: MSHA 2016<sup>131</sup>

Production (1987-2011): US EIA 2012<sup>132</sup>

Production (2012-2015): US EIA 2016<sup>133</sup>

way of life in coal communities is based on ties of employment and friendship, ties of family across multiple generations, and ties to place. As one author wrote of the anthracite mining towns of northeastern Pennsylvania:

“The people remaining in these towns – half or one-third the 1920 number – have a powerful sense of belonging just where they are.”<sup>134</sup>

Renewable energy and natural gas are rapidly gaining ground relative to coal as the sources for generating electricity. But there is no assurance that this shift can provide a lifeline to struggling coal-dependent communities or workers who are unwilling to relocate. Notwithstanding these challenges, commitment to place and community can be a very positive force in finding a path to a more resilient and diversified local economy. There are numerous case studies of formerly coal-reliant Appalachian communities that have used economic

<sup>131</sup>MSHA (United States Department of Labor Mine Safety Health Administration). 2016. Coal Mine and Employment Data. Accessed September 2016. Available at <http://arlweb.msha.gov/OpenGovernmentData/OGIMSHA.asp>.

<sup>132</sup> US EIA. 2012. Annual Energy Review, Table 7.2: Coal Production, 1949-2011. Available at: <https://www.eia.gov/totalenergy/data/annual/showtext.php?t=ptb0702>

<sup>133</sup> US EIA. 2016. Annual Coal Report, Table I. Coal Production and Number of Mines by State and Mine Type. Available at: <http://www.eia.gov/coal/annual/>

<sup>134</sup> Marsh, B. 1987. “Continuity and Decline in the Anthracite Towns of Pennsylvania”. *Annals of the Association of American Geographers* 77(3):337. Available at [http://www.facstaff.bucknell.edu/marsh/anthracite\\_towns.pdf](http://www.facstaff.bucknell.edu/marsh/anthracite_towns.pdf)

development strategies that invest in local and regional assets—such as human capital, infrastructure, entrepreneurs, and emerging industry clusters—to successfully diversify their economies.<sup>135</sup>

### **Demographic and Employment Data for Areas Supplying Coal**

As described above, coal production occurs in three broad regions: Appalachian, Interior, and Western. Because the vast majority of coal from Federal lands is produced in the western region, this section divides the western region into 13 subregions, based on the coal supply regions used in the EPA Base Case v5.13.<sup>136</sup>

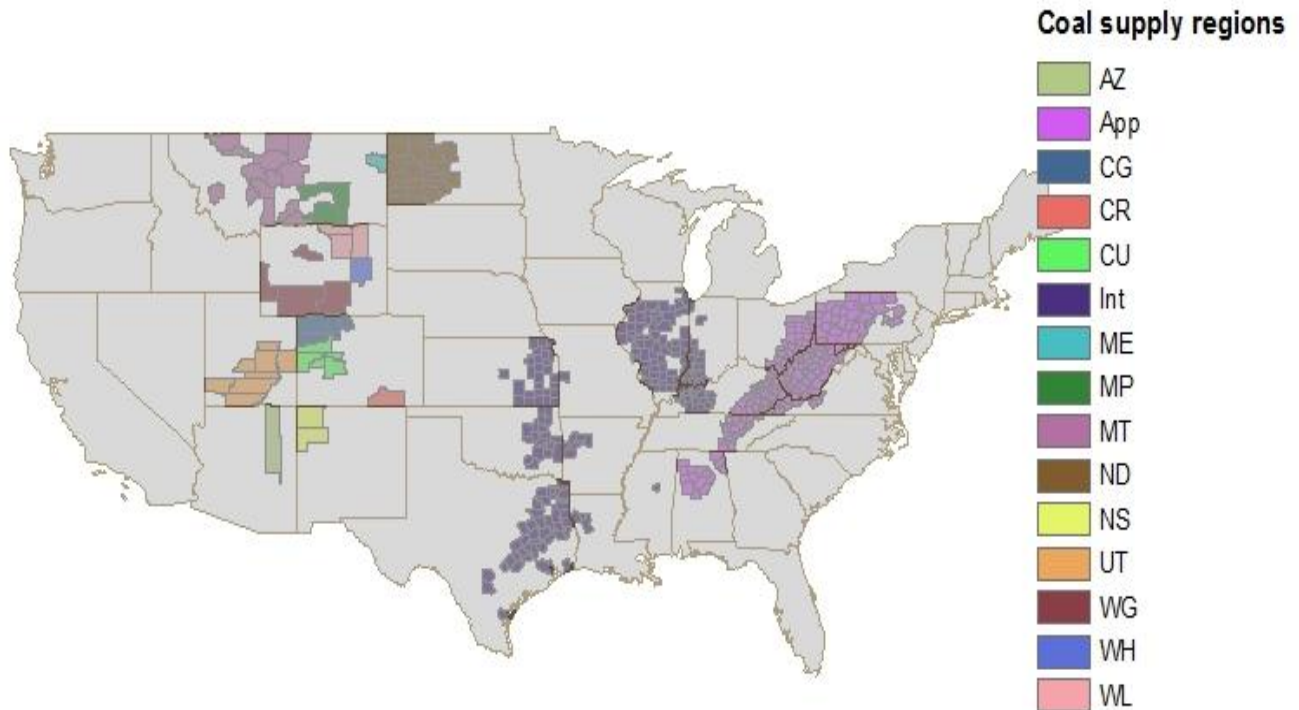
**Table 5-3**, below, describes the 15 regions and subregions, and includes both Federal and non-Federal coal resources. A map is shown in **Figure 5-6**.

**Table 5-3**  
**Coal Supply Regions**

<b>Region</b>	<b>Subregion</b>	<b>Description</b>	<b>Number of Counties</b>
Appalachian	None	Includes portions of Pennsylvania, West Virginia, Ohio, Maryland, Virginia, Eastern Kentucky, Tennessee, and Alabama	193
Interior	None	Includes portions of Indiana, Illinois, Western Kentucky, Missouri, Kansas, Oklahoma, Texas, Arkansas, and Louisiana	206
Western	CG	Colorado, Green River	44
	CR	Colorado, Raton	1
	CU	Colorado, Uinta	5
	UT	Utah	8
	ME	Montana, East	1
	ND	North Dakota	22
	MP	Montana, Powder River	3
	MT	Montana, Bull Mountain	14
	AZ	Arizona	1
	NS	New Mexico	2
	WG	Western Wyoming	4
	WH	Wyoming Northern Powder River Basin	1
	WL	Wyoming Southern Powder River Basin	3

<sup>135</sup> Center for Regional Economic Competitiveness, 2014. Economic Diversity in Appalachia. Statistics, Strategies, and Guides for Action. Prepared for Appalachian Regional Commission. February 2014. Available at [https://www.arc.gov/assets/research\\_reports/EconomicDiversityinAppalachiaCompilationofAllReports.pdf](https://www.arc.gov/assets/research_reports/EconomicDiversityinAppalachiaCompilationofAllReports.pdf)

<sup>136</sup> The EPA maintains an application of the IPM to analyze the impact of power sector regulations. IPM is a linear programming, least-cost optimization model of the US power sector developed by ICF consulting. It provides forecasts of least-cost capacity expansion and electricity dispatch to meet energy demand subject to market and regulatory factors. It captures a wide range of issues related to the power sector, including fuel markets such as coal. The model is widely used by government and industry to assess policy and market influences. See US EPA. 2013. Documentation for EPA Base Case v.5.13 Using the Integrated Planning Model. EPA #450R13002. Available at [https://www.epa.gov/sites/production/files/2015-07/documents/documentation\\_for\\_epa\\_base\\_case\\_v.5.13\\_using\\_the\\_integrated\\_planning\\_model.pdf](https://www.epa.gov/sites/production/files/2015-07/documents/documentation_for_epa_base_case_v.5.13_using_the_integrated_planning_model.pdf)



**Figure 5-6. Coal Supply Regions**

**Table 5-4** presents population, wage, and income information for the 15 coal supply regions and the United States. As the data show, these parameters vary widely across regions. Employment growth between 1970 and 2014 ranged from half of the national rate (e.g., in the Appalachian, Rocky Mountain CR, and Western Montana MT regions) to over three times the national rate (e.g., Rocky Mountain CU region). Personal income growth showed similar trends. With a few exceptions, average annual wages were at or below the national average in 2015. However, with the exception of the Rocky Mountain CU region, the average annual wages for mining (except oil and gas), for regions reporting this variable, substantially exceeded the national and regional average wages.

**Table 5-4**  
**Sociodemographic Characteristics of Coal Supply Regions**

	App.	Int.	CG	CR	CU	UT	ME	ND	MP	MT	AZ	NS	WG	WH	WL	Total US
Population 2014 (thous.) <sup>1</sup>	11,851	22,017	45	14	269	124	12	325	27	191	108	198	84	14	87	318,857
Pop. Change 1970 - 2014 (%) <sup>1</sup>	5.2	35.7	125.1	-11.2	172.3	116.8	17.8	33.5	37.1	8.4	124.1	105.5	83.9	132.2	138.0	56.5
Employment Change 1970 - 2014 (%) <sup>1</sup>	43.4	75.8	286.2	48.8	316.6	198.1	114.0	165.1	72.5	41.7	251.5	205.5	138.5	246.8	252.5	103.6
Personal Income Change 1970- 2014 (%) <sup>1</sup>	97.0	142.2	421.3	114.6	458.9	256.5	220.7	311.5	125.8	72.4	339.4	311.7	279.1	411.5	378.1	181.7
Avg. annual wages, all sectors 2015 (\$) <sup>2</sup>	44,119	54,410	44,814	36,858	42,710	33,935	53,989	58,176	44,193	36,814	37,576	41,229	52,833	51,482	50,438	52,937
Avg. annual wages, mining (except oil & gas), 2015 (\$) <sup>2</sup>	76,564	79,780	82,172	N/A	48,151	74,122	86,435	84,652	N/A	N/A	N/A	N/A	100,587	N/A	85,693	74,695
Coal wages/all wages (%)	173.5	146.6	183.4	N/A	112.7	218.4	160.1	145.5	N/A	N/A	N/A	N/A	190.4	N/A	169.9	141.1
Receiving transfer payments (2014) (%) <sup>3</sup>	24.5	16.4	10.7	32.4	15.3	23.2	8.4	9.9	26.1	20.5	40.3	25.3	11.9	13.3	11.6	17.2

N/A: information not disclosed for the region

Information represents the most recent data available from the following sources:

1. Bureau of Economic Analysis 2015<sup>137</sup>
2. Bureau of Labor Statistics 2016<sup>138</sup>
3. Bureau of Economic Analysis 2015<sup>139</sup>

<sup>137</sup> Bureau of Economic Analysis, Regional Economic Accounts 2015; from Economic Profile System (EPS) Summary Profile, p. 2. Headwater Economics EPS tool available at: <https://headwaterseconomics.org/tools/economic-profile-system/about/>

<sup>138</sup> Bureau of Labor Statistics, Quarterly Census of Employment and Wages, 2016; from EPS Mining Profile. p. 5. Headwater Economics EPS tool available at: <https://headwaterseconomics.org/tools/economic-profile-system/about/>

<sup>139</sup> Bureau of Economic Analysis, Regional Economic Accounts, 2015; from EPS, Non-Labor Income Report. p. 1. Headwater Economics EPS tool available at: <https://headwaterseconomics.org/tools/economic-profile-system/about/>

**Table 5-5** presents coal mine employment in 2014 and 2015 and total employment in 2014 for each region. The Appalachian and Interior regions accounted for about 80 percent of the total coal employment across all the regions. The proportion of employment associated with coal varies across regions and was highest in the Montana MP and Wyoming WL regions. While these data provide a useful overview of where coal employment exists, the role of coal employment may be more significant at local levels. The subsequent section explores this point.

**Figure 5-7** displays coal mine employment trends between 2000 and 2015 for the three broad supply regions. This figure demonstrates that the larger downward trend in employment beginning around 2011 has been driven primarily by coal employment reductions in the Appalachian region.

**Table 5-5**  
**Coal Mine Employment by Supply Region**

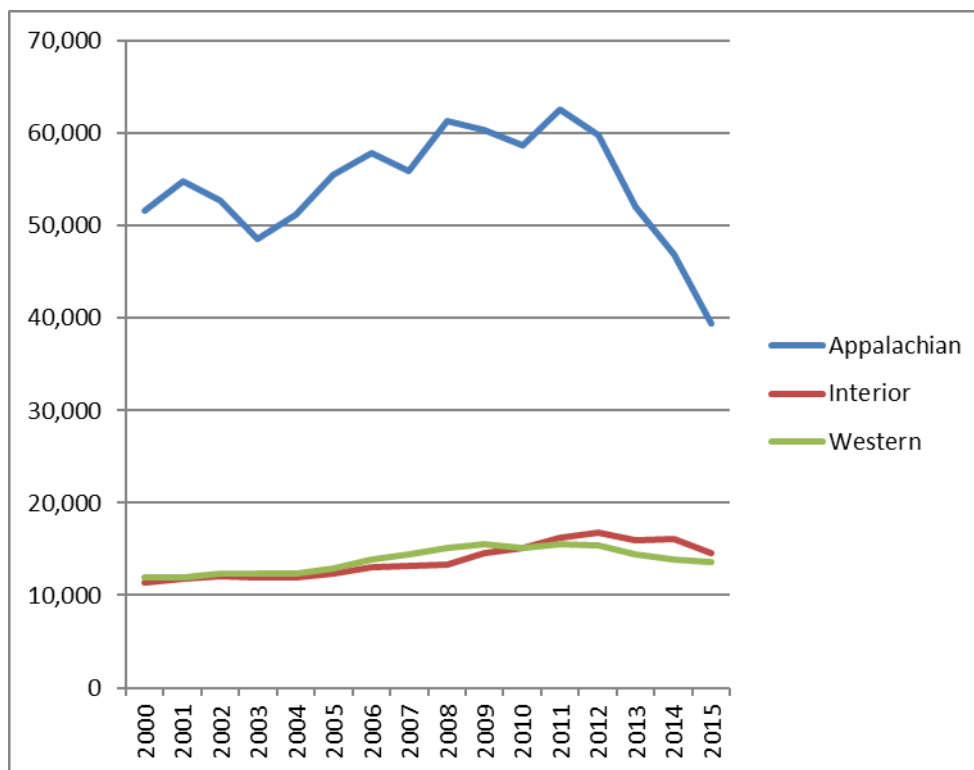
	<b>Coal Mine Employment, 2015<sup>1</sup></b>	<b>Coal Mine Employment, 2014<sup>1</sup></b>	<b>Total Employment, 2014<sup>2</sup></b>	<b>Percent Coal Employment, 2014</b>
Appalachian	39,471	46,891	6,235,437	0.8
Interior	14,636	16,073	13,167,982	0.1
CG	909	926	35,347	2.6
CR	15	24	7,764	0.3
CU	575	724	175,592	0.4
UT	1,308	1,413	70,377	2.0
ME	12	12	9,864	0.1
ND	1,313	1,292	285,040	0.5
MP	1,317	1,306	14,255	9.2
MT	0	0	109,350	0.0
AZ	403	387	40,585	1.0
NM	1,133	1,175	93,120	1.3
WG	1,026	1,021	53,626	1.9
WH	611	569	9,583	5.9
WL	5,016	5,039	60,366	8.3

Information represents the most recent data available from the following sources:

1. MSHA. 2016<sup>140</sup>.
2. Bureau of Economic Analysis. 2015<sup>141</sup>

<sup>140</sup> MSHA (United States Department of Labor Mine Safety Health Administration). 2016. Coal Mine and Employment Data. Accessed September 2016. Available at <http://arlweb.msha.gov/OpenGovernmentData/OGIMSHA.asp>.

<sup>141</sup> Bureau of Economic Analysis. 2015. A25N: Total Full-Time and Part-Time Employment by NAICS Industry. Available at <https://www.bea.gov/itable/index.cfm>



**Figure 5-7. Coal Mine Employment, 2000 – 2015 by Supply Region**

Source: MSHA 2016<sup>142</sup>

### **County-level Socioeconomic Variability**

The previous section provides an aggregate view of broad coal-producing regions. Assessing the likely effects on counties and communities from changes to coal leasing policy requires some recognition of their economic and demographic variability. A contrast of three coal-producing counties reveals some of the relevant variation (see **Table 5-6**). These counties include:

- Boone County, WV. With some of the highest production in West Virginia, this county exemplifies the coal conditions of Appalachia, dominated by private mineral holdings.<sup>143</sup>
- Campbell County, WY. In the Powder River Basin, this county has the highest coal production in Wyoming.<sup>144</sup>

<sup>142</sup> MSHA (United States Department of Labor Mine Safety Health Administration). 2016. Coal Mine and Employment Data. Accessed September 2016. Available at <http://arlweb.msha.gov/OpenGovernmentData/OGIMSHA.asp>.

<sup>143</sup> US EIA. 2014. Annual Coal Report 2014, Table 2. Coal Production and Number of Mines by State, County, and Mine Type, 2014. November 3, 2016. Available at <http://www.eia.gov/coal/annual/pdf/table2.pdf>

<sup>144</sup> US EIA. 2014. Annual Coal Report 2014, Table 2. Coal Production and Number of Mines by State, County, and Mine Type, 2014. November 3, 2016. Available at <http://www.eia.gov/coal/annual/pdf/table2.pdf>

**Table 5-6  
County Comparison Table**

	<b>Boone Co., WV</b>	<b>Campbell Co., WY</b>	<b>Delta Co., CO</b>
Population change, 1970 – 2014 <sup>1</sup>	-5.8%	270.3%	95.3%
Employment change, 1970 – 2014 <sup>1</sup>	34.5%	459.9%	155.5%
Personal income change, 1970 – 2014 <sup>1</sup>	59.1%	739.9%	244.8%
Coal / total employment 2014 <sup>2</sup>	29.2%	14.9%	2.4%
Ratio 2016 / 2000 coal employment (2000 =100%) <sup>2</sup>	34.8%	136.2%	47.6%
Average annual wages, all sectors, 2015 <sup>3</sup>	\$45,905	\$57,426	\$33,178
Average annual wages, mining (except oil & gas), 2015 <sup>3</sup>	\$79,239	\$85,936	\$73,181 <sup>4</sup>
Coal wages / all wages	173%	150%	221%
Bachelor degree or higher, 2010-2014 <sup>5</sup>	9.1%	19.2%	18.9%
Receiving transfer payments (2014) <sup>6</sup>	34.1%	9.0%	25.4%

Information represents the most recent data available from the below sources

1. Bureau of Economic Analysis 2015<sup>145</sup>

2. Bureau of Economic Analysis 2014<sup>146</sup>

3. Bureau of Labor Statistics 2016<sup>147</sup>

4. For Delta County, data for mining wages (except oil and gas) is not available; overall mining wages are shown.

5. Census Bureau<sup>148</sup>

6. Bureau of Economic Analysis. 2015<sup>149</sup>

- Delta County, CO. On the Gunnison River's North Fork, this county has a relatively more diverse economic base, but coal jobs remain important.

Since 2000, the level of coal sector employment in the three counties has diverged (see **Figure 5-8**). In 2015, Campbell County coal employment was 157 percent of the employment of 2000. Delta County, after doubling the 2000 employment level in 2013, by 2015 had declined to 104 percent of its 2000 level, while in Boone County's coal sector employment stood at 66 percent of its earlier level. While the statistics are abstractions, local examples better convey the extent of the decline. From a 2016 news story in Delta County, Colorado:

<sup>145</sup> Bureau of Economic Analysis. 2015. Regional Economic Accounts 2015. From Economic Profile System (EPS) Summary Profile, p. 2. Headwater Economics EPS tool available at:

<https://headwaterseconomics.org/tools/economic-profile-system/about/>

<sup>146</sup> Bureau of Economic Analysis. 2014. GDP & Personal Income Regional Data, 1970-2014.

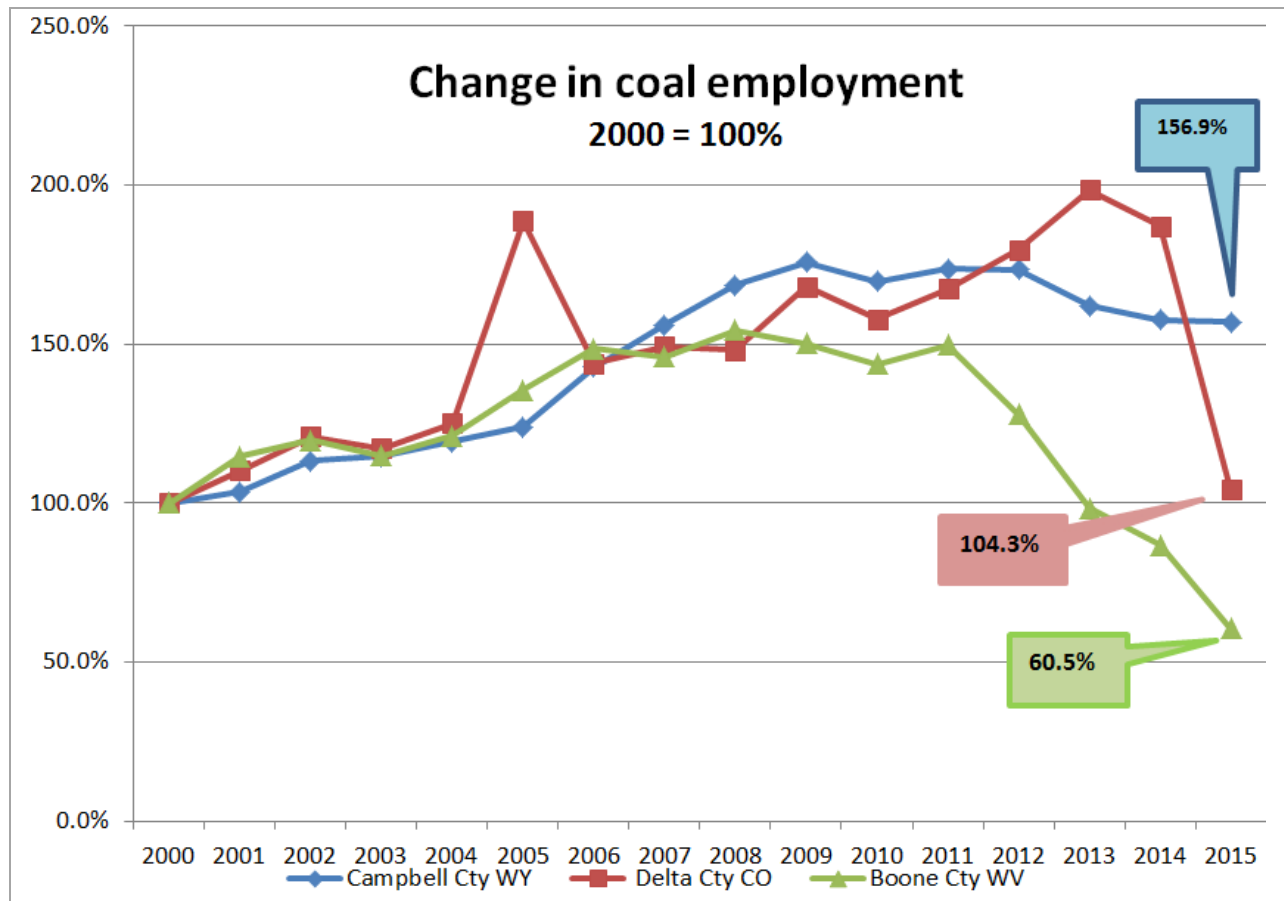
<http://www.bea.gov/itable/iTable.cfm?ReqID=70&step=1#reqid=70&step=27&isuri=1&7022=49&7023=7&7024=n-industry&7025=4&7026=08029&7001=749&7028=-1&7083=levels&7029=49&7090=70&7031=08000>. United States Department of Labor, Employment/Production Data Set (Yearly).

<sup>147</sup> Bureau of Labor Statistics. 2016. Quarterly Census of Employment and Wages. From EPS Mining Profile, p. 5. Headwater Economics EPS tool available at: <https://headwaterseconomics.org/tools/economic-profile-system/about/>

<sup>148</sup> Census Bureau. 2016. Quick Facts. Available at

<http://www.census.gov/quickfacts/table/PST045215/08029,56005,54005,00>

<sup>149</sup> Bureau of Economic Analysis. 2015, Regional Economic Accounts. From EPS Non-Labor Income Report, p. 1. Headwater Economics EPS tool available at: <https://headwaterseconomics.org/tools/economic-profile-system/about/>



**Figure 5-8. Change in Coal Employment**

Sources:

MSHA. 2016<sup>150</sup>

Bureau of Economic Analysis. 2014<sup>151</sup>

“Bowie Resource Partners said Friday that depressed coal prices have forced it to idle the Bowie #2 Mine near Paonia in the latest mine closure to hit Colorado’s Western Slope. BRP, through its subsidiary Bowie Resources LLC, employed 108 full-time workers and one contractor at the facility. The closure is another big economic blow to Delta County, whose coal industry employment has dropped from 1,200 positions to less than 400 since 2013. That doesn’t include the hundreds of support jobs in fields like construction and logging that helped keep the county’s mines running. ‘The coal mines are very

<sup>150</sup> MSHA (United States Department of Labor Mine Safety Health Administration). 2016. Employment/Production Data Set (Yearly). Available at <http://arlweb.msha.gov/OpenGovernmentData/OGIMSHA.asp>.

<sup>151</sup> Bureau of Economic Analysis. 2014, GDP & Personal Income Regional Data, 1970-2014. Available at <http://www.bea.gov/itable/iTable.cfm?ReqID=70&step=1#reqid=70&step=27&isuri=1&7022=49&7023=7&7024=no-n-industry&7025=4&7026=08029&7001=749&7028=-1&7083=levels&7029=49&7090=70&7031=08000>.



critical to the economy of Delta County. We have lost two-thirds of those jobs in the last three years,' said Robbie LeValley, Delta County administrator."<sup>152</sup>

The loss of coal jobs can have an outsized effect on communities, because the coal industry pays far higher than average wages. In the three counties, average coal wages were between 150 percent and 221 percent of average wages in all sectors. The proportion of jobs provided by mining, in contrast, varies greatly across the three counties, ranging from nearly 30 percent in Boone County in 2014 to less than 3 percent in Delta County.

### **Industries Related to Coal Production**

Beyond the local economic activity directly supported by coal operations (e.g., employment at coal operations), additional economic activity, including secondary or multiplier effects and upstream effects (e.g., economic activity associated with the sale of coal such as rail transportation and electricity generation), can be linked to coal operations. Multiplier effects arise from the fact that local businesses, households, and governmental agencies purchase goods and services from one another. These effects include indirect impacts (economic activity affected by sectors that supply inputs to coal operations) and induced impacts (economic activity affected by income expenditures, such as expenditures on groceries or housing of employees in both the coal sector and supplying sectors).<sup>153</sup>

The magnitude of multiplier and upstream economic effects varies by region. A February 2015 study by the University of Wyoming's Center for Energy Economics and Public Policy estimated these additional economic effects for Wyoming.<sup>154</sup> The study found that, in 2012, for every coal mining operation job in Wyoming, an additional 1.32 jobs were supported in Wyoming as a result of indirect and induced economic effects. Rail and electric generation associated with coal supported an additional 7,105 jobs in Wyoming (including indirect and induced economic effects). This upstream employment represented approximate 30 percent of the "total coal economy" in Wyoming.

The Utah Governor's Office of Energy Development commissioned a similar analysis focused on multiplier effects and found that for every coal mining operation job in Utah, an additional 1.21 jobs were supported in Utah as a result

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<sup>152</sup> Svaldi, A. 2016. "Delta County Loses Another Big Coal Mine with Closure of Bowie #2". *The Denver Post*. February 26, 2016. Available at: <http://www.denverpost.com/2016/02/26/delta-county-loses-another-big-coal-mine-with-closure-of-bowie-2/>

<sup>153</sup> Leontief, W. W. 1986. *Input-Output Economics*. 2nd ed., New York: Oxford University Press.

<sup>154</sup> Godby, R., R. Coupal, D. Taylor, and T. Considine. 2015. *The Impact of the Coal Economy on Wyoming*. University of Wyoming, Center for Energy Economics and Public Policy. Prepared for the Wyoming Infrastructure Authority. February 2015. Available at: [http://www.uwyo.edu/cee/\\_files/docs/wia\\_coal\\_full-report.pdf](http://www.uwyo.edu/cee/_files/docs/wia_coal_full-report.pdf)

of indirect and induced economic effects.<sup>155</sup> An economic study of coal in Colorado concluded that, in 2012, about 1.44 indirect and induced jobs were supported for every coal sector job in Colorado as a whole, and 1.04 indirect and induced jobs in northwest Colorado for every northwest Colorado coal mining job.<sup>156</sup>

### 5.7.2 Externalities Associated with Coal

An externality is defined as a side effect or consequence of an industrial or commercial activity that affects other parties without this being reflected in the cost of the goods or services. There are a number of externalities cited in conjunction with coal production, transportation, and consumption.<sup>157,158,159</sup> Environmental, social, and economic values that can be particularly vulnerable near coal-fired power plants or along coal transportation networks include those related to air quality, water quality, noise, and wildlife populations. Ecosystem services associated with these values provide many market and nonmarket benefits. While the costs of these externalities may not be fully reflected in the fiscal terms of Federal coal leases, it is important to note that there are a number of Federal, state, and local laws and regulations that control such impacts.

Coal mining can produce several production-related externalities, including the emission of greenhouse gases; air and water pollution, including associated negative health effects; and water use. Methane, a potent greenhouse gas, is released when gases trapped in coal seams are released when they are cut to extract coal. Running equipment (drills, bulldozers, and trucks) causes additional types of air pollution, in addition to greenhouse gas emissions, particularly criteria pollutants (i.e., carbon monoxide, lead, ground-level ozone, particulate matter, nitrogen dioxide, and sulfur dioxide). Coal mining can affect water quality and, thus, human health, livestock, fishing stocks, and aquatic species. In addition, coal mining can use a significant amount of water for dust

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<sup>155</sup> Utah Governor's Office of Energy Development. 2015. Energy and Energy-related Mining in Utah, An Economic and Fiscal Assessment. May 2015. Available at [Energy and Energy-related Mining in Utah, An Economic and Fiscal Assessment](#).

<sup>156</sup> Hovarth, G. 2014. Measurement of Economic Activity for Coal Industry and Electrical Power Generation Industry in the Yampa-White River Region of Northwest Colorado. Funding provided by the Economic Development Council of Colorado. Prepared for the Craig/Moffat Economic Development Partnership, Rio Blanco County, and Steamboat Springs Economic Development Council. Available at <http://cber.co/wp-content/uploads/2014/05/Economic-Impact-of-Coal-Industry-in-the-Yampa-White-River-Region-of-Colorado.pdf>

<sup>157</sup> For review of externalities associated with coal production, see Hein, J. F., and P. Howard. 2015. "Illuminating the Hidden Costs of Coal: How the Interior Department Can Use Economic Tools to Modernize the Federal Coal Program". Institute for Policy Integrity. New York University School of Law. December 2015. Available at [http://policyintegrity.org/files/publications/Hidden\\_Costs\\_of\\_Coal.pdf](http://policyintegrity.org/files/publications/Hidden_Costs_of_Coal.pdf)

<sup>158</sup> Epstein, P. R. et al. 2011. "Full cost accounting for the life cycle of coal". *Ann. N.Y. Acad. Sci.* 1219(2011):73-98. Available at [http://www.chgharvard.org/sites/default/files/epstein\\_full%20cost%20of%20coal.pdf](http://www.chgharvard.org/sites/default/files/epstein_full%20cost%20of%20coal.pdf)

<sup>159</sup> Lashof, D. 2007. Coal in a Changing Climate. Natural Resources Defense Council (NRDC). NRDC Issue Paper. February 2007. Available at <https://www.nrdc.org/sites/default/files/coalclimate.pdf>

control, extraction (i.e., to cool equipment and prevent fire), and processing (e.g., coal washing).

The transportation of coal requires large amounts of energy and includes some risks. According to a study by the Institute for Policy Integrity at New York University, in the United States, coal companies transport 70 percent of their product by rail, approximately 10 percent by truck, 10 percent or more by waterways, and the rest using a variety of means including conveyor belts and slurry pipelines.<sup>160</sup> Transportation of coal can result in multiple externalities, including increased risk to public health through accidents and air pollution, emission of greenhouse gases, and noise.

The combustion of coal can contribute to air quality externalities, as the burning of coal results in emissions of nitrogen oxides, sulfur dioxide, the particulates PM<sub>10</sub> and PM<sub>2.5</sub>, and mercury, all of which can affect air quality and public health.<sup>161</sup> Importantly, the greenhouse gas emissions associated with coal consumption contribute to global climate change.<sup>162</sup> According to the National Research Council, “Emissions of CO<sub>2</sub> from the burning of fossil fuels have ushered in a new epoch where human activities will largely determine the evolution of Earth’s climate. Because CO<sub>2</sub> in the atmosphere is long lived, it can effectively lock Earth and future generations into a range of impacts, some of which could become very severe. Therefore, emission reduction choices made today matter in determining impacts experienced not just over the next few decades, but in the coming centuries and millennia.”<sup>163</sup>

In 2009, based on a large body of robust and compelling scientific evidence, the EPA Administrator issued the Endangerment Finding under CAA section 202(a)(1).<sup>164</sup> In the Endangerment Finding, the Administrator found that the current, elevated concentrations of greenhouse gases in the atmosphere—already at levels unprecedented in human history—may reasonably be anticipated to endanger public health and welfare of current and future generations in the United States. We summarize these adverse effects on public health and welfare briefly here.

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<sup>160</sup> Hein, J. F., and P. Howard. 2015. “Illuminating the Hidden Costs of Coal: How the Interior Department Can Use Economic Tools to Modernize the Federal Coal Program”. Institute for Policy Integrity. New York University School of Law. December 2015. Available at [http://policyintegrity.org/files/publications/Hidden\\_Costs\\_of\\_Coal.pdf](http://policyintegrity.org/files/publications/Hidden_Costs_of_Coal.pdf)

<sup>161</sup> Lashof, D. 2007. Coal in a Changing Climate. Natural Resources Defense Council (NRDC). NRDC Issue Paper. February 2007. Available at <https://www.nrdc.org/sites/default/files/coalclimate.pdf>

<sup>162</sup> US EPA. 2016. Climate Change: Basic Information. Available at <https://www.epa.gov/climatechange/climate-change-basic-information>

<sup>163</sup> National Research Council. 2011. Climate Stabilization Targets. Missions, Concentrations, and Impacts over Decades to Millennia. p. 3. Available at <https://www.nap.edu/catalog/12877/climate-stabilization-targets-emissions-concentrations-and-impacts-over-decades-to>

<sup>164</sup> US EPA. 2009. Endangerment and Cause or Contribute Findings for Greenhouse Gases Under Section 202(a) of the Clean Air Act. Final Rule. 74 FR 66496. December 15, 2009. Available at <https://www.gpo.gov/fdsys/pkg/FR-2009-12-15/pdf/E9-29537.pdf>

**Public Health Impacts**

Climate change caused by human emissions of greenhouse gases threatens the health of Americans in multiple ways. By raising average temperatures, climate change increases the likelihood of heat waves, which are associated with increased deaths and illnesses. While climate change also increases the likelihood of reductions in cold-related mortality, evidence indicates that the increases in heat mortality will be larger than the decreases in cold mortality in the United States. Compared with a future without climate change, climate change is expected to increase ozone pollution over broad areas of the United States, especially on the highest ozone days and in the largest metropolitan areas with the worst ozone problems, and thereby increase the risk of morbidity and mortality. Climate change is also expected to cause more intense hurricanes and more frequent and intense storms and heavy precipitation, with impacts on other areas of public health, such as the potential for increased deaths, injuries, infectious and waterborne diseases, and stress-related disorders. Children, the elderly, and the poor are among the most vulnerable to these climate-related health effects.

**Public Welfare Impacts**

Climate change impacts touch nearly every aspect of public welfare. Among the multiple threats caused by human emissions of greenhouse gases, climate changes are expected to place large areas of the country at serious risk of reduced water supplies, increased water pollution, and increased occurrence of extreme events such as floods and droughts. Coastal areas are expected to face a multitude of increased risks, particularly from rising sea level and increases in the severity of storms. These communities face storm and flooding damage to property, or even loss of land due to inundation, erosion, wetland submergence, and habitat loss.

Impacts of climate change on public welfare also include threats to social and ecosystem services. Climate change is expected to result in an increase in peak electricity demand. Extreme weather from climate change threatens energy, transportation, and water resource infrastructure. Climate change may also exacerbate ongoing environmental pressures in certain settlements, particularly in Alaskan indigenous communities, and is very likely to fundamentally rearrange US ecosystems over the 21st century. Though some benefits may balance adverse effects on agriculture and forestry in the next few decades, the body of evidence points toward increasing risks of net adverse impacts on US food production, agriculture, and forest productivity as temperature continues to rise. These impacts are global and may exacerbate problems outside the United States that raise humanitarian, trade, and national security issues for the United States.

**New Scientific Assessments and Observations**

Since the administrative record concerning the Endangerment Finding closed following the EPA's 2010 Reconsideration Denial, climate change impacts have

continued to intensify, with new records being set for a number of climate indicators, such as global average surface temperatures, Arctic sea ice retreat, CO<sub>2</sub> concentrations, and sea level rise. Additionally, a number of major scientific assessments have been released that further improve understanding of the climate system and further strengthen the case that greenhouse gases endanger public health and welfare both for current and future generations. These assessments from the Intergovernmental Panel on Climate Change (IPCC), the US Global Change Research Program, and the National Research Council (NRC) include:

- IPCC's 2012 Special Report on Managing the Risks of Extreme Events and Disasters to Advance Climate Change Adaptation and the 2013–2014 Fifth Assessment Report (AR5)
- The US Global Change Research Program 2014 National Climate Assessment, *Climate Change Impacts in the United States* (NCA3)
- The NRC's 2010 *Ocean Acidification: A National Strategy to Meet the Challenges of a Changing Ocean* (Ocean Acidification); 2011 *Report on Climate Stabilization Targets: Emissions, Concentrations, and Impacts over Decades to Millennia* (Climate Stabilization Targets); 2011 *National Security Implications for US Naval Forces* (National Security Implications); 2011 *Understanding Earth's Deep Past: Lessons for Our Climate Future* (Understanding Earth's Deep Past); 2012 *Sea Level Rise for the Coasts of California, Oregon, and Washington: Past, Present, and Future*; 2012 *Climate and Social Stress: Implications for Security Analysis* (Climate and Social Stress); and 2013 *Abrupt Impacts of Climate Change* (Abrupt Impacts) assessments.

The findings of the recent scientific assessments confirm and further strengthen the conclusion that greenhouse gases endanger public health, now and in the future. The NCA3 indicates that human health in the United States will be impacted by “increased extreme weather events, wildfire, decreased air quality, threats to mental health, and illnesses transmitted by food, water, and disease-carriers such as mosquitoes and ticks.” The most recent assessments now have greater confidence that climate change will influence production of pollen that exacerbates asthma and other allergic respiratory diseases such as allergic rhinitis, as well as effects on conjunctivitis and dermatitis. Both the NCA3 and the IPCC AR5 found that increasing temperature has lengthened the allergenic pollen season for ragweed, and that increased CO<sub>2</sub> by itself can elevate production of plant-based allergens.

The NCA3 also concludes that children's unique physiology and developing bodies contribute to making them particularly vulnerable to climate change. Impacts on children are expected from heat waves, air pollution, infectious and waterborne illnesses, and mental health effects resulting from extreme weather events. The IPCC AR5 indicates that children are among those especially

susceptible to most allergic diseases, as well as health effects associated with heat waves, storms, and floods. The IPCC finds that additional health concerns may arise in low-income households, especially those with children, if climate change reduces food availability and increases prices, leading to food insecurity within households.

Both the NCA3 and IPCC AR5 conclude that climate change will increase health risks facing the elderly. Older people are at much higher risk of mortality during extreme heat events. Pre-existing health conditions also make older adults susceptible to cardiac and respiratory impacts of air pollution and to more severe consequences from infectious and waterborne diseases. Limited mobility among older adults can also increase health risks associated with extreme weather and floods.

The new assessments also confirm and further strengthen the conclusion that greenhouse gases endanger public welfare, and emphasize the urgency of reducing greenhouse gas emissions due to their projections that show greenhouse gas concentrations climbing to ever-increasing levels in the absence of mitigation. The NRC assessment *Understanding Earth's Deep Past* projected that, without a reduction in emissions, CO<sub>2</sub> concentrations by the end of the century would increase to levels that the Earth has not experienced for more than 30 million years.<sup>165</sup> In fact, that assessment stated that “the magnitude and rate of the present greenhouse gas increase place the climate system in what could be one of the most severe increases in radiative forcing of the global climate system in Earth history.”<sup>166</sup> Because of these unprecedented changes, several assessments state that we may be approaching critical, poorly understood thresholds. As stated in the assessment, “As Earth continues to warm, it may be approaching a critical climate threshold beyond which rapid and potentially permanent—at least on a human timescale—changes not anticipated by climate models tuned to modern conditions may occur.”

The NRC *Abrupt Impacts* report analyzed abrupt climate change in the physical climate system and abrupt impacts of ongoing changes that, when thresholds are crossed, can cause abrupt impacts for society and ecosystems. The report considered destabilization of the West Antarctic Ice Sheet (which could cause 3–4 meters (9–12 feet) of potential sea level rise) as an abrupt climate impact with unknown but probably low probability of occurring this century. The report categorized a decrease in ocean oxygen content (with attendant threats to aerobic marine life); increase in intensity, frequency, and duration of heat waves; and increase in frequency and intensity of extreme precipitation events (droughts, floods, hurricanes, and major storms) as climate impacts with moderate risk of an abrupt change within this century.

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<sup>165</sup> National Research Council. 2011. *Understanding Earth's Deep Past. Lessons for Our Climate Future*. p.1. Available at <https://www.nap.edu/catalog/13111/understanding-earths-deep-past-lessons-for-our-climate-future>

<sup>166</sup> *Ibid.*, p.138.

The NRC Abrupt Impacts report also analyzed the threat of rapid state changes in ecosystems and species extinctions as examples of an irreversible impact that are expected to be exacerbated by climate change. Species at most risk include those whose migration potential is limited, whether because they live on mountaintops or fragmented habitats with barriers to movement, or because climatic conditions are changing more rapidly than the species can move or adapt. While the NRC determined that it is not presently possible to place exact probabilities on the added contribution of climate change to extinction, they did find that there was substantial risk that impacts from climate change could, within a few decades, drop the populations in many species below sustainable levels, thereby committing the species to extinction. Species within tropical and subtropical rainforests, such as the Amazon, and species living in coral reef ecosystems were identified by the NRC as being particularly vulnerable to extinction over the next 30 to 80 years, as were species in high-latitude and high-elevation regions.

Since the 2009 Endangerment Finding, the USGCRP NCA3, and multiple NRC assessments have projected future rates of sea level rise that are 40 percent larger to more than twice as large as the previous estimates from the 2007 IPCC 4th Assessment Report due in part to improved understanding of the future rate of melt of the Antarctic and Greenland Ice sheets. These assessments continue to recognize that there is uncertainty inherent in accounting for ice sheet processes. Additionally, local sea level rise can differ from the global total depending on various factors. The east coast of the US in particular is expected to see higher rates of sea level rise than the global average. The NCA3 states that “five million Americans and hundreds of billions of dollars of property are located in areas that are less than four feet above the local high-tide level,” and the NCA3 finds that “[c]oastal infrastructure, including roads, rail lines, energy infrastructure, airports, port facilities, and military bases, are increasingly at risk from sea level rise and damaging storm surges.”<sup>167</sup>

Events outside the US, as also pointed out in the 2009 Endangerment Finding, will also have relevant consequences. The NRC Climate and Social Stress assessment concluded that it is prudent to expect that some climate events “will produce consequences that exceed the capacity of the affected societies or global systems to manage and that have global security implications serious enough to compel international response.” The NRC National Security Implications assessment recommends preparing for increased needs for humanitarian aid; responding to the effects of climate change in geopolitical hotspots, including possible mass migrations; and addressing changing security needs in the Arctic as sea ice retreats.

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<sup>167</sup> Melillo, J. M., T. Richmond, and G. W. Yohe, Eds. 2014. *Climate Change Impacts in the United States: The Third National Climate Assessment*. US Global Change Research Program, p. 9. Available at <http://www.globalchange.gov/browse/reports/climate-change-impacts-united-states-third-national-climate-assessment-0>

These assessments and observed changes make it clear that reducing emissions of greenhouse gases across the globe is necessary in order to avoid the worst impacts of climate change, and underscore the urgency of reducing emissions now. Moreover, due to the time lags inherent in the Earth's climate, the NRC Climate Stabilization Targets assessment notes that the full warming from any given concentration of CO<sub>2</sub> reached will not be fully realized for several centuries, underscoring that emission activities today carry with them climate commitments far into the future.

### 5.7.3 Fiscal Implications of Coal

Federal, state, and local governments collect revenues from coal operations through various taxes, fees, and royalties. This section summarizes the revenue mechanisms and describes how revenues are disbursed.

#### ***Revenue and Disbursement Associated with Federal Royalties, Bonus Bids, and Rents***

The Federal government receives revenue from coal leasing in three ways:

- Bonus bids
- Rental fees
- Production royalties

These revenues are collected and disbursed by the ONRR. In addition to these three channels, the ONRR also collects and tracks “other revenues” that consist of advance royalty payments, minimum royalty payments, estimated royalty payments, settlement agreements, and interest. Over the last 10 years, average annual revenues from coal leasing have amounted to slightly more than \$1 billion, representing approximately one-quarter of all revenues associated with onshore Federal minerals collected by the ONRR. **Table 5-7**, below, shows the revenues collected from coal in fiscal year 2015 associated with Federal coal leases by state, as well as the 10-year average by state and revenue type.

Over the last 10 years, almost 90 percent of total revenues collected from coal leases originated in Wyoming. Rent and other revenues generally represent a small proportion of overall revenue with less than 5 percent in any state and less than 0.5 percent of the national total. Bonus bids (36 percent) and royalties (63.6 percent) make up the greatest percentage of overall revenues from coal leasing.<sup>168</sup>

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<sup>168</sup> Bonus bids actually make up a relatively small proportion of the total revenue by state (less than 10 percent) with the exception of Wyoming. On average, bonus bids have represented about 40 percent of revenues from leases in Wyoming.



**Table 5-7**  
**Summary of Federal Revenues Associated with Coal Leases**

State	Fiscal Year	10-year Average				
	2015 Total	Bonus	Other Revenues	Rent	Royalties	Total
Alabama	\$87,791	\$25,645	-\$102,705	\$12,120	\$3,810,903	\$3,745,963
Colorado	\$45,946,041	\$2,799,763	\$307,583	\$183,152	\$47,004,798	\$50,295,297
Kentucky	\$158,280	\$52,935	\$10,200	\$15,923	\$1,110,040	\$1,189,098
Montana	\$43,259,597	\$3,489,852	\$2,137,707	\$130,007	\$38,823,202	\$44,580,768
Oklahoma	\$825,481	\$80,999	\$2,655	\$36,382	\$723,083	\$843,118
North Dakota	\$3,483,815	\$64,906	\$0	\$33,176	\$1,244,067	\$1,342,149
Utah	\$34,545,089	\$1,338,104	\$98,931	\$225,425	\$28,753,933	\$30,416,393
Wyoming	\$987,724,580	\$372,599,892	\$842,377	\$555,832	\$550,402,368	\$924,400,469
<b>Total</b>	<b>\$1,116,030,675</b>	<b>\$380,452,096</b>	<b>\$3,296,747</b>	<b>\$1,192,017</b>	<b>\$671,872,395</b>	<b>\$1,056,813,255</b>

Source: ONRR 2016

The Mineral Leasing Act specifies that 50 percent of Federal revenues from leasable minerals (including coal) are paid to the US Treasury (40 percent appropriated to the Reclamation Fund and 10 percent to the General Fund), and 50 percent are paid “to the State within the boundaries of which the leased land is located or the deposits were derived” (30 USC, Subsection 191[a]). The Act further states that “[i]n determining the amount of payments to the States...beginning in fiscal year 2014 and for each year thereafter, the amount of such payments shall be reduced by 2 percent for any administrative or other costs incurred by the United States in carrying out the program authorized by this chapter, and the amount of such reduction shall be deposited to miscellaneous receipts of the Treasury” (30 USC, Subsection 191[b]). Thus, States effectively receive 49 percent of the revenues collected on leases within their state. The Act also recommends that “the legislature of the State may direct giving priority to those subdivisions of the State socially or economically impacted by development of minerals leased under this Act, for (i) planning, (ii) construction and maintenance of public facilities, and (iii) provision of public service” (30 USC, Subsection 191[a]). Given this recommendation, states have broad discretion in using these funds, and each state distributes them differently.

For example, Wyoming distributes mineral royalty and bonus payments to a range of funds, including the School Foundation Fund, School Construction Fund, Highway Fund, General Fund, and Budget Reserve Account. Portions of these payments are also distributed directly to cities and towns; cities, counties, and special districts capital construction; the community college commission; and the University of Wyoming. **Table 5-8**, below, summarizes the distribution of payments in Wyoming in fiscal year 2015 for payments associated with all Federal mineral leases (including coal). Based on the current level of revenues generated from coal leases, approximately 60 percent of the total distribution could be attributed to coal.

**Table 5-8**  
**State of Wyoming's Distribution of Federal Mineral Revenues**

<b>Funds / Recipient</b>	<b>Fiscal Year 2015</b>
Cities & Towns	\$18,562,500
Cities, Counties & Special Districts Capital Const.	\$13,050,000
Foundation Fund	\$251,827,747
School Capital Construction	\$215,609,844
School Districts – Grants	\$5,346,000
Highway Fund / State Roads	\$66,472,500
1% General Fund	\$2,000,000
University of Wyoming	\$13,365,000
Community College Commission	\$1,600,000
Budget Reserve Account	\$326,149,640
<b>Total</b>	<b>\$913,983,231</b>

Source: Wyoming State Treasurer's 2015 Report (p. 52)

Funds distributed directly to cities and towns are generally based on population. The funds allocated to cities, counties, and the special districts capital construction account allow for grants or loans to district construction projects when specific circumstances are met. As shown in the table, a substantial proportion of the funds are allocated to schools. The Foundation Fund is a major revenue source to the Wyoming's Department of Education's annual budget and supports K-12 funding throughout the state.

#### **Other Federal Taxes and Fees Associated with Coal Production**

In addition to Federal revenues in the form of royalties, rents, and bonus bids, all coal mining operations are subject to:

- A per ton reclamation fee established by SMCRA, as amended
- The Black Lung Excise Tax enacted under Black Lung Benefits Revenue Act of 1977

#### *Reclamation Fee*

Title IV of the SMCRA established an Abandoned Mine Reclamation Fund (Fund)<sup>169</sup> that is administered by OSMRE. The primary source of revenue for the Fund is a reclamation fee paid by operators of coal mining operations. Currently, the fees are \$0.28 per ton of non-lignite coal produced by surface coal mining and \$0.12 per ton of non-lignite coal produced by underground mining or 10 percent of the value of the coal at the mine, whichever is less. The fee for lignite coal is 8 cents per ton or 2 percent of the value of the coal at the mine, whichever is less. SMCRA specifies how the collected funds are used, including "reclamation and restoration of land and water resources adversely affected by past coal mining" and grants to states to accomplish the purposes of Title IV (30 USC, Subsection 1231 [c]).

<sup>169</sup> 30 USC, Section 1232

In addition, interest is earned on the Fund, which is used to make transfers to three health care plans that are part of the United Mine Workers of America Health and Retirement Fund (30 USC, Subsection 1231[e]). Since SMCRA's enactment in 1977, the OSMRE has collected over \$10.5 billion in fees and distributed more than \$8.0 billion for grants to states and tribes, transfers to the health care plans, and its own operation of the national program to reclaim land and waters damaged by coal mining before SMCRA's passage.<sup>170</sup> In fiscal year 2015, OSMRE collected about \$195 million in fees, and the average between fiscal year 2011 and fiscal year 2015 was just over \$220 million annually.<sup>171</sup>

#### *Black Lung Excise Tax*

The Black Lung Excise Tax became effective in 1978 with the passage of the Black Lung Benefits Reform Act that enacted the Black Lung Disability Trust Fund. The departments of Labor, Treasury, and Health and Human Services jointly administer the fund. Currently, the excise tax is \$1.10 per ton on underground-mined coal and \$0.55 cents per ton on surface-mined coal, in either case not to exceed 4.4 percent of the sale price.<sup>172</sup> Between 2009 and 2014, the average annual collections from this excise tax were approximately \$595 million.<sup>173</sup> The Department of Labor's Division of Coal Mine Workers' Compensation administers the Black Lung Program and uses funds to compensate "coal miners who are totally disabled by pneumoconiosis arising out of coal mine employment, and to survivors of coal miners whose deaths are attributable to the disease" and provide "eligible miners with medical coverage for the treatment of lung diseases related to pneumoconiosis."<sup>174</sup>

#### **State and Local Taxes and Fees Associated with Coal Production and Operations**

State and local governments collect revenues from coal mining operations through a variety of channels. This section provides an overview of these revenue streams.

#### *Severance Taxes*

Many states collect severance taxes from the production of non-renewable mineral resources, regardless of the surface land owner. Severance tax rates vary by state and can be based on value or volume. Not all states collect

<sup>170</sup> Office of Surface Mining Reclamation and Enforcement. 2016. Reclaiming Abandoned Mine Lands. Available at: <http://www.osmre.gov/programs/AML.shtm>

<sup>171</sup> Office of Surface Mining Reclamation and Enforcement. 2016. Grant Distribution. Available at: <http://www.osmre.gov/resources/grants.shtm>

<sup>172</sup> Department of Labor. 2016. Fiscal year 2016 Detailed Budget Documentation - Black Lung Disability Trust Fund. Available at: <https://www.dol.gov/general/budget/index-2016>

<sup>173</sup> Internal Revenue Service. 2016. Federal Excise Taxes Reported to or Collected by the Internal Revenue Service, Alcohol and Tobacco Tax and Trade Bureau, and Customs Service, by Type of Excise Tax. November 22, 2016. Available at: <https://www.irs.gov/uac/soi-tax-stats-historical-table-20>

<sup>174</sup> Department of Labor. 2016. About the Black Lung Program. Available at: <https://www.dol.gov/owcp/dcmwcl/>

severance taxes, and, for those that do, the approach and level of the severance tax rate varies widely. Many of the states allow for some deductions and exceptions on severance taxes. Along with variation in the collection of severance taxes, the distribution of these revenues to state and local funds varies widely.

#### *Taxes on Production and Property*

In addition to severance taxes, many states collect tax revenues based on the value of coal produced in a given year, or the value of the real and personal property of coal operations.

An ad valorem tax is one based on the monetary value of an item, including property. States that have an ad valorem tax on coal production may refer to the tax as a gross products or gross proceeds tax, based on the total value of the item. Property taxes are ad valorem taxes applied to real and personal property. Real property generally refers to fixed property, such as land and buildings (e.g., the land in which a coal mining operation is located and any fixed structures). Personal property typically refers to property that can be moved, such as most equipment and vehicles used in the mining process. It is important to note that Federal land is exempt from real property tax. However, any improvements on Federal lands associated with a private operation are typically subject to property tax.

Ad valorem taxes on coal production and property associated with coal mining are primarily collected by local governments and some states. These taxes are typically set by taxing entities at the state and local level, including counties, cities, towns, school districts, and special districts (e.g., hospital district, soil and water conservation district, regional transportation authority, etc.). Commonly, the county treasurer is responsible for the collection of these taxes and then distributes the collections back to the taxing entities.

#### *Other Local Taxes*

Two additional tax revenue sources may exist that are applied to coal operations. One source, which would not apply to Federal coal leases, would be royalty and rents collected by states from state-owned coal resources. The other is sales and use taxes. Capital investment and other operating expenses at coal operations may generate additional state and local revenues.

## **5.8 FEDERAL COAL LEASING PROCESS**

The BLM is the Federal agency that is responsible for leasing Federal coal. As previously discussed, the BLM coordinates with other Federal, state, and local agencies and governments that may be affected by coal-related activities and with representatives of industry and environmental groups that may be affected by how Federal coal is leased and managed. The BLM leases coal through a competitive sales process using a fixed royalty-variable cash bonus bidding system. The BLM prepares the paperwork necessary to evaluate tracts for sale,

holds the lease sale using sealed bidding procedures, and evaluates the high bids received to determine if they constitute FMV.

### **5.8.1 Land Use Planning**

The first major step in the Federal coal leasing process is land use planning. Decisions resulting from the land use planning process identify lands acceptable for further consideration for coal leasing. These areas are identified after reviewing all lands in the planning area using the four screens established by the Federal coal management program in 1979 and memorialized in Federal regulations. The four screens are:

1. Identification of areas with coal development potential - areas are eliminated from coal leasing consideration if they do not possess coal development potential (43 CFR, Subparts 3420.1-4[e][1]).
2. Determining if lands are unsuitable for coal development - areas are eliminated if they contain coal but are judged unsuitable for surface coal mining after the application of 20 coal unsuitability criteria, if exemptions and exception do not apply (43 CFR, Subparts 3420.1-4[e][2]; 43 CFR, Subpart 3461).
3. Multiple use conflict analysis - additional coal areas may be eliminated on multiple use grounds if other resource values are determined to be more valuable than coal (43 CFR, Subparts 3420.1-4[e][3]).
4. Surface owner consultation - potential elimination of split-estate mineral lands where surface mining is proposed and a significant number of qualified surface owners have stated a preference against surface coal mining (43 CFR, Subparts 3420.1-4[e][4]).

Pursuant to the Mineral Leasing Act and BLM regulations, lands cannot be offered for lease if they are not identified by the BLM as acceptable for further consideration for coal leasing. This is also true where lands overlying Federal coal resources are managed by a Federal surface management agency other than the BLM.

### **5.8.2 Competitive Leasing Processes**

Federal coal regulations at 43 CFR, Part 3420 identify two types of competitive leasing processes: regional leasing and lease by application. The BLM no longer employs regional leasing; the last “certified” Federal coal production region, the Powder River Coal Production Region, was decertified in 1990 (see **Section 5.3** for more information).

#### ***Regional Coal Leasing***

Under the previous regional coal leasing process—which is described in 43 CFR, Part 3420—the BLM would set leasing levels and select potential coal leasing tracts for sale based on land use planning, expected coal demand, and potential environmental and economic impacts. This process required close consultation

with local governments and citizens through a Federal/state advisory board known as a Regional Coal Team. All costs associated with conducting regional leasing were borne by the Federal Government.

Under this process, regional leasing levels were established by the Secretary of the Interior based on recommendations of Regional Coal Teams. Leasing levels were based on the following factors (43 CFR, Subpart 3420.2):

1. Advice from governors of affected states as expressed through the regional coal team
2. The potential economic, social, and environmental effects of coal leasing on the region, including recommendations from affected Indian tribes
3. Expressed industry interest in coal development in the region and indications of the demand for coal reserves
4. Expressed interests for special opportunity sales
5. Expected production from existing Federal coal leases and non-Federal coal holdings
6. The level of competition within the region and recommendations from the Department of Justice
7. US coal production goals and projections of future demand for Federal coal
8. Consideration of national energy needs
9. Comments received from the public in writing and at public hearings
10. Other pertinent factors

The Regional Coal Team would delineate tracts in any areas acceptable for further consideration for leasing whether or not expressions of leasing interest had been received for those areas. Upon completion of tract delineation and preparation of the tract profiles, the Regional Coal Team would rank the tracts in classes of high, medium, or low desirability for coal leasing. Three major categories of consideration would be used in tract ranking: coal economics, impacts on the natural environment, and socioeconomic impacts (43 CFR, Subparts 3420.3-4).

The delineated tracts selected for further study would be analyzed in a regional EIS. These tracts would be grouped into leasing alternatives, with at least one alternative falling into the recommended leasing level range. Before making a final leasing decision, the Secretary would consult with the governors of the affected states, the surface management agencies, and the Department of Justice. The Secretary's final decision would include whether to offer coal for lease and if so, how much coal to offer, when to hold the lease sale (or sales), and how the coal would be offered for sale.

Under the regional leasing process, if a mine were in a situation in which it was running out of reserves to maintain existing production or existing contracts, prior to the next scheduled regional coal lease sale, the regulations allow for the filing of an emergency LBA.<sup>175</sup> Emergency lease sales are held when coal is needed within 3 years to maintain production at existing mines, to meet contractual obligations, or to prevent the bypass of Federal coal.

### ***Lease-by-Application***

All current leasing under the Federal coal program is conducted through the LBA process (43 CFR, Subpart 3425; see **Section 5.4.3** for more information). Under this process, coal tracts are applied for by an adjacent mine operator in order to maintain production levels and extend the life of the mine. The processing of LBAs has many steps, some running concurrently, but in general, the broad steps taken prior to offering a tract for sale are:<sup>176</sup>

1. Receipt and initial review of the application for completeness and conformance with the applicable land use plan, and if complete, a cost recovery account is established
2. Ensure adequate data exists to determine the amount and characteristics of coal reserves within (and if applicable outside of) the application boundary (exploration)
3. Develop a preliminary tract delineation
4. Prepare a document to comply with the NEPA, preparing the decision on whether to offer a selected coal tract for sale and which tract to offer
5. Prepare and finalize all reports associated with the presale FMV estimate
6. Offer the selected tract for competitive bid

### *Review of Application*

The application must be filed in the proper BLM State Office (SO) having jurisdiction over the lands and/or minerals involved. Once received, the SO assigns a serial number and reviews the application for completeness, ensuring the lands are properly described and available for lease in the approved Resource Management Plan.<sup>177</sup> The SO notifies the appropriate governor(s) that an LBA has been received. Staff confirms the application conforms to the land use plan, and the lands have been determined to be acceptable for further consideration for coal leasing. If the application is located on lands where the surface is administered by another agency, the BLM must confirm with the

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<sup>175</sup> 43 CFR, Part 3420

<sup>176</sup> 43 CFR, Part 3420

<sup>177</sup> Leases within the decertified Powder River Coal Production area will take the application before the Powder River Regional Coal Team to get a recommendation from that team prior to processing.

surface management agency that coal leasing is in conformance with their approved land use plan. If private lands are noted in the application, it should be determined as soon as possible if a qualified surface owner is present, and whether the applicant has received consent to mine.

The applicant for a new Federal coal lease is required to reimburse the BLM for all processing costs incurred by the BLM through a cost recovery account. The processing costs include reimbursement of the BLM's time to provide information for and review of the NEPA document, and time to prepare the geologic, engineering, economic, and valuation documents that establish the presale FMV estimate. Total processing costs will be disclosed in the lease sale notice, and if the successful bidder is not the applicant, that bidder will be required to reimburse the applicant for the cost recovery fees.

#### *Coal Exploration*

The BLM must have adequate data to determine the quality and quantity of recoverable coal before a tract can be delineated and recommended for leasing. If geologic information is inadequate, the BLM will ask the applicant to conduct exploration drilling. A BLM-issued exploration license is required to conduct exploration activities on unleased Federal coal. However, the license confers no right to lease the lands where the exploration occurs. Applicants for exploration licenses must provide opportunity for other parties to participate in the exploration, on a pro rata cost share basis. A public Notice of Invitation to Participate is published in the local newspaper as well in the *Federal Register*.

#### *Developing a Preliminary Tract*

Production maintenance tracts generally do not contain sufficient recoverable reserves necessary to support an entirely new operation. Recoverable reserves are present only in sufficient quantities to extend the life of an adjacent, existing mine, or to permit expansion of the mine's annual production. The tract nominated for leasing by the applicant may be reconfigured by the BLM for reasons of Public Interest and resource conservation. Some common reasons to reconfigure the tract are in order to achieve maximum economic recovery and reduce the potential for bypass, increase potential value, promote competition, reduce potential impacts on other resources, and accommodate qualified surface owner constraints.

In order to enhance competition among companies, if a portion of an applied for tract lies near a competing mine, the BLM may split lands in an LBA into individual tracts in the hopes a competing mine may place a bid. The BLM will also try to delineate a tract that will enhance FMV. Often the BLM does this by pacing the rate of leasing to match the rate of coal production. Rapid leasing in excess of reserve needs could adversely affect bonus values, and the BLM is obligated not to lease speculative coal resources. The BLM attempts to configure these tracts to contain only those reserves needed to meet



production needs, recover all coal resources, avoid speculation or high grading, and encourage competition.

*Preparing the NEPA Document/Decision to Lease*

All coal lease applications will undergo NEPA analysis in the form of an environmental analysis or EIS with full public involvement consistent with regulation and policy. The BLM will also invite agencies involved with post-lease decision-making—often the OSMRE, the Forest Service, or other Surface Management Agency—and the State RA to become Cooperating Agencies in preparing the NEPA document.

Through NEPA, the BLM will evaluate the potential direct, indirect, and cumulative environmental and socioeconomic impacts of leasing and developing Federal coal in the application area. The BLM evaluates the environmental impacts of coal mining that would be expected to result if leases are issued for maintenance coal tracts. Although the BLM does not authorize mining by issuing leases for Federal coal, the impacts of mining the coal are considered in the environmental analyses, because it is a logical consequence of issuing a maintenance lease next to an adjacent mine.

*Determining Fair Market Value*

All successful lease bonus bids must meet or exceed the FMV established by the BLM prior to offering the lease for sale. The estimate of FMV is prepared in accordance with standard appraisal methods and is kept strictly confidential. The term is defined as the “amount in cash, or on terms reasonably equivalent to cash, for which in all probability the coal deposit would be sold or leased by a knowledgeable owner willing, but not obligated to sell or lease to a knowledgeable purchaser who desires but is not obligated to buy” (43 CFR, Subparts 3400.0-5[n]).

The presale estimate of the FMV relies on information about the geology and characteristics of the coal in the application area, the engineering report that considers an optimum mine plan, mining cost associated with extracting the identified reserves in the preferred tract, an economic report that establishes the market for the coal lying within the selected tract, and finally the appraisal/valuation report. The economic report identifies the most likely market(s) for coal lying within the tract, including an evaluation of whether the coal is suitable for export. The BLM is also required by statute and regulation to conduct a public hearing between the Draft and Final EIS to receive comments from the public on the tract proposed for leasing to inform the calculation of the FMV.

The BLM uses a sealed bid system as a measure to ensure FMV is received and the Public Interest is protected. In most instances, particularly in coal areas where lease sales are held on a consistent basis, the BLM keeps the presale estimate of FMV, and the information used to establish this value, confidential even after a lease sale is complete.

*Conducting the Sale and Issuing the Lease*

Once a decision is made to move forward and offer a coal tract for competitive sale, an announcement will be made in proposed and final sale notices in the *Federal Register* that give the time, date, and procedures of the lease sale and description of the coal to be offered. Other methods of notifying the public of the sale may also be employed.

The lease sale begins with receipt of sealed bids. All sealed bids are opened at the public lease sale. The apparent high bid is accepted contingent upon it meeting or exceeding the BLM's presale estimate of FMV, adjudication requirements (bidders must meet regulatory requirements necessary to be qualified to hold a Federal coal lease), and the appropriate fees and payments being attached.

Before a lease is issued, the lessee must furnish a bond in an amount determined by the agency to ensure compliance with the terms and conditions of the lease and to provide a bond to cover the remaining balance of the bonus bid.<sup>178</sup> A sale panel consisting of a mineral appraiser/economist, geologist, mining engineer, and Washington Office delegate will review the apparent high bid to determine if it has met or exceeded the presale FMV.

If the apparent high bid meets the FMV and the bidder is qualified to hold a Federal coal lease, the recommendation is sent before the BLM Authorized Officer, who will accept the bid and send the provided information to the Department of Justice for antitrust review. Upon hearing from Department of Justice, the Authorized Officer will either issue or reject the lease.

Should the apparent high bid not meet the FMV, the BLM Authorized Officer will send notice rejecting the bid and the right to appeal. The notice also allows a bidder to request the BLM to reoffer a tract if they waive their right to appeal. If no bid is received during the reoffer, the decision to hold the sale is complete, and the BLM Authorized Officer will close the case with no further action.

**Public Interest**

Throughout the coal leasing process, the BLM takes into careful consideration whether leasing the applied for lands would be in the public interest (30 USC, Sections 181-287, 351-359; 43 CFR, Subparts 3425.1, 3472.1). The regulations state the BLM must reject an application if "leasing of the land covered by the application, environmental or other sufficient reasons, would be contrary to the public interest" (43 CFR, Subparts 3425.1-8[a][3]). Many, often competing, interests must be considered in arriving at a Public Interest determination,

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<sup>178</sup> Lessees are required to pay the bonus bids in five equal installments beginning with the first payment due at the time of the lease sale and the remaining payments due on the following four anniversary dates of the lease. Per the Energy Policy Act of 2005, if a successful bidder can demonstrate they have a history of timely payments, the requirement to cover any outstanding balance with a bond can be waived.

including, but not limited to, the applicant's request; the environmental impacts; the economic benefit to the local, state, and national economy; rights of qualified surface owners; ensuring a fair return for the use of the public resources; and conservation of the public resource (BLM Manual 3435).

### ***The Federal Coal Lease***

A Federal coal lease grants the right to explore for, extract, remove, and dispose of some or all of the coal deposits that may be found on the leased lands. After a lease is issued, the BLM will review and approve a Resource Recovery and Protection Plan, which describes how maximum economic recovery of the coal resource will be achieved. The BLM does not, however, approve any mining activities. A Federal coal lease is granted on the condition that the lessee will obtain the appropriate permits and licenses from other Federal, state, and local agencies. Before the lessee may initiate any mining activity, as required by SMCRA, OSMRE or the state RA must approve a permit. In addition, the Assistant Secretary, Land and Minerals Management, after receiving a recommendation from OSMRE, must approve a mining plan as required by the Mineral Leasing Act. As part of a permit issued by OSMRE or the state RA, the permittee is required to post a reclamation bond to cover the costs of returning the land to the pre-mining state.

A Federal coal lease has an initial term of 20 years, but it may be terminated within 10 years if the coal resources are not diligently developed. A lease is readjusted at the end of the 20-year primary term and every 10 years thereafter for the life of the lease. Diligent development occurs when the lessee mines one percent of the established recoverable reserves. Once that threshold is met, the lessee is required to continue to produce one percent of their original recoverable reserves on an annual basis, or pay an advance royalty.<sup>179</sup> Lessees who fail to comply with continued operation provisions subject their leases to cancellation. Because mines may be located in areas with various coal owners and mining occurs in a logical sequence, establishing a logical mining unit<sup>180</sup> allows lessees to consolidate the diligent development and continuous operations requirements for Federal leases within the boundary of the mine.

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<sup>179</sup> Upon request by the lessee, the BLM may accept, for a total of not more than 20 years, the payment of advance royalties in lieu of continued operation, consistent with the regulations. The advance royalty will be based on a percentage of the value of a minimum number of tons determined in the manner established by the advance royalty regulations in effect at the time the lessee requests approval to pay advance royalties in lieu of continued operation (30 USC, Sections 181-287; 20 USC, Sections 351-359 (acquired lands); 43 CFR, Part 3483; BLM Coal Lease Form 3400-12).

<sup>180</sup> A logical mining unit is an administrative construction that allows the lessee or operator to consolidate the diligent development and continued operations requirements for all the Federal leases and other coal tracts within the boundaries of the mine. A logical mining unit provides for continuity in management of the coal resource whenever the geologic characteristics of a coal seam cross property boundaries. A logical mining unit has been defined as an area of land in which the coal can be developed in an efficient, economical, and orderly manner as a unit with due regard for conservation of the coal and other resources. An application is required to be filed with the BLM for approval to form a logical mining unit.

At any time, a lessee may surrender, in whole or in part, its Federal coal lease by filing a written request for relinquishment. Before a lease can be relinquished, the lessee must be in compliance with all lease terms and conditions, and have paid all payments and fees.

# CHAPTER 6

## PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT

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The BLM has received a large amount of substantive input from a diverse array of stakeholders through both the internal and external scoping process. **Chapter 5** includes a summary of the comments raised through the scoping process, and **Appendix D** includes a full record of all comments received. The BLM has undertaken a thorough review of the scoping record and developed a preliminary framework for the PEIS based on this input. This chapter presents a purpose and need statement, reform options that meet identified policy objectives to be carried forward for further consideration by the BLM, a rationale for dismissing some options from further consideration, a framework for developing program reform alternatives, issues for analysis, an analytical approach, analytical considerations, and a schedule for completion of the PEIS.

### 6.1 PURPOSE AND NEED STATEMENT

An EIS “shall briefly specify the underlying purpose and need to which the agency is responding in proposing the alternatives including the proposed action” (40 CFR, Subpart 1502.13). For many types of actions, the “need” for the action can be described as the underlying problem or opportunity to which the BLM is responding with the action. The “purpose” can be described as a goal or objective that the BLM is trying to reach (BLM NEPA Handbook Section 6.2).

#### 6.1.1 Need for the Federal Action

The need for this action is to undertake a comprehensive review of the Federal coal program and to consider how the program can be improved and modernized in the areas of fair return, climate change, resource management and protection, and program administration. The last time the Federal coal program received a comprehensive review was in the mid-1980’s, and most of the existing regulations which were promulgated in the late 1970’s, have been only slightly modified since that time. Further, the direct, indirect, and

cumulative impacts of the Federal coal program have not been fully analyzed under NEPA in over 30 years. As described in Secretarial Order 3338, this has led to calls from a variety of stakeholders, including the GAO, OIG, members of Congress, interested stakeholders, and the public for review of many facets of the Federal coal program.

This need is a part of the BLM's stewardship role as a proprietor and sovereign regulator, which is charged by Congress with managing and overseeing mineral development on the public lands, not only for the purpose of ensuring safe and responsible development of mineral resources, but also to ensure conservation of the public lands; the protection of their scientific, historic, and environmental values; and compliance with applicable environmental laws. In addition, the BLM has a statutory duty to ensure a fair return to the taxpayer and broad discretion to decide where, when, and under what terms and conditions mineral development should occur.

Based primarily on the input received through the listening sessions and scoping process, it appears that modernization of the Federal coal program is warranted. While energy markets, communities, environmental conditions, and national priorities have changed dramatically, the program has remained fairly static in its administration over the last thirty years.

There are three general areas in particular that should be modernized to ensure that the program continues to accomplish its responsibilities to the American public. In each of these areas additional analysis is necessary prior to the recommendation of specific policy choices, in order to provide a complete understanding of the likely impacts of various policies on energy markets, electricity prices, employment, and other critically important issues. These issues will be the focus areas of analysis for the PEIS going forward. However, it is possible at this stage in the process to identify the most promising policies for consideration, and those are also set out below. In addition, there are some simpler good government improvements that can be made without significant additional analysis. These may be undertaken in parallel with the PEIS process and they are set out below as well.

The three general areas requiring modernization are: fair return to Americans for the sale of their public coal resources; impact of the program on the challenge of climate change and on other environmental issues; and efficient administration of the program in light of current market conditions including impacts on communities.

First, the program must ensure that the public owners of this coal receive a full and fair return for this resource. Addressing this issue will benefit not only the general public but the states and communities in which Federal coal is located, since 50 percent of most revenue generated by the program goes to those states.

In 2013, both GAO and OIG issued reports making specific recommendations regarding the Federal coal program, particularly with respect to the leasing process and fair market value. The BLM addressed these recommendations through the development of new protocols and issuance of policy guidance, a manual, and a handbook. In the broader context of these reports, stakeholders have expressed additional concerns with what they believe are fundamental weaknesses in the program with respect to fair return.

These concerns arise, at least in part, because there is currently very little competition for Federal coal leases. About 90 percent of lease sales receive bids from only one bidder, typically the operator of a mine adjacent to the new lease, given the investment required to open a new mine. While the BLM conducts a peer-reviewed analysis to estimate a pre-sale fair market value of the coal and will not sell a lease unless the bid meets or exceeds that value, commenters have questioned whether an accurate fair market value can be identified in the absence of a truly competitive marketplace. As OIG pointed out, “since even a 1-cent-per-ton undervaluation in the fair market value calculation for a sale can result in millions of dollars in lost revenues, correcting the identified weaknesses could produce significant returns to the Government.”<sup>181</sup>

Commenters have also raised concerns about the royalty rates in Federal leases, which are set by regulation at a fixed 8 percent for underground mines and not less than 12.5 percent for surface mines. Some stakeholders have suggested that the large volumes and relatively low costs of Federal coal, which currently represents approximately 42 percent of total domestic production, have the effect of artificially lowering market prices for coal, further reducing the amount of royalties received. There are also concerns that the Federal coal program obtains even lower returns through certain types of leasing actions, such as lease modifications, and through royalty rate reductions, which may result in royalty rates as low as 2 percent. In addition, stakeholders have noted that the \$100/acre minimum bid requirement has not been updated since it was established in the regulations in 1982. Some stakeholders further suggest that a fair return to the taxpayer should also include compensation for externalities such as the environmental damage (or lost environmental benefits) from the removal and combustion of the coal. Through the PEIS, the BLM will consider reform options to address these and other aspects of fair return.

Second, the program must ensure appropriate alignment with US climate goals and adequately reflect the impact of the program on climate change. Virtually every community in the US is being impacted by climate change, and Federal programs have an obligation to be administered in a way that will not worsen and help address these impacts. The United States has pledged under the United

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<sup>181</sup> OIG. 2013. Coal Management Program, US Department of the Interior, Report No. CR-EV-BLM-0001-2012. June 2013. Available at <https://www.doioig.gov/sites/doioig.gov/files/CR-EV-BLM-0001-2012Public.pdf>

Nations Convention of Climate Change to reduce its greenhouse gas emissions by 26-28 percent below 2005 levels by 2025. Efforts are already being made to reduce US greenhouse gas emissions in line with this target through measures such as vehicle efficiency standards, the CPP, energy efficiency standards, requirements to reduce methane reductions from oil and gas production, and many other measures.

However, numerous scientific studies indicate that reducing greenhouse gas emissions from coal use worldwide is critical to addressing climate change. As noted above, the Federal coal program is a significant component of overall US coal production. In 2015, 42 percent of total US coal production occurred on Federal lands.<sup>182</sup> When combusted, this Federal coal contributes roughly 10 percent of total US greenhouse gas emissions. Many stakeholders highlighted the tension between producing very large quantities of Federal coal while pursuing policies to reduce US greenhouse gas emissions substantially, including from coal combustion. Furthermore they stated that the current leasing system does not provide a way to systematically consider the climate impacts and costs to the public of Federal coal development, either as a whole or in the context of particular projects, and suggested tools such as royalty adders and compensatory mitigation.

Several of the most promising reforms in this area also are linked to fair return in that they would require an increase in the cost of this coal through price or royalty increases or compensatory mitigation to reflect and help to address its climate change impact. Like other fair return approaches, these reforms would benefit not just the public generally, but more specifically the states in which the Federal coal is located and their communities. Through the PEIS, the BLM will consider reform options to better align the Federal coal program with the challenges presented by climate change.

In addition, there is a need for program reform to better protect the nation's other natural resources (e.g., air, water, and wildlife). Commenters suggested a variety of options for improving protection and management of resources as part of the Federal coal program in accordance with the "multiple use" and "sustained yield" principals of FLPMA. Commenters expressed concern that the unsuitability criteria are not consistently applied at the land use plan level, which they believe disregards important landscape-scale land use allocation considerations. Commenters also suggested that the current unsuitability criteria should be revised and expanded to provide greater protection to important resources such as bats and Greater sage-grouse. Commenters requested that the BLM develop strategic leasing plans that would address resource issues at an appropriate scale and with consideration of the need for mitigation. Options were suggested for strengthening lease applicant

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<sup>182</sup> US Extractive Industries Transparency Initiative. Full dataset. Table I. Available at <https://useiti.doi.gov/downloads/Federal-production/>. See also EIA. Annual Coal Report. Available at <http://www.eia.gov/coal/annual/>



qualifications to ensure that future leases are only offered to companies that have a proven track record with successful environmental performance, including reclamation. Still other commenters suggested using a pricing mechanism (adder associated with royalties) to account for the environmental externalities associated with coal production and use such as air quality impacts. Through the PEIS, the BLM will consider reform options to improve the protection of natural resources.

Finally, there is a need for common-sense reforms to the Federal coal program that provide for the efficient and orderly administration of coal on Federal lands in light of current market conditions. A number of commenters expressed concern over the length of time it takes to obtain a Federal coal lease (in some cases 10+ years) and what they perceive as redundancies in the process between the other agencies involved. They urged the BLM to consider as part of the PEIS ways to improve the administration of the lease process itself. Others offered information to suggest that current leasing processes do not fully promote competition in the current marketplace. And many, particularly in coal states and communities, made a powerful case that the program administration does not appropriately consider or address the impact on communities from changes in the market. The BLM will consider reform options aimed at improving the administration of the Federal coal leasing process in all of these areas.

### **6.1.2 Purpose of the Federal Action**

The purpose of this action is to identify, evaluate, and recommend comprehensive reforms to the Federal coal program. Through the PEIS, the BLM will consider how the program can be improved and modernized to foster the orderly development of BLM-administered coal on Federal lands in a manner that gives proper consideration to the impact of that development on important stewardship values while also ensuring a fair return to the American public.

Programmatic NEPA reviews address the general environmental issues relating to broad decisions, such as those establishing policies, plans, or programs, and can effectively frame the scope of subsequent site- and project-specific Federal actions.<sup>183</sup> The PEIS provides the BLM with an efficient and effective tool to consider a wide range of reasonable reform alternatives for the Federal coal program and adequately assess the cumulative effects of those alternatives across many factors such as market and climate effects. The analysis in the PEIS will inform, and possibly streamline, future decisions for individual actions under the Federal coal program through the ability to tier. Importantly, the PEIS provides an excellent venue for meaningful public involvement, collaboration

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<sup>183</sup> Executive Office of the President, Council on Environmental Quality “Effective Use of Programmatic NEPA Reviews.” December 2014. Available at [https://ceq.doe.gov/current\\_developments/docs/Effective\\_Use\\_of\\_Programmatic\\_NEPA\\_Reviews\\_Final\\_Dec2014\\_searchable.pdf](https://ceq.doe.gov/current_developments/docs/Effective_Use_of_Programmatic_NEPA_Reviews_Final_Dec2014_searchable.pdf)

with interested parties, and ultimately transparent, accountable, and informed government decision-making.

## 6.2 OPTIONS AND ALTERNATIVES

### 6.2.1 Options to Be Evaluated

**Table 6-1** outlines the reform options that the BLM is proposing to carry forward for further consideration that may be analyzed in the PEIS and used as the basis for alternatives development. The options are organized by the policy objectives described in the Need for Federal Action in **Section 6.1.1**.

**Table 6-1**  
**Options Proposed for Analysis by Policy Objective**

<b>Fair Return</b>	<b>Reduce/Account for Greenhouse Gas Emissions</b>	<b>Improve Resource Protection and Management</b>	<b>Increase Lease Process Efficiency</b>
1. Increase royalty rate	1. Account for carbon-based externalities through royalty rate increase or royalty adder	1. Improve application of unsuitability criteria; modify criteria	1. Develop strategic leasing plans that allow for tiering of future lease decisions
2. Implement FMV process changes (i.e., transparency and consistency)	2. Require compensatory mitigation for greenhouse gas emissions	2. Develop strategic leasing plans that address landscape scale issues, multiple use, and mitigation planning	2. Create pre-application process
3. Limit the use and improve the transparency of royalty rate reductions	3. Lease based on a carbon budget	3. Account for additional coal-related externalities	3. Create a standardized lease application form and develop an electronic application platform
4. Increase rental rate	4. Create incentives for methane capture	4. Strengthen lease applicant qualification requirements	4. Establish a single team to develop FMV
5. Raise minimum bonus bid	5. No new leasing, with limited modifications	5. Apply environmental protections to existing leases	5. Work with other agencies to evaluate means for eliminating overlapping requirements and redundant processes
6. Implement inter-tract or modified inter-tract bidding processes to increase competition		6. Develop regional mitigation strategies for existing and new coal development (to address public health and environmental impacts)	6. Improve transparency in the leasing process
7. Evaluate current performance bonding amounts; increase bonding levels as necessary		7. Develop best management practices	
8. Convene a royalty policy commission			

The reform options presented were raised through the scoping process or developed through internal scoping conducted by the BLM's Interdisciplinary Team. These options are described in greater detail in the text that follows based on best available information. The options presented will be evaluated in terms of benefits, impacts, and overall feasibility, including the BLM's legal and statutory authority for implementation. The BLM may use the options in combination to develop alternatives to be considered in the PEIS, as described in more detail below. Options raised through the scoping process that the BLM proposes not to carry forward for further consideration are discussed in **Section 6.2.3**. Based on further analysis, some of the options identified in **Table 6-1** may also be eliminated from further consideration.

### **Fair Return**

A central objective of the BLM's reform effort for the Federal coal program is the level of return that it provides to the American public. The BLM received a number of comments suggesting reform options that would help better reflect FMV and consequently improve return to the taxpayer. The Federal Government receives revenues generated through the mining of Federal coal in three ways: production royalties, bonus bids, and rental fees (see **Section 5.7.3** for more information). The BLM will assess the following options in terms of the degree to which they would improve fair return to the taxpayer as well as their overall feasibility and practicality.

- I. **Royalty Rate Increase:** The BLM will evaluate the ability of using the royalty rate to better reflect FMV and assess the impacts of increasing the royalty rate on Federal coal. Royalty rates are currently set by statute at a minimum of 12.5 percent of the gross value of the coal produced for surface mines and 8 percent for underground mines (43 CFR, Subparts 3473.3-2). The rate for surface mines may be increased on a lease-by-lease basis but may not be set below 12.5 percent. Currently, most leases contain a royalty rate of 12.5 percent. The BLM will analyze a range of royalty rate increases as part of the PEIS effort to secure fair return. The BLM will consider the effective royalty rate (royalty rate when accounting for deductions and royalty relief) for other federally leased commodities, considering royalties, bonus bids, and rental rates. This may include, but is not limited to basing the royalty rate on the market price for nearby regional coal, basing the royalty rate on the market price for non-Federal coal nationwide, or making the royalty rate commensurate with the rate used on other resources such as offshore oil and gas (18.75 percent). The BLM may also consider adjusting existing royalty rates upward until they are commensurate (on an energy content basis) with royalties that would be collected on substitute fuels, such as natural gas, or possibly consider a royalty rate aimed at maximizing revenues.

For context, the Council of Economic Advisers (CEA) in their study entitled, "The Economics of Coal Leasing on Federal Lands: Ensuring a

Fair Return to Taxpayers,”<sup>184</sup> estimated the necessary royalty rate in the year 2025 based on mine mouth prices to ensure a fair return as follows: 17 percent based on regional coal prices, 29 percent based on non-Federal nationwide coal, and 29 percent based on natural gas prices.<sup>185</sup> The CEA concluded that a policy goal of maximizing return to the taxpayer would require royalty rates of 304 percent<sup>186</sup> (equal to approximately a \$30/ton royalty charge on Powder River Basin coal), which would curtail future Federal coal production by more than half from projected levels (partially offset by increased production from other regions) while increasing revenue by \$2.7-\$3.1 billion. No other studies submitted during the scoping process went into this level of detail on royalty rate increases for the purposes of fair return.

Because royalty charges are related to production levels and gross revenues, the BLM will model the impact various royalty rates have on total Federal coal production and corresponding revenues. For example, the CEA study estimated that Federal coal production based on the royalty rate increases described above would decrease between 3 and 53 percent, respectively, and revenue would increase between \$0-290 million to \$2.7-3.1 billion annually.

The BLM will also evaluate in more detail than the CEA study how raising the royalty rate may depress bonus bids. As previously discussed, total returns are composed of revenues from royalty rates, bonus bids, and rental fees, less administrative costs. Increasing any single component may reduce one of the other components or vice versa. Revenue collection is split among these components as a risk-sharing mechanism between lessors and lessees.

Implementation of this option could be accomplished through policy under the Secretary’s discretion under the Mineral Leasing Act for surface mines; however, rulemaking would be required to increase royalty rates for underground mines. Additionally, rulemaking would be required if the regulatory minimum royalty rate is to be increased.

2. **Fair Market Value Transparency:** The BLM will consider various ways to build on processes that improve consistency and transparency in the FMV calculation process without jeopardizing the competitive process. These include the new oversight process in which the

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<sup>184</sup> Council of Economic Advisers, Executive Office of the President. 2016. The Economics of Coal Leasing on Federal Lands: Ensuring a Fair Return to Taxpayers. June 2016. Available at [https://www.whitehouse.gov/sites/default/files/page/files/20160622\\_cea\\_coal\\_leasing.pdf](https://www.whitehouse.gov/sites/default/files/page/files/20160622_cea_coal_leasing.pdf)

<sup>185</sup> These percent values are relative to an estimated 9.3 percent weighted average royalty rate based on production in 2025 and accounting for waivers, suspensions, and reductions.

<sup>186</sup> The royalty rates increases pertain to mine mouth, initial point of sale, cost of coal. For most Federal coals, this is only a small portion of the totaled delivered cost of coal to a power plant. Therefore, the actual percent increase in price observed by the end user will be significantly lower than the values reflected here.

OVS/DME reviews the BLM’s FMV calculations (see **Section 5.8.2**, Competitive Leasing Process), or the establishment of a single team to develop FMV. Regarding transparency, the BLM Handbook instructs that:

“While much of the data and information used to develop a pre-sale estimate of value have proprietary and confidential characteristics, it is the policy of the BLM that the Federal coal leasing processes are as transparent as the law and regulations allow. To this end, consideration must be given while developing reports that support FMV estimates to the ease with which sensitive, confidential, and proprietary data can be redacted to provide publicly available documents. It is not acceptable to redact an entire document. Further, consideration should be given to timely posting public versions of FMV related documents prominently on publicly available web sites after a successful lease sale, consistent with law and regulation.”<sup>187</sup>

As part of the PEIS, the BLM will look at ways to improve the amount and timeliness of information available to the public for FMV, as well as improved transparency of the process. FMV process improvements will require, at a minimum, modification or additions to BLM policy and guidance to implement, and they may require rulemaking based on options to be evaluated.<sup>188</sup>

3. **Royalty Rate Reductions:** The BLM will evaluate its current use of royalty rate reductions and consider ways to limit the use of those reductions. Under certain circumstances the BLM can, upon application by the lessee or operator, temporarily reduce the royalty rate for a specific area of coal. Since the passage of FCLAA in 1976, the BLM has frequently granted royalty rate reductions.<sup>189</sup> In their scoping comment letter, Taxpayers For Common Sense noted that the BLM has reduced the royalty rates on 35 of 80 Federal coal leases in 9 states during the last 25 years, more than half of which occurred between 2001 and 2007 based on data they obtained from the ONRR.<sup>190</sup>

The general consideration for a royalty rate reduction is to encourage the greatest ultimate recovery of the coal resource. Analysis will be

<sup>187</sup> BLM. 2014. BLM H-3073-1, Coal Evaluation Handbook. October 12, 2014. Available at [https://www.blm.gov/style/medialib/blm/wo/Information\\_Resources\\_Management/policy/blm\\_handbook.Par.58766.File.dat/H-3073-1.pdf](https://www.blm.gov/style/medialib/blm/wo/Information_Resources_Management/policy/blm_handbook.Par.58766.File.dat/H-3073-1.pdf)

<sup>188</sup> Pursuant to Mineral Leasing Act § 201(a), “[n]o bid shall be accepted which is less than the fair market value[.]” The Mineral Leasing Act does not provide a definition for FMV. Changes to the FMV process may require modifications to 43 CFR, Subpart 3422.1.

<sup>189</sup> ONRR. 2016. Royalty Reporting (except Solid Minerals). Available at <http://www.onrr.gov/ReportPay/royalty-reporting.htm>

<sup>190</sup> Taxpayers For Common Sense. 2016. Scoping comment letter on Coal PEIS. July 28, 2016. See Volume 2 Appendix D.

needed to determine the overall revenue impact of royalty rate reductions and the potential for improved return if reductions were curtailed. Analysis will be needed to determine if limitations on royalty rate reductions could result in reduced revenue to the government, as rate reductions are most applicable to already marginal investments (i.e., without the reduction, the coal would not be recovered and no revenue would be generated).

The BLM will also consider ways to improve the transparency associated with the use of royalty rate reductions. As described in scoping comments from Taxpayers For Common Sense and others, the BLM could improve transparency in royalty rate reductions by providing public updates of the applications received and/or approved. This work has already been initiated through the implementation of BLM Instruction Memorandum No. 2014-156 and the associated justification that State Directors are required to provide to the Washington Office any application to ensure consistency in the BLM's review and decisions related to royalty rate reductions.<sup>191</sup> These policies may be further modified through the PEIS and formalized as part of the proposed program reform alternatives.

4. **Rental Rate:** The BLM will consider increasing the rental rate associated with coal leases, which is currently set at a minimum \$3 per acre as established in 1979 (43 CFR, Subparts 3473.3-1). At a minimum, the BLM will consider increasing rental rates to reflect inflation since 1979. Given the small percentage of overall revenues that are generated by rental rates (see **Section 5.7.3**), it is not expected that this option will result in a substantial increase in return. This option may be implemented without rulemaking on an individual lease basis; however, rulemaking would be required to increase the regulatory minimum rate.
5. **Minimum Bonus Bid:** The BLM will consider raising the minimum bonus bid for coal leases that is currently set at \$100 per acre and was established in 1982. The minimum bonus bid represents the minimum value that can be received by the Treasury for a coal lease (43 CFR, Subpart 3422.1[c][2]). The minimum regulatory value is used only when other methods of estimating value (i.e., FMV) yield results that are less than the equivalent of \$100 per acre. At a minimum, the BLM will consider increasing the minimum bonus bid to reflect inflation since 1982. Accounting for inflation alone would increase the minimum bid to approximately \$250 per acre as pointed out by the Institute for Policy

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<sup>191</sup> BLM. 2014. BLM Instructional Memorandum 2014-156. Supplemental Guidance on Processing Royalty Rate Reduction Applications. September 26, 2014. Available at [http://www.blm.gov/wo/st/en/info/regulations/Instruction\\_Memos\\_and\\_Bulletins/national\\_instruction/2014/IM\\_2014-156.html](http://www.blm.gov/wo/st/en/info/regulations/Instruction_Memos_and_Bulletins/national_instruction/2014/IM_2014-156.html)

Integrity in their paper entitled, “Illuminating the Hidden Costs of Coal.”<sup>192</sup>

Raising the minimum bid is not likely to result in a substantial improvement in return since the minimum bonus bid has historically only been employed for leasing in North Dakota and Oklahoma. Minimum bids can vary regionally, and the BLM may also consider establishing minimum bonus bids by coal region taking into account regional economic, geologic, and engineering variables. An additional consideration may be to remove the \$100 bid floor and use the FMV process for setting the statutory minimum bid. The BLM will also consider the feasibility of and need for considering the option value associated with future information and/or changed conditions when establishing the minimum bonus bid.

6. **Alternative Leasing Mechanism:** The BLM will consider the use of alternative leasing mechanisms as a potential means to increase competition among bidders with the goal of improving return. Consideration will be given to inter-tract bidding and modified inter-tract bidding processes.

An inter-tract bidding requires mining companies that are interested in different tracts to compete among themselves for the right to produce on those tracts. As a general overview, the BLM would determine a leasing level for the region being covered before the lease sale. The BLM would then offer tracts for sale, or accept industry requests, in excess of the determined leasing level. The companies would all bid at once on the tracts they most prefer, and their bids would be ranked (e.g., based on \$/ton or \$/Btu). Tracts would then be subtracted from the leasing level in order until the leasing level is met. At this point, the remaining tracts would be rejected. The accepted tracts would be subjected to standard post-sale review to ensure that they achieved FMV.

Under a modified inter-tract bidding process, the BLM would determine a maximum tonnage or maximum number of Btus (or possibly carbon credits that would give the right to mine a volume of coal) to be leased for a region. All interested companies would bid among themselves for the right to produce coal. It could be conducted such that each bidder bids for a specified quantity of coal, and the highest bidders' quantities are subtracted in order from the level. Alternately, bids could be accepted on a proportional basis, where each bidder bids in a price per ton or per Btu and wins a proportion of the total leasing level equivalent to the value of their bid. The former option consolidates production among the highest bidders, while the latter ensures that

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<sup>192</sup> Bureau of Labor Statistics. 2016. Consumer Price Index Inflation Calculator. Available at <http://data.bls.gov/cgi-bin/cpicalc.pl?cost=100.00&year1=1982&year2=2016>

every reasonable bidder receives some production. Once the lessees have received their production quantities, they would be free to allocate the increase on Federal lands of their choice subject to suitability review and NEPA analysis.

Both of these alternative bidding processes imply the need for a strategic plan that sets leasing level for a given region or nationally. Analysis will be needed to determine the potential for increased return associated with modified bidding systems in comparison to the administrative costs. If adopted, the design of this option would be critical. Any procedure to establish leasing levels is subject to uncertainty about future supply and demand conditions in energy markets. For example, the government should have the flexibility to adjust leasing levels to changing market conditions. The methods for how to determine a leasing cap will have to be established (see for example Reduce/Account for Greenhouse Gas Emissions #3). This option may also be considered in connection with the greenhouse gas issues to be discussed below.

It should be noted that the BLM leased coal based on regional plans that included the amount of coal to be leased starting in the late 1970s. This system was suspended due in part to low bidding activity. However, this system did not include the aforementioned alternative leasing mechanisms, and consideration of these options would not be limited to the specific processes and requirements previously used for regional leasing.

7. **Lease Bonding:** The BLM will assess whether current performance lease bonding procedures are sufficient to provide assurance of payment of obligations required under a lease. The BLM is not responsible for establishing bonds to cover environmental protection and reclamation requirements within a SMCRA permit, but rather is responsible for establishing bonds to protect the Federal government from losses in rentals and royalties (and in certain cases unpaid deferred bonus). The bonds are calculated using guidance established in BLM Manual Section 3474 and WO IM 86-145. At minimum, a bond must cover one-fifth of the bonus bid if there is any unpaid balance, as well as one year of advance rental and one-quarter year of royalties if the lease is in production. Bond reviews are currently conducted at least annually but may be increased based on circumstances, such as an anticipated increase/decrease in lease production. The BLM will accept a number of different types of lease bonds but does not accept self-bonds (43 CFR, Subpart 3471.1). This option may be implemented without rulemaking. However, rulemaking would be necessary to make the BLM regulations consistent with section 436 of the Energy Policy Act of 2005, 42 USC, Sections 15801 et seq, amending the Mineral Leasing Act at section 201(a)(4)(A).



8. **Royalty Policy Commission:** A number of commenters suggested that the BLM should immediately reconvene the Royalty Policy Committee, which was established by charter in 1995 under the authority of the Federal Advisory Committee Act. The Committee advised the Secretary on royalty management issues and other mineral-related policies, and also provided a forum for mineral lessees, operators, revenue payers, royalty recipients, government agencies, and interested public to express their views on those issues. The Committee charter required biennial review and could be renewed in 2-year increments by the Secretary as long as the Minerals Management Service required the expertise and advice of the Committee.

The Royalty Policy Committee was terminated on April 2, 2014, due to lack of participation. While the BLM does not believe there is a need to reconvene the Royalty Policy Committee in its previous form, as the Department of the Interior has in place various advisory bodies to address key minerals issues, it will consider the potential value in a policy commission that could assist with rate setting for the Federal coal program and will give that further consideration in the PEIS. Implementation of this option may require development of a charter pursuant to the Federal Advisory Committee Act and Secretarial action to convene a committee.

#### ***Reduce/Account for Greenhouse Gas Emissions***

A related central objective to the BLM's reform effort for the Federal coal program is consideration of the effect of the program on, and alternatives for alignment with, US climate goals. Many stakeholders highlighted the tension between producing large quantities of Federal coal while pursuing policies to restrict global warming to a 2 degrees Celsius outcome, in line with the Paris Agreement (see **Section 5.4.6** for more information). The BLM received a number of suggestions for reform options that would help limit greenhouse gas emissions associated with Federal coal production. Future BLM analysis will evaluate the comparative effectiveness of these options at mitigating greenhouse gas emissions while still respecting the BLM's multiple use and fair return statutory mandates.

- I. **Accounting for Carbon-Based Externalities Through a Royalty Rate Increase or Royalty Adder:** The BLM will consider options to account for the carbon-based environmental and social costs of coal production and use (e.g., climate change damages such as net agricultural productivity, human health, and property damages from increased flood risk). Two possible methods of adjusting the royalty to account for carbon-based externalities will be considered: an increase in the royalty rate (i.e., a percent increase) to account for carbon-based externalities and a carbon adder (or carbon fee) generally expressed as a \$/ton fee that would be in addition to the royalty rate. The advantages and drawbacks of a royalty rate increase versus an adder will be

explored in the PEIS. As has been suggested by commenters, the BLM could also theoretically account for carbon-based externalities through changes to rental rates or bonus bids. The BLM has determined that using royalty-based changes would directly connect impacts to the coal production and consumption—the activities that generate externalities—whereas rental rates are denominated in acres, and bonus bids are dependent on upfront estimates of total coal production.

Consideration will be given to the appropriateness of accounting for individual segments of, or the full lifecycle emissions of, CO<sub>2</sub> from coal. This includes the upstream carbon-related impacts associated with coal production, such as methane released during mining, and the midstream and downstream carbon-related impacts associated with transportation and combustion. For context, in their assessment of royalty rate adjustments to account for upstream externalities in coal production, the Institute for Policy Integrity estimated surface mine royalties would increase from 12.5 percent to 18.7 percent, and underground mine royalties would increase from 8 percent to 28.7 percent when accounting for the social cost of methane emissions from coal production.<sup>193</sup> Their analysis suggested a surface mine royalty of 82.6 percent when incorporating environmental and social externalities from coal transportation.<sup>194</sup> Royalty charge estimates increased higher still when the social cost of carbon related to coal combustion was internalized in other studies.

The BLM's consideration of the external costs associated with coal may, among others, rely on estimates for CO<sub>2</sub> and methane from the Federal Interagency Working Group on the Social Cost of Carbon.<sup>195</sup> The estimates of the social cost of carbon vary over time. Thus, in order to apply the social cost of carbon to Federal coal, analysis will be needed to link coal production and/or combustion to the social cost of carbon or social cost of methane specific to that year.

As this option results in higher prices for coal, it is likely to result in decreased Federal coal production and, therefore, greenhouse gas

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<sup>193</sup> Foley, J. H. and P. Howard. 2016. Illuminating the Hidden Cost of Coal. New York University School of Law Institute of Policy Integrity. p. A-13. Available at [http://policyintegrity.org/files/publications/Hidden\\_Costs\\_of\\_Coal.pdf](http://policyintegrity.org/files/publications/Hidden_Costs_of_Coal.pdf)

<sup>194</sup> These royalty percentages pertain to mine mouth prices, but constitute a much smaller percentage of the delivered price of coal that informs power plant's fuel purchase decisions.

<sup>195</sup> Interagency Working Group on Social Cost of Greenhouse Gases. 2016. Addendum to the Technical Support Document on Social Cost of Carbon for Regulatory Impact Analysis under Executive Order 12866: Application of the Methodology to Estimate the Social Cost of Methane and the Social Cost of Nitrous Oxide. Participation by the Council of Economic Advisers, Council on Environmental Quality, Department of Agriculture, Department of Commerce, Department of Energy, Department of the Interior, Department of Transportation, Department of the Treasury, Environmental Protection Agency, National Economic Council, Office of Management and Budget, Office of Science and Technology Policy. August 2016. Available at [https://www.whitehouse.gov/sites/default/files/omb/inforeg/august\\_2016\\_sc\\_ch4\\_sc\\_n2o\\_addendum\\_final\\_8\\_26\\_16.pdf](https://www.whitehouse.gov/sites/default/files/omb/inforeg/august_2016_sc_ch4_sc_n2o_addendum_final_8_26_16.pdf)

emissions, but as a price mechanism it has no pre-determined CO<sub>2</sub> emissions or coal production outcomes, and levels can be expected to vary based on future market conditions and the availability of substitutes. Higher Federal coal prices may lead to increased non-Federal coal consumption that has similar lifecycle CO<sub>2</sub> emissions, which could partially offset some of the climate-related benefits to reduced Federal coal consumption. The environmental effectiveness of a royalty rate increase or adder would be largely contingent on the degree to which the substitute fuel sources are less carbon intensive (e.g., natural gas-fired generation or renewable generation) as opposed to similarly carbon intensive (e.g., non-Federal coal). The BLM will develop and use economic models to assess these substitution dynamics and the impact they have on the costs and benefits of any changes. Although there is less certainty around CO<sub>2</sub> emission under this option, in comparison to a carbon budget or other quantity-based option, a price-based mechanism would provide greater cost certainty to the coal industry.

Initial analysis conducted by Vulcan Philanthropy using the IPM model suggested a wide range of substitution rates of non-Federal coal for Federal coal, largely in the 0.2 to 0.7 range, depending on base case assumptions regarding the CPP and the percentage of the social cost of carbon incorporated into the royalty rate.<sup>196</sup> Two additional studies (one using the IPM model) project a small amount of substitution, while another study has posited that it may be more significant.<sup>197,198,199</sup> The BLM will be conducting independent analysis similar to these as part of the PEIS. The BLM could also use modeling to test for economic efficiency by identifying at what level of royalty rate increase or adder the marginal benefit from avoided climate damages is greater than or equal to the marginal cost of that royalty adder.

Another consideration in the design of this option will be downstream emissions regulations. For instance, if existing downstream regulation at the point of combustion of coal is already addressing carbon

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<sup>196</sup> A value of 0.2 would suggest that each decrease in a ton of Federal coal production would result in an increase of 0.2 tons of non-Federal coals. (Note: on average, non-Federal coals have higher Btu and CO<sub>2</sub> content per ton). See:

Vulcan Philanthropy. 2016. Federal Coal Leasing Reform Options: Effects on CO<sub>2</sub> Emissions and Energy Markets. Fairfax, Virginia: Vulcan Philanthropy/ICF International. January 2016. Available at <http://www.vulcan.com/MediaLibraries/Vulcan/Documents/Federal-Coal-Lease-Model-report-Jan2016.pdf>

<sup>197</sup> Gillingham, K, J. Bushnell, M. Fowlie, M. Greenstone, A. Krupnick, C. Kolstad, A. Morris, R. Schmalensee, and J. Stock. 2016. "Reforming the US Coal Leasing Program". *Science* 354(6316):1096-1098. Available at <http://science.sciencemag.org/content/354/6316/1096>

<sup>198</sup> Gerarden, T., W. S. Reeder, and J. Stock. 2016. Federal coal program reform, the Clean Power Plan, and the interaction of upstream and downstream climate policies. National Bureau of Economic Research Working Paper 22214. Cambridge, Massachusetts. Available at [http://scholar.harvard.edu/files/stock/files/fedcoal\\_cpp\\_v9.pdf](http://scholar.harvard.edu/files/stock/files/fedcoal_cpp_v9.pdf)

<sup>199</sup> Krupnick, A., J. Darmstadter, N. Richardson, and K. McLaughlin. 2015. Putting a carbon charge on federal coal: legal and economic issues. Resources for the Future Discussion Paper 15-13. Washington, DC. Available at <http://www.rff.org/research/publications/putting-carbon-charge-federal-coal-legal-and-economic-issues>

externalities (partially or fully) through Federal or State regulatory initiatives, or if there is carbon capture and sequestration at the point of combustion, then those impacts could be netted out against any assumed social cost of carbon before converting into an adder as suggested by commenters. One such final downstream regulation is the CPP, which regulates CO<sub>2</sub> from existing power plants and, in effect, causes the internalization of a portion of the social cost of carbon. Because this downstream regulation partially captures the social cost of carbon, optimal upstream policies reflecting the social cost of carbon could be less than 100 percent of the full social cost of carbon to account for the CPP's effects.

With these substitution effects and downstream regulations in mind, some commenters have suggested only incorporating a percentage of the social cost of carbon into any royalty adjustments.<sup>200,201</sup> However, the percentages used in these studies was illustrative and would require further refinement by the BLM. For example, research by Kenneth Gillingham and James Stock found that a carbon adder accounting for 20 percent of the social cost of carbon would amount to between \$15 and \$20 per ton for Powder River Basin coal.<sup>202</sup> Relative to current coal prices and the current surface mining royalty of 12.5 percent, this would equate to a royalty rate of roughly 160 percent to 210 percent.

The BLM may also consider as part of the PEIS opportunities for directing increased revenue streams to address climate adaptation and preparedness practices (e.g., develop and implement comprehensive climate adaptation plans, update stormwater infrastructure, and wildfire programs). Opportunities to direct revenue streams may require recommendations to Congress for statutory amendments.

2. **Compensatory Mitigation:** The BLM will consider adopting requirements for the use of compensatory mitigation to offset the greenhouse gas emissions and climate change impacts associated Federal coal production and use. According to the Department of the Interior's Departmental Manual chapter on implementing mitigation, compensatory mitigation is defined as means to compensate for remaining unavoidable impacts after all appropriate and practicable avoidance and minimization measures have been applied, by replacing or

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<sup>200</sup> Vulcan Philanthropy. 2016. Federal Coal Leasing Reform Options: Effects on CO<sub>2</sub> Emissions and Energy Markets. Fairfax, Virginia: Vulcan Philanthropy/ICF International. January 2016. Available at <http://www.vulcan.com/MediaLibraries/Vulcan/Documents/Federal-Coal-Lease-Model-report-Jan2016.pdf>

<sup>201</sup> Gerarden, T., W. S. Reeder, and J. Stock. 2016. Federal coal program reform, the Clean Power Plan, and the interaction of upstream and downstream climate policies. National Bureau of Economic Research Working Paper 22214. Cambridge, Massachusetts. Available at [http://scholar.harvard.edu/files/stock/files/fedcoal\\_cpp\\_v9.pdf](http://scholar.harvard.edu/files/stock/files/fedcoal_cpp_v9.pdf)

<sup>202</sup> Gillingham, K. and J. Stock. 2016. Federal Minerals Leasing Reform and Climate Policy. Hamilton Project Policy Proposal 2016-07. December 8, 2016. Available at [https://www.brookings.edu/wp-content/uploads/2016/12/es\\_20161208\\_federal\\_minerals\\_leasing\\_reform\\_and\\_climate\\_policy\\_pp.pdf](https://www.brookings.edu/wp-content/uploads/2016/12/es_20161208_federal_minerals_leasing_reform_and_climate_policy_pp.pdf)

providing substitute resources or environments through the restoration, establishment, enhancement, or preservation of resources and their values, services, and functions. Impacts are authorized pursuant to a regulatory or resource management program that issues permits and licenses, or otherwise approves activities.<sup>203</sup>

Under this option, the BLM could receive compensation for unavoidable impacts associated with carbon-based externalities from lessees in the form of a fee paid at lease issuance based on the units of coal produced. Once the fee is paid, the BLM could assume responsibility for ensuring that the desired outcomes of compensatory mitigation are achieved. This approach has been used by the BLM in solar development and is proposed to be used in oil and gas development in the Northeastern National Petroleum Reserve in Alaska. Through the PEIS, the BLM will look at ways to calculate mitigation fees for unavoidable carbon-related impacts and ways to invest the fees collected. Alternately, under this option, the BLM could approve transactions proposed by lessees that would achieve the desired outcome of compensatory mitigation, but for which projects were carried out by private businesses, non-profits, or state or local agencies. This approach has been used under the Endangered Species Act and Clean Water Act as an efficient way to provide appropriate and measurable benefits to a resource that has been negatively affected through a proposed action.

Suggestions made through scoping comments on ways to spend compensatory mitigation funds include carbon offsets, carbon sequestration, climate adaption, and community resilience. As with option #1, Royalty Rate Accounting for Externalities, a compensatory mitigation fee would generate revenue. Careful consideration will be given to which carbon-related externalities should be mitigated for: upstream, or upstream and downstream. Another consideration in the design of this option will be existing regulations for downstream emissions. Like a royalty rate increase or royalty adder, compensatory mitigation may result in substitution from Federal to non-Federal coal and/or other energy sources. This substitution effect would need to be incorporated into BLM's analysis. In comparison to a royalty rate increase or carbon adder, this approach may offer the BLM the ability to direct how mitigation dollars are spent.

3. **Carbon Budget:** The BLM will consider establishing a carbon budget to guide Federal coal leasing in an effort to limit the amount of greenhouse gas emissions associated with Federal coal production. Under this quantity based option, the BLM would offer leases in

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<sup>203</sup> Department of the Interior. 2015. Departmental Manual Part 600 Public Land Policy, Chapter 6 Implementing Mitigation at the Landscape-scale, Section 6.4.C. October 2015. Available at <https://www.doi.gov/sites/doi.gov/files/uploads/TRS%20and%20Chapter%20FINAL.pdf>

accordance with an established carbon budget. A carbon budget would reflect the estimated annual volumes of CO<sub>2</sub> from Federal coal that align with US climate goals (see **Section 5.4.6**) and give consideration to the role of Federal coal in the emissions profile. Under this option, the BLM would identify the amount of Federal coal production and desired additional leasing over a specified time period that would be consistent with current national greenhouse gas emission reduction goals. Like a royalty rate increase or royalty adder, the carbon budget approach may result in substitution from Federal to non-Federal coal and/or other energy sources, so reducing federal leasing by a given amount may not lead to a commensurate reduction in greenhouse gas emissions. This substitution effect would need to be incorporated into BLM's analysis. In comparison to a royalty rate increase or royalty adder approach to addressing carbon-based externalities, a carbon budget approach would not link the climate cost of coal to consumption or provide cost certainty to industry.

In November 2016, the White House released its Mid-Century Strategy for Deep Decarbonization, which lays out the long-term pathways to achieve reductions in net economy-wide emissions of 80 percent below 2005 levels by 2050.<sup>204</sup> This is consistent with the global ambition necessary to avoid most costly climate impacts and risks by meeting the long-term Paris Agreement aim of limiting the increase in the global average temperature to well below 2 degrees Celsius. Other studies have estimated that the US will have to reduce emissions an average of 83 percent below 2005 levels by 2050 (to do its part in limiting the concentration of greenhouse gases in the atmosphere to around 450 parts per million of CO<sub>2</sub>).<sup>205</sup>

Studies acknowledge there are multiple potential pathways to a 2 degree compliance scenario, and there is not a single coal production level specific to these broader climate goals at a given point in time. The BLM may consider a carbon budget that is commensurate with Federal coal's appropriate contribution to meeting economy-wide greenhouse gas emission reduction targets. The BLM may also consider phasing in a budget over time to reduce the economic impact to coal producing regions. Furthermore, the BLM could analyze alternative carbon budgets that strive to align with other metrics such as EIA's projected demand for coal in its reference case scenario, or the anticipated amount of coal demand when social cost of methane and/or social cost of carbon dioxide are internalized into its price. Establishment of any carbon budget would have to consider the amount

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<sup>204</sup> The White House. 2016. US Mid-Century Strategy for Deep Decarbonization. November 2016. p.26. Available at [https://www.whitehouse.gov/sites/default/files/docs/mid\\_century\\_strategy\\_report-final.pdf](https://www.whitehouse.gov/sites/default/files/docs/mid_century_strategy_report-final.pdf)

<sup>205</sup> See International Energy Agency. 2015. Energy and Climate Change. p.151. Available at [publication/WE02015SpecialReportonEnergyandClimateChange.pdf](https://www.iea.org/publications/WE02015SpecialReportonEnergyandClimateChange.pdf)

of coal already available under lease, production capacity, demand, and substitution effects.

Leasing per a carbon budget implies the need for a strategic leasing plan that guides how coal resources will be allocated overtime in a given region or nationally (see Improve Resource Protection & Management #2). It also would likely have to be coupled with a modified bidding system in order to allocate the coal per the budget as discussed under Improve Return #6.

4. **Methane Emissions:** The BLM will consider opportunities to address methane emissions associated with coal mining operations through the PEIS. This includes creating incentives for operators to capture waste mine methane (e.g., for free on-lease use, or capture, storage and sale to the market). The BLM initiated rulemaking through an Advanced Notice of Proposed Rulemaking for waste mine methane use or capture in April 2014 that considers the capture of waste mine methane, for use or sale, that would otherwise be vented.<sup>206</sup> This proposed rulemaking asked for comments and suggestions that might assist the agency in the establishment of a program to capture, use, or destroy waste mine methane that is released into the mine environment and the atmosphere as a direct result of underground coal mining operations. As suggested in scoping comments, the BLM will consider incorporating some of these concepts into the PEIS.
5. **No New Leasing:** The BLM will fully analyze a no new leasing alternative as part of the PEIS as a means to reduce greenhouse gas emissions. Under this alternative, the BLM would issue no future leases for Federal coal with the exception of lease modifications within the defined acreage limitations; existing coal already under lease would not be impacted. Commenters have raised differing opinions on the BLM's legal authority with respect to ceasing all leasing of Federal coal. As part of the PEIS, the BLM will examine its statutory authority regarding implementing a no new leasing alternative and will consider alternative ways this option may be accomplished.

This alternative will require modeling and analysis of substitution, or "leakage," effects to determine net impacts on greenhouse gas emissions and climate change. For example, in the study entitled "How Would Phasing Out US Federal Leases for Fossil Fuel Extraction Affect CO<sub>2</sub> Emission and 2 Degree Celsius Goals?" the authors concluded that if the Federal government stopped all new leasing and did not renew non-producing leases, 3.1 QBtu of Federal coal would not be extracted that

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<sup>206</sup> BLM. 2014. Waste Mine Methane Capture, Use, Sale, or Destruction. Proposed Rule. *Federal Register* 79 (82): 23923. April 29, 2014. Available at <https://www.gpo.gov/fdsys/pkg/FR-2014-04-29/pdf/2014-09688.pdf>

otherwise would be between now and 2030.<sup>207</sup> In terms of greenhouse gas emission reductions, assuming CPP implementation, the authors found that leasing restrictions would reduce CO<sub>2</sub> emissions in 2030 from coal by about 107 million metric tons of CO<sub>2</sub>, but increased use of gas would increase emissions by about 36 million metric tons of CO<sub>2</sub>, resulting in a net reduction of 71 million metric tons of CO<sub>2</sub>. Supporting modeling showed that approximately 60 percent of the decreased Federal coal production would be made up by increased production in the Illinois Basin and (to a lesser extent) Appalachia. The resulting increased coal prices also led to some substitution by gas in domestic power systems, which also reduced emissions.

The BLM could consider including a conditional no new leasing option in which the BLM would issue new and renewed leases conditioned only upon a demonstration that the United States is on track to meet its economy-wide carbon reduction goals. If current emissions and projected emission levels did not suggest that the United States was on track to meet its emissions reduction goals, such as, for example, an 80 percent reduction from 2005 levels by 2050, then the BLM could withhold all new and renewed Federal leases on coal. If the United States were meeting or exceeding the economy-wide percent reduction goals for 2050, then new and renewed coal leasing could continue with no need for any climate-based royalties or budgets discussed in other options.

### ***Improve Resource Protection and Management***

The BLM will consider options aimed at improving resource protection and management, beyond the climate considerations described previously. These options will be analyzed to determine effectiveness at avoiding, minimizing, and/or mitigating impacts on resources of concern. This includes impacts on natural resources and communities as well as impacts related to public health.

- I. **Unsuitability Criteria:** In accordance with the BLM's coal leasing regulations (43 CFR, Subparts 3420.1-4[a]), coal cannot be leased until it has been evaluated in a comprehensive land use plan or land use analysis. As part of the planning process for coal resources, the BLM must identify areas acceptable for further consideration for leasing using four screening procedures (see **Section 5.8.1** for more information). Commenters expressed concern that the BLM does not consistently apply these screens at the land use plan level however. As part of the PEIS, the BLM will identify mechanisms to improve the application of these screens, which include the 20 defined unsuitability criteria, in

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<sup>207</sup> Erickson, P. and M. Lazarus. 2016. How would phasing out US federal leases for fossil fuel extraction affect CO<sub>2</sub> emissions and 2°C goals? The Stockholm Environmental Institute. 2016 Working Paper. Available at <https://www.sei-international.org/mediamanager/documents/Publications/Climate/SEI-WP-2016-02-US-fossilfuel-leases.pdf>



Resource Management Plans (43 CFR, Part 3461), such as requiring documentation and updating plans where this analysis is lacking.

As part of the PEIS, the BLM will also evaluate and modify as necessary the existing 20 criteria listed in the regulations that define areas as unsuitable for surface mining (43 CFR, Subpart 3461.5). For example, The Wilderness Society in their scoping comment letter suggested that the current unsuitability criteria be revised or expanded to include bat roosts and colonies, and important greater sage-grouse habitats, including priority habitat management areas (PHMA) and sagebrush focal areas (SFA).<sup>208</sup> In their scoping comment letter, the Center for Biological Diversity provided specific suggested modification to individual criteria, such as increasing the buffer distance for public building or homes to 500 feet in Criterion 3 and including inventoried roadless areas in Criterion 4.<sup>209</sup> The BLM will consider these suggestions as well as others as part of this option. Each of the unsuitability criteria contains specific information about exceptions or exemptions. As part of the PEIS, the BLM will also evaluate and modify as necessary the application of exceptions and exemptions to ensure adequate resource protection and consistency in application (43 CFR, Part 3461).

2. **Strategic Coal Leasing Plans:** The BLM will consider the development of strategic coal leasing plans as a means to guide Federal coal leasing for a given region or nationally. These plans would likely be step-downs to (or tiered to) an existing Resource Management Plan. However, the opportunity exists to include many of the same decisions and considerations in a Resource Management Plan. These strategic plans would be developed by the BLM on a reoccurring time frame. Many commenters have suggested a 5-year planning horizon for such plans, consistent with the Secretary's leasing program for offshore oil and gas. Commenters have also advocated for a regional approach to strategic planning in order to recognize the significant differences in geology, coal rank and quality, mining conditions, and socioeconomic conditions across various coal regions (see **Sections 5.4.2** and **5.7.1** for more information). As envisioned, these strategic plans could serve a variety of purposes that meet a number of policy objectives. Specific to the policy objective of improving resource protection and management, these plans could address resource management concerns at a landscape scale and potentially incorporate mitigation planning. These plans could recommend how much coal should be leased, in what

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<sup>208</sup> The Wilderness Society. 2016. Scoping comment letter on the Coal PEIS. July 28, 2016. See Volume 2, Appendix D.

<sup>209</sup> Center for Biological Diversity. 2016. Scoping comment letter on the Coal PEIS. July 28, 2016. See Volume 2, Appendix D.

locations, and on what timeline to facilitate management of the Federal coal program under a carbon budget (Reduce/Account for Greenhouse Gas Emissions #3) and accommodate modified bidding procedures (Fair Return #6). These plans could also help streamline future leasing actions and provide a mechanism for future decisions to “tier” to or incorporate by reference (see Increase Lease Process Efficiency #1).

3. **Accounting for Additional Externalities:** The BLM will evaluate the impacts of increasing the royalty rate or including an adder for Federal coal to account for the environmental and social costs of coal production and use beyond carbon-based externalities. These externalities may include, but are not limited to, public health, safety, air quality, water quality, and wildlife impacts. Similar to Option #1, Royalty Rate Accounting for Externalities, an important consideration in the design of this option is what externalities at what point in the coal lifecycle to account for (i.e., upstream, or upstream and downstream). Coordination will be needed with many other agencies to avoid duplicate accounting for these externalities and to establish dollar values for impacts that are not easily quantified.

Inclusion of all of these values is likely to increase the cost of Federal coal substantially. For example, the study entitled “Full Accounting of the Life Cycle of Coal,” published by the New York Academy of Sciences, provided an estimate for all lifecycle externalities (upstream and downstream) related to Federal and non-Federal coal, including carbon-related externalities that ranged from \$175 to \$523 billion in 2008 dollars.<sup>210</sup> The authors point out that their review was limited by the omission of many environmental, community, mental health, and economic impacts that are not easily quantifiable or monetized. The BLM will develop a similar calculation for both upstream and downstream externalities specific to Federal coal production and use.

As with other options, the BLM will use modeling and analysis to determine the impact of coal price increases on Federal coal production. With increased costs, there is also the potential for switching to non-Federal coal or other energy sources, which could have a net effect on impacts and externalities associated with energy generation. Modeling and analysis will be needed to determine the projected level of substitution associated with various price increases on Federal coal. With these factors in mind, the BLM may consider applying only a percentage of the externality costs as a component of this option.

4. **Applicant Qualifications:** The BLM will consider strengthening the self-certification requirements for companies bidding on leases (43 CFR,

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<sup>210</sup> Epstein, P. R. et al. 2011. “Full cost accounting for the life cycle of coal”. *Ann. N.Y. Acad. Sci.* 1219(2011):73-98. Available at [http://www.chgeharvard.org/sites/default/files/epstein\\_full%20cost%20of%20coal.pdf](http://www.chgeharvard.org/sites/default/files/epstein_full%20cost%20of%20coal.pdf)

Subparts 3472.1-2[e][2]). As suggested in comments, requirements to be evaluated should include prohibiting leasing to self-bonded companies, ensuring sufficient financial resources, ensuring companies have not been cited for major violations of environmental regulations in connection with other operations, and verifying companies have been fulfilling reclamation obligations in connection with other operations. This option would require substantial coordination between the BLM, OSMRE, and the states to obtain this information on companies before they bid on leases.

5. **Environmental Protections:** The BLM will consider improving mechanisms that apply environmental protections in the form of stipulations (e.g., to reduce groundwater depletions, conduct breeding bird surveys, establish a monitoring program to assess mining impacts, and address any adverse impacts on surface resources from subsidence as a result of underground mining) to existing leases. The BLM currently has the authority to modify the terms and conditions of a lease at lease readjustment. This occurs upon the expiration of the initial 20-year lease period and any 10-year period thereafter (30 USC, Subsection 207[a]; 43 CFR, Subpart 3451.1[a][1]). The BLM also has the authority to apply additional stipulations to existing leases if the leases are modified and additional acreage is added (43 CFR, Subpart 3432.3).
6. **Regional Mitigation Strategies:** Commenters suggested that the BLM develop regional mitigation strategies for existing and new coal development to address environmental and public health impacts. Regional mitigation strategies identify and facilitate mitigation opportunities at the regional scale, allowing for pre-planning for mitigation opportunities. Guidance on preparing regional mitigation strategies is included in BLM Manual Section 1794.<sup>211</sup> Where the BLM anticipates large-scale development, regional mitigation strategies can be an effective tool to increase permitting efficiency and financial predictability for applicants by studying potential mitigation needs and opportunities on both BLM and non-BLM-administered lands, which can help to inform subsequent permits and authorizations. Regional mitigation strategies can also enhance the ability of Federal and state governments, tribes, nongovernmental organizations, and resource users to invest in larger-scale mitigation efforts through prioritization of investments and pooling of financial resources. The BLM will consider its existing authority with respect to environmental and public health impacts and determine if the concept of regional mitigation strategies could be applied to the Federal coal program to further the goal of improving resource protection and management. This option will

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<sup>211</sup> BLM 2013. BLM Manual Section 1794. Available at [https://www.blm.gov/sites/blm.gov/files/uploads/BLM\\_MS-1794%20Mitigation%20FINAL.docx](https://www.blm.gov/sites/blm.gov/files/uploads/BLM_MS-1794%20Mitigation%20FINAL.docx)

require close coordination with the OSMRE to identify appropriate mitigation actions.

7. **Best Management Practices:** The BLM will consider the use of best management practices to meet resource protection goals for the Federal coal program. Best management practices are state-of-the-art mitigation measures to be applied on a site-specific basis to reduce, prevent, or avoid adverse environmental or social impacts. The BLM often applies best management practices in the context of oil and gas development and will evaluate the use of best management practices to meet resource protection goals in the coal leasing and management context. These best management practices may be incorporated as stipulations in individual new leases as appropriate. Best management practices would serve a similar purpose as design features, which were suggested by some commenters as an option to protect resources.

#### ***Increase Lease Process Efficiency***

The BLM will consider options that are intended to improve the lease process itself. A number of commenters expressed concern over the time it takes to obtain a Federal coal lease and what they perceive as redundancies in the process. These options will be analyzed to determine the degree to which the BLM can increase the efficiency of the lease process while maintaining the integrity and intent.

1. **Strategic Coal Leasing Plans:** As discussed under the policy objective Improve Resource Protection and Management, the BLM will consider the development of strategic coal leasing plans as a means to guide Federal coal leasing for a given region or nationally. These plans would likely be step-downs to (or tiered to) an existing Resource Management Plan. However, the opportunity exists to include many of the same decisions and considerations in a Resource Management Plan. These strategic plans would be developed by the BLM on a reoccurring time frame. Many commenters have suggested a 5-year planning horizon for such plans, consistent with the Secretary's leasing program for offshore oil and gas. Commenters have also advocated for a regional approach to strategic planning in order to recognize the significant differences in geology, coal rank and quality, mining conditions, and socioeconomic conditions across various coal regions (see **Sections 5.4.2** and **5.7.1** for more information). As envisioned, these strategic plans could serve a variety of purposes that meet a number of policy objectives. Specific to the policy objective of increasing lease process efficiency, these plans could be designed to help streamline future leasing actions, providing a mechanism for future decisions to "tier" to or incorporate by reference addressing regional issues that tend to be cumulative in nature, such as air quality and climate change. In addition, these plans could address resource management concerns at a

landscape scale and potentially incorporate mitigation planning (see Improve Resource Protection and Management #2). These plans could recommend how much coal should be leased, in what locations, and on what timeline to facilitate management of the Federal coal program under a carbon budget (Reduce/Account for Greenhouse Gas Emissions #3) and accommodate modified bidding procedures (Fair Return #6).

2. **Pre-Application Process:** The BLM will consider creating a pre-application process in which lease applicants would be required to complete some work prior to the BLM accepting an application (e.g., Qualified Surface Owner consent/identification). This would be intended to help reduce time delays that take place after an application is received.
3. **Standardized Lease Application Form:** The BLM will consider establishing a standardized lease application form to include minimum requirements found in 43 CFR, Subparts 3425.1-7 and other requirements, as determined appropriate. The BLM will also consider developing an electronic platform for the submission of applications. This could improve the consistency and efficiency of the application process.
4. **Single Fair Market Value Team:** The BLM will consider establishing a single team nationwide that conducts the FMV calculations for all offices. This is expected to bring a higher level of consistency and efficiency to the process. This work is currently carried out by a mix of field and state office personnel. This team would prepare the geologic, engineering, economic, and valuation reports to support the estimate of FMV associated with a coal tract proposed for leasing.

Chapter 2 of the BLM's Coal Evaluation Handbook, H-3073-1 describes evaluation team members and their roles in the estimate of FMV. Secretarial Order 3300 established that the Department of the Interior, OVS has the sole responsibility for all real estate valuation functions of the BLM. Based on recent GAO/OIG recommendations, the BLM and OVS revised the Coal Evaluation Handbook (H-3073-1) to establish the procedures under which OVS reviews the BLM's FMV estimates to assure compliance with all applicable guidance and professional standards.

5. **Eliminating Redundant Processes:** The BLM will work with other agencies to evaluate means for eliminating identified overlapping requirements and redundant processes associated with the Federal coal leasing and permitting process. There are existing interagency memorandums of understanding that outline the roles and responsibilities of the various agencies involved in Federal coal activities. The OSMRE is the Federal agency with the primary responsibility to

administer programs that regulate surface coal mining and reclamation operations in accordance with SMCRA and with oversight over state RAs. The state RAs in primacy states have primary responsibility to administer and regulate surface coal mining operations within their jurisdiction subject to the OSMRE's oversight. The OSMRE also is responsible for providing the Mineral Leasing Act mining plan recommendations to the Assistant Secretary of the Interior, Land and Minerals Management. The Forest Service also has jurisdictional responsibilities (i.e., they must provide consent or concurrence to the BLM) when coal is proposed for leasing or exploration on National Forest System lands. Both Federal agencies, as well as state and tribal RAs, may participate as cooperating agencies on the BLM's NEPA analysis for a given coal lease and use that analysis (e.g., through tiering or incorporation by reference) to prepare a decision for actions under their jurisdiction.

6. **Improve Transparency:** The BLM will continue to seek opportunities to improve transparency associated with the Federal coal leasing process. This work has already been initiated through the development of an Instruction Memorandum expected to be finalized in early calendar year 2017. In accordance with that Instruction Memorandum, state offices are directed to maintain on their publicly accessible websites information regarding:
  - a. Lease and lease modification applications covered by one of the exceptions to the Pause
  - b. Coal leasing information including the number of coal leases that are currently in effect; the total acreage under lease; the number of sales held in each fiscal year, including both successful and unsuccessful lease sales; and noncompetitive lease modifications
  - c. Exploration licenses and licensing applications
  - d. Previously granted and pending royalty rate reduction applications.

These policies may be further modified through the PEIS and formalized as part of the proposed program reform. These options may be implemented without rulemaking.

### 6.2.2 Development of Alternatives

The BLM will conduct an evaluation of the options in **Table 6-1**. Once the benefits, impacts, and overall feasibility of the various options are understood, the BLM will be better equipped to blend the options into reform alternatives for the Federal coal program and consider their combined impacts. Program alternatives will be analyzed in a comparative way in the Draft PEIS to determine

their overall impact on the energy markets, energy prices, socioeconomics, and the environment as described in more detail in **Section 6.4**.

The BLM believes that there are a number of the options that represent more modest reforms that could be combined with almost any combined option package or future alternative, or implemented as standalone actions. These options represent beneficial program modernization activities and good government practices.

For fair return, these include FMV determination process changes aimed at transparency and consistency, limiting the use of royalty rate reductions and improving the transparency associated with the use of royalty rate reductions, rental rate adjustments to reflect inflation, minimum bonus bid adjustments to reflect inflation, and evaluation of current performance bonding amounts. For greenhouse gas emissions, this includes creating incentives for methane capture.

For resource protection and management, this includes strengthening requirements for companies bidding on leases, all of which would require coordination with the OSMRE. The requirements include prohibiting leasing to self-bonded companies, ensuring sufficient financial resources, ensuring companies have not been cited for major violations of environmental regulations in connection with other operations, and verifying companies have been fulfilling reclamation obligations in connection with other operations. It also includes developing best management practices for resource protection and improving planning to avoid land use conflicts, such as through the modification and improved application of unsuitability criteria or through the development of strategic coal leasing plans. For lease process efficiency, these include standardizing lease application forms, developing an electronic platform for the submission of applications, working with other agencies to evaluate means for eliminating redundant processes, and improving transparency.

At the Secretary's direction in connection with Order 3338, the BLM is in the process of developing guidance to implement several of these improvements. Additional reforms may be implemented prior to completion of the Final PEIS if further analysis supports taking action on a more expedited timeframe.

To demonstrate how the various options could be combined to develop alternatives in the PEIS, the BLM sets out three possible option combination packages. Because each option presents its own range of analytic issues and because that complexity may be compounded by interactions among the reform options if they are implemented in combination, additional analysis is needed before these or other combinations of options can be included as alternatives for consideration in the PEIS. The Draft PEIS also will analyze a "no action" and a "no leasing" alternative.

## Possible Option Combination Package #1

### 1. Fair Return

*Increase the royalty rate to reflect the fair return for coal produced on Federal land.* The BLM would identify the most appropriate metric and corresponding royalty rate for Federal coal, reflecting on analysis already conducted by other groups such as the CEA. The BLM would also assess the net impact on revenues from such changes, including any potential reduction in bonus bids and production.

### 2. Climate Change/Resource Protection

*Require compensatory mitigation for Federal coal leases.* The BLM would require lessees to carry out or fund activities that proportionally offset climate-related impacts, including through investment in a fund managed by an entity that takes on the liability to proportionally offset those greenhouse gas emissions and climate-related impacts. Contribution to the fund would be tied to the unit of coal produced. Funds could be used for activities including, but not limited to, carbon offsets, carbon sequestration, climate adaptation, and community resilience.

### 3. Leasing Process

- a. *Develop strategic leasing plans and utilize modified inter-tract bidding on a \$/ton or \$/Btu basis.* Strategic leasing plans would be developed based on regular reviews of projected domestic coal demand (e.g., over a 5-year window) and the role of Federal coal resources in meeting domestic energy needs. These plans would set lease sales on a regular schedule to accommodate a modified inter-tract bidding system. The BLM would determine a maximum tonnage of coal or maximum number of Btus to be leased consistent with projected demands. Under a modified inter-tract leasing process, all interested companies would bid among themselves for the right to produce a specified quantity of coal in the location of their choice, assuming it is suitable for mining and consistent with the approved land use plan and strategic leasing plan. To the extent that auctions become more competitive through the use of modified inter-tract bidding, resulting in increased bonus bids, the need for a higher royalty rate could be revisited on a periodic basis.
- b. *Develop regional mitigation strategies.* Regional mitigation strategies would be developed by the BLM to identify and facilitate compensatory mitigation opportunities at the regional scale, allowing for pre-planning for, and advanced investment in, mitigation opportunities.

### 4. Community Assistance



- a. *Explore use of compensatory mitigation funds to invest in affected communities experiencing reduced coal production.* The BLM would seek to use compensatory mitigation funds to invest in economic diversification and workforce development efforts.
- b. *Direct a portion of Federal coal revenues to community assistance.* The BLM would seek to secure Congressional authorization to direct a portion of increased Federal coal revenues toward investments in impacted communities that support economic diversification, job training, mine reclamation, and other community priorities.

## **Possible Option Combination Package #2**

### **1. Fair Return**

*Increase the royalty rate to reflect the fair return for coal produced on Federal land.* The BLM would identify the most appropriate metric and corresponding royalty rate for Federal coal reflecting on analysis already conducted by other groups. Because a carbon-based royalty adder, as described under 2, could be instituted in combination with or independent of a potential royalty rate increase based on fair return principles, the BLM will analyze the effects of such changes both individually and cumulatively.

### **2. Climate Change/Resource Protection**

*Apply a royalty adder to royalty rates to account for carbon-based environmental and societal costs of coal production and use (\$/ton of coal).* A royalty adder would tie climate costs directly to production/consumption. As a price mechanism, a royalty adder would provide price certainty to mining operators and downstream purchasers. A royalty adder would apply only to new and renewed leases and, therefore, would be necessarily phased in over time. The BLM would conduct analysis to identify the most appropriate royalty adder taking into account downstream regulations and substitution effects, and reflecting on analysis already completed by other groups. The BLM would also assess the net impact on revenues from such changes, including any potential reduction in bonus bids and production.

### **3. Leasing Process**

*Develop strategic leasing plans and utilize modified inter-tract bidding on a \$/ton or \$/Btu basis.* Strategic leasing plans would be developed based on regular reviews of projected Federal coal demand (e.g., over a 5-year window) and could serve a variety of purposes that meet a number of policy objectives, including addressing resource management concerns at a landscape level and helping to streamline future leasing actions. These plans would set lease sales on a regular

schedule to accommodate a modified inter-tract bidding system. The BLM would determine a maximum tonnage of coal or maximum number of Btus to be leased consistent with projected demands. Under a modified inter-tract leasing process, all interested companies would bid among themselves for the right to produce a specified quantity of coal in the location of their choice, assuming it is suitable for mining and consistent with the approved land use plan and strategic leasing plan. To the extent that auctions become more competitive through the use of modified inter-tract bidding, resulting in increased bonus bids, the need for a higher royalty rate could be revisited on a periodic basis.

#### 4. Community Assistance

- a. *Direct a portion of Federal coal revenues to community assistance.* The BLM would seek to secure Congressional authorization to direct a portion of increased Federal coal revenues toward investments in impacted communities that support economic diversification, job training, mine reclamation, and other community priorities.
- b. *The states' portion of increased revenues would be available to invest in impacted communities experiencing reduced coal production.* The additional revenues generated by a royalty rate adder would be split with states consistent with current law and could be used by states to support economic diversification efforts in communities and related activities.

### Possible Option Combination Package #3

#### 1. Fair Return

*Increase the royalty rate to reflect the fair return for coal produced on Federal land.* The BLM would identify the most appropriate metric and corresponding royalty rate for Federal coal, reflecting on analysis already conducted by other groups. The BLM would also assess the net impact on revenues from such changes, including any potential reduction in bonus bids and production.

#### 2. Climate Change/Resource Protection

- a. *Periodically evaluate and ensure that coal production and associated life-cycle emissions are consistent with the need to reduce net domestic greenhouse gas emissions 80 percent below 2005 levels by 2050.* This tracks to a straight-line reduction from the US 2025 Intended Nationally Determined Contribution (INDC),<sup>212</sup> and it is also consistent with the long-term pathway set forth in the US Mid-

<sup>212</sup> Actions described by the UNFCCC in December 2015 to achieve the long-term goals of the Paris Agreement: to hold the increase in global average temperature to well below 2°C, to pursue efforts to limit the increase to 1.5°C, and to achieve net zero emissions in the second half of this century.

Century Strategy for Deep Decarbonization.<sup>213</sup> *The BLM would limit the amount of Federal coal leased at a given time based on a carbon budget. The Federal coal leasing levels would be premised on a carbon budget that is commensurate with Federal coal's appropriate contribution to meeting economy-wide greenhouse gas emission reduction targets. In other words, the total amount of coal offered and made accessible under Federal leases would contain lifecycle CO<sub>2</sub> emission levels that are less than or equal to the anticipated emissions from Federal coal under an INDC strategy.*<sup>214</sup> The BLM would also need to evaluate the effectiveness of applying INDC-based limits to Federal coal leasing if and when no similar limitations are applied to substitute non-Federal energy sources to address concerns over emissions shifting to non-Federal coal sources. This potential shifting to non-Federal coal sources could reduce the environmental benefit of such limits (i.e., due to emissions leakage).

- b. *Develop strategic leasing plans.* Strategic leasing plans would incorporate the carbon budget and set lease sales on a regular schedule to accommodate a modified bidding system (see 3a below). These strategic plans could help meet a variety of policy objectives, including addressing resource management concerns at a landscape level and helping to streamline future leasing actions.

### 3. Leasing Process

*Use modified inter-tract bidding on a \$/ton or \$/Btu basis.* The BLM would determine a maximum tonnage of coal or carbon or maximum number of Btus to be leased consistent with the defined carbon budget. Under a modified inter-tract leasing process, all interested companies would bid among themselves for the right to produce a specified quantity of coal in the location of their choice, assuming it is suitable for mining and consistent with the approved land use plan and strategic leasing plan. To the extent that auctions become more competitive through the use of modified inter-tract bidding, resulting in increased bonus bids, the need for a higher royalty rate could be revisited on a periodic basis.

### 4. Community Assistance

*Direct a portion of Federal coal revenues to investments in communities experiencing economic impacts from reduced coal production.* The BLM would seek to secure Congressional authorization to direct a

<sup>213</sup> The White House. 2016. US Mid-Century Strategy for Deep Decarbonization. November 2016. Available at [https://www.whitehouse.gov/sites/default/files/docs/mid\\_century\\_strategy\\_report-final.pdf](https://www.whitehouse.gov/sites/default/files/docs/mid_century_strategy_report-final.pdf)

<sup>214</sup> One way to implement this approach would be for the BLM to use an economy-wide model to estimate least cost compliance strategies for meeting INDCs. The BLM could use the model output to derive anticipated Federal coal consumption levels over a 20-year period, and then use that level, in conjunction with reserves already under lease, as a limit on the amount of reserves that are leased.

portion of increased Federal coal revenues toward investments in communities that support economic diversification, job training, mine reclamation, and other community priorities.

### **No Action Alternative**

Under the no action alternative, the Federal coal program would continue to be administered in the manner in which it is administered currently. Leasing would be conducted through LBA. The current means of determining FMV, royalty rate reductions, minimum bonus bids, and rental rates would remain unchanged. The no action alternative would not address concerns raised by numerous parties about the Federal coal program, including concerns raised by the GAO, the OIG, members of Congress, interested stakeholders, and the public.

### **No Leasing Alternative**

Under a no leasing alternative, the BLM would issue no new leases for Federal coal except for lease modifications within the defined acreage limitations (960 acres or less<sup>215</sup>). Existing coal already under lease would not be impacted. Administration of existing leases would remain unchanged, including existing royalty rates and rental rates. The BLM may also consider combining the no new leasing alternative with other reform options aimed at modernizing the administration of existing leases as part of separate reform packages or alternatives.

### **6.2.3 Options Not Carried Forward for Further Analysis**

The following section includes a summary of additional reform options suggested through the scoping process that the BLM is proposing not to carry forward for analysis in the PEIS. A rationale has been provided as appropriate. Many of these options are already undertaken by the BLM, are under the authority of another agency, or would not meet the policy objectives outlined in BLM's Need for Federal Action in **Section 6.1.1**.

#### **Fair Return**

Comments were submitted suggesting that the FMV calculation for Federal coal should be redefined to account for environmental and social costs of coal production and use. While the BLM agrees that consideration should be given to such costs, the agency does not believe the FMV is the appropriate place for this to be applied. FMV is defined at 43 CFR, Subparts 3400.0-5(n) as the "amount in cash, or on terms reasonably equivalent to cash, for which in all probability the coal deposit would be sold or leased by a knowledgeable owner willing but not obligated to sell or lease to a knowledgeable purchaser who desires but is not obligated to buy or lease." The Coal Evaluation Handbook (H-3073-1) describes FMV as a determination made by reference to a competitive market rather than to personal or inherent value of the property. Therefore, the BLM believes accounting for the social and environmental costs of coal to be

<sup>215</sup>As defined in the Energy Policy Act of 2005 Section 432

produced in the future would be too remote or speculative to include in the FMV calculation. Alternatively, the BLM is proposing to consider the environmental and social costs of coal production and use as part of an increased royalty rate or adder (see Reduce/Account for Greenhouse Gas Emissions #1 and Improve Resource Protection and Management #3).

Other comments made with respect to the FMV calculation asked the BLM to consider non-Federal coal, exports, and extraction costs in their calculation methods. The BLM's calculation of FMV already takes these factors into consideration. Chapter 3 of H-3073-1 discusses both export coal market data and lease-specific comparable sales data requirements, including information about private coal property market transactions.

A number of commenters suggested that the BLM should subject the FMV calculation to public hearing(s) ahead of the competitive leasing process. The BLM's FMV process currently includes the opportunity for public input as part of the information gathering process that goes into the FMV calculation (see **Section 5.8.2**). Because the Mineral Leasing Act requires competitive leasing, the BLM believes that opening up the FMV estimate to the public would undermine the bidding process, especially on those tracts where only one bid is received.

Some commenters requested that the BLM maintain the existing royalty rates and consider reducing the existing royalty rates as a means to increase production and, therefore, improve return. The BLM will consider no change in the existing royalty rates as part of the no action alternative. An option to reduce the royalty rate is not proposed to be carried forward for further analysis in the PEIS, however, as royalty rates are already at their statutory defined floor (43 CFR, Subparts 3473.3-2). The BLM has determined that this option would not meet the object of improving fair return to the American taxpayer.

As described in **Section 5.4.6, Main Drivers**, the demand for coal is driven by a variety of complex market and regulatory factors. A simple reduction in the current royalty rate on coal would not necessarily lead to increased demand levels that offset the revenue loss. Therefore, this may have the impact of decreasing return to the Federal taxpayer. Moreover, while more analysis is needed, most preliminary qualitative and quantitative assessments suggest increasing, not decreasing, royalty rates is the appropriate direction to evaluate to enhance FMV and revenues. This is supported by the market projections for coal (see **Section 5.5**).

A number of commenters suggested alternative ways that the value of coal production, on which royalties are assessed, should be calculated. Options included basing the value of coal production on the final sale price to a power plant or other end user or applicable market price; basing the value of coal production on the average price of nearby regional coal, the price of nationwide

coal, or the price of a substitute in the electricity dispatch order; basing the value of coal production on sales prices of coal with similar characteristics from both Federal and non-Federal lands; and directly valuing coal production using an appraisal approach rather than basing the value on individual sales transactions.

Other comments suggested capping transportation deductions, establishing cost of allowable transportation deductions based on the most efficient means of transport, or establishing the cost of allowable transportation deductions based on observable indices of coal transportation costs per rail mile, rather than self-reported cost numbers. Comments were also raised regarding the elimination of coal washing deductions, the practice of selling to affiliates at artificially low prices, and take or pay contracts. The BLM has no authority over the valuation of coal production for purposes of royalty payments; this is the ONRR's responsibility (see **Section 5.2**). The ONRR has recently completed rulemaking on Consolidated Federal Oil and Gas and Federal and Indian Coal Valuation Reform (30 CFR, Parts 1202 and 1206), which will become effective January 1, 2017.

In terms of bonus bids, commenters suggested that the BLM should base bonus bids on the amount of recoverable coal rather than the amount of coal reserves. This is already the case, as the BLM bases the pre-sale FMV on recoverable coal estimates. This will be considered as part of the no action alternative. In order to provide additional clarity, the BLM will consider revising guidance to ensure consistency among states on how to apply recoverable coal estimates.

Commenters also suggested that the BLM should abandon bonus bids for maintenance tracts, and instead employ an adjusted revenue-neutral royalty schedule for those tracts. The BLM experimented with this approach in the past and found that it did not meet the goals of obtaining fair return for the coal resource. If the coal were never produced, there would be no benefit associated with issuing a maintenance tract, whereas a bonus bid ensures a return to the public. Therefore, this suggestion would be ineffective, as it does not meet the purpose and need of the PEIS.

Commenters suggested that the BLM incorporate into coal leases the authority to adjust rental and royalty fees over time. The BLM currently has the authority to modify the terms and conditions of a lease, including rental fees and royalty rates at lease readjustment (43 CFR, Part 3451). This occurs at the end of the 20-year primary term and then every 10 years for the life of the lease (43 CFR, Part 3451). It should also be noted that royalty rates are assessed on the value of coal production, which is determined by the ONRR at the time of the first arm's-length sale (30 CFR, Part 1206).

Commenters also suggested the BLM should cancel existing leases that are not producing. While the BLM is not authorized to cancel an existing lease specifically for "not producing," it can cancel an existing lease for not meeting

the terms and conditions of the lease, which include diligent development (43 CFR, Subparts 3452.2-1). Therefore enforcing diligent development of existing leases will be considered as part of the no action alternative.

Commenters requested that the BLM modify the time frame over which bonus bid payments are made (i.e., over a longer or shorter period of time). This option would not impact the overall value of the bonus bid. The BLM has decided not to carry this option forward for further analysis, because it does not meet any of the objectives stated as part of the purpose and need of the PEIS.

Commenters also suggested that the BLM consider delaying collection of bonus bids until mining begins on the leases and allow a royalty credit for the capital costs to establish a mining operation to increase competition for bids. The BLM has decided not to carry this option forward for further analysis, because it does not meet any of the policy objectives stated as part of the purpose and need of the PEIS.

Commenters suggested that the BLM should ban companies from selling coal to subsidiaries to depress rates (i.e., captive transactions). This issue is outside of the BLM's authority, but is addressed by the ONRR in the methods by which it values coal production. The ONRR has procedures in place to ensure proper valuation of coal production sold to affiliates or subsidiaries under non-arm's-length transactions. Effective January 1, 2017, the ONRR amended their regulations governing valuation, for royalty purposes, of oil and gas produced from Federal onshore and offshore leases and coal produced from Federal and Indian leases (81 FR 43337).

Commenters asked the BLM to consider how the leasing of smaller tracts might better ensure the maximum economic recovery of coal (e.g., reduce market uncertainties and ensure a higher fair market valuation associated with shortened duration of mining operations). Other commenters suggested that the BLM only lease 10 years or less of coal reserves under a single lease. The BLM already considers the size of the tract and potential amount of reserves as part of the leasing process and has the ability to reconfigure tracts prior to lease sale. Tract reconfiguration is done to increase competition when another existing mine is nearby and to carve out areas not suitable for leasing (e.g., raptor nests and cultural sites). The BLM also may reconfigure a LBA tract to ensure that Federal coal reserves are not bypassed and the amount of reserves is reasonable based on the annual production at that mine. This will be considered as part of the no action alternative.

Commenters suggested two ways to potentially reduce costs with respect to the coal leasing process. These included waiving the BLM cost recovery imposed during the Federal coal leasing process and not charging lease applicants for the third-party NEPA associated with NEPA actions. These suggestions run counter to the objective of orderly administration of coal on Federal lands. Without

cost recovery, the BLM would have to allocate appropriated budget dollars from other priorities for processing coal lease applications. The BLM would also have to identify staff to undertake NEPA analyses for leasing actions or allocate budget dollars to hire third-party NEPA consultants to undertake this work. Given resource limitations, this would have a negative impact on the efficiency of the process, which is already the subject of criticism for the length of time it takes to complete.

### ***Reduce/Account for Greenhouse Gas Emissions***

Regarding Social Cost of Carbon, commenters recommend the inclusion of a net “social benefit” standard for coal that includes both the social cost of carbon and the positive economic benefits of coal jobs and revenue, schools, infrastructure, and reliable, low-cost electricity. While the BLM agrees that there are benefits associated with the production and use of Federal coal, many of these “benefits” are captured in the market value of coal. Additional nonmarket benefits can be assessed qualitatively. While not necessarily in the form requested by commenters, the PEIS will include consideration of both the market and nonmarket values associated with coal (see **Section 5.7**).

Some commenters suggested the BLM should not allow leasing of Federal coal if it is intended to be used for export. It should be noted that exports have historically and currently make up a very small part of Federal coal market (see **Section 5.4.6**). Opportunities for exports are limited by the availability of export terminals, transportation costs, and global coal prices. Because the BLM has very limited, if any, control over where Federal coal is ultimately consumed (i.e., coal may change hands multiple times before its final end use), this option will not be carried forward for further analysis. The BLM does however identify coal export market information during the preparation of the economic evaluation report supporting BLM’s FMV estimate (Chapter 3 of H-3073-1), and will consider it in the context of evaluating strategic leasing plans that could be developed based on regular reviews of projected domestic coal demand (e.g., over a 5-year window) and the role of Federal coal resources in meeting domestic energy needs.

A number of commenters emphasized the need to require carbon capture and sequestration for coal energy generators, and to invest in carbon capture and storage technologies and clean coal technologies. The BLM does not have the authority to require any action of coal consumers or dollars to invest in new technologies. While not carried forward as an option in the PEIS, it is worth noting there are a number of Federal programs in place that target these topics. For example, the Department of Energy’s Office of Fossil Energy manages a Clean Coal Research and Development program that is focused on developing and demonstrating advanced power generation and carbon capture, utilization and storage technologies for existing facilities and new fossil-fueled power plants by increasing overall system efficiencies and reducing capital costs. Their Carbon Capture, Utilization and Storage program advances safe, cost effective, capture



and permanent geologic storage and/or use of CO<sub>2</sub> and their Advanced Energy Systems program focuses on improving the efficiency of coal-based power systems, enabling affordable CO<sub>2</sub> capture, increasing plant availability, and maintaining the highest environmental standards.<sup>216</sup>

Some commenters stated support for investing in renewable energy programs over coal mining operations, due to the decreased environmental impact and efforts to mitigate climate change. The promotion of renewable energy programs over coal leasing is outside of the scope of the PEIS. The BLM will however consider as part of the PEIS analysis the impacts of coal program reform alternatives on the larger power sector including other energy sources such as wind and solar energy generation (see **Section 6.4**).

#### ***Improve Resource Protection and Management***

Some commenters suggested that the BLM should modify regulations to require the application of unsuitability criteria only at the time an applicant submits an application for leasing (versus at the Resource Management Plan stage). The BLM believes that there are benefits to applying the unsuitability criteria at both stages in the process, and the regulations allow for consideration at both levels (43 CFR 3461.3-1). The application of unsuitability criteria at the Resource Management Plan level allows for landscape-scale land use allocation decisions to be made and areas to be identified as unsuitable for coal leasing. Once an application has been submitted for an area allocated as suitable for coal leasing, the BLM has the obligation to take a second look at the area under consideration to determine if any of the unsuitability criteria are triggered based on site-specific information.

Commenters suggested that the BLM should provide clarification around “contemporaneous” reclamation and develop rules that require diligent reclamation. Commenters also submitted comments suggesting that the BLM evaluate alternatives for funding reclamation and post-closure activities. While the BLM understands the importance of timely, successful reclamation, the BLM does not have authority over the reclamation process associated with Federal coal production. This authority is held by OSMRE (see **Section 5.2**). As appropriate, the BLM will work with OSMRE to improve reclamation planning and implementation opportunities for Federal coal.

A larger number of commenters expressed concern about the practice of self-bonding for reclamation requirements and requested amendment to the regulations at 30 CFR 800.23 and any other regulations, as appropriate, to prohibit self-bonding whenever publicly owned coal is permitted to be mined. This is particularly troublesome with the recent rash of bankruptcies among many large coal companies. While the BLM is aware of the issues associated

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<sup>216</sup> Department of Energy, Office of Fossil Energy Clean Coal Research Program. 2016. Clean Coal Research. Available at <https://energy.gov/fe/science-innovation/clean-coal-research>

with self-bonding for reclamation, the BLM does not have the authority over bonding for reclamation. This authority is held by OSMRE (see **Section 5.2**) and primacy states. OSMRE recently announced its intention to initiate rulemaking on the practice of self-bonding.<sup>217</sup> As appropriate, the BLM will work with OSMRE to improve self-bonding regulations.

#### ***Increase Lease Process Efficiency***

Commenters suggested consolidating the Federal coal leasing and permitting process into the hands of fewer agencies. SMCRA prohibits this (30 USC 1211). There are inherent differences in the duties of OSMRE and the BLM. To combine the agencies would require amending the SMCRA. Further, Department of the Interior experience has shown that it is best to keep leasing and environmental enforcement separate. For example, the Minerals Management Service, which previously managed the nation's natural gas, oil, and other mineral resources on the outer continental shelf split into the BOEM, the Bureau of Safety and Environmental Enforcement (BSEE), and the Office of Natural Resources Revenue. In lieu of consolidation, the BLM is proposing to consider options to work with other agencies to evaluate means for eliminating the overlapping requirements and redundant processes (see Increase Lease Process Efficiency #5).

Commenters suggested the BLM establish specific timelines and procedures for the various steps in the leasing process. The BLM's existing coal regulations (43 CFR Part 3400) delineate the process for issuing leases (see **Section 5.8** on Leasing Process). While the BLM agrees that improvements in efficiency may be needed (and will be considered as part of the PEIS), past experience with many other programs has proven that mandatory timelines often are not effective in improving efficiency, therefore this option is not considered further.

#### ***Other***

A large number of commenters discussed the pause on significant new coal leasing decisions instituted through Secretarial Order 3338. Some commenters expressed support for the coal leasing pause, stating that it should be extended or made permanent and reasoned that a sufficient amount of coal has already been leased. Other commenters stated opposition to the coal leasing pause, stating that it should be removed because it negatively impacts the economy and violates laws. The leasing pause does not apply to existing leases and coal production activities and is intended to be in place temporarily while the PEIS is underway.

Some commenters stated concern over both the environmental impacts of leasing and the economic impacts of delays for specific coal lease applications (e.g., Alton Mine, Bull Mountain Mine, and Greens Hollow Coal tract). Consideration of specific leasing actions is outside of the scope of the PEIS. The

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<sup>217</sup> OSMRE Decision on Petition to Initiate Rulemaking, 81 Fed. Reg. 61612 (September 7, 2016).

BLM will however consider the full portfolio of existing BLM leasing activities as part of the analysis in the PEIS.

### 6.3 COMMUNITY TRANSITION CONSIDERATIONS

A central theme in many of the comments raised by stakeholders is concern about the implications of current and future coal market conditions. As discussed in **Section 5.4.5** and reported by the EIA, in 2015, the United States' total coal production was roughly 900 million short tons, 10 percent lower than in 2014. The 2016 production levels are expected to decrease further, reaching levels not seen since the 1970s. Worldwide, demand for coal appears to be softening as well, with EIA projections for coal exports (the majority of which is metallurgical coal) being relatively flat through 2030, accounting for only approximately 8 percent of total US coal production (see **Section 5.5.3**). As a result of the softening of both the domestic and export markets, a number of mines in the United States have idled production, several major coal companies have entered Chapter 11 bankruptcy, many coal miners have been laid off, and coal-dependent communities have suffered. The EIA and other projections of future coal production show anticipated continuing declines.

Commenters have urged the BLM to take these significant market changes into account when considering reform options for the Federal coal program. In order to make fully informed decisions, stakeholders have requested that the BLM determine what the impacts of reform options will be on factors such as coal production, energy supply, energy prices, state revenues, and jobs (direct and indirect). As discussed in more detail in **Section 6.4**, the BLM intends to evaluate all program alternatives against a set of defined issues for analysis that include all of these critical metrics.

Through the scoping process, stakeholders also provided suggestions to help communities currently in transition or communities that may find themselves in need of transitioning in the near future. While many of these suggestions do not fall under the authority of the BLM's coal program, the BLM believes they are an important part of the larger conversation about coal's future in the United States. The BLM is committed to working with the White House, Congress, and other Federal, state, and local agencies throughout the PEIS process to further these ideas and to address Federal coal reform in the most comprehensive manner possible. The stakeholders' suggestions are summarized below, and it is worth noting that the BLM could seek to secure Congressional authorization to direct a portion of increased Federal coal revenues toward such community assistance programs.

- Undertake meaningful collaboration with coal-producing states concerning socioeconomic impacts related to Federal coal mining
- Develop a program to hire mine workers for restoration and rehabilitation associated with mining operations

- Explore changes to revenue-sharing statutes to improve community access to funding for local school and other community priorities
- Provide communities a comprehensive review of tools to help diversify their economies
- Work to secure Congressional authorization to direct increased royalty and rental payments toward worker and community support
- Establish an Economic Transition Fund that would be sustained by an increase in reimbursement fees charged by the Department of the Interior when processing coal-related applications
- Prioritize support and assistance to help communities transition (e.g., Secretarial Order)
- Accelerate the transition to renewable energy production on Federal lands, identify new opportunities to use abandoned or reclaimed mine lands as renewable energy production sites, and work with partner agencies to assist in retraining coal workers for the renewable energy industry
- Provide assistance to help coal miners transition to other jobs
- Undertake severance tax reform and ensure that taxes that are intended to provide funds to invest in economic diversification in the coalfields are actually being invested back into coal producing counties at a higher rate and in a timely manner
- Look for ways to ensure coal revenue is reinvested in communities to help them break from the boom and bust cycles of fossil fuel extraction

The Power Plus (POWER+) Plan,<sup>218</sup> proposed in President Obama's FY2016 and FY2017 budgets, and the Obama Administration's corollary POWER Initiative provide an example of recent efforts by the Federal government to help coal communities in transition.

The POWER+ Plan proposed a range of investments in economic diversification, employment and training services, and abandoned mine reclamation targeted to coal communities and workers. It also included Federal transfers to rescue the solvency of the largest multi-employer pension plan serving retired coal miners and their families, and to extend health care coverage to beneficiaries who were going to lose their coverage at the end of 2016.<sup>219</sup> In addition, it included two

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<sup>218</sup>The White House. 2016. Investing in Coal Communities, Workers, and Technology: The POWER+ Plan. Available at [https://www.whitehouse.gov/sites/default/files/omb/budget/fy2016/assets/fact\\_sheets/investing-in-coal-communities-workers-and-technology-the-power-plan.pdf](https://www.whitehouse.gov/sites/default/files/omb/budget/fy2016/assets/fact_sheets/investing-in-coal-communities-workers-and-technology-the-power-plan.pdf)

<sup>219</sup> The Further Continuing and Security Assistance Appropriations Act of 2017 provided funds to ensure that the health care coverage to these beneficiaries was extended until April 30, 2017. Pub. L. No. 114-254 (Dec. 12, 2016).

new proposed tax credits to catalyze the deployment of carbon capture, utilization, and sequestration (CCUS) technologies in the power sector.

Starting in 2015, the Administration began in parallel—because the economic need was so urgent—the POWER (Partnerships for Opportunity and Workforce and Economic Revitalization) Initiative, which is effectively the economic and workforce development component of the POWER+ Plan. It was a coordinated effort involving ten Federal agencies—including the DOE—with the goal of effectively aligning, leveraging, and delivering a range of Federal economic and workforce development resources to assist communities negatively impacted by changes in the coal industry and coal-fired segment of the power sector.

Since October 2015, as part of the POWER Initiative, Federal agencies have awarded to date roughly \$80 million to support economic and workforce development projects in coal-impacted communities in 15 states. These projects will catalyze economic diversification in industry clusters ranging from advanced manufacturing and agriculture to information technology and tourism and recreation.<sup>220,221</sup> In addition, in the Consolidated Appropriations Act of 2016, Congress appropriated OSMRE \$90 million for a pilot program in three Appalachian states, inspired by a proposal in the POWER+ Plan, to use General Treasury funds for the reclamation of abandoned mine land sites in conjunction with economic and community development and reuse goals.<sup>222</sup>

#### 6.4 ISSUES FOR ANALYSIS

According to the BLM NEPA Handbook (Section 6.4), an “issue” is a point of disagreement, debate, or dispute with a proposed action based on some anticipated environmental effect. Analysis of an issue is necessary to make a reasoned choice between alternatives. Based on the input received through the scoping process, the BLM has identified the following issues for analysis in the PEIS. Each program reform alternative will be evaluated against these issues, and a comparative analysis will be presented in the Draft PEIS. Consistent with guidance in the BLM’s NEPA Handbook (Section 9.2.9), the BLM will attempt to quantify the effects analysis in the PEIS as much as possible.

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<sup>220</sup> The White House. 2016. Fact Sheet: Administration Announces Additional Economic and Workforce Development Resources for Coal Communities through POWER Initiative. October 26, 2016. Available at <https://www.whitehouse.gov/the-press-office/2016/10/26/fact-sheet-administration-announces-additional-economic-and-workforce>

<sup>221</sup> The White House. 2015. FACT SHEET: Administration Announces New Workforce and Economic Revitalization Resources for Communities through POWER Initiative. October 15, 2015. Available at <https://www.whitehouse.gov/the-press-office/2015/10/15/fact-sheet-administration-announces-new-workforce-and-economic>

<sup>222</sup> OSMRE. 2016. Guidance for Eligible Projects To Be Funded Under The Abandoned Mine Land Reclamation Economic Development Pilot Program For Fiscal Year 2016. Available at <https://www.osmre.gov/programs/aml/pilotProgramGuidance.pdf>

- What would be the effect of the alternatives on Federal coal production?
- What would be the effect of the alternatives on other energy sources?
- What effect would the alternatives have on substitution between energy sources and between Federal and non-Federal coal?
- What would be the effect of the alternatives on energy prices (wholesale and retail)?
- What would be the effect of the alternatives on net coal exports?
- What would be the change in effect of the alternatives considering sensitivity analysis (e.g., natural gas prices)?
- What would be the effects of the alternatives on socioeconomic factors, including but not limited to, national revenues, state revenues, and employment (direct and indirect)?
- What would be the effect of the alternatives on fair return to the American taxpayer?
- What would be the effect of the alternatives on greenhouse gas emissions (separated by streams: production, transportation, and combustion)?
- What would be the effect of the alternatives in terms of achieving US climate goals?
- What would be the effect of the alternatives on the environment?
- What would be the effect of the alternatives on public health?

## 6.5 ANALYTICAL APPROACH

Consistent with the requirements of NEPA, the BLM will prepare the PEIS using an interdisciplinary approach, and the disciplines of the preparers will be appropriate to the scope of the analysis and to the issues identified in the scoping process (40 CFR, Subpart I 502.6). As can be seen in the issues identified for analysis (see **Section 6.4**), the PEIS will require economic and national and global energy market expertise among the more traditional disciplines. Further, many of the issues identified for analysis will require the use of sophisticated power sector modeling. The BLM is in the process of assessing the various models that are available and will determine which model or models best meet the analytical needs of the PEIS.

The BLM will prepare a reasonably foreseeable development scenario to support the analysis in the PEIS. The reasonably foreseeable development scenario will forecast coal exploration, development, and production for the planning area for a defined time horizon. This baseline scenario will inform the analysis of the no action alternative and other program reform alternatives.

In accordance with the requirements of NEPA, the PEIS will analyze the direct, indirect, and cumulative impacts of the proposed coal reform alternatives (40 CFR, Subpart 1508.25[c]). As determined appropriate, this will include considerations such as transportation related impacts, health impacts, socioeconomic impacts, and ecological impacts. As discussed in CEQ's guidance "Effective Use of Programmatic NEPA Reviews," a broad (e.g., regional or landscape) description may suffice for characterizing the affected environment in programmatic NEPA reviews, so long as potentially impacted resources are meaningfully identified and evaluated. Further impacts in programmatic reviews are typically discussed in a broad geographic and temporal context with particular emphasis placed on cumulative effects.<sup>223</sup>

In developing the PEIS, the BLM will adhere to CEQ's Final Guidance for Federal Departments and Agencies on Consideration of Greenhouse Gas Emissions and the Effects of Climate Change in NEPA Reviews (August 1, 2016). This includes an assessment of greenhouse gas emissions and the effects of climate change on a proposed action and its environmental impacts. The BLM will quantify the projected direct and indirect greenhouse gas emissions associated with the proposed coal reform alternatives to the extent practicable. The BLM will also evaluate the appropriate application of the social cost of carbon and the social cost of methane in the PEIS.

The BLM will use the best available science to support its NEPA analyses in the PEIS (BLM NEPA Handbook Section 6.8.1.2) and will adhere to the five Principles and Practices of Science-Management Integration identified in the March 2015 publication *Advancing Science in the BLM: An Implementation Strategy*<sup>224</sup>:

1. Use the best available scientific knowledge relevant to the problem or decision being addressed, relying on peer-reviewed literature when it exists.
2. Recognize the dynamic and interrelated nature of socioecological systems within which the BLM operates.
3. Acknowledge, describe, and document assumptions and uncertainties.
4. Use quantitative data when it exists, in combination with internal and external professional scientific expertise.
5. Use transparent and collaborative methods that consider diverse perspectives.

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<sup>223</sup> Executive Office of the President, Council on Environmental Quality. 2014. Effective Use of Programmatic NEPA Reviews. December 2014. Available at [https://ceq.doe.gov/current\\_developments/docs/Effective\\_Use\\_of\\_Programmatic\\_NEPA\\_Reviews\\_Final\\_Dec2014\\_searchable.pdf](https://ceq.doe.gov/current_developments/docs/Effective_Use_of_Programmatic_NEPA_Reviews_Final_Dec2014_searchable.pdf)

<sup>224</sup> BLM. 2015. Advancing Science in the BLM, an Implementation Strategy. Available at [http://www.blm.gov/style/medialib/blm/wo/blm\\_library/BLM\\_pubs.Par.38337.File.dat/BLMAdvSciImpStratFINAL032515.pdf](http://www.blm.gov/style/medialib/blm/wo/blm_library/BLM_pubs.Par.38337.File.dat/BLMAdvSciImpStratFINAL032515.pdf)

The BLM will conduct a thorough review of all data, reports, and studies submitted to the BLM over the course of the NEPA process and incorporate them as appropriate into the NEPA analysis. A list of the data and reports submitted through the scoping process can be found in the annotated bibliography in **Appendix E** (see **Section 4.6.1** for more information). The BLM will work with Cooperating Agencies and other industry experts as necessary in conducting this work.

Consistent with NEPA, the PEIS will concentrate on the issues that are truly significant to the action in question rather than amassing needless detail (40 CFR, Subpart 1500.1). While the reform options under consideration are fairly expansive, the BLM will work to keep the PEIS as focused as possible with a goal of developing a document that is understandable to the larger public and completed in a timely manner.

## **6.6 ENERGY AND ECONOMIC ANALYTICAL CONSIDERATIONS**

The development of the PEIS will involve detailed analysis of options, option combination packages, and alternatives with a goal of addressing the issues for analysis described in **Section 6.4**.

Of particular relevance will be analyzing effects on energy markets and the energy economy as well as fiscal effects. Most obviously, adjustments to the Federal coal program have the potential to impact Federal coal production as well as employment and the state and Federal revenues associated with production. Moreover, policy options also have the potential to impact greenhouse gas emissions directly through limitations on production or indirectly through mechanisms that factor in the environmental externalities of coal production. However, as illustrated by comments and accompanying studies and reports, there are a wide array of variables and constraints to consider when examining how coal reform would interact with other components of the national energy and economic systems. Some of these considerations are highlighted below. These considerations present key next steps for the BLM, Cooperating Agencies, and other interested stakeholders in examining reform opportunities for the Federal coal program.

*Modeling choice for energy sectors:* The impacts from reforms to the PEIS would be absorbed over an extended period of time as it is adopted through new or renewed coal leases as current lease contract periods expire.<sup>225</sup> As noted above, reform options would have the potential to affect not just Federal coal production, but national energy and economic systems as a whole. Estimating these potential system wide effects requires modeling the complex interactions of the power sector and various fuel sources. There are a number of power

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<sup>225</sup> Existing leases are generally structured as 20-year contracts and would not be directly impacted by the reform until up for renewal.



sector models available to assist the BLM in this task.<sup>226</sup> The power sector represents the chief source of demand for Federal coal; its detailed representation and ability to respond to changes in fuel cost through dispatch and capacity changes are critical to accurately modeling any leasing reform.

Capacity expansion models that optimize electricity dispatch and generation subject to fuel costs and regulatory constraints are ideal for analyzing these types of long-run power generation scenarios and the policies that drive them.<sup>227</sup> Production cost models and network reliability models have higher temporal resolutions focused on near-term electricity production and dispatch decisions and generally apply to more narrow geographies. Given the nationwide power market implications of Federal coal leasing reform and the extended time horizon for which its impact would be assessed, capacity expansion models would offer an advantage over other power-sector models. These types of models can provide the temporal and spatial dimensions necessary to best capture the full impacts of leasing decisions. The discussion below highlights important considerations regarding modeling assumptions and inputs and outputs.

#### Model Inputs

- I. *Coal Supply Representation:* With slightly over 40 percent of coal produced in the United States coming from Federal lands, a key data element for analysis and modeling will be distinguishing between coal supplied from Federal coal leases and other non-Federal mineral ownership. This distinction would allow the BLM, when specifying modeling inputs, to most accurately link any coal reform changes to the mines on the supply-side that will absorb those changes. Furthermore, being able to distinguish between the types of mine—surface or underground—will also be a relevant distinction for analytic efforts. Federal coal leasing currently involves different royalty rates for surface and underground mines, and it is likely that any alterations that address fair return or environmental impacts would likely impact these mine types differently. Finally, a data field that distinguishes whether a particular mine is an existing lease, a renewed mine lease, or a new lease would be central to appropriately reflecting Federal coal leasing changes when designing modeling parameters. Any Federal coal leasing changes would likely only apply to renewed and new leases and, therefore, having a detailed mine-by-mine coal supply representation that made this distinction would allow the BLM to best reflect the policy parameters in its analysis. In summary, having detailed mine-by-mine

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<sup>226</sup> Howard, P. 2016. The Bureau of Land Management's Modeling Choice for the Federal Coal Programmatic Review. New York University Institute for Policy Integrity. June 10, 2016. Available at <http://policyintegrity.org/publications/detail/BLM-model-choice>

<sup>227</sup> Ibid.

supply assumptions that include data on each mine's Federal/non-Federal, surface/underground, and existing/new status will equip the BLM with the appropriate data necessary to best analyze any coal reform changes.

2. *Coal Transportation Representation:* The primary consumer of Federal coal is the power sector. Many of these buyers are located far away from the western coal lands where the majority of coal from Federal leases is produced. Consequently, compared with other domestic coal sources, the cost of transportation is typically a more significant factor into the delivered price of western coal. Therefore, having an accurate representation of the linkages from coal supply regions to the power plant is critical to assessing the delivered price of coal to power markets and the corresponding dispatch decisions to meet electricity demand. Data regarding the mode of transportation (e.g., rail, barge, and truck) from mine to power plant and the cost per ton-mile transported will likely be an important model input. Any capacity limitations would also be critical to understand—and to capture as a constraint—in analysis to ensure that significant changes in coal supply origins are compatible with current and future infrastructure. Finally, coal transportation cost and supply linkages between plant and supply region may be informed by historical data (such as fuel receipts provided in EIA Form 923). However, the BLM would likely need to identify possible rail linkages, not just historical ones, between supply regions and plants to ensure that new transportation options to competing basins are an option, where appropriate, for power plants in optimization models to prevent any bias against substitution in its analysis.
3. *Coal Demand Representation:* Demand for Federal coals is almost entirely from US power plants. Power plants base their purchase decisions on a variety of factors, including the delivered price per mmBtu of a particular coal, compatibility with boiler design, and the environmental properties of the coal, the compatibility with current pollution control equipment (e.g., flue gas desulfurization or dry sorbent injection), and emission requirements. Moreover, coal plants may have captive competition where they only access coal markets through a single rail carrier, or they may have a more competitive position where they can access coal supply through a variety of the primary rail carriers. While a mine-by-mine representation of coal supply will allow the BLM to most accurately estimate the effect of coal reform adjustments on availability of different types of coal, a detailed plant-by-plant representation of the power sector will help best capture how any changes affect the demand for coal as well as other fuel sources. A bottom-up model that starts with a database of the power plant fleet and contains capacity, historical fuel consumption, boiler design, plant-specific pollution controls, and emissions constraints for each power plant will be a central data element to future PEIS analysis.

### Model Outputs/Impacts Dependent on Model Outputs

- I. *Substitution:* With appropriate model structure and supply and demand representation, the impact of any Federal coal program reforms will ultimately pivot on substitution. Specifically, this includes estimated shifts to/away from Federal coal and estimated shifts to/away from competing electricity generation (e.g., non-Federal coal, natural gas, renewable, etc.). To inform substitution effects, the BLM may use power-sector models that accurately reflect electricity generation capacity and capacity expansion, as well as cost and performance metrics of each form of electricity generation.

In regard to coal switching between Federal and non-Federal it is important to fully capture the cost of such switching to ensure there is no bias for or against substitution. For instance, the majority of Federally produced coal is subbituminous, and the majority of non-Federal coal is bituminous. When a coal boiler built for subbituminous substitutes to bituminous, it may require soot blowing or heat transfer surface modifications to handle the low ash fusion temperatures and/or corrosive nature of its higher chlorine content. These costs, in addition to the fuel costs, are critical data elements to capture when assessing substitution. Likewise, when a boiler built for consuming bituminous coals substitutes to subbituminous, it may experience additional capital cost in the form of increased material handling, milling capacity, and dust control. Finally, a plant may have an investment in certain control technologies, such as dry sorbent injection, that only function with certain coal ranks and, thus, this data needs to be considered when assessing substitution costs.

When switching to/from natural-gas fired generation, it is important to have production and pipeline data to ensure that the levels of substitution are not inconsistent with infrastructure capabilities. Likewise, it is important to appropriately reflect the cost and performance of renewable technologies to identify the degree to which this technology serves as a substitute. Due to the long time horizon under consideration when evaluating PEIS reform and the rapidly evolving changes regarding renewable energy costs, it is a data component that may benefit from sensitivity analysis. For example, its viability as a substitute may be informed by current cost and performance metrics in one sensitivity, but a different set of technology cost and performance assumptions reflecting recent trends and growth may be used for sensitivity.

Some commenters have conducted initial analysis that informs the likely substitution effects from different policy scenarios and may help inform further exploration of substitution effects. For example, Vulcan Philanthropy looked at varying scenarios where different royalty rates were applied. With CPP, the royalty change resulted in a substitution as high as 0.75 tons of non-Federal coal for every ton of Federal coal decline

in 2030. At higher royalty rates, these substitution rates reached levels where only 0.5 tons of additional non-Federal coal were produced for every ton of Federal coal reduced in 2030 as the power sector increasingly looks for non-coal energy (e.g., natural gas) sources to replace larger decreases in Federal coal production.<sup>228</sup> As the substitution rate to non-Federal coal became smaller, the substitution to natural gas became larger, reflecting the competitive reality of these two fuels as marginal dispatch sources.

The environmental (including climate change) and economic impacts of reform alternatives depend, in large part, on the estimated substitution effects. For a variety of reform options, identifying substitution will be a critical early data element to enable the BLM to subsequently determine the power system impacts, corresponding cost and benefits, changes to state/Federal revenues, employment, and greenhouse gas emissions impacts. Some of those impacts are explored further below.

2. *Employment Impacts:* The BLM will analyze employment impacts (as well as impacts on other economic metrics such as output, gross domestic product, and labor income) to sectors potentially affected by reform alternatives. The prior discussion highlights that these impacts extend beyond the coal sector to the energy industry as a whole, as well as other industries affected by the multiplier impacts of coal production, transportation, and generation. The estimated substitution results of alternative reforms will serve as primary input for such an analysis on employment impacts to various sectors.

One key consideration for analyzing coal employment impacts relates to differences in labor intensity of Federal and non-Federal coal. The majority of Federal coal is surface mined and has the lowest labor intensity in the nation, whereas the non-Federal coals generally require much more labor per ton of coal removed. For instance, in Wyoming, where the majority of Federal coal is located, the aggregate coal mine productivity is 29 tons per labor hour. Illinois, Pennsylvania, and West Virginia, where many of the competing non-Federal coals are mined, have productivity rates in the range of 2 to 6 tons per labor hour due to the thinner and more difficult-to-reach seams (see **Table 6-2**, which shows coal labor employment and productivity for the seven largest states by employment).<sup>229</sup> This means that for each ton of Federal coal

<sup>228</sup> Vulcan Philanthropy. 2016. Federal Coal Leasing Reform Options: Effects on CO2 Emissions and Energy Markets. Fairfax, Virginia: Vulcan Philanthropy/ICF International. January 2016. Available at <http://www.vulcan.com/MediaLibraries/Vulcan/Documents/Federal-Coal-Lease-Model-report-Jan2016.pdf>

<sup>229</sup> US EIA. 2016. Data from Annual Energy Outlook Coal Data Browser. Available at <http://www.eia.gov/beta/coal/data/browser/#!/topic/37?agg=0,2,1&geo=vvvvvvvvvvo&mntp=g&freq=A&start=2001&end=2014&ctype=map&ltype=pin&rtype=s&mtype=0&rse=0&pin=>

**Table 6-2**  
**Labor Requirements to Mine Coal**

	<b>Employment</b>	<b>Productivity (tons per labor hour)</b>
West Virginia	18,330	2.69
Kentucky	11,834	2.8
Pennsylvania	7,938	3.52
Wyoming	6,624	28.62
Illinois	4,218	5.99
Indiana	3,810	4.21
Alabama	3,694	1.88

Source: US EIA 2016<sup>230</sup>

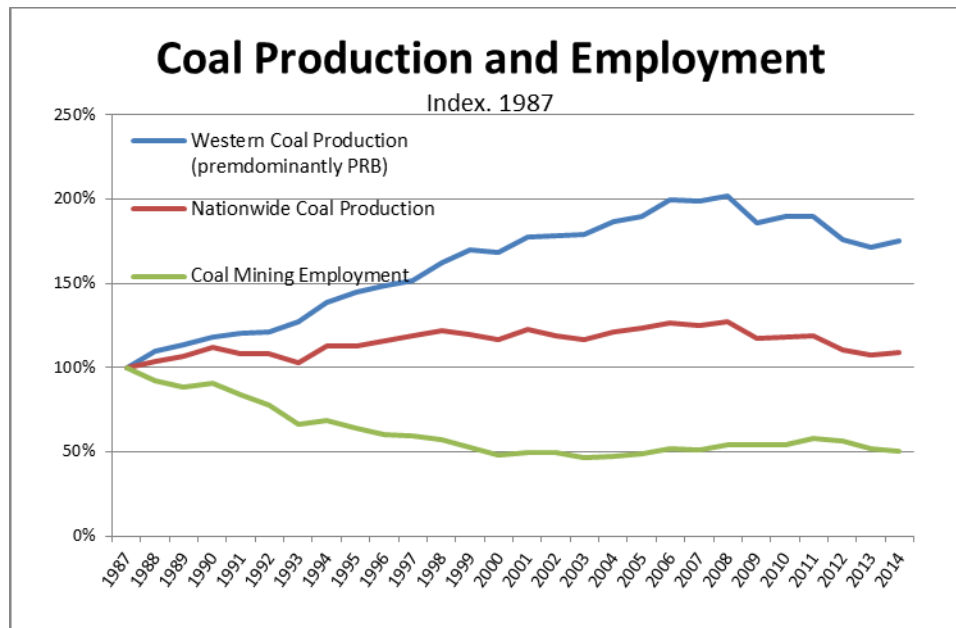
replaced by a ton of non-Federal coal, the amount of coal labor may increase by a factor of 10. The BLM will examine the substitution impacts from any coal reform to assess the impact on employment markets in non-Federal coal mining markets and in natural gas markets. The EIA data on productivity and employment will be one critical element to understanding coal mining job impacts from any reform efforts and subsequent substitution.

Initial analysis provided by commenters examining the impact of various coal reform options, such as royalty rate adders, highlighted that nationwide coal mining employment increased (by more than 5 percent) as a result of Federal royalty rate adders that made non-Federal coals more competitive.<sup>231</sup> With appropriate data on substitution and employment, the BLM can further explore the potential to simultaneously increase coal revenues and employment. **Figure 6-1** highlights the negative correlation historically observed between Powder River Basin production and coal mining jobs. The BLM analytical efforts could help ensure that the price for which Federal coals are leased reflects FMV in order to prevent any effective subsidization of western coal mining jobs at the expense of eastern coal mining jobs.

3. *Electricity Prices* - Any changes that make fuel more expensive will likely be carried through to the end user of the fuel—the electric ratepayer. The BLM will assess how these changes to Federal coal leasing impact fuel cost and related capital cost, and how those costs are passed through to ratepayers.

<sup>230</sup> US EIA. 2016. Coal data browser. Available at [www.eia.gov/beta/coal/data/browser](http://www.eia.gov/beta/coal/data/browser)

<sup>231</sup> Gillingham, K. and J. Stock. 2016. Federal Minerals Leasing Reform and Climate Policy. Hamilton Project Policy Proposal 2016-07. December 8, 2016. Available at [https://www.brookings.edu/wp-content/uploads/2016/12/es\\_20161208\\_federal\\_minerals\\_leasing\\_reform\\_and\\_climate\\_policy\\_pp.pdf](https://www.brookings.edu/wp-content/uploads/2016/12/es_20161208_federal_minerals_leasing_reform_and_climate_policy_pp.pdf)



**Figure 6-1. Powder River Basin Production and Nationwide Coal Employment**

Source: Employment: MSHA 2016<sup>232</sup>  
 Production (1987-2011): US EIA. 2012<sup>233</sup>  
 Production (2012-2015): US EIA 2016<sup>234</sup>

4. *Revenue Impacts:* The BLM will analyze data on government revenues as a result of any coal leasing changes. This includes assessing effects on the Federal revenue sources, particularly revenues associated with bonus bids, rental rents, and royalties. To the extent feasible, the BLM will assess effects on other Federal taxes (e.g., Reclamation Fee and Black Lung Excise Tax) and effects on relevant state and local revenues. The analysis released by the Council of Economic Advisors suggests that as coal royalties increase up to a certain point so too do government revenues.<sup>235</sup> That is, the increase in revenue from higher royalties more than offsets any decline in production and bonus bids. For example, their analysis suggested that a royalty charge of \$30/ton would result in an additional 2.7 to 3.1 billion dollars in government revenues each year after 2025 when the changes are fully phased in even though total annual production would decrease by 53 percent. Regional coal

<sup>232</sup> MSHA (United States Department of Labor Mine Safety Health Administration). 2016. Coal Mine and Employment Data. Accessed September 2016. Available at <http://arlweb.msha.gov/OpenGovernmentData/OGIMSHA.asp>

<sup>233</sup> US EIA. 2012. Annual Energy Review. Table 7.2: Coal Production, 1949-2011. Available at: <https://www.eia.gov/totalenergy/data/annual/showtext.php?t=ptb0702>.

<sup>234</sup> US EIA. 2016. 2016 Annual Coal Report. Table 1. Coal Production and Number of Mines by State and Mine Type. November 3, 2016. Available at: <http://www.eia.gov/coal/annual/>.

<sup>235</sup> Council of Economic Advisors, Executive Office of the President. 2016. The Economics of Coal Leasing on Federal Lands: Ensuring a Fair Return to Taxpayers. June 2016. Available at [https://www.whitehouse.gov/sites/default/files/page/files/20160622\\_cea\\_coal\\_leasing.pdf](https://www.whitehouse.gov/sites/default/files/page/files/20160622_cea_coal_leasing.pdf)

production forecasts, including forecasts specific to Federal leases, are the key input for analyzing revenues. Therefore, outputs that detail production levels from different coal supply regions and Federal mines will be critical results from the energy sector model.

5. *Externalities*: Economic theory indicates that markets are optimized when the full marginal cost of production (including externalities) is equal to the marginal benefits. In order to reflect this optimal level, fuels such as coal would have a cost that reflects not only the extractive component but also any environmental or social damages associated with them. When examining externalities, the BLM would need data and analysis regarding the social cost of methane and the social cost of carbon per ton of coal produced. These values, and instructions on how to incorporate them, are available from the Interagency Working Group on the Social Cost of Carbon. The BLM would also need to project the incremental changes in methane and CO<sub>2</sub> emissions from upstream, midstream, and downstream portions of coal's lifecycle. These estimates are needed for all coal not just coal from Federal leases, as well as from competing fossil fuel substitutes such as natural gas. Having this price and volume data would allow the BLM to assess the total impact of any coal reform changes.

Commenters also pointed out other, non-climate-based externalities on which the BLM would need better data quantification. These include the ecosystem impacts from coal mining, lifecycle criteria pollutant impacts, rail transportation fatalities, etc. Emission estimates for SO<sub>2</sub>, NO<sub>x</sub>, and mercury will be useful data points for informing the benefits of any coal reform changes. These changes will largely manifest themselves in the power sector, so using a model that included outputs for these variables will be an important consideration in the BLM's analytic endeavors. Finally, being able to understand the locational impact of these changes will empower the BLM and the public to best understand the distributional aspects of the cost and benefits to coal reform. Having this data will help the BLM consider environmental justice impacts as required under NEPA and to consider how best to address adverse community impacts from any coal job loss as well as other labor impacts.

6. *Sensitivity*: Sensitivity analysis will be central to any assessment of Federal coal leasing reform due to the uncertainty of energy markets over the extended time horizon affected by any leasing changes. Therefore, specifying modeling runs that test the same policy scenario under different market and regulatory assumptions (i.e., sensitivity analysis) will be useful to determine a range of possible results that capture the uncertainty of policy impacts. These sensitivities may include, but are not limited to, testing policy changes:

- a) With reference case natural gas prices, as well as high and low natural gas prices scenarios
- b) With high and low renewable technology cost and performance assumptions
- c) With and without additional coal export terminal capacity on the West Coast
- d) With and without improved cost performance of carbon capture and sequestration

## 6.7 SCHEDULE

As discussed previously, on January 15, 2016, Secretary Jewell issued Secretarial Order 3338 directing “the BLM to prepare a discretionary PEIS that analyzes the potential leasing and management reforms to the current Federal coal program.” In the press release and other materials released with the Secretarial Order and Notice of Intent, the Secretary indicated that the PEIS would take approximately 3 years to complete.

Following the CEQ regulations at 40 CFR, Subpart 1508.22, a Notice of Intent to prepare a PEIS was issued on March 30, 2016, which initiated the scoping process. The proposed schedule for the PEIS can be found in **Table 6-3**. The BLM will prepare a Draft PEIS using the information received during the scoping process and will provide, at minimum, a 45-day public comment period on the Draft PEIS (43 CFR, Subpart 1506.10). The BLM plans to release the Draft PEIS in January 2018. The BLM will incorporate public comments received on the Draft PEIS and prepare a Final EIS (40 CFR, Subpart 1502.9) by January 2019, with a Record of Decision to follow by March 2019 (40 CFR, Subpart 1506.10).

**Table 6-3**  
**Proposed Schedule for the PEIS**

<b>Milestone</b>	<b>Proposed Date</b>
Scoping Report	January 2017
Draft PEIS	January 2018
Public Comment Period	January – March 2018
Final PEIS	January 2019
Record of Decision	March 2019





# Federal Coal Program

Programmatic Environmental Impact Statement - Scoping Report Appendices



### *Our Vision*

To enhance the quality of life for all citizens through the balanced stewardship of America's public lands and resources.

### *Our Mission*

To sustain the health, diversity, and productivity of the public lands for the use and enjoyment of present and future generations.

# **FEDERAL COAL PROGRAM PROGRAMMATIC EIS SCOPING REPORT**

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## **VOLUME I- SCOPING REPORT**

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### **EXECUTIVE SUMMARY**

#### **1. INTRODUCTION**

#### **2. BACKGROUND**

#### **3. PUBLIC INVOLVEMENT AND PUBLIC SCOPING PROCESS**

#### **4. SUMMARY OF COMMENTS RECEIVED**

#### **5. FEDERAL COAL LEASING PROGRAM**

#### **6. PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT**

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## **VOLUME 2 - APPENDICES**

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### **A. NOTICE OF INTENT**

### **B. SCOPING MATERIALS**

### **C. LIST OF COMMENTERS**

### **D. COMMENTS BY ISSUE CATEGORY**

### **E. ANNOTATED BIBLIOGRAPHY**

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# Appendix A

## Listening Session Materials

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# APPENDIX A

## LISTENING SESSION MATERIALS

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The BLM hosted five listening sessions to offer the public the opportunity to comment on how the BLM can best carry out its responsibility to ensure that taxpayers receive a fair return on the coal resources managed by the BLM on their behalf. **Appendix A**, Listening Session Materials, includes the presentation provided to the public at the five listening sessions.

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# **Bureau of Land Management Federal Coal Leasing Program**

## **2015 National Listening Sessions**

- **Washington, D.C. – July 29**
- **Billings, Montana – August 11**
- **Gillette, Wyoming – August 13**
- **Denver, Colorado – August 18**
- **Farmington, New Mexico – August 20**

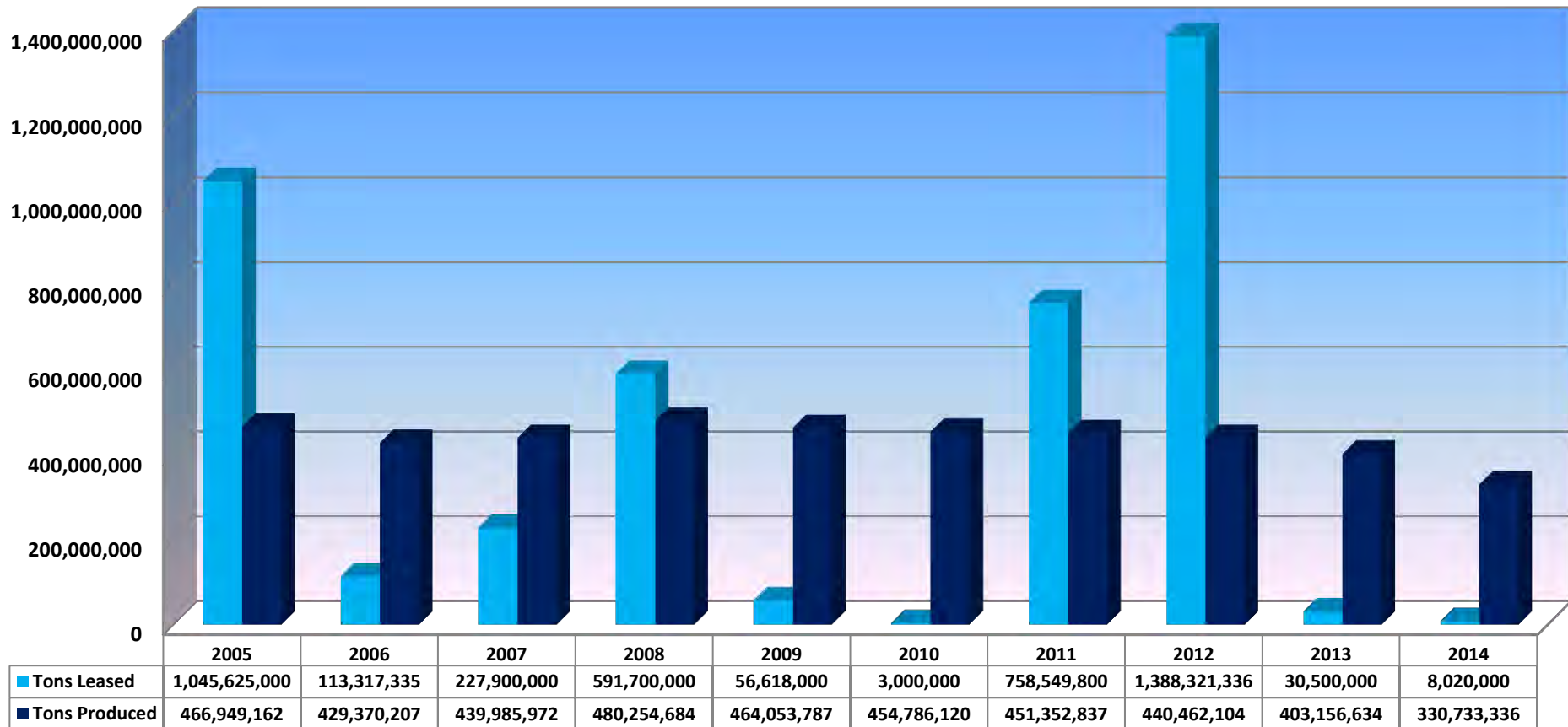


## BLM Coal Program Quick Statistics

- BLM currently administers **310** coal leases
- **In the last 10 years:**
  - BLM-managed lands produced approximately 5.1 billion tons of coal worth over \$72 billion
  - This production generated \$7.9 billion in royalties and nearly \$4.0 billion in revenues from rents, bonuses, and other payments.
  - BLM held 39 coal lease sales
- **In 2014:**
  - Approximately 40% of Nation's electricity was produced from coal.
    - It is expected to account for 30% by 2040
  - Approximately 40% of the coal produced was from federal coal; 85% of that was from the Powder River Basin in Wyoming.

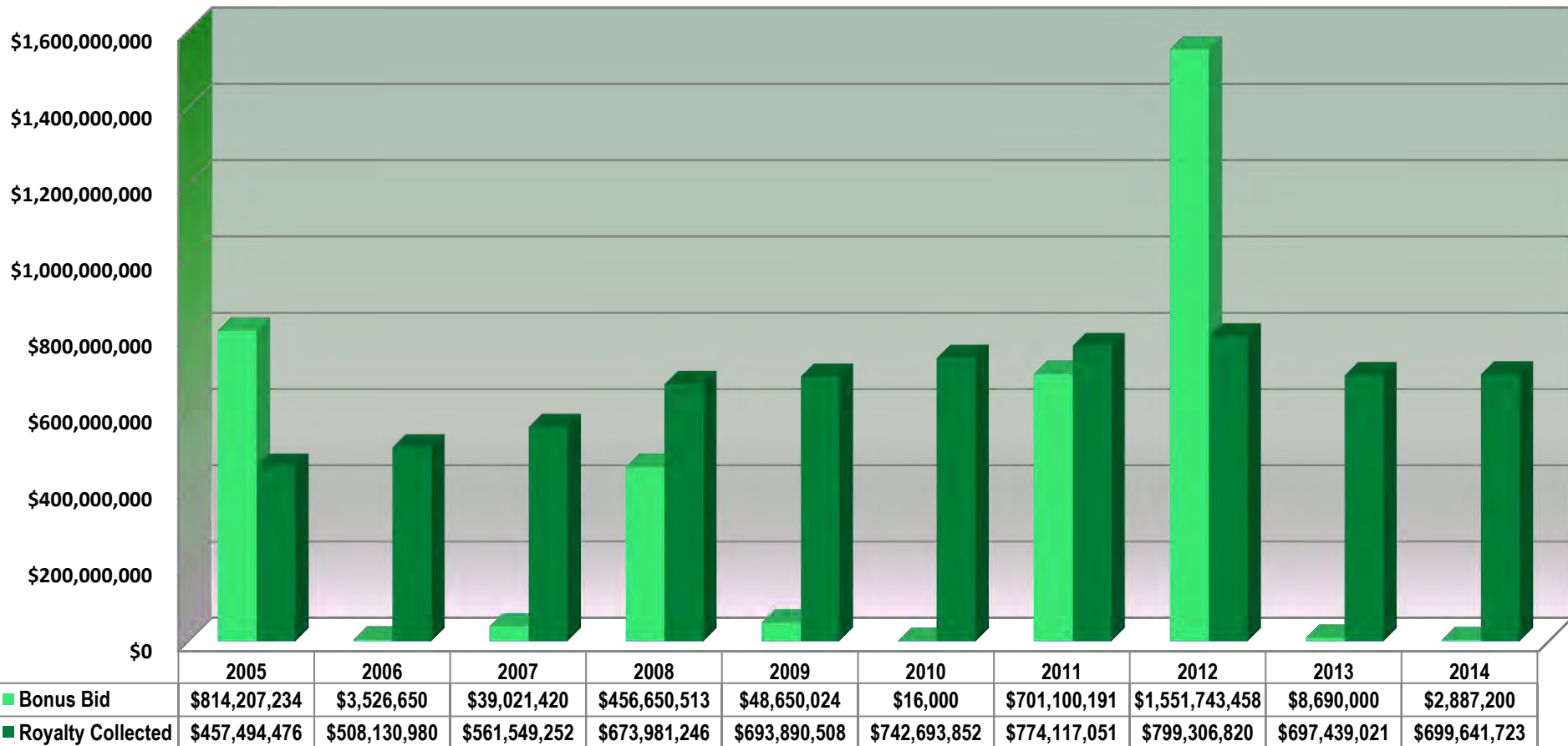


# Federal Coal Tons Leased and Mined 2005 - 2014



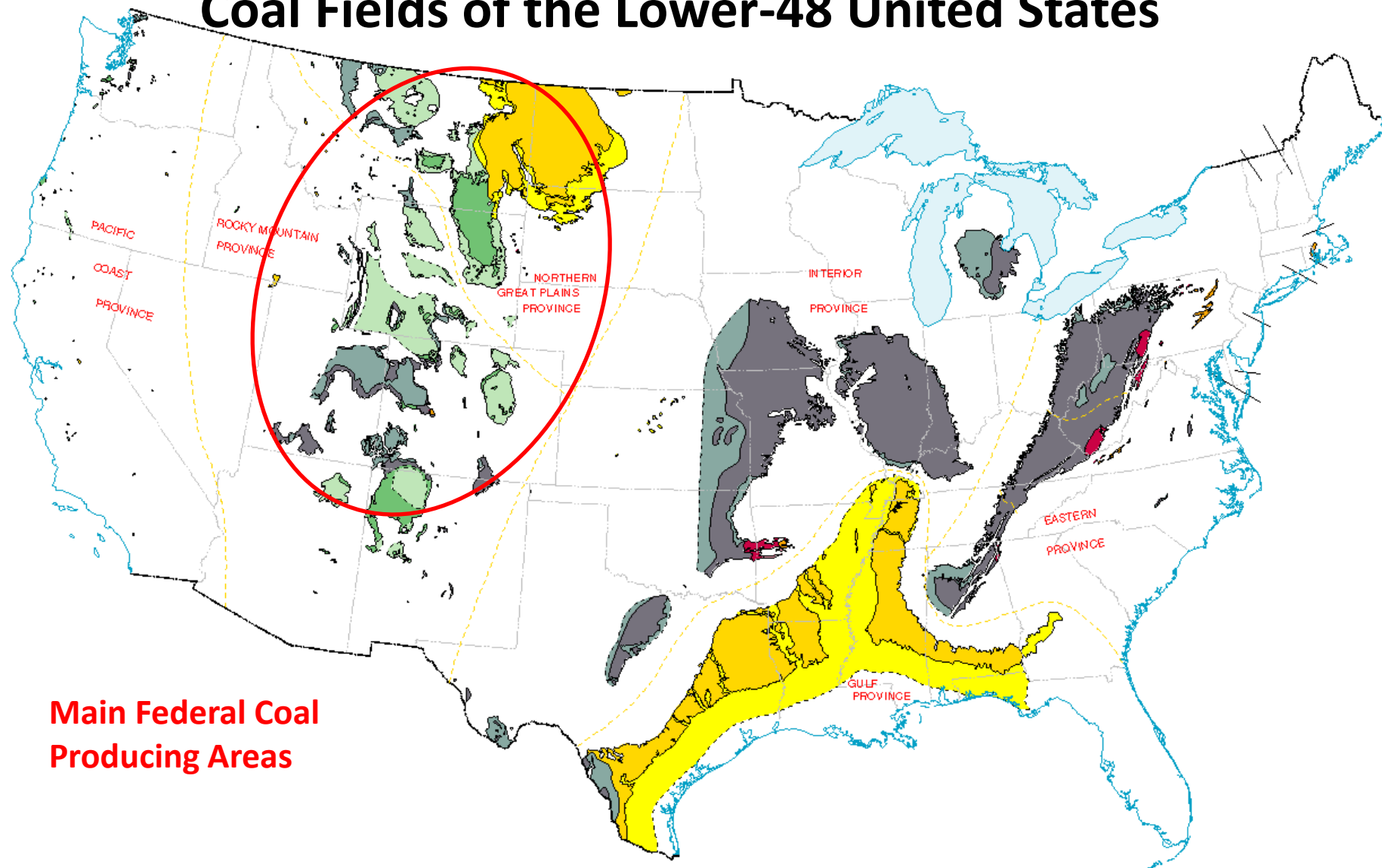


# Federal Coal Bonus Bids and Royalty Collected 2005 - 2014





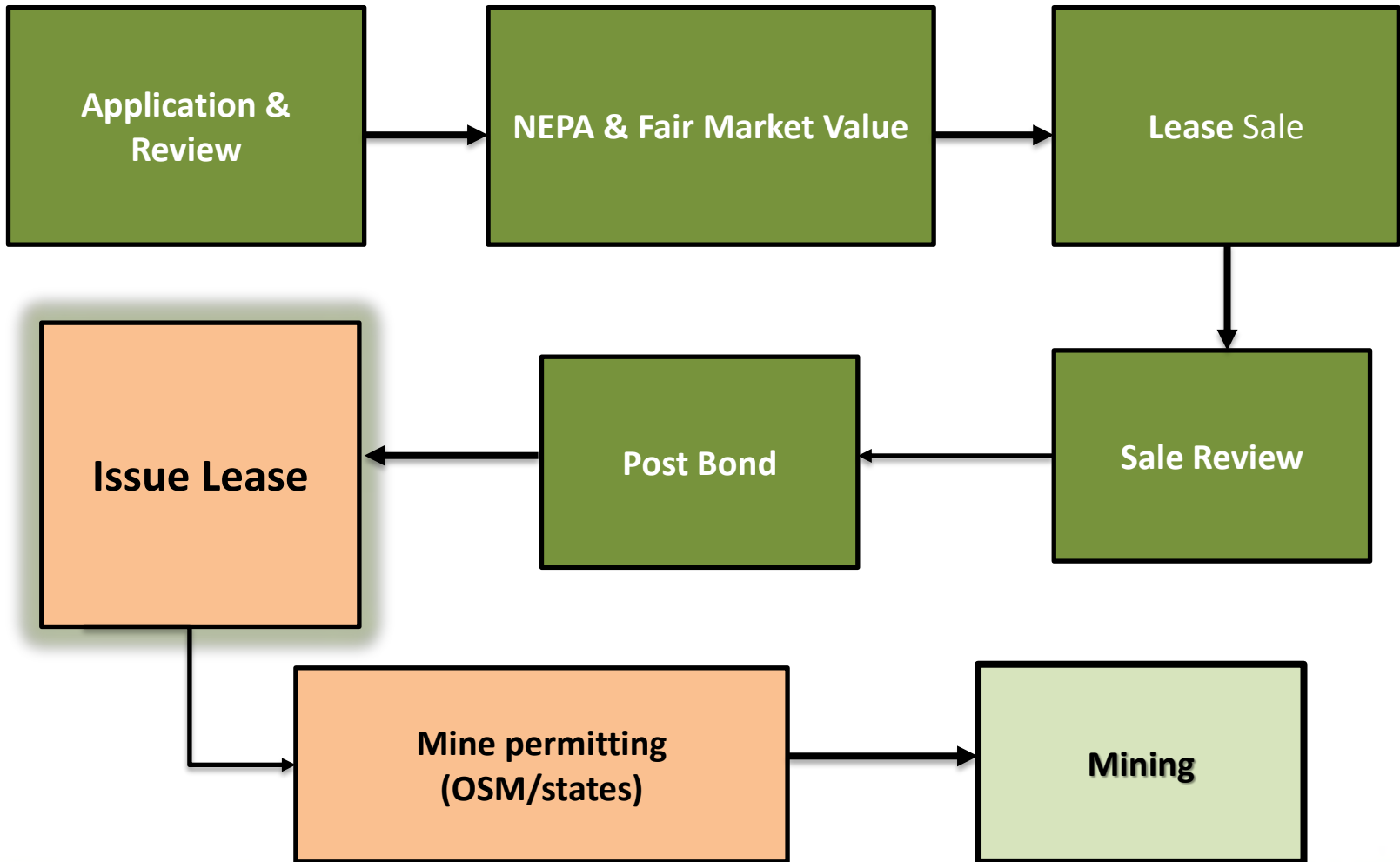
# Coal Fields of the Lower-48 United States



**Main Federal Coal Producing Areas**



# Federal Coal Leasing Process





# General Steps for Federal Coal Leasing and Mining

- Land Use Planning (Resource Management Plans)
  - Determines lands open to leasing consideration
- Application Submittal
- Environmental Analysis
- Mineral Authorization (Right of Entry)
  - Coal lease sale (bonus bid revenue generated)
- SMCRA Permit (Right to Mine)
  - Granted by Office of Surface Mining, Reclamation and Enforcement (OSMRE) or state
- Mining (royalty revenue generated)
- Reclamation
  - OSMRE or state



# Royalty and Royalty Rate Reductions for Federal Coal

## By **statute** (30 U.S.C. 209)

- Lessees must pay a royalty of not less than 12 ½% on the sale price of the coal
- The Secretary may determine a lesser royalty rate for underground mining to promote development
- The Secretary may consider lease or region-specific royalty rate reductions under certain circumstances (30 U.S.C. 209)



## By **regulation** (43 CFR 3473.3-1 & 2)

- Lessees must pay a royalty of 8% for underground mining and not less than 12 ½% for surface mining
- Lessees must pay an annual rent of not less than \$3 per acre





## Bonding Requirements

- Both BLM and the Office of Surface Mining, Reclamation and Enforcement (OSMRE) administer bonds for coal mines, which serve different purposes

### Coal Lease Bonds (BLM)

**BLM** is responsible for the administration of lease bonds.

- Lease bonds assure those aspects of the mining operation **other than reclamation operations** on a lease are conducted in conformity with the approved mining or exploration plan.
- BLM lease bonds typically cover:
  - Three months of production royalty
  - One year of lease rental
  - Remaining balance of deferred bonus bids





## Bonding requirements (Cont'd)

### Performance Bonds (OSMRE)

**OSMRE** is responsible for the administration of performance bonds.

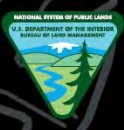
- A performance bond is a surety bond, collateral bond and/or self-bond to assure the permittee performs the requirements of the permit and reclamation plan.

### Lease Protection Bonds (OSMRE)

**OSMRE** is responsible for the administration of Federal lessee protection bonds.

- These bonds hold the permittee responsible for any damages to crops or tangible improvements on Federal lands.

**Note:** States with OSMRE approved SMCRA regulatory programs may enter into cooperative agreements with OSM in order to become the regulatory authority for coal mining on Federal lands.



# Recent Improvements to the Management of the Federal Coal Program

Developed in response to recommendations from the OIG (2013) and GAO (2014) which focused on the:

1. Lease Sale Valuation Process
2. Royalty Rate Reductions

The lease valuation process is critically important because it establishes the pre-sale estimate of the fair market value (FMV) for a given tract.

The high bid at a given sale must meet or exceed that estimate.





## Lease Valuation Process Improvements

Published an updated Coal Evaluation Manual and Handbook

- Providing more robust guidance on FMV procedures
- Standardizing requirements for sales and reoffers
- Establishing internal controls and safeguards
- Requiring additional information, including third party review and consideration of export markets
- Increasing transparency of process
- Recommends use of two most common appraisal methods

### Income Approach

Geologic analysis  
Engineering analysis  
Market analysis  
Valuation

### Comparable Sales

Valuation based on recent  
similar sales



## Royalty Rate Reductions Process Improvements

- Issued new RRR guidance to streamline the application review and consultation process;
- Required ONRR consultation for financial hardship RRR application processing.





# Thank You

For further information of BLM's coal program:

[http://www.blm.gov/wo/st/en/prog/energy/coal\\_and\\_non-energy.html](http://www.blm.gov/wo/st/en/prog/energy/coal_and_non-energy.html)





- 1. Are existing royalty rates appropriate in light of the value of the federal coal resources, the costs of their development, and the returns due to American taxpayers?**
- 2. How might different levels of royalty rates affect: Return? viability of mining operations? Revenues for states and communities? Levels and locations of coal production? Jobs and coal exports markets?**
- 3. What are reasonable economic and market assumptions about Federal coal in the future, particularly in the West? In particular, what role might coal exports play? Do BLM's lease sale valuation and royalty policies appropriately consider exports or other market forces or economics?**
- 4. Are there other ways in which BLM might promote greater competition in the coal leasing process?**
- 5. Are there other aspects of the BLM coal program that should also be considered with respect to ensuring a fair return to the taxpayer, such as appraisals, leasing procedures, lease terms, bonding, cost recovery, or penalties?**
- 6. What actions might the BLM take to address any of these issues, consistent with our existing statutory authority?**

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# Appendix B

## Scoping Materials

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# APPENDIX B

## SCOPING MATERIALS

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Public scoping for the Federal Coal Program Programmatic EIS included a press release, six public scoping meetings, and a project website (<https://www.blm.gov/programs/energy-and-minerals/coal/coal-peis>). The formal public scoping period began on March 30, 2016, with the publication of an NOI in the Federal Register (Vol. 81, No. 61, page 17720), and comments were accepted through September 15, 2016.

Information provided to the public during the public scoping period is included in this appendix, as follows:

1. Secretarial Order 3338. Discretionary Programmatic Environmental Impact Statement to Modernize the Federal Coal Program (10 pages)
2. Federal Register NOI to Prepare a Programmatic Environmental Impact Statement to Review the Federal Coal Program and to Conduct Public Scoping Meetings (Federal Register Vol. 81, No. 61, March 30, 2016; 9 pages)
3. Sample newspaper advertisement from the Grand Junction Daily Sentinel (1 page)
4. Press release, “BLM Gathering Public Input on Coal Program at Six Public Meetings,” released May 16, 2016 (1 page)
5. Sample speaker registration card (1 page)
6. Public scoping meeting presentation (14 pages)
7. Question and Answers on the Department of Interior Federal Coal Reform (10 pages)

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THE SECRETARY OF THE INTERIOR  
WASHINGTON

ORDER NO. 3338

Subject: Discretionary Programmatic Environmental Impact Statement to Modernize the Federal Coal Program

**Sec. 1 Purpose.** The Department of the Interior (Department) is entrusted with overseeing Federal land and resources for the benefit of current and future generations. This responsibility includes advancing the safe and responsible development of our energy resources, while also promoting the conservation of our Federal lands and the protection of their scientific, historic, and environmental values for generations to come. The production of federally managed coal presently accounts for approximately 41 percent of the coal produced in the Nation. However, the existing regulatory and programmatic scheme for leasing that coal has been in place, with only relatively minor adjustments, since 1979. It was established at a time when market conditions, environmental concerns, and energy infrastructure were considerably different from today. To help determine whether and how the current system for developing Federal coal should be modernized, this Secretarial Order directs the Bureau of Land Management (BLM) to prepare a discretionary Programmatic Environmental Impact Statement (PEIS) that analyzes potential leasing and management reforms to the current Federal coal program. The PEIS will provide a vehicle for the Department to undertake a comprehensive review of the program and consider whether and how the program may be improved and modernized to foster the orderly development of BLM administered coal on Federal lands in a manner that gives proper consideration to the impact of that development on important stewardship values, while also ensuring a fair return to the American public. This Order does not apply to the coal program on Indian lands as that program is distinct from the BLM's program and is subject to the unique trust relationship between the United States and federally recognized Indian tribes and government-to-government consultation requirements, nor does it apply to any action of the Office of Surface Mining Reclamation and Enforcement (OSMRE) or the Office of Natural Resources Revenue (ONRR).

**Sec. 2 Background.**

a. Summary of the Federal Coal Program.

The BLM has responsibility for coal leasing on approximately 570 million acres where the coal mineral estate is owned by the Federal Government. The owner of the surface estate of these lands varies and may be the BLM, other Federal agencies, state and local governments, or private landowners. Under authorities, such as the Mineral Leasing Act (MLA), the Mineral Leasing Act for Acquired Lands, and the Federal Land Policy and Management Act, the BLM regulates the leasing and development of this coal. Other Department bureaus, in particular OSMRE and ONRR, also have responsibilities in administering coal mining operations. The OSMRE and those states that have regulatory primacy under the Surface Mining Control and Reclamation Act

(SMCRA) have regulatory responsibilities over surface coal mining and reclamation operations. The ONRR collects, disburses, and verifies revenues from the lease, including bonus bids, royalties, and rental payments, and distributes those funds evenly between the Federal Treasury and the states where the coal resources are located.

The BLM issued coal leasing regulations in 1979 that contemplated two separate competitive coal leasing processes: regional leasing, where the BLM selects tracts within a region for competitive sale, and leasing by application, where the public nominates a particular tract of coal for competitive sale. The regional leasing system has not been used since the 1980s, and currently all BLM coal leasing is done by application. Leasing by application begins with BLM review of an application to ensure completeness, that it conforms to existing land use plans, and that it contains sufficient geologic data to determine the fair market value of the coal. The Agency then prepares an environmental analysis in compliance with the National Environmental Policy Act (NEPA). At the same time, the BLM will also consult with tribal governments and appropriate Federal and state agencies, and will determine whether the surface owner consents to leasing in situations where the surface is not administered by the BLM.

Preparations for the actual lease sale begin with the BLM formulating, after obtaining public comment, an estimate of the fair market value of the coal. This number is kept confidential and is used to evaluate the bids received during the sale. Sealed bids are accepted prior to the date of the sale and are publicly announced during the sale. The winning bid is the highest bid that meets or exceeds the coal tract's presale estimated fair market value, assuming that the bidder meets all eligibility requirements and has paid the appropriate fees and payments.

The BLM receives revenue from coal leasing in three ways: (1) a bonus that is paid at the time BLM issues a lease; (2) rental fees; and (3) production royalties. The royalty rates are set by regulation at a fixed 8 percent for underground mines and not less than 12.5 percent for surface mines. All receipts from a lease are shared equally with the state in which the lease is located.

Over the last few years, approximately 41 percent of the Nation's annual coal production has come from Federal land. Federal coal produced from the Powder River Basin in Montana and Wyoming accounts for over 85 percent of that Federal coal production. Federal coal was used to generate about 14 percent of the Nation's electricity in 2015. Coal is also used for other critical processes, including making steel (metallurgical coal).

As of Fiscal Year 2014, the BLM administered 310 Federal coal leases, encompassing 475,692 acres in 10 states, with an estimated 7.75 billion tons of recoverable Federal coal reserves. Over the last decade, the BLM has held 39 coal lease sales and managed leases that produced approximately 4.4 billion tons of coal and \$10.3 billion in revenue. The recoverable reserves of Federal coal currently under lease are estimated to be sufficient to continue production from federal leases at current levels for 20 years, which does not take into account projections from the Energy Information Administration (EIA) showing that demand for coal is declining.

b. Open Conversation about Modernizing the Coal Program.

On March 17, 2015, I called for "an honest and open conversation about modernizing the Federal coal program." The last time the Federal coal program underwent comprehensive review was in

the mid-1980s, and market conditions, infrastructure development, and national priorities have changed considerably since that time. My call also responded to continued concerns from numerous stakeholders about the Federal coal program, including concerns raised by the Government Accountability Office (GAO), the Department's Office of Inspector General (OIG), Members of Congress, and interested stakeholders. The concerns raised by the GAO and OIG centered on whether taxpayers are receiving fair market value from the sale of coal. Other commenters raised concerns that the current Federal leasing structure lacks transparency and competition and is therefore not ensuring that the American taxpayer receives a fair return from Federal coal resources. These groups also questioned whether the leasing program results in over-supply of a commodity that has significant environmental and health impacts, including impacts on global climate change.

In response to my call for a conversation to address these concerns, the BLM held 5 listening sessions on the Federal coal program in the summer of 2015. Sessions were held in Washington, D.C.; Billings, Montana; Gillette, Wyoming; Denver, Colorado; and Farmington, New Mexico. The Department heard from 289 individuals during the sessions and received over 92,000 written comments before the comment period closed on September 17, 2015. The oral and written comments revealed several recurring themes:

- Concern about global climate change and the impact of coal production and use.
- Concern about the loss of jobs and local revenues if coal production is reduced.
- Support for increased transparency and public participation in leasing and royalty decisions and concern about whether the structure of the leasing program does not provide for adequate competition or a fair return to the taxpayer for the use of federal resources.
- Support for increasing the coal royalty rate, because: (1) the royalty rate should account for the environmental costs of coal production; (2) the royalty rate should match the rate for offshore Federal leases; and (3) taxpayers are not receiving a fair return.
- Support for maintaining or lowering royalty rates, because: (1) the coal industry already pays more than its fair share because existing Federal rates are too high given current market conditions; (2) raising rates will lower production and revenues; and (3) raising rates will cost jobs and harm communities.
- Support for streamlining the current leasing process, so that the Federal coal program is administered in a way that better promotes economic stability and jobs, especially in coal communities which are already suffering from depressed economic conditions.

Of these concerns, three aspects of the current coal program received the most attention. First, numerous stakeholders are concerned that American taxpayers are not receiving a fair return on public coal resources. Second, many stakeholders are concerned that the Federal coal program conflicts with the Administration's climate policy and our national climate goals, making it more difficult for us to achieve those goals. Third, there are numerous and varying concerns about the structure of the Federal coal program in light of current market conditions, including how implementation of the Federal leasing program affects current and future coal markets, coal-dependent communities and companies, and the reclamation of mined lands. These three main concerns are addressed in more detail below.

i. Concerns about Fair Return. In 2013, both GAO and OIG issued reports expressing concerns about the Federal coal program, particularly with respect to the leasing process and fair market value. In response, in 2014 the BLM developed new protocols and issued policy guidance, as well as a manual and handbook, to implement these changes. Nevertheless, stakeholders have expressed concerns that the BLM's response, while helpful, was insufficient to rectify fundamental weaknesses in the program with respect to fair return.

These concerns arise, at least in part, because there is currently very little competition for Federal coal leases. About 90 percent of lease sales receive bids from only one bidder, typically the operator of a mine adjacent to the new lease, given the investment required to open a new mine. While the BLM conducts a peer-reviewed analysis to determine the "fair market value" of the coal and will not sell a lease unless the bid meets or exceeds that value, commenters have questioned whether an accurate fair market value can be identified in the absence of a truly competitive marketplace.

Commenters also raised concerns about the royalty rates set in Federal leases, which are set by regulation at a fixed 8 percent for underground mines and not less than 12.5 percent for surface mines. Many stakeholders believe that these rates do not adequately compensate the public for the removal of the coal and the externalities associated with its use. Still others have suggested that the impact of Federal coal sales, which currently represent approximately 41 percent of total domestic production, artificially lowers market prices, further reducing the amount of royalties received.

Stakeholders also criticize the Federal coal program for obtaining even lower returns through certain types of leasing actions, such as lease modifications, and through royalty rate reductions, which may result in royalty rates as low as 2 percent. In addition, stakeholders have noted that the \$100 acre minimum bid requirement, which is rarely applicable due to fair market value requirements, but occasionally relevant, is outdated.

ii. Concerns about Climate Change. The second broad category of concerns about the Federal coal program relates to its impacts on climate change. The United States has pledged to the United Nations Framework Convention on Climate Change (UNFCCC) to reduce its greenhouse gas (GHG) emissions by 26-28 percent below 2005 levels by 2025. The Obama Administration has made, and is continuing to make, unprecedented efforts to reduce GHG emissions in line with this target through numerous measures. Numerous scientific studies indicate that reducing GHG emissions from coal use worldwide is critical to addressing climate change.

At the same time, as noted above, the Federal coal program is a significant component of overall United States' coal production. Federal coal represents approximately 41 percent of the coal produced in the United States, and when combusted, it contributes roughly 10 percent of the total U.S. GHG emissions.

Many stakeholders highlighted the tension between producing very large quantities of Federal coal while pursuing policies to reduce U.S. GHG emissions substantially, including from coal combustion. Critics also noted that the current leasing system does not provide a way to systematically consider the climate impacts and costs to taxpayers of Federal coal development.



iii. Concerns about Market Conditions. Stakeholders raised various concerns about the implications of current and future coal market conditions. As reported by EIA, between 2008 and 2013, United States' coal production fell by 16 percent, as declining natural gas prices and other factors made coal less competitive as a fuel for generating electricity. In 2015, United States' coal production was roughly 900 million short tons (MMst), 10 percent lower than 2014—the lowest level since 1986. Worldwide, demand for coal appears to be softening as well, with EIA projecting a 21 percent decline in total U.S. coal exports in 2015 from the previous year. As a result, a number of mines in the U.S. have idled production, several major coal companies have entered Chapter 11 bankruptcy, many coal miners have been laid off, and coal-dependent communities have suffered. The EIA and other projections of future coal production show anticipated continuing declines.

Stakeholders have urged the BLM to change the Federal coal program to take these significant market changes into account, although the recommended changes vary. Some suggest that the program should attempt to improve the economic viability of the coal industry and help coal-dependent communities by reducing royalties and streamlining the leasing and permitting processes. Others raise concerns that the program has contributed to low coal prices by incentivizing over-production through non-competitive sales that oversupply the market.

Some have focused on how current market conditions threaten reclamation of lands disturbed by coal mining and may leave state and Federal governments with billions of dollars of unfunded reclamation liabilities. Specifically, many coal companies “self-bond” to meet reclamation bonding requirements, and some stakeholders have asserted that these companies may no longer have the funds to support reclamation activities, and/or they may attempt to shed reclamation obligations in bankruptcy.

Stakeholders also expressed various views regarding exports of Federal coal. Some see export markets as a possible way to maintain or expand Federal coal production, while others view the production of coal for export as a less valuable activity than coal production for domestic use. Still others expressed concern that the export of U.S. coal will contribute to GHG emissions worldwide, which undermines our climate objectives. A number of stakeholders expressed concern that exports, or the potential for exports, were not adequately considered as part of leasing decisions or fair market value determinations.

c. Previous Comprehensive Reviews.

The Department has previously conducted two separate comprehensive reviews of the Federal coal program. In the late 1960s, there were serious concerns about speculation in the coal leasing program. A BLM study discovered a sharp increase in the total Federal acreage under lease and a consistent decline in coal production. In response, the Department undertook the development of a planning system to determine the size, timing, and location of future coal leases, and the preparation of an environmental impact statement (EIS) for the entire Federal coal leasing program. The short-term actions included a complete moratorium on the issuance of new coal prospecting permits, and a moratorium with limited exceptions on the issuance of new Federal coal leases. New leases were issued only to maintain existing mines or to supply reserves for production in the near future, where “near future” meant that development and production were to commence within 3 and 5 years, respectively. The moratorium was scaled

back over time, but was not completely lifted until 1981, after a PEIS had been completed, a new leasing system had been adopted through regulation, and litigation was resolved.

In 1982, concerns about the Federal coal program arose again, this time related to allegations that the Government did not receive fair market value from a large lease sale in the Powder River Basin under the new procedures adopted as part of the programmatic review in the 1970s. Among other reports on the issue, in May 1983, GAO issued a report concluding that the Department had received roughly \$100 million less than it should have for the leases sold, although the Department disputed this conclusion. In response, in July 1983, Congress directed the Secretary to appoint members to a commission, known as the Linowes Commission, to investigate fair market value policies for Federal coal leasing. Congress also, in the 1984 Appropriations Act, directed the Office of Technology Assessment (OTA) to study whether the Department's coal leasing program was compatible with the nationally mandated environmental protection goals.

As part of the 1984 Appropriations Bill, Congress imposed a moratorium on the sale or lease of coal on public lands, subject to certain exceptions, starting in 1983 and ending 90 days after publication of the Linowes Commission's report. The Linowes Commission published the *Report of the Commission on Fair Market Value Policy for Federal Coal Leasing* in February 1984. The OTA report, *Environmental Protection in the Federal Coal Leasing Program*, was released in May 1984. The principal thrust of these reports was that the Department should: (1) temper its pace of coal leasing; (2) improve and better document its procedures for receiving fair market value; and (3) take care to balance competing resource uses in making lease decisions.

Interior Secretary William P. Clark extended the suspension of coal leasing (with exceptions for emergency leasing and processing preference right lease applications, among other things), while the Department completed its comprehensive review of the program. This review included proposed modifications to be made by the Department in response to the Linowes Commission and OTA reports. Secretary Clark announced on August 30, 1984, that the Department would prepare an EIS supplement to the 1979 Final Environmental Statement for the Federal Coal Management Program. The Department issued the Record of Decision for the PEIS supplement in January 1986, in the form of a Secretarial Issue Document. That document recommended continuation of the leasing program with modifications. In conjunction with those modifications, Interior Secretary Donald Hodel lifted the leasing moratorium in 1987.

**Sec. 3 Authorities.** This Order is issued under statutory authority that includes, but is not limited to, the Mineral Leasing Act, 30 U.S.C. §§ 181 *et seq.*; the Mineral Leasing Act for Acquired Lands, 30 U.S.C. §§ 351 *et seq.*; the National Environmental Policy Act, 42 U.S.C. §§ 4321 *et seq.*; the Surface Mining Control and Reclamation Act, 30 U.S.C. §§ 1201 *et seq.*; and the Federal Land Policy and Management Act, 43 U.S.C. §§ 1701 *et seq.*

**Sec. 4 Discretionary Programmatic Environmental Impact Statement.** Given the broad range of issues raised over the course of the past year (and beyond) and the lack of any recent analysis of the Federal coal program as a whole, a more comprehensive, programmatic review is in order, building on the BLM's public listening sessions. Accordingly, to meaningfully address the breadth and complexity of the issues raised by commenters regarding the Federal coal

program, I hereby direct the BLM to conduct a broad, programmatic review of the Federal coal program it administers through the preparation of a PEIS under NEPA.

The Department is authorized to undertake this effort in its stewardship role as a proprietor and sovereign regulator which is charged by Congress with managing and overseeing mineral development on the public lands, not only for the purpose of ensuring safe and responsible development of mineral resources, but also to ensure conservation of the public lands, the protection of their scientific, historic, and environmental values, and compliance with applicable environmental laws. Additionally, the Department has the statutory duty to ensure a fair return to the taxpayer and broad discretionary authority to decide where, when, and under what terms and conditions, mineral development should occur, including with regard to the issuance of Federal coal leases.

Although I am not proposing any regulatory action at this time, the purpose of the PEIS is to identify, evaluate, and potentially recommend reforms to the Federal coal program. This review will enable the Department to consider how to modernize the program to allow for the continued development of Federal coal resources while addressing the substantive issues raised by the public, other stakeholders, and the Department's own review of the comments it has received.

While the precise issues to be assessed in the PEIS will be determined through the public scoping process, the PEIS should at a minimum address the following topics:

a. How, When and Where to Lease. The regional leasing program authorized in the 1979 regulations has not worked as envisioned and, instead, BLM has conducted leasing only in response to industry applications. Given concerns about the lack of competition in the lease-by-application system, as well as consideration of environmental goals, the PEIS should examine whether the current regulatory framework should be changed to provide a better mechanism or mechanisms to decide which coal resources should be made available and how the leasing process should work.

As part of this evaluation, the PEIS should explicitly examine the issue of when to lease. Some leasing programs for other Federal resources operate with an established schedule for leasing or consideration of leasing (*e.g.*, BLM holds onshore oil and gas lease sales on a quarterly basis if parcels are available; offshore oil and gas leasing occurs using a schedule established in a five-year plan). The PEIS should examine whether scheduled sales should be used for Federal coal.

The PEIS should also examine where to lease. In other contexts, the Department has identified areas to promote certain kinds of resource development. For example, the BLM's Solar PEIS (Western Solar Plan) amended land use plans across six southwestern states and established preferred locations for solar development. The PEIS should examine whether a similar approach would be useful for coal to minimize potential user conflicts and streamline leasing decisions.

b. Fair Return. The PEIS should address whether the bonus bids, rents, and royalties received under the Federal coal program are successfully securing a fair return to the American public for Federal coal, and, if not, what adjustments could be made to provide such compensation. As part of this analysis, the PEIS should examine whether the decision to lease large amounts of relatively low cost coal artificially drives down pricing in the U.S. market and, if so, how the taxpayer may best be compensated for the reduced royalties due to artificially low

prices. The PEIS should also examine whether the BLM estimates of fair market value for purposes of establishing minimum bids successfully substitute for competition in the bidding process, and if not, how to better estimate fair market value.

c. Climate Impacts. With respect to the climate impacts of the Federal coal program, the PEIS should examine how best to assess the climate impacts of continued Federal coal production and combustion and how to address those impacts in the management of the program to meet both the Nation's energy needs and its climate goals, as well as how best to protect the public lands from climate change impacts.

d. Socio-Economic Considerations. Beyond the issue of fair market value, the PEIS should assess whether the current Federal coal leasing program adequately accounts for externalities related to Federal coal production, including environmental and social impacts. It should more broadly examine how the administration, availability, and pricing of Federal coal affect regional and national economies (including job impacts), and energy markets in general, including the pricing and viability of other coal resources (both domestic and foreign) and other energy sources. The impact of possible program alternatives on the projected fuel mix and cost of electricity in the United States should also be examined.

e. Exports. The PEIS should address whether leasing decisions should consider whether the coal to be produced from a given tract would be for domestic use or export. In consultation with other applicable executive branch offices, the PEIS should examine how to estimate export potential, particularly given potential differences between the estimates of industry and independent economic experts about the prospects for exports in a given circumstance.

f. Energy Needs. Finally, the PEIS should examine the degree to which Federal coal supports, or should support, fulfilling the energy needs of the United States. The evaluation should include an assessment of how the administration, availability, and pricing of Federal coal impacts electricity generation in the United States, particularly in light of other regulatory influences, and what other sources of energy supply (including efficiency) are projected to be available.

**Sec. 5 Pause on the Issuance of New Federal Coal Leases for Thermal (Steam) Coal.** Lease sales and lease modifications result in lease terms of 20 years and for so long thereafter as coal is produced in commercial quantities. Continuing to conduct lease sales or approve lease modifications during this programmatic review risks locking in for decades the future development of large quantities of coal under current rates and terms that the PEIS may ultimately determine to be less than optimal. This risk is why, during the previous two programmatic reviews, the Department halted most lease sales with limited exceptions for small sales, emergencies and other situations involving potential economic hardship. Considering these factors and given the extensive recoverable reserves of Federal coal currently under lease, I have decided that a similar policy is warranted here. A pause on leasing, with limited exceptions, will allow future leasing decisions to benefit from the recommendations that result from the PEIS while minimizing any economic hardship during that review.

a. Pursuant to my discretionary authority under the Mineral Leasing Act (e.g., 30 U.S.C § 201) and other statutes, and based on the reasons discussed herein, I conclude that further evaluation, additional receipt of public input, and comprehensive consideration of the Federal coal program is warranted, and accordingly, I hereby direct BLM to apply the following limitations on the issuance of Federal coal leases until the completion of the PEIS:

(i) No new applications for thermal (steam) coal leases or lease modifications will be processed, subject to the enumerated exclusions in Section 6 of this Order; and

(ii) For pending applications, no lease sales will be held, leases issued, or modifications approved for thermal (steam) coal, subject to the enumerated exclusions in Section 6 of this Order. At an applicant's request, preparatory work on pending applications may continue (including the preparation of NEPA analyses), but no final decision on whether to hold a lease sale will be made unless one of the exceptions listed in Section 6 of this Order applies.

b. This pause in holding lease sales, issuing coal leases, and approving lease modifications will apply to applications for both surface and underground thermal coal, but it does not apply to metallurgical coal. Metallurgical coal is produced at far fewer mines and in much smaller quantities than thermal coal, and recoverable metallurgical coal reserves may not be sufficient to support current production levels for that resource during the pause. In addition, metallurgical coal is required for key applications, such as steelmaking, for which substitutes are not readily available. Given that the Federal mineral estate includes comparatively very small quantities of metallurgical coal, we expect potential impacts from any leasing activities for metallurgical coal during the review period to be very limited.

c. This pause does not constitute a decision on the merits of any application, but is merely a deferral of the decision to allow the PEIS to be considered in making future final decisions. The pause applies only to the Federal mineral estate administered by the BLM and does not apply to coal leases on tribal or allotted lands, which are regulated by the Bureau of Indian Affairs under a different regulatory structure. The pause applies only to lease sales and modifications. It does not apply to other BLM actions related to the Federal coal program, including the processing and issuance of coal exploration licenses, the issuance of renewal leases when required by the terms of existing leases, and the development and implementation of resource management plans. Similarly, the pause does not apply to any actions undertaken by ONRR, OSMRE, or any other agency, office, or bureau with duties related to the development, production or reclamation of Federal or non-Federal coal resources.

**Sec. 6 Exclusions.** Nothing in this Order will be deemed to prohibit or restrict:

- a. emergency leasing as defined in 43 C.F.R. § 3425.1-4;
- b. lease modifications, as defined in 43 C.F.R. § 3432.1, that do not exceed 160 acres or the number of acres in the original lease, whichever is less;
- c. lease exchanges as defined in 43 C.F.R. §§ 3435.1, 3436.1, and 3436.2;
- d. the rights of preference right lease applicants based on prospecting permits issued prior to August 4, 1976; and


- e. the sale and issuance of new thermal coal leases by application, 43 C.F.R. Subpart 3425, or the issuance of thermal coal lease modifications, 43 CFR Subpart 3432, under pending applications for which the environmental analysis under NEPA has been completed and a Record of Decision or Decision Record has been issued by the BLM or the applicable Federal surface management agency as of the date of this Order. This exception extends to previously issued Records of Decision or Decision Records that have been (or may be) vacated by judicial decision and are undergoing re-evaluation in accordance with the judicial decision. Before holding any lease sale or issuing any lease under this exception, the BLM must confirm and ensure that the applicable NEPA document for a project is adequate and includes, at a minimum, an analysis of the direct and indirect greenhouse gas emissions resulting from the proposed leasing action.

**Sec. 7 Implementation.**

- a. The Director of the BLM is responsible for implementation of this Order. This responsibility may be delegated as appropriate.
- b. The Director will expeditiously initiate the NEPA scoping process by inviting Federal, State, and local agencies, Indian tribes, and the public to help identify the environmental issues and reasonable alternatives to be examined in the PEIS. Upon completion of the scoping process, the Director will provide a scoping report to me along with a proposed schedule for the completion of the PEIS.

**Sec. 8 Effect of the Order.** This Order is intended to provide for a comprehensive review of the Federal coal program and allow for the Department to improve the program going forward. This Order and any resulting report or recommendation are not intended to, and do not, create any right or benefit, substantive or procedural, enforceable at law or equity by a party against the United States, its departments, agencies, instrumentalities or entities, its officers or employees, or any other person. To the extent there is any inconsistency between the provisions of this Order and any Federal laws or regulations, the laws or regulations will control.

**Sec. 9. Effective Date.** This Order is effective immediately and will remain in effect until its provisions are amended, superseded, or revoked, whichever occurs first.

  
Secretary of the Interior

Date: **JAN 15 2016**

**FOR FURTHER INFORMATION CONTACT:** Mr. Cade London, Policy Advisor, International Affairs, U.S. Fish and Wildlife Service, by email at [cade.london@fws.gov](mailto:cade.london@fws.gov) (preferable method of contact); by U.S. mail at U.S. Fish and Wildlife Service; 5275 Leesburg Pike, MS: IA; Falls Church, VA 22041–3803; by telephone at (703) 358–2584; or by fax at (703) 358–2276.

**SUPPLEMENTARY INFORMATION:** In accordance with the requirements of the Federal Advisory Committee Act (5 U.S.C. App.), we announce that the Advisory Council on Wildlife Trafficking (Council) will hold a meeting to discuss the implementation of the National Strategy for Combating Wildlife Trafficking, and other Council business as appropriate. The Council's purpose is to provide expertise and support to the Presidential Task Force on Wildlife Trafficking.

You may attend the meeting in person, or you may participate via telephone. At this time, we are inviting submissions of questions and information for consideration during the meeting.

### Background

Executive Order 13648 established the Advisory Council on Wildlife Trafficking on August 30, 2013, to advise the Presidential Task Force on Wildlife Trafficking, through the Secretary of the Interior, on national strategies to combat wildlife trafficking, including, but not limited to:

1. Effective support for anti-poaching activities;
2. Coordinating regional law enforcement efforts;
3. Developing and supporting effective legal enforcement mechanisms; and
4. Developing strategies to reduce illicit trade and consumer demand for illegally traded wildlife, including protected species.

The eight-member Council, appointed by the Secretary of the Interior, includes former senior leadership within the U.S. Government, as well as chief executive officers and board members from conservation organizations and the private sector. For more information on the Council and its members, visit <http://www.fws.gov/international/advisory-council-wildlife-trafficking/>.

### Meeting Agenda

The Council will consider:

1. Task Force discussions,
2. Administrative topics, and
3. Public comment and response.

The final agenda will be posted on the Internet at <http://www.fws.gov/>

[international/advisory-council-wildlife-trafficking/](http://www.fws.gov/international/advisory-council-wildlife-trafficking/).

### Making an Oral Presentation

Members of the public who want to make an oral presentation in person or by telephone at the meeting will be prompted during the public comment section of the meeting to provide their presentation and/or questions. If you want to make an oral presentation in person or by phone, contact Mr. Cade London (**FOR FURTHER INFORMATION CONTACT**) no later than the date given in the **DATES** section.

Registered speakers who want to expand on their oral statements, or those who wanted to speak but could not be accommodated on the agenda, are invited to submit written statements to the Council after the meeting. Such written statements must be received by Mr. London, in writing (preferably via email), no later than April 22, 2016.

### Submitting Public Comments

You may submit your questions and information by one of the methods listed in **ADDRESSES**. We request that you send comments by only one of the methods described in **ADDRESSES**.

If you submit information via the Federal eRulemaking Portal (<http://www.regulations.gov>), your entire submission—including any personal identifying information—will be posted on the Web site.

If your submission is made via a hardcopy that includes personal identifying information, you may request at the top of your document that we withhold this information from public review. However, we cannot guarantee that we will be able to do so. We will post all hardcopy submissions at <http://www.regulations.gov>.

### Reviewing Public Comments

Comments and materials we receive will be available for public inspection at <http://www.regulations.gov>. Alternatively, you may view them by appointment during normal business hours at 5275 Leesburg Pike, Falls Church, VA 22041–3803. Please contact Mr. London (see **FOR FURTHER INFORMATION CONTACT**).

### Obtaining Meeting Minutes

Summary minutes of the meeting will be available on the Council Web site at <http://www.fws.gov/international/advisory-council-wildlife-trafficking/>. Alternatively, you may view them by appointment during normal business hours at 5275 Leesburg Pike, Falls Church, VA 22041–3803. Please contact

Mr. London (see **FOR FURTHER INFORMATION CONTACT**).

**Gloria Bell,**

*Deputy Assistant Director, International Affairs, U.S. Fish and Wildlife Service.*

[FR Doc. 2016–07113 Filed 3–29–16; 8:45 am]

**BILLING CODE 4333–15–P**

## DEPARTMENT OF THE INTERIOR

### Bureau of Land Management

[16X.LLWO320000.L13200000.PP0000]

### Notice of Intent To Prepare a Programmatic Environmental Impact Statement To Review the Federal Coal Program and To Conduct Public Scoping Meetings

**AGENCY:** Bureau of Land Management, Interior.

**ACTION:** Notice.

**SUMMARY:** In compliance with the National Environmental Policy Act of 1969, as amended (NEPA), the Bureau of Land Management (BLM), Washington Office, intends to prepare a Programmatic Environmental Impact Statement (EIS) to review the Federal coal program.

This Notice of Intent begins the process of defining the scope of the Programmatic EIS by providing background on the Federal coal program and identifying the issues that may be addressed in the Programmatic EIS. This Notice informs the public about: Concerns that have been raised about the Federal coal program; issues that are expected to be assessed in the Programmatic EIS; and potential modifications to the Federal coal program suggested by stakeholders during the listening sessions that could be considered in the Programmatic EIS. This Notice of Intent also announces plans to conduct public scoping meetings, invites public participation in the scoping process, and solicits public comments for consideration in establishing the scope and content of the Programmatic EIS.

**DATES:** The BLM will invite interested agencies, States, American Indian tribes, local governments, industry, organizations and members of the public to submit comments or suggestions to assist in identifying significant issues and in determining the scope of this Programmatic EIS.

The BLM will be holding public scoping meetings to obtain comments on the Programmatic EIS and plans to hold these meetings in the following locations: Casper, WY; Grand Junction, CO; Knoxville, TN; Pittsburgh, PA; Salt

Lake City, UT; and Seattle, WA. The BLM will announce the specific dates and locations of the scoping meetings at least 15 days in advance through local media, newspapers, and the project Web site at: [http://www.blm.gov/wo/st/en/prog/energy/coal\\_and\\_non-energy/details\\_on\\_coal\\_peis.html](http://www.blm.gov/wo/st/en/prog/energy/coal_and_non-energy/details_on_coal_peis.html). In addition, the BLM will consider all written comments received or postmarked during the public comment period on scoping, which will close 30 days after the final public meeting.

**ADDRESSES:** You may submit written comments by the following methods:

- *Email:* [BLM\\_WO\\_Coal\\_Program\\_PEIS\\_Comments@blm.gov](mailto:BLM_WO_Coal_Program_PEIS_Comments@blm.gov). This is the preferred method of commenting.
- *Mail, personal, or messenger delivery:* Coal Programmatic EIS Scoping, Bureau of Land Management, 20 M St. SE., Room 2134LM, Washington, DC 20003.

**FOR FURTHER INFORMATION CONTACT:**

Mitchell Leverette, Chief, Division of Solid Minerals, email: [mleveret@blm.gov](mailto:mleveret@blm.gov), telephone: 202–912–7113, or visit the Coal Programmatic EIS Web site at: [http://www.blm.gov/wo/st/en/prog/energy/coal\\_and\\_non-energy/details\\_on\\_coal\\_peis.html](http://www.blm.gov/wo/st/en/prog/energy/coal_and_non-energy/details_on_coal_peis.html).

**SUPPLEMENTARY INFORMATION:** On January 15, 2016, the Secretary of the Interior issued Order No. 3338 directing the BLM to conduct a broad, programmatic review of the Federal coal program it administers through preparation of a Programmatic EIS under NEPA. 42 U.S.C. 4321 *et seq.* The Order was issued in response to a range of concerns raised about the Federal coal program, including, in particular, concerns about whether American taxpayers are receiving a fair return from the development of these publicly owned resources; concerns about market conditions, which have resulted in dramatic drops in coal demand and production in recent years, with consequences for coal-dependent communities; and concerns about whether the leasing and production of large quantities of coal under the Federal coal program is consistent with the Nation's goals to reduce greenhouse gas emissions to mitigate climate change. In light of these issues, the Programmatic EIS will identify and evaluate potential reforms to the Federal coal program. This review will enable the Department to consider how to modernize the program to allow for the continued development of Federal coal resources, as appropriate, while addressing the substantive issues raised by the public, other stakeholders, and the Department's own review of the comments it has received during recent

listening sessions held last year in Washington, DC; Billings, Montana; Gillette, Wyoming; Denver, Colorado; and Farmington, New Mexico.

**Background and Need for Agency Action**

*A. Overview of Federal Coal Program*

Under the Mineral Leasing Act of 1920, as amended, 30 U.S.C. 181 *et seq.*, and the Mineral Leasing Act for Acquired Lands of 1947, as amended, 30 U.S.C. 351 *et seq.*, the BLM is responsible for the leasing of Federal coal and regulation of the development of that coal on approximately 570 million acres of the 700 million acres of mineral estate that is owned by the Federal government. This includes Federal mineral rights on Federal lands and Federal mineral rights located under surface lands with non-Federal ownership. Under the authority of the Mineral Leasing Act, the BLM administers leasing and monitors coal production. Other Departmental bureaus, in particular the Office of Surface Mining Reclamation and Enforcement (OSMRE) and the Office of Natural Resources Revenue (ONRR), also take actions related to coal mining on Federal lands. The OSMRE, and those States that have regulatory primacy under the Surface Mining Control and Reclamation Act of 1977 (SMCRA), permit coal mining and reclamation activities, and monitor reclamation and reclamation bonding actions. The ONRR collects and audits all payments required under the lease, including bonus bids, royalties, and rental payments, and distributes those funds between the Federal Treasury and the States where coal resources are located.

**1. Federal Coal Leasing and Production**

On average, over the last few years, about 41 percent of the Nation's annual coal production came from Federal land. Federal coal produced from the Powder River Basin in Montana and Wyoming accounts for over 85 percent of all Federal coal production. Federal coal was used to generate an estimated 14 percent of the Nation's electricity in 2015. Coal is also used for other critical processes, including making steel (metallurgical coal).

As of FY2015, the BLM administered 306 coal leases, covering 482,691 acres in 11 States, with an estimated 7.75 billion tons of recoverable Federal coal. Over the last decade (2006–2015), the BLM sold 32 coal leases and managed leases that produced approximately 4.3 billion tons of coal and resulted in \$9.55

billion in revenue collections by the United States.

The U.S. Energy Information Administration (EIA) estimates total U.S. coal production in 2015 was about 895 million short tons (MMst), 10 percent lower than in 2014 and the lowest level since 1986.<sup>1</sup> EIA projects that coal production will fall by another 12 percent in 2016, then rise by 2 percent in 2017.<sup>2</sup> The approximately 7.75 billion tons of recoverable reserves of Federal coal currently under lease is estimated to be sufficient to continue production at current levels for 20 years, averaged across all leases, and these reserves would be sufficient to cover production, on average, for even longer if coal production declines, as is projected.

EIA estimates that U.S. coal exports decreased 23 MMst (24 percent) from 2014 levels to 74 MMst in 2015, and EIA expects the current global coal market trends to continue.<sup>3</sup> EIA forecasts that coal exports will decline by an additional 10 MMst (13 percent) in 2016 and by 1 MMst (2 percent) in 2017.<sup>4</sup>

In terms of employment and revenues to the States, coal mining employed almost 90,000 people in 2012. More recently, there were an estimated 74,000 direct jobs in coal mining as of May 2014, including roughly 6,500 in Wyoming.<sup>5</sup> Revenues from Federal coal provided Wyoming approximately \$556 million in FY2014. Other States received the following approximate amounts: Utah—\$44 million; Montana—\$43 million; Colorado—\$36 million; and New Mexico—\$16 million.

**2. Federal Coal Program**

The current BLM coal leasing program includes land use planning, processing applications (*e.g.*, for exploration licenses and lease sales), estimating the value of proposed leases, holding lease

<sup>1</sup> U.S. EIA, *Short Term Energy Outlook: Coal* (Mar. 8, 2016) (<http://www.eia.gov/forecasts/steo/report/coal.cfm>); U.S. EIA, *Today in Energy: Coal Production and Prices Decline in 2015* (Jan. 8, 2016) (<http://www.eia.gov/todayinenergy/detail.cfm?id=24472>). Note that the EIA data referenced in this Notice is more recent than the EIA data referenced in the Secretarial Order.

<sup>2</sup> U.S. EIA, *Short Term Energy Outlook: Coal* (Mar. 8, 2016) (<http://www.eia.gov/forecasts/steo/report/coal.cfm>).

<sup>3</sup> U.S. EIA, *Short Term Energy Outlook: Coal* (Mar. 8, 2016) (<http://www.eia.gov/forecasts/steo/report/coal.cfm>).

<sup>4</sup> U.S. EIA, *Short Term Energy Outlook: Coal* (Mar. 8, 2016) (<http://www.eia.gov/forecasts/steo/report/coal.cfm>).

<sup>5</sup> Bureau of Labor Statistics, *May 2014 National Industry-Specific Occupational Employment and Wage Estimates: NAICS 212100—Coal Mining* ([http://www.bls.gov/oes/current/naics4\\_212100.htm](http://www.bls.gov/oes/current/naics4_212100.htm)); Wyoming Department of Workforce Services, *Wyoming Labor Market Information* (<http://doe.state.wy.us/lmi/CES/nawy14.htm>).



sales, and post-leasing actions (e.g., production verification, lease and production inspection and enforcement, royalty reductions, and bond review).

The Federal Government receives revenue from coal leasing in three ways: (1) A bonus that is paid at the time BLM issues a lease; (2) Rental fees; and (3) Production royalties. The royalty rates are set by regulation at a fixed 8 percent for underground mines and not less than 12.5 percent for surface mines. All receipts from a lease are shared with the State in which the lease is located (51 percent to the Federal Government and 49 percent to the State).

The BLM's planning process for Resource Management Plans, supported by environmental analysis under NEPA, identifies areas that are potentially available to be considered for coal leasing. The planning process considers, among other things, the impacts of a "reasonably foreseeable development scenario," but it does not directly authorize any coal leasing or determine which coal will actually be leased.

The Federal Coal Leasing Amendments Act of 1976 (FCLAA), which amended Section 2 of the Mineral Leasing Act of 1920, requires that, with limited exceptions, Federal lands available for coal leasing be sold by competitive bid, with the BLM receiving "fair market value" for the lease. While multiple bids are not required, all successful bids must equal or exceed the estimated pre-sale fair market value for the lease, as calculated by the BLM. Competitive leasing is not required for: (1) Preference right lease applications for owners of pre-FCLAA prospecting permits; and (2) Modifications of existing leases, where Congress has authorized the Secretary to allow up to 960 acres (increased from 160 acres by the Energy Policy Act of 2005) of contiguous lands for noncompetitive leasing by modifying an existing lease.

The BLM issued coal leasing regulations in 1979 that provided for two separate competitive coal leasing processes: (1) Regional leasing, where the BLM selects tracts within a region for competitive sale; and (2) Leasing by application, where an industry applicant nominates a particular tract of coal for competitive sale.

Regional coal leasing requires the BLM to select potential coal leasing tracts based on land use planning, expected coal demand, and potential environmental and economic impacts.<sup>6</sup> This process includes use of a Federal/State advisory board known as a

Regional Coal Team,<sup>7</sup> to provide input on leasing decisions. The regional leasing system has not been used since 1990, and currently all BLM coal leasing is done by application.<sup>8</sup> Leasing by application begins with the submission of an application to lease a tract of coal identified by the applicant.<sup>9</sup> The BLM reviews the application for completeness, to ensure that it conforms to existing land use plans, and to ensure that it contains sufficient geologic data to determine the fair market value of the coal. The agency then prepares an analysis under NEPA (either an Environmental Assessment or an EIS) and seeks public comment on the proposed lease sale. Through this process, the BLM evaluates alternative tract configurations to maximize competitiveness and value, and to avoid bypassing Federal coal. The BLM also consults with other appropriate Federal, State, and tribal government agencies, and the BLM determines whether the surface owner consents to leasing in situations where the surface is not administered by the BLM. Preparations for the actual lease sale begin with the BLM formulating, after obtaining public comment, a pre-sale estimate of the fair market value of the coal. This estimate is kept confidential and is used to evaluate the bids for the lease "bonus" received during the sale. Sealed bids are accepted prior to the date of the sale and are publicly announced during the sale. The winning bid is the highest bid that meets or exceeds the coal tract's presale estimated fair market value, assuming that the bidder meets all eligibility requirements and has paid the appropriate fees and payments.

There are two separate bonding requirements for Federal coal leases. The BLM requires a bond adequate to ensure compliance with the terms and conditions of the lease, which must cover a portion of potential liabilities associated with the bonus bid, rental fees, and royalties. In addition, under SMCRA, the OSMRE or the State with regulatory primacy requires sufficient bonding to cover anticipated reclamation costs.

<sup>7</sup> The BLM regulations require a Regional Coal Team to be established for each coal production region, comprised of representatives from the BLM and the Governors of each State in the region. The Regional Coal Teams are to guide the coal planning process for each coal production region, serve as the forum for BLM and State consultation, and make recommendations on coal leasing levels. 43 CFR 3400.4.

<sup>8</sup> While the Powder River Basin (PRB) coal production region was decertified in 1992, the PRB regional coal team is still in place and meets periodically to review regional activity and make recommendations on coal leasing in the region.

<sup>9</sup> See 43 CFR subpart 3425.

A Federal coal lease has an initial term of 20 years, but it may be terminated after 10 years if the coal resources are not diligently developed. 30 U.S.C. 207. Existing leases that have met their diligence requirements may be renewed for additional 10 year terms following the initial 20 year term.

### 3. Previous Comprehensive Reviews

The Department has previously conducted two separate, comprehensive reviews of the Federal coal program. In the late 1960s, there were serious concerns about speculation in the coal leasing program. A BLM study discovered a sharp increase in the total Federal acreage under lease and a consistent decline in coal production. In response, the Department undertook the development of a planning system to determine the size, timing, and location of future coal leases, and the preparation of a Programmatic EIS for the entire Federal coal leasing program. Beginning in February 1973, the short-term actions included a complete moratorium on the issuance of new coal prospecting permits, and a moratorium with limited exceptions on the issuance of new Federal coal leases. New leases were issued only to maintain existing mines or to supply reserves for production in the near future, where "near future" meant that development and production were to commence within 3 and 5 years, respectively. The moratorium was scaled back over time, but was not completely lifted until 1981, after the Programmatic EIS had been completed, a new leasing system had been adopted through regulation, and litigation was resolved.

In 1982, concerns about the Federal coal program arose again, this time related to allegations that the Government did not receive fair market value from a large lease sale in the Powder River Basin under the new procedures adopted as part of the programmatic review in the 1970s. Among other reports on the issue, in May 1983, the Government Accountability Office (GAO) issued a report concluding that the Department had received roughly \$100 million less than it should have for the leases sold. In response, in July 1983, Congress directed the Secretary to appoint members to a commission, known as the Linowes Commission, to investigate fair market value policies for Federal coal leasing. Congress also, in the 1984 Appropriations Act, directed the Office of Technology Assessment (OTA) to study whether the Department's coal leasing program was compatible with the nationally mandated environmental protection goals.

<sup>6</sup> 43 CFR part 3420.

As part of the 1984 Appropriations Bill, Congress imposed a moratorium on the sale or lease of coal on public lands, subject to certain exceptions, starting in 1983 and ending 90 days after publication of the Linowes Commission's report. The Linowes Commission published the *Report of the Commission on Fair Market Value Policy for Federal Coal Leasing* in February 1984. The OTA report, *Environmental Protection in the Federal Coal Leasing Program*, was released in May 1984. The principal thrust of these reports was that the Department should: (1) Temper its pace of coal leasing; (2) Improve and better document its procedures for receiving fair market value; and (3) Take care to balance competing resource uses in making lease decisions.

Interior Secretary William P. Clark extended the suspension of coal leasing (with exceptions for emergency leasing and processing preference right lease applications, among other things), while the Department completed its comprehensive review of the program. This review included proposed modifications to be made by the Department in response to the Linowes Commission and OTA reports. Secretary Clark announced on August 30, 1984, that the Department would prepare an EIS supplement to the 1979 Programmatic EIS for the Federal coal management program. The Department issued the Record of Decision for the Programmatic EIS supplement in January 1986, in the form of a Secretarial Issue Document. That document recommended continuation of the leasing program with modifications. In conjunction with those modifications, Interior Secretary Donald Hodel lifted the coal leasing moratorium in 1987.

### B. Need for Comprehensive Review of Federal Coal Program

On March 17, 2015, Secretary Jewell called for "an honest and open conversation about modernizing the Federal coal program." As described above, the last time the Federal coal program underwent comprehensive review was in the mid-1980s, and market conditions, infrastructure development, scientific understanding, and national priorities have changed considerably since that time. The Secretary's call also responded to continued concerns from numerous stakeholders about the Federal coal program, including concerns raised by the GAO,<sup>10</sup> the Department's Office of

Inspector General (OIG),<sup>11</sup> members of Congress, interested stakeholders, and the public. The concerns raised by the GAO and OIG centered on whether taxpayers are receiving fair market value from the sale of coal. Others raised concerns that the current Federal leasing structure lacks transparency and competition and is therefore not ensuring that the American taxpayer receives a fair return from Federal coal resources, while also raising questions regarding current market conditions for the coal industry generally and related implications for Federal resources. Stakeholders also questioned whether the leasing program results in over-supply of a commodity that has significant environmental and health impacts, including impacts on global climate change.

In response to the Secretary's call for a conversation to address these concerns, the BLM held 5 listening sessions regarding the Federal coal program in the summer of 2015. Sessions were held in Washington, DC; Billings, Montana; Gillette, Wyoming; Denver, Colorado; and Farmington, New Mexico. The Department heard from 289 individuals during the sessions and received more than 92,000 written comments before the comment period closed on September 17, 2015. The oral and written comments reflected several recurring themes:

- Concern about global climate change and the impact of coal production and use.
- Concern about the loss of jobs and local revenues if coal production is reduced.
- Support for increased transparency and public participation in leasing and royalty decisions and concern that the structure of the leasing program does not provide for adequate competition or a fair return to the taxpayer for the use of Federal resources.
- Support for increasing coal royalty rates because: (1) The royalty rate should account for the environmental costs of coal production; (2) The royalty rate should match the rate for offshore Federal leases; and (3) Taxpayers are not receiving a fair return.
- Support for maintaining or lowering coal royalty rates because: (1) The coal industry already pays more than its fair share and existing Federal rates are too high given current market conditions; (2) Raising rates will lower production and revenues; and (3) Raising rates will cost jobs and harm communities.
- Support for streamlining the current leasing process, so that the Federal coal program is administered in a way that better promotes economic stability and jobs, especially in coal communities which are

*Exports, and Provide More Public Information*, GAO 14-140 (Dec. 2013).

<sup>11</sup> OIG, *Coal Management Program*, U.S. Department of the Interior, Report No.: CR-EV-BLM-0001-2012 (June 2013).

already suffering from depressed economic conditions.

Of these concerns, three aspects of the current Federal coal program received the most attention. First, numerous stakeholders are concerned that American taxpayers are not receiving a fair return on public coal resources. Second, many stakeholders are concerned that the Federal coal program conflicts with the Administration's climate policy and our national climate goals, making it more difficult for us to achieve those goals. Third, there are numerous and varying concerns about the structure of the Federal coal program in light of current market conditions, including how implementation of the Federal leasing program affects current and future coal markets, coal-dependent communities and companies, and the reclamation of mined lands. These three main concerns are addressed in more detail below.

### 1. Concerns About Fair Return

In 2013, both GAO and OIG issued reports expressing concerns about the Federal coal program, particularly with respect to the leasing process and fair market value. In response, in 2014, the BLM developed new protocols and issued policy guidance, a manual, and a handbook to implement these changes. Nevertheless, stakeholders have expressed concerns that the BLM's response, while helpful, was insufficient to rectify fundamental weaknesses in the program with respect to fair return.<sup>12</sup>

These concerns arise, at least in part, because there is currently very little competition for Federal coal leases. About 90 percent of lease sales receive bids from only one bidder, typically the operator of a mine adjacent to the new lease, given the investment required to

<sup>12</sup> See, e.g., Taxpayers for Common Sense, *Federal Coal Leasing: Fair Market Value and a Fair Return for the American Taxpayer* (Sept. 2013). ([http://www.taxpayer.net/images/uploads/downloads/TCS\\_Federal\\_Coal\\_Leasing\\_Report\\_-\\_Final\\_-\\_Updated\\_10.4.13.pdf](http://www.taxpayer.net/images/uploads/downloads/TCS_Federal_Coal_Leasing_Report_-_Final_-_Updated_10.4.13.pdf)); Center for American Progress, *Modernizing the Federal Coal Program* (Dec. 2014) (<https://cdn.americanprogress.org/wp-content/uploads/2014/12/FederalCoal.pdf>); Headwaters Economics, *An Assessment of U.S. Federal Coal Royalties* (Jan. 2015) (<http://headwaterseconomics.org/wphw/wp-content/uploads/Report-Coal-Royalty-Valuation.pdf>); Center for American Progress, *Cutting Subsidies and Closing Loopholes in the U.S. Department of the Interior's Coal Program* (Jan. 6, 2015) (<https://cdn.americanprogress.org/wp-content/uploads/2015/01/CoalSubs-brief2.pdf>); Institute for Policy Integrity, *Harmonizing Preservation and Production* (June 2015) (<http://policyintegrity.org/publications/detail/harmonizing-preservation-and-production/>); Institute for Policy Integrity, *Illuminating the Hidden Costs of Coal* (Dec. 2015) (<http://policyintegrity.org/publications/detail/hidden-costs-of-coal/>).

<sup>10</sup> GAO, *Coal Leasing: BLM Could Enhance Appraisal Process, More Explicitly Consider Coal*

open a new mine. While the BLM conducts a peer-reviewed analysis to estimate a pre-sale fair market value of the coal and will not sell a lease unless the bid meets or exceeds that value, commenters have questioned whether an accurate fair market value can be identified in the absence of a truly competitive marketplace.

Commenters also raised concerns about the royalty rates set in Federal leases, which are set by regulation at a fixed 8 percent for underground mines and not less than 12.5 percent for surface mines. Many stakeholders believe that these rates do not adequately compensate the public for the removal of the coal and the externalities associated with its use. Still others have suggested that the large volumes and relatively low costs of Federal coal, which currently represents approximately 41 percent of total domestic production, have the effect of artificially lowering market prices for coal, further reducing the amount of royalties received.

Stakeholders also criticize the Federal coal program for obtaining even lower returns through certain types of leasing actions, such as lease modifications, and through royalty rate reductions, which may result in royalty rates as low as 2 percent. In addition, stakeholders have noted that the \$100 acre minimum bid requirement established in the regulations is outdated, and although the minimum bid does not apply frequently, given fair market value requirements, there are situations in which it sets the floor for the bid price.

Some stakeholders further suggest that a fair return to the taxpayer should also include compensation for externalities such as the environmental damage (or lost environmental benefits) from the removal and combustion of the coal.

## 2. Concerns About Market Conditions

Stakeholders raised a variety of concerns about the implications of current and future coal market conditions. As reported by EIA, between 2008 and 2013, U.S. coal production fell by 16 percent in total, as declining natural gas prices and other factors made coal less competitive as a fuel for generating electricity.<sup>13</sup> In 2015, U.S. coal production was roughly 891 MMst, 11 percent lower than 2014, and the lowest level since 1986.<sup>14</sup> World-wide

demand for coal appears to be softening as well, with EIA estimating a 23 percent decline in total U.S. coal exports in 2015 from the previous year.<sup>15</sup> As a result of these market trends, a number of mines in the U.S. have idled production, companies have asked the BLM to hold off on processing certain lease tracts for sale, several major coal companies have entered Chapter 11 bankruptcy, many coal miners have been laid off, and coal-dependent communities have suffered.<sup>16</sup> The EIA and other projections of future coal production anticipate continuing declines.

Stakeholders have urged the BLM to modify the Federal coal program to take these significant market changes into account, although the recommended changes vary. Some suggest that the program should attempt to improve the economic viability of the coal industry by reducing royalties and streamlining the leasing and permitting processes. Others raise concerns that the program has contributed to low coal prices by incentivizing over-production through non-competitive sales that oversupply the market.

Some have focused on how current market conditions threaten reclamation of lands disturbed by coal mining and may leave State and Federal governments with billions of dollars of unfunded reclamation liabilities. Specifically, many coal companies “self-bond” to meet reclamation bonding requirements, and some stakeholders have asserted that these companies may no longer have the funds to support reclamation activities, and/or they may attempt to shed reclamation obligations in bankruptcy.<sup>17</sup> OSMRE currently estimates that there is over \$3.6 billion in outstanding self-bonded reclamation liability in the United States.

Stakeholders also expressed a number of views regarding export of Federal coal. Some see export markets as a possible way to maintain or expand Federal coal production, while others view the production of coal for export

as a less valuable activity than coal production for domestic use. A number of stakeholders expressed concern that exports, or the potential for exports, were not adequately considered as part of the leasing process.

## 3. Concerns About Climate Change

The third broad category of concerns about the Federal coal program relates to its impacts on climate change. The United States has pledged under the United Nations Framework Convention on Climate Change to reduce its greenhouse gas (GHG) emissions by 26–28 percent below 2005 levels by 2025. The Obama Administration has made, and is continuing to make, unprecedented efforts to reduce U.S. GHG emissions in line with this target through measures such as vehicle efficiency standards, the Clean Power Plan, energy efficiency standards, requirements to reduce methane reductions from oil and gas production, and many other measures. Numerous scientific studies indicate that reducing GHG emissions from coal use worldwide is critical to addressing climate change.<sup>18</sup>

As noted above, the Federal coal program is a significant component of overall U.S. coal production. In recent years, Federal coal has comprised about 41 percent of the coal produced in the U.S.<sup>19</sup> When combusted, this Federal coal contributes roughly 10 percent of total U.S. GHG emissions.<sup>20</sup>

Many stakeholders highlighted the tension between producing very large quantities of Federal coal while pursuing policies to reduce U.S. GHG emissions substantially, including from coal combustion. They also stated that the current leasing system does not provide a way to systematically consider the climate impacts and costs to the public of Federal coal development, either as a whole, or in the context of particular projects. In addition, they raise concerns that exporting Federal coal, and the associated GHG emissions, undermines

<sup>18</sup> See, e.g., McGlade and Ekins, The geographical distribution of fossil fuels unused when limiting global warming to 2 °C, *Nature*, 517, 187–190 (Jan. 8, 2015) (finding that globally over 80% of current coal reserves should remain unused from 2010 to 2050 to meet the target of 2 degrees C).

<sup>19</sup> U.S. EIA, *Sales of Fossil Fuels Produced from Federal and Indian Lands, FY 2003 through FY 2014* (July 17, 2015) (<https://www.eia.gov/analysis/requests/federallands/>) (quantity of Federal coal production in 2014 and percent of total U.S. coal production).

<sup>20</sup> *Id.*; U.S. EPA, *Inventory of U.S. Greenhouse Gas Emissions and Sinks, 3–2* (April 2015) (<http://www3.epa.gov/climatechange/Downloads/ghgemissions/US-GHG-Inventory-2015-Chapter-3-Energy.pdf>) (quantity of U.S. emissions from coal in 2013).

<sup>13</sup> U.S. EIA, *Annual Energy Outlook 2015*, 22 (Apr. 14, 2015).

<sup>14</sup> U.S. EIA, *Short Term Energy Outlook: Coal* (Feb. 9, 2016) (<http://www.eia.gov/forecasts/steo/report/coal.cfm>); U.S. EIA, *Coal Production and Prices Decline in 2015* (January 8, 2016) (<http://www.eia.gov/todayinenergy/detail.cfm?id=24472>).

<sup>15</sup> U.S. EIA, *Short Term Energy Outlook: Coal* (Feb. 9, 2016) (<http://www.eia.gov/forecasts/steo/report/coal.cfm>); see also U.S. EIA, *Coal Production and Prices Decline in 2015* (Jan. 8, 2016) (<http://www.eia.gov/todayinenergy/detail.cfm?id=24472>).

<sup>16</sup> See, e.g., Wall Street Journal, *Pressure on Coal Industry Intensifies*, B1 (Jan. 12, 2016).

<sup>17</sup> See, e.g., *In re Alpha Natural Resources, Inc., et al.*, Case No. 15–33896 (KRH) United States Bankruptcy Court, Eastern District of Virginia, Richmond Division (Alpha Resources bankruptcy filing) (Aug. 3, 2015) (<http://www.kccllc.net/alpharestructuring/>); *In re Arch Coal, Inc., et al.*, Case No. 16–40120–705, United States Bankruptcy Court, Eastern District of Missouri, Eastern Division (Arch Coal bankruptcy filing (Jan. 11, 2016) (<http://www.archcoal.com/restructuring/>).

our nation's efforts to encourage all countries to contribute to climate change mitigation efforts.

### C. Secretarial Order

On January 15, 2016, the Secretary of the Interior issued Order No. 3338 directing the BLM to conduct a broad, programmatic review of the Federal coal program it administers through the preparation of a Programmatic EIS under NEPA. The Order stated:

Given the broad range of issues raised over the course of the past year (and beyond) and the lack of any recent analysis of the Federal coal program as a whole, a more comprehensive, programmatic review is in order, building on the BLM's public listening sessions . . . .

\* \* \* \* \*

[T]he purpose of the P[rogrammatic] EIS is to identify, evaluate, and potentially recommend reforms to the Federal coal program. This review will enable the Department to consider how to modernize the program to allow for the continued development of Federal coal resources while addressing the substantive issues raised by the public, other stakeholders, and the Department's own review of the comments it has received.

The Order does not apply to the coal program on Indian lands, as that program is distinct from the BLM's program and is subject to the unique trust relationship between the United States and federally recognized Indian tribes and government-to-government consultation requirements. The Order also does not apply to any action of OSMRE or ONRR.

### D. Scoping Discussion

The Programmatic EIS will identify and review potential modifications to the Federal coal program to address the concerns discussed above and others that may be identified during the scoping process, and potentially, identify a preferred set of actions. Such modifications could include changes to guidance, regulations, and/or land use plans. The process of developing the Programmatic EIS will be used to identify and develop potential changes to the program and evaluate their projected effects on the quality of the human environment. In addition, the Programmatic EIS will consider, as an alternative, a continuation of the current Federal coal program without any modifications, as required by NEPA. The scoping process will refine the specific issues to be addressed in the Programmatic EIS and the potential modifications to be evaluated. Cooperating agencies may include any

Federal, State, or local agency or tribal government with jurisdiction or special expertise in matters within the scope of the Programmatic EIS.

#### 1. Issues To Be Addressed

The full set of issues to be assessed in the Programmatic EIS will be determined through the public scoping process, but it is expected to include the following topics. The Order identified most of these, but the following list has been expanded to include additional topics and details raised through the listening sessions.

##### a. *How, When, and Where to Lease.*

The regional leasing program authorized in the 1979 regulations has not worked as envisioned and, instead, the BLM has conducted leasing only in response to industry applications. Given concerns about the lack of competition in the lease-by-application system, as well as consideration of environmental goals, the Programmatic EIS will examine whether the current regulatory framework should be changed to provide a better mechanism or mechanisms to decide which coal resources should be made available and how the leasing process should work.

As part of this evaluation, the Programmatic EIS will examine the issue of when to lease. Some leasing programs for other Federal resources operate with an established schedule for leasing or consideration of leasing (*e.g.*, BLM holds onshore oil and gas lease sales on a quarterly basis if parcels are available; offshore oil and gas leasing occurs using a schedule established in a five-year plan). The Programmatic EIS will examine whether scheduled sales should be used for Federal coal. In addition, the Programmatic EIS will look at the factors that should be considered in decisions about the timing of leasing. For example, it will evaluate whether market conditions should affect the timing of lease sales, such that sales would occur when coal values are higher rather than during periods of market downturns, when revenues from lease sales would be lower.

The Programmatic EIS will also examine where to lease and where not to lease, consistent with taking a landscape level view of this question. The Federal Land Policy and Management Act requires the BLM to develop land use plans, also known as Resource Management Plans to guide the BLM's management of public lands. The BLM uses this planning process to identify and address, at a broad scale, potential conflicts over and impacts of possible resource uses. The Programmatic EIS will consider whether

the BLM's unsuitability screening criteria adequately address the questions of where and/or where not to lease for coal production, as well as other potential factors that could be applied during the planning process to provide guidance on the most appropriate locations for coal leasing. This question is particularly timely in light of the BLM's recent proposal to update the current planning regulations ("Planning 2.0").<sup>21</sup> The proposed regulatory changes highlight, in particular, opportunities for early public involvement in the planning process and landscape level planning efforts that may cross traditional administrative boundaries, both of which are relevant for planning related to the coal program.

b. *Fair Return.* The Programmatic EIS will address whether the bonus bids, rents, and royalties received under the Federal coal program are successfully securing a fair return to the American public for Federal coal, and, if not, what adjustments could be made to provide such compensation. As part of this analysis, the Programmatic EIS will examine how each of these components of fair return should be calculated, including whether (and if so, what) externalities should be considered as part of the fair return calculation.

c. *Climate Impacts.* With respect to the climate impacts of the Federal coal program, the Programmatic EIS will examine how best to measure and assess the climate impacts of continued Federal coal production, transportation, and combustion. This will include evaluation of potential substitution effects from any changes in Federal coal production, and consideration of how best to ensure no unnecessary and undue degradation of public lands from climate change impacts. It will also consider whether and how to mitigate, account for, or otherwise address those impacts through the structure and management of the coal program, including, as appropriate, land use planning, adjustments to the scale and pace of leasing, adjustments to royalties or other means of internalizing externalities, mitigation through greenhouse gas reductions elsewhere, information disclosure, and other approaches. The Programmatic EIS will examine the climate impacts of the coal program in the context of the Nation's climate objectives, as well as the Nation's energy and security needs.

d. *Other Impacts.* The Federal coal program has other potential impacts on public health and the environment,

<sup>21</sup> Dept. of Interior, Bureau of Land Management, Resource Management Planning, Proposed Rule, 81FR 9674 (Feb. 25, 2016).

beyond climate impacts, that will also be assessed in the Programmatic EIS. These include the effects of coal production on: The quantity and quality of water resources, including aquifer drawdown and impacts on streams and alluvial valley floors; air quality and the associated effects on health and visibility; wildlife, including endangered species; and other land uses such as grazing and recreation. These impacts are commonly addressed through mitigation requirements. Recent mitigation directives focus on developing a comprehensive, clear, and consistent approach for avoidance and minimization of, and compensatory mitigation for, the impacts of agency activities and the projects agencies approve.<sup>22</sup> The Programmatic EIS will evaluate the BLM's general approach to mitigation for these impacts from coal production, and specifically, whether impacts from mining and combusting Federal coal are adequately mitigated across the Federal coal program, including the timing and certainty of mitigation, and whether standard mitigation at the programmatic level should be required, in addition to on a project-by-project basis.

*e. Socio-Economic Considerations.* Beyond the issue of fair market value, the Programmatic EIS will assess whether the current Federal coal leasing program adequately accounts for externalities related to Federal coal production, including environmental and social impacts. It will more broadly examine how the administration, availability, and pricing of Federal coal affect State, regional, and national economies (including job impacts), and energy markets in general, including the pricing and viability of other coal resources (both domestic and foreign) and other energy sources. The impact of possible program alternatives on the projected fuel mix and cost of electricity in the United States will also be examined.

*f. Exports.* The Programmatic EIS will address whether and, if so, how leasing decisions should consider actual and/or

projected exports of domestic coal from any given tract and potential mechanisms that could be used to appropriately evaluate export potential.

*g. Energy Needs.* Finally, the Programmatic EIS will examine how Federal coal supports fulfilling the energy needs of the United States. The evaluation will include an assessment of how the administration, availability, and pricing of Federal coal impacts electricity generation in the United States, particularly in light of other regulatory influences, and what other sources of energy supply (including efficiency) are projected to be available.

## 2. Potential Modifications to the Federal Coal Program To Be Considered

The BLM is considering various approaches for reforming the Federal coal program to address some or all of the identified issues above, including providing a fair return to taxpayers and providing appropriate consideration of the impacts the program has on the environment. These approaches may be considered separately or in any combination.

To date, stakeholders have made suggestions that range from maintaining the status quo to undertaking sweeping changes. During the listening sessions, commenters suggested a variety of modifications that could be made to the Federal coal program to better address concerns about fair return to taxpayers, market conditions, and effects on climate change, among others. Some of these suggestions were sufficiently specific to constitute potential approaches that could be evaluated in the Programmatic EIS. These proposals are summarized below.

The BLM requests comment on whether the Programmatic EIS should further evaluate some or all of these specific approaches, or some variation on them. The BLM also welcomes suggestions for other potential approaches that should be evaluated in the Programmatic EIS, including approaches that may be contrary to those articulated below, such as reforming the leasing process to promote coal development through steps that might accelerate leasing and reduce delays and costs. As previously noted, the Programmatic EIS will also consider a “no action alternative”—the continuation of the program without any modifications—as required by NEPA. We encourage commenters to be as specific as possible in identifying the types of changes to the program that the Programmatic EIS should evaluate, including changes to regulations, guidance, and management practices.

To address concerns about fair returns to taxpayers, the BLM is considering evaluating the following approaches:

- Raise the royalty rate or adjust the royalty terms of new leases, such as:
    - Raise the royalty rate to 18.75 percent, consistent with the royalty rate for Federal offshore oil and gas;
    - Raise the royalty rate to a level that would provide parity on an energy content (Btu) basis with the royalties currently collected for Federal onshore natural gas, a common substitute fuel;
    - Raise the royalty rate to the point that would maximize revenues to the taxpayer, taking into consideration any decrease in demand that may result from the higher royalty rate; or
    - Identify and require an “adder” to be paid to reflect the cost of the harm to the public from negative externalities from coal development;
      - Limit the use of royalty rate reductions;
      - Change the methodology for determining fair market value when establishing the minimum bid or valuing lease modifications, such as:
        - Use the market price of non-Federal coal in the region or nation-wide;
        - Include the option value of leasing the coal resource at a given point in time;
        - Include the social cost of mining (*i.e.*, the cost to taxpayers of mining imposed by fixed cost non-internalized externalities, such as loss of recreational or other values, which do not vary by quantity produced);
        - Explicitly include export value in establishing fair market value;
        - Replace the lease by application approach with an open process of setting (after public comment and expert advice) minimal acceptable bid levels for tracts; or
        - Update the minimum bid established by regulation to account for inflation, and/or establish state-specific minimum bids;
          - Raise rental rates to adjust for inflation and/or incorporate lost value of other uses of the land and anticipated externalities of exploratory activities;
          - Do not lease to companies that have more than 10 years of recoverable reserves coal at the time of lease application; and
          - Evaluate whether there is an over-supply of Federal coal that is undercutting market prices for coal in the United States and thereby leading to lower royalty revenue.
- The BLM received the following industry proposals concerned with promoting coal production that are also under consideration:
- Lower royalty rates, including as a means of increasing overall government take;

<sup>22</sup> Secretary of the Interior, Secretarial Order 3330 (Oct. 31, 2013) (establishing a Department-wide mitigation strategy) (<https://www.doi.gov/sites/doi.gov/files/migrated/news/upload/Secretarial-Order-Mitigation.pdf>); President Obama, Presidential Memorandum: Mitigating Impacts on Natural Resources from Development and Encouraging Related Private Investment (Nov. 3, 2015) (<https://www.whitehouse.gov/the-press-office/2015/11/03/mitigating-impacts-natural-resources-development-and-encouraging-related>). Consistent with these directives, the BLM is currently working on a mitigation policy that will bring consistency to the consideration and application of avoidance, minimization, and compensatory actions or development activities and projects impacting public lands and resources.

- Broaden the applicability of royalty rate reductions;
- Reform the leasing process to accelerate leasing and reduce delays and costs;
  - Base bonus bids on the amount of recoverable coal, not coal reserves;
  - Convert revenue streams to pay-as-you go, instead of an upfront payment of bonus bids over five years; and
  - Reestablish the Royalty Policy Committee to guide changes to royalties.

To address concerns about climate impacts and/or other public health and environmental harms, the BLM is considering evaluating the following approaches:

- Change the methodology for determining which, or how much, Federal coal and/or acreage is made available for leasing, such as:
  - Establish a “budget,” or other quantity-based schedule, for the amount of Federal coal and/or acreage to be leased over a given period, with the budget set on a declining schedule consistent with the United States’ climate goals and commitments and market demand;
  - Re-establish an updated version of the regional planning and leasing process, using land use planning and environmental evaluation to decide whether an area should be leased; or
  - Develop a landscape-level approach to identify geographic areas for potential leasing to identify and address potential conflicts
- Raise royalty rates or require an “adder” to be paid to reflect the cost of the harm to the public from negative externalities from coal development (could include production-related externalities, transportation-related externalities, externalities from use of coal, and/or costs of infrastructure demand, such as water and power), such as:
  - Incorporating the social cost of carbon;
  - Incorporating the social cost of methane; or
  - Reflecting other externalities;
  - Require climate and/or other public health and environmental harms to be mitigated; and
  - Prohibit or otherwise limit leasing to entities that are not meeting their environmental responsibilities, such as:
    - Entities listed in the Office of Surface Mining Reclamation and Enforcement Applicator Violator System; or
    - Entities that have not met their reclamation or bonding (including bond release) requirements.

#### E. Scoping Process

The Federal coal program Programmatic EIS process will provide

opportunities for formal public participation through commenting during public scoping and on the draft Programmatic EIS, when that is published. The BLM aims to complete the Coal Programmatic EIS over roughly 3 years. The process will include public and agency scoping, including public scoping meetings, collection of public comments during the scoping period, issuance of a summary of substantive comments received during the scoping period, as well as issuance of a scoping report at the end of the scoping process; coordination and consultation with Federal, State, tribal and local governments; publication of a draft Programmatic EIS; public review of and comments on the draft Programmatic EIS; and publication of a final Programmatic EIS, which will include the BLM’s responses to substantive comments received on the draft Programmatic EIS. The Programmatic EIS process is intended to involve all interested agencies (Federal, State, county, and local), Native American tribes, public interest groups, businesses, and members of the public.

At this time, interested parties are invited to participate in the scoping process to assist the BLM in identifying and refining the issues and policy proposals to be analyzed in depth and in eliminating from detailed study those policy proposals and issues that are not feasible or pertinent. Participation in the scoping process may take the form of attendance at public scoping meetings, speaking at public scoping meetings, and/or submitting written comments.

In addition to taking comment on the specific approaches discussed above, as well as welcoming suggestions for other potential approaches that should be evaluated in the Programmatic EIS, BLM is soliciting input on the following:

1. Potential new leasing models, or potential reforms to the previous or existing leasing models of regional leasing and lease by application;
2. Other approaches to increase competition in the leasing process;
3. Data or analyses that justify a specific change to the royalty rate;
4. Potential approaches to improve the pre-sale estimate of fair market value;
5. Whether, and how, to account in the leasing process for the extent to which reclamation responsibilities have been met;
6. Potential approaches to design a ‘budget’ for the amount of Federal coal and/or acreage to be leased over a given period; and
7. How to account for export potential in the leasing process.

Public scoping meetings will be held as indicated above under the **DATES** section. These scoping meetings will be

informal. The presiding officer will establish only those procedures needed to ensure that everyone who wishes to speak has a chance to do so, to the extent practicable, and that the agency representatives understand all issues and comments. Persons wishing to speak on behalf of an organization should identify that organization in their request to speak. Should any speaker wish to provide for the record further information that cannot be presented within the designated time, such information may be submitted in writing or electronically by the date listed in the **DATES** section to the addresses listed in the **ADDRESSES** section.

In submitting written comments, individuals should be aware that the entire comment—including personal identifying information (including address, phone number, and email address)—may be made publicly available at any time. While the commenter can request in the comment that the commenter’s personal identifying information be withheld from public review, this cannot be guaranteed. All comments from organizations or businesses, and from individuals identifying themselves as representatives or officials of organizations or businesses, will be available for public inspection in their entirety. If you would like to receive a copy of the draft Programmatic EIS and other project materials, you are encouraged to make this request through the project Web site ([http://www.blm.gov/wo/st/en/prog/energy/coal\\_and\\_non-energy/details\\_on\\_coal\\_peis.html](http://www.blm.gov/wo/st/en/prog/energy/coal_and_non-energy/details_on_coal_peis.html)), or you may contact Mitchell Leverette as provided in the **ADDRESSES** section of this notice.

Pursuant to 36 CFR 800.2(d)(3), the BLM will use the NEPA public participation requirements to satisfy the public involvement requirements under Section 106 of the National Historic Preservation Act (NHPA), 16 U.S.C. 470(f). The BLM will consult with Indian tribes on a government-to-government basis in accordance with Executive Order 13175 and other policies. Tribal concerns, including impacts on Indian trust assets and potential impacts to cultural resources, will be given due consideration. Federal, State, and local agencies, along with tribes and other stakeholders that may be interested in or affected by the Federal coal program, are invited to participate in the scoping process and, if eligible, may request or be requested by the BLM to participate in the development of the environmental analysis as a cooperating agency.

After gathering public comments on issues and policy proposals that should be addressed in the Programmatic EIS, the BLM will identify the issues and policy proposals to be addressed in the Programmatic EIS and the issues and proposals determined to be beyond the scope of the Programmatic EIS.

Following closure of the scoping period, the BLM will prepare a scoping summary report and will make the report available to the public. The report will be posted on the project Web site ([http://www.blm.gov/wo/st/en/prog/energy/coal\\_and\\_non-energy/details\\_on\\_coal\\_peis.html](http://www.blm.gov/wo/st/en/prog/energy/coal_and_non-energy/details_on_coal_peis.html)), or may be requested from Mitchell Leverette, as provided in the **ADDRESSES** section of this notice.

**Authority:** The BLM will prepare the Programmatic EIS in accordance with, but not limited to, the National Environmental Policy Act, 42 U.S.C. 4321 *et seq.*; the Council on Environmental Quality regulations (CEQ), 40 CFR parts 1500–1508; the U.S. Department of the Interior regulations implementing NEPA, 43 CFR part 46; and the Federal Land Policy and Management Act of 1976 (FLPMA), 43 U.S.C. 1701 *et seq.*

This notice is published in accordance with section 40 CFR 1501.7 of the CEQ regulations and 43 CFR 46.235 of the DOI regulations implementing the NEPA.

**Neil Kornze,**

*Director, Bureau of Land Management,  
Department of the Interior.*

[FR Doc. 2016-07138 Filed 3-29-16; 8:45 am]

**BILLING CODE 4310-84-P**

## DEPARTMENT OF THE INTERIOR

### Bureau of Land Management

[LLWO2200000.L10200000.PK0000.  
00000000; Control No. 1004-0019]

### Renewal of Approved Information Collection

**AGENCY:** Bureau of Land Management, Interior.

**ACTION:** 60-Day notice and request for comments.

**SUMMARY:** In compliance with the Paperwork Reduction Act, the Bureau of Land Management (BLM) invites public comments on, and plans to request approval to continue, the collection of information from individuals, households, farms, and businesses interested in cooperating with the BLM in constructing or maintaining range improvement projects that enhance or

improve livestock grazing management, improve watershed conditions, enhance wildlife habitat, or serve similar purposes. The BLM also invites public comments on this collection of information. The Office of Management and Budget (OMB) has assigned control number 1004-0019 to this information collection.

**DATES:** Please submit comments on the proposed information collection by May 31, 2016.

**ADDRESSES:** Comments may be submitted by mail, fax, or electronic mail.

*Mail:* U.S. Department of the Interior, Bureau of Land Management, 1849 C Street NW., Room 2134LM, Attention: Jean Sonneman, Washington, DC 20240.

*Fax:* to Jean Sonneman at 202-245-0050.

*Electronic mail:* [Jean\\_Sonneman@blm.gov](mailto:Jean_Sonneman@blm.gov).

Please indicate “Attn: 1004-0019” regardless of the form of your comments.

**FOR FURTHER INFORMATION CONTACT:**

Kimberly Hackett, at 202-912-7216. Persons who use a telecommunication device for the deaf may call the Federal Information Relay Service at 1-800-877-8339, to leave a message for Ms. Hackett.

**SUPPLEMENTARY INFORMATION:** OMB regulations at 5 CFR part 1320, which implement provisions of the Paperwork Reduction Act, 44 U.S.C. 3501-3521, require that interested members of the public and affected agencies be given an opportunity to comment on information collection and recordkeeping activities (see 5 CFR 1320.8 (d) and 1320.12(a)). This notice identifies an information collection that the BLM plans to submit to OMB for approval. The Paperwork Reduction Act provides that an agency may not conduct or sponsor a collection of information unless it displays a currently valid OMB control number. Until OMB approves a collection of information, you are not obligated to respond.

The BLM will request a 3-year term of approval for this information collection activity. Comments are invited on: (1) The need for the collection of information for the performance of the functions of the agency; (2) the accuracy of the agency’s burden estimates; (3) ways to enhance the quality, utility and clarity of the information collection; and (4) ways to minimize the information collection burden on respondents, such

as use of automated means of collection of the information. A summary of the public comments will accompany our submission of the information collection requests to OMB.

Before including your address, phone number, email address, or other personal identifying information in your comment, you should be aware that your entire comment—including your personal identifying information—may be made publicly available at any time. While you can ask us in your comment to withhold your personal identifying information from public review, we cannot guarantee that we will be able to do so.

The following information pertains to this request:

*Title:* Grazing Management: Range Improvements Agreements and Permits (43 CFR Subpart 4120).

*OMB Control Number:* 1004-0019.

*Summary:* This request pertains to range improvements on public lands managed by the BLM. Range improvements enhance or improve livestock grazing management, improve watershed conditions, enhance wildlife habitat, or serve similar purposes. At times, the BLM may require holders of grazing permits or grazing leases to install range improvements to meet the terms and conditions of their permits or leases. Operators may also come to the BLM with proposals for range improvements. Often the BLM, operators, and other interested parties work together and jointly contribute to construction of range improvements in order to facilitate improved grazing management or enhance other multiple uses. Cooperators may include lenders which provide the funds that operators contribute for improvements.

*Frequency of Collection:* On occasion.

*Forms:*

- Form 4120-6 (Cooperative Range Improvement Agreement); and
- Form 4120-7 (Range Improvement Permit).

*Description of Respondents:* Holders of BLM grazing permits or grazing leases; affected individuals and households; and affected tribal, state, and county agencies.

*Estimated Annual Responses:* 1,110.

*Estimated Annual Burden Hours:* 1,640.

*Estimated Annual Non-Hour Costs:* None.

The estimated burdens are itemized in the following table:

## **Public Scoping Meeting for the Bureau of Land Management's Programmatic Environmental Impact Statement to Review the Federal Coal Program**

The Bureau of Land Management (BLM) has announced its intent to prepare a Programmatic Environmental Impact Statement (EIS) to examine alternative approaches for reforming the federal coal program. The BLM is seeking public input on the issues and policies that should be outlined in the Programmatic EIS, including topics such as whether Americans are receiving a fair return for federal coal, how market conditions affect coal, how federal coal affects the environment, and how these and other factors impact coal-dependent communities. Public feedback will help inform the size and scope of the review conducted in the Programmatic EIS.

The BLM is hosting six public scoping meetings throughout the country to solicit public input. The meetings will begin with a presentation on the Programmatic EIS process, including an overview of the federal coal program, with the rest of the meeting open for public comment.

Information for the Grand Junction, Colorado meeting is as follows:

***Date:*** Thursday, June 23, 2016

***Location:*** Two Rivers Convention Center's Avalon Theatre, 645 Main Street, Grand Junction, CO 81501; the BLM will also provide an audio link for the meeting at Phone Number: 888-989-5165; Passcode: 1924798.

***Time:*** The meeting will be held from 10 a.m. to 4 p.m. local time. The sign-in process will begin at 8:00 a.m.

***Public Comment:*** The BLM will accommodate those attending the meeting in person who wish to provide public comment on a first-come, first-served basis to the fullest extent possible given the space and time available. The maximum speaking time per speaker will be 3 minutes.

Written comments may be submitted until **July 28, 2016**, using one of the following methods:

Email: [BLM\\_WO\\_Coal\\_Program\\_PEIS\\_Comments@blm.gov](mailto:BLM_WO_Coal_Program_PEIS_Comments@blm.gov)

Mail: Coal Programmatic EIS Scoping  
Bureau of Land Management  
20 M St. SE, Room 2134 LM  
Washington, D.C. 20003

Additional information on the BLM's Federal Coal Program Programmatic EIS can be found at: [http://www.blm.gov/wo/st/en/prog/energy/coal\\_and\\_non-energy/details\\_on\\_coal\\_peis.html](http://www.blm.gov/wo/st/en/prog/energy/coal_and_non-energy/details_on_coal_peis.html).





**Release Date:** 05/16/16  
**Contacts:** Jeff Krauss, 202-912-7410

## BLM Gathering Public Input on Coal Program at Six Public Meetings

### **Public Participation is Next Step in Comprehensive Coal Program Review**

Washington, D.C.—As the next step in the Department of the Interior's comprehensive review of the federal coal program, the Bureau of Land Management (BLM) will solicit public input at six public meetings starting with Casper, Wyo., on May 17.

Meetings in Casper, Wyo., Salt Lake City, Knoxville, Seattle, and Grand Junction, Colo., will be held from 10 a.m. to 4 p.m. local time. The Pittsburgh meeting will be held from 1 to 7 p.m. local time. Specifics for all of the upcoming public scoping meetings can be found below:

#### **May 17, 2016**

Casper Events Center  
1 Events Drive  
Casper, WY 82601  
Doors open for speaker registration at 8:30 a.m.; meeting 10 a.m. to 4 p.m.

#### **May 19, 2016**

Salt Palace Convention Center  
90 South West Temple  
Salt Lake City, UT 84101  
Doors open for speaker registration at 8:00 a.m., meeting 10 a.m. to 4 p.m.

#### **May 26, 2016**

Tennessee Theatre  
604 S. Gay Street  
Knoxville, TN 37902  
Doors open for speaker registration at 8:00 a.m.; meeting 10 a.m. to 4 p.m.

#### **June 21, 2016**

Sheraton Seattle Downtown  
1400 6th Avenue  
Seattle, WA 98101  
Doors open for speaker registration at 8:00 a.m.; meeting 10 a.m. to 4 p.m.

#### **June 23, 2016**

Two Rivers Convention Center Avalon Theatre  
645 Main Street  
Grand Junction, CO 81501  
Doors open for speaker registration at 8:00 a.m.; meeting 10 a.m. to 4 p.m.

**No signs or banners are permitted in the auditorium, and bags and backpacks will be subject to search before entry.**

#### **June 28, 2016\***

Pittsburgh Convention Center  
1000 Fort Duquesne Boulevard  
Pittsburgh, PA 15222  
Doors open for speaker registration at 11:00 a.m.; meeting 1 to 7 p.m.

**No signs or banners are permitted in the auditorium, and bags and backpacks will be subject to search before entry.**

*\*Please note this is a new date; the meeting originally scheduled for June 16, 2016, is now scheduled for June 28, 2016.*

The meetings in Casper, Wyo., Seattle and Pittsburgh will be live-streamed at [www.blm.gov/live](http://www.blm.gov/live); meetings in Salt Lake City, Knoxville, Tenn., and Grand Junction, Colo., will have a toll-free, listen-only audio link available via telephone.

Those who attend the meetings in person and who wish to speak will be asked to sign in. Speakers will be called upon on a first-come, first-served basis determined by sign-in order. Attendees wishing to speak will be accommodated to the fullest extent possible given the time available. The maximum speaking time per speaker is three minutes.

Written comments may be submitted until July 28, 2016, using one of the following methods. Comments received after July 28, 2016\* will be considered by the BLM and included in the scoping report to the extent practicable:

Email: [BLM\\_WO\\_Coal\\_Program\\_PEIS\\_Comments@blm.gov](mailto:BLM_WO_Coal_Program_PEIS_Comments@blm.gov)

Mail: Coal Programmatic EIS Scoping  
Bureau of Land Management  
20 M St. SE, Room 2134 LM  
Washington, D.C. 20003

Additional information on the PEIS can be found [here](#), and additional information on the federal coal program can be found [here](#). The Notice of Intent to prepare a Programmatic EIS can be found [here](#).

The BLM manages more than 245 million acres of public land, the most of any Federal agency. This land, known as the National System of Public Lands, is primarily located in 12 Western states, including Alaska. The BLM also administers 700 million acres of sub-surface mineral estate throughout the nation. The BLM's mission is to sustain the health, diversity, and productivity of America's public lands for the use and enjoyment of present and future generations. In Fiscal Year 2015, the BLM generated \$4.1 billion in receipts from activities occurring on public lands.

--BLM--

1

**SPEAKER CARD**  
**Federal Coal Program Programmatic EIS**  
**Public Scoping Meeting**  
May 26, 2016, Knoxville, Tennessee

Name: \_\_\_\_\_

Organization: \_\_\_\_\_

\*Receipt of a speaker card is not a guarantee of the opportunity to speak at this meeting. Speakers will be accommodated, in order of card number, to the fullest extent possible given the time constraints of this meeting.

2

**SPEAKER CARD**  
**Federal Coal Program Programmatic EIS**  
**Public Scoping Meeting**  
May 26, 2016, Knoxville, Tennessee

Name: \_\_\_\_\_

Organization: \_\_\_\_\_

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3

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**Federal Coal Program Programmatic EIS**  
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May 26, 2016, Knoxville, Tennessee

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4

**SPEAKER CARD**  
**Federal Coal Program Programmatic EIS**  
**Public Scoping Meeting**  
May 26, 2016, Knoxville, Tennessee

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Organization: \_\_\_\_\_

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5

**SPEAKER CARD**  
**Federal Coal Program Programmatic EIS**  
**Public Scoping Meeting**  
May 26, 2016, Knoxville, Tennessee

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Organization: \_\_\_\_\_

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6

**SPEAKER CARD**  
**Federal Coal Program Programmatic EIS**  
**Public Scoping Meeting**  
May 26, 2016, Knoxville, Tennessee

Name: \_\_\_\_\_

Organization: \_\_\_\_\_

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7

**SPEAKER CARD**  
**Federal Coal Program Programmatic EIS**  
**Public Scoping Meeting**  
May 26, 2016, Knoxville, Tennessee

Name: \_\_\_\_\_

Organization: \_\_\_\_\_

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8

**SPEAKER CARD**  
**Federal Coal Program Programmatic EIS**  
**Public Scoping Meeting**  
May 26, 2016, Knoxville, Tennessee

Name: \_\_\_\_\_

Organization: \_\_\_\_\_

\*Receipt of a speaker card is not a guarantee of the opportunity to speak at this meeting. Speakers will be accommodated, in order of card number, to the fullest extent possible given the time constraints of this meeting.

9

**SPEAKER CARD**  
**Federal Coal Program Programmatic EIS**  
**Public Scoping Meeting**  
May 26, 2016, Knoxville, Tennessee

Name: \_\_\_\_\_

Organization: \_\_\_\_\_

\*Receipt of a speaker card is not a guarantee of the opportunity to speak at this meeting. Speakers will be accommodated, in order of card number, to the fullest extent possible given the time constraints of this meeting.



U.S. Department of the Interior  
Bureau of Land Management

# Bureau of Land Management Federal Coal Leasing Program Programmatic Environmental Impact Statement Scoping Meeting





# Federal Coal Regulating Agencies

- **Bureau of Land Management (BLM)**
  - Leasing
  - Production verification
- **Office of Surface Mining, Reclamation & Enforcement**
  - Mine permitting & reclamation (including bonding for reclamation)
- **Office of Natural Resources Revenue**
  - Manages royalty collection and disbursement
- **Mine Safety & Health Administration**
  - Develops and enforces safety and health rules for U.S. mines





## BLM Coal Program Quick Statistics

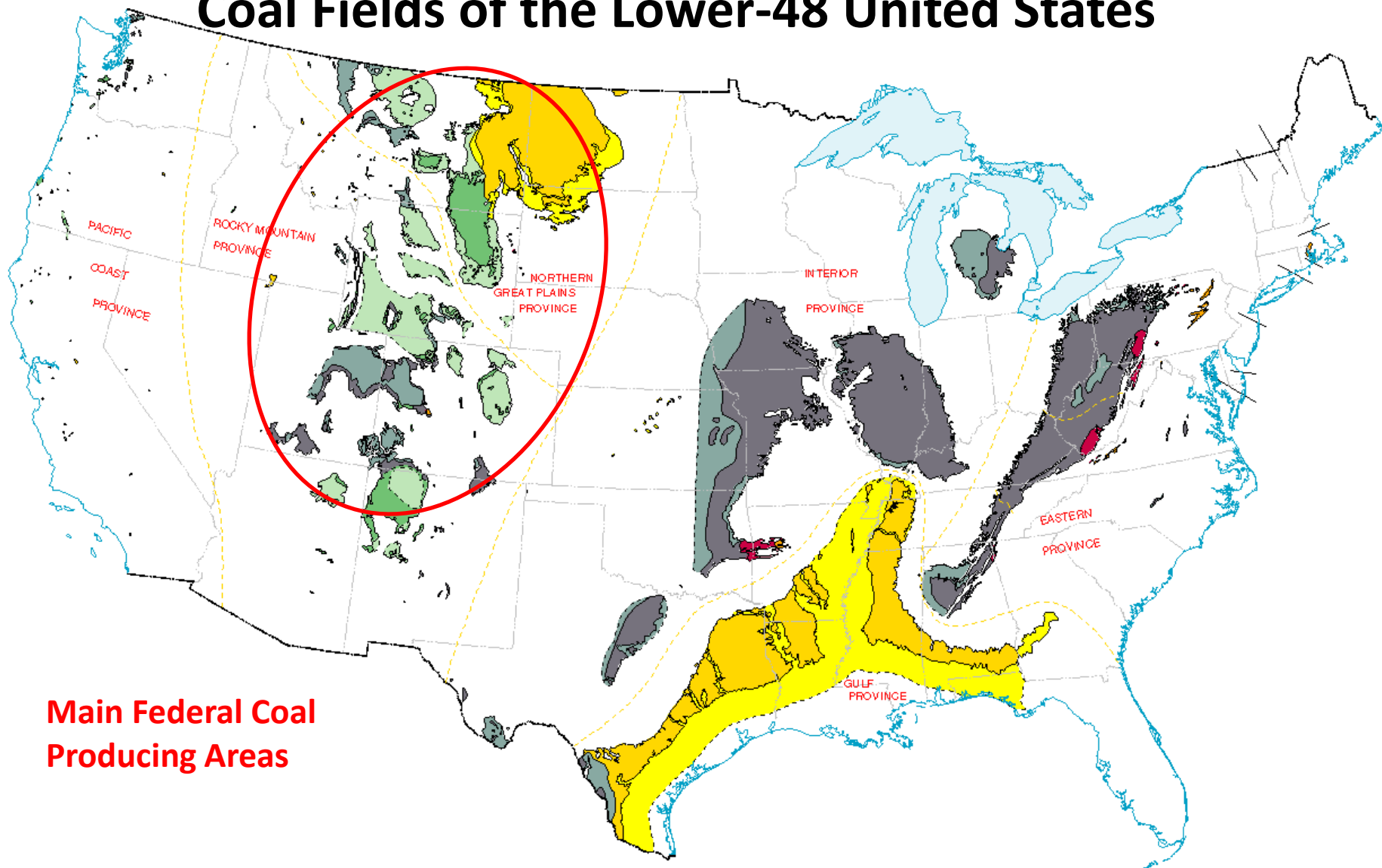
- BLM currently administers **306** coal leases
- **In the last 10 years (2006-2015):**
  - BLM-managed lands produced approximately 4.3 billion tons, worth over \$63.4 billion<sup>1</sup>
  - This production generated \$6.8 billion in royalties and \$3.8 billion in rents, bonuses, and other payments<sup>1</sup>
  - BLM held 32 coal lease sales
- **In 2015:**
  - 33.2% of Nation's electricity produced from coal<sup>2</sup>
  - 43.5% of the coal produced was federal coal; 88% of that was from the Powder River Basin in Wyoming and Montana<sup>1</sup>

<sup>1</sup> Data from Office of Natural Resources Revenue

<sup>2</sup> Data from Energy Information Administration



# Coal Fields of the Lower-48 United States



**Main Federal Coal  
Producing Areas**



## Coal Leasing Pause

- The pause does not apply to existing leases and coal production.
  - There are about 20 years of reserves at current production levels already under lease.
- Pending lease applications with signed decisions can proceed to sale if requested by the operator.
- Pending applications without a decision may proceed with NEPA and Fair Market Value analysis .
- Mines that need reserves to continue operations may apply for emergency leasing consideration.
- New applications received during the pause that do not meet emergency criteria or the other exceptions will be deferred for processing.



# The Programmatic Environmental Impact Statement (PEIS) initiated by Secretarial Order 3338 will consider:

- How, when and where to lease
- Fair return
- Climate impacts
- Other impacts
- Socio-economic considerations
- Exports
- Energy needs
- Other potential modifications







**The full set of issues in the PEIS will be decided through scoping; however, some that will be considered are listed in the Notice of Intent, including:**

## **How, when and where to lease**

- Should scheduled sales be used (e.g., like onshore oil & gas)?
- Should market conditions affect the timing of lease sales, such that sales would occur when coal values are higher rather than during downturns?
- Where and where not should the BLM lease consistent with taking a landscape level view?
- Do the BLM's unsuitability screening criteria adequately address the questions of where and/or where not to lease?





## Fair Return

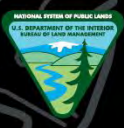
- Are the bonus bids, rents, and royalties received under the Federal coal program successfully securing a fair return to the American public?
- How should each of these components of fair return be calculated?
- Should externalities be considered as part of the fair return calculation? If so, what specifically and how?



## Climate Impacts

- How can we best measure and assess the climate impacts of continued Federal coal production, transportation, and combustion?
- What are the potential substitution effects from any changes in Federal coal production?
- How may BLM best ensure no unnecessary and undue degradation of public lands from climate change impacts?
- How do we mitigate, account for, or otherwise address those impacts?
- How does the Federal coal program relate to the Nation's climate objectives, as well as its energy and security needs?





## Other Impacts

- What are the effects of Federal coal production on water resources, air quality, wildlife, and other land uses such as grazing and recreation?
- Are impacts from mining and combusting Federal coal adequately mitigated?
- Should standard mitigation at the programmatic level be required, in addition to on a project-by-project basis?

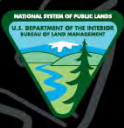




## Socio-economic Considerations

- Does the current program adequately account for externalities related to Federal coal production, including environmental and social impacts?
- How does the administration, availability, and pricing of Federal coal affect State, regional, and national economies (including job impacts), and energy markets in general?
- What is the impact of possible program alternatives on the projected fuel mix and cost of electricity?

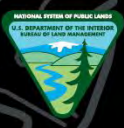




## Exports

- Whether and, if so, how should, leasing decisions consider actual and/or projected exports of domestic coal from any given tract?
- What potential mechanisms could be used to appropriately evaluate export potential?





## Energy Needs

- How does Federal coal support fulfilling the energy needs of the United States?
- How does the administration, availability, and pricing of Federal coal impact electricity generation in the United States, particularly in light of other regulatory influences?
- What other sources of energy supply (including efficiency) are projected to be available?



**We look forward to your comments on these and other important issues related to the Federal coal program**



**Q&A**  
**Department of the Interior Federal Coal Reforms**

**OVERALL**

**What actions are being taken today?**

U.S. Secretary of the Interior Sally Jewell announced several actions to strengthen and improve the federal coal program that is managed on behalf of all Americans. There are three main components that the Interior Department is announcing:

- 1) A formal, comprehensive review of the federal coal program that will identify and evaluate potential reforms;
- 2) A pause on new coal leasing on public lands while the review is underway; and
- 3) A series of good government reforms to improve transparency and program administration, including establishing a public database to account for the carbon emissions from fossil fuels on public lands.

**Why are you taking these actions?**

The federal government has a responsibility to all Americans to ensure that the coal resources it manages are administered in a responsible way to help meet our energy needs and that taxpayers receive a fair return for the sale of these public resources. And yet, over the past few years, it has become clear that many of the decades-old regulations and procedures that govern the federal coal program are outdated and do not fully reflect the realities of today's economy or current understanding of environmental and public health impacts from coal production.

In March 2015, Secretary of the Interior Sally Jewell called for an “open and honest conversation about modernizing the federal coal program,” and she launched a series of listening sessions across the country to hear from the public on complex questions, including: Are taxpayers and local communities getting a fair return from these resources? How can we make coal leasing more transparent and more competitive? How do we manage the program in a way that is consistent with our climate change objectives?

As a direct result of these public listening sessions – as well as concerns raised by the Government Accountability Office, the Interior Department's Inspector General, and Members of Congress – Secretary Jewell is taking the next step in the conversation by launching a formal, comprehensive review of the federal coal program. While the review is underway, consistent with practices during previous programmatic reviews of the federal coal program, Secretary Jewell has ordered a pause on significant new coal leasing decisions on public lands so that those decisions and leases can incorporate lessons learned from the comprehensive review to ensure that taxpayers receive a fair return for the sale of these public resources.

**How did the public help shape this path forward?**

Over the summer of 2015, the Interior Department hosted five listening sessions across the country (Washington, D.C.; Billings, Montana; Gillette, Wyoming; Denver, Colorado; and Farmington, New Mexico). Over the course of the public comment period, the Interior

Department heard from hundreds of individuals and received over 90,000 written comments that represented a wide variety of views. The Interior Department carefully reviewed the public feedback before crafting a path forward.

### **What concerns have the GAO, IG and Members of Congress raised?**

In June 2013, the Interior Department's Office of Inspector General issued a report ([\*Coal Management Program, U.S. Department of the Interior\*](#)) that found weaknesses in the sale process and deficiencies in inspection and enforcement. In December 2013, the Government Accountability Office issued a [report](#) that found the Bureau of Land Management (BLM) could improve its coal leasing program by enhancing the appraisal process, more explicitly considering coal exports, and providing more public information. Over the years, Members of Congress have raised a variety of concerns with the program, including the environmental impacts, and the lack of competitiveness, transparency, and accounting for full costs of carbon.

### **Has the Interior Department undertaken any steps to address these concerns?**

Yes, several. In January 2015, Interior's Office of Natural Resources Revenue published a proposed rule governing the valuation of federal oil and gas, and federal and American Indian coal resources. The proposed rule would modernize existing valuation regulations, which were put in place for natural gas and coal in the late 1980s, and ensure that the valuation process better reflects the changing energy industry while protecting taxpayers and American Indian assets. A final rule will be issued in 2016.

In December 2014, the BLM announced a series of actions aimed at addressing criticisms that its process to determine fair market value at the leasing stage is insufficient and fails to adequately account for higher prices received overseas. The BLM revised its manual and handbooks for the coal program to increase clarity regarding how the agency determines fair market value, provide guidance on independent review of appraisal reports, and make improvements that will enable the BLM to account for export potential through analysis of comparable sales and income. The BLM has also released safety, inspection and enforcement guidance to promote more responsible development of coal resources on the nation's public lands, regarding: improved documentation for coal operation inspections on coal exploration licenses, licenses to mine, leases, and logical mining units; and increased Mineral Mine Inspector training and certification requirements.

In addition, Interior's Office of Surface Mining Reclamation and Enforcement has proposed the Stream Protection Rule, under the Surface Mining Control and Reclamation Act (SMCRA), which would modernize 30-year old rules to better protect communities from the adverse effects of coal mining, and provide greater certainty to the mining industry about what constitutes harm to certain water bodies during mining activities.

## **COMPREHENSIVE REVIEW OF COAL PROGRAM**

### **What is a PEIS?**

A Programmatic Environmental Impact Statement (PEIS) is a formal, comprehensive review, with opportunity for extensive public engagement which evaluates the effects of broad proposals or program-level decisions. In this case, the Interior Department will use the PEIS process to

help identify and evaluate potential reforms to the federal coal program. The PEIS process will be completed consistent with the National Environmental Policy Act. The process is being undertaken as a discretionary action.

### **What will the PEIS evaluate?**

The review will take a careful look at issues related to the BLM's administration of the federal coal program, including:

- The appropriate leasing mechanisms for how, when and where to lease;
- How to account for the environmental and public health impacts of the federal coal program; and
- How to ensure the sale of these public resources results in a fair return to the American taxpayers, including whether current royalty rates should be adjusted.

The review will also explore whether U.S. coal exports should factor into leasing or other program decisions; how the management, availability and pricing of federal coal impacts domestic and foreign markets and energy portfolios; and the role of federal coal in fulfilling the energy needs of the United States.

### **What are the next steps?**

The review will include extensive opportunities for public participation. The PEIS will kick off with public meetings in early 2016 to help determine the precise scope of the review. The Interior Department will release an interim report by the end of 2016 with conclusions from the scoping process about alternatives that will be evaluated and, as appropriate, any initial analytical results. The scoping period will help inform the development of a draft PEIS, which the BLM will issue for public review and comment. Informed by comments on the draft PEIS, the BLM will then issue a Final PEIS. Changes to the coal leasing program may be implemented through a Record of Decision or separate processes.

### **How can I get involved?**

Members of the public and stakeholders are encouraged to participate at all stages of the process, including in the public scoping meetings in 2016. There will also be multiple opportunities to submit written comments throughout the process.

### **How long will the PEIS take?**

A PEIS typically takes several years to complete, providing adequate time for public comment and review at each stage of the process. It is expected that the review will take approximately three years to complete.

### **Have programmatic reviews of the federal coal program been done before?**

Yes – although a programmatic review of the coal program has not been completed in more than 30 years. In 1983 and 1984, Congress established a commission to investigate fair market value policies for coal leasing and required a study of whether the coal leasing program was compatible with national environmental protection goals. The Interior Department followed these reports with a supplemental PEIS on the federal coal program, completed in 1986.

Previously, in 1973, President Nixon's Interior Department launched a PEIS in response to serious concerns about speculation in the coal leasing program, which was completed in 1979. Both programmatic reviews were accompanied by similar pauses in new coal leasing decisions.

## **PAUSE ON NEW COAL LEASING**

### **Why is the Secretary instituting a pause on new coal leasing?**

Given the serious concerns raised about the federal coal program and the large reserves of undeveloped coal already under lease to coal companies, it would not be responsible to continue to issue new leases under outdated rules and processes. While the review is underway, and consistent with the practice during two previous programmatic reviews, the Interior Department is instituting a pause on new coal leasing on public lands so that those leasing decisions can benefit from the recommendations that come out of the review.

### **What does the pause cover? Will there be exceptions?**

During the pause, the BLM will not hold lease sales or process new lease applications for surface and underground coal. Importantly, the pause does not apply to existing leases and coal production activities.

There will be limited, commonsense exemptions to the pause for small lease modifications (160 acres or less), coal lease exchanges, certain preference right lease interests, and emergency leasing as defined by the BLM's current regulations, such as mines where there is a demonstrated safety need or insufficient reserves. Preparatory work on already-pending applications may continue, including NEPA analysis, but the BLM will not make final decisions on new leases, absent an applicable exemption. Pending leases that have already completed NEPA analysis and received a final Record of Decision or Decision Order by a federal agency under the existing regulations will be allowed to complete the final procedural steps to secure a lease or lease modification, including those that are undergoing re-evaluation after having been vacated by judicial decision. The pause does not apply to metallurgical coal (used in steel production), renewals of existing leases, or other BLM, Office of Surface Mining, or Office of Natural Resources Revenue actions related to the federal coal program, such as mine plan approvals. The pause does not apply to coal leases on tribal or allotted lands.

### **What is an "emergency" that would allow leasing under the exceptions?**

The coal leasing regulations at 43 CFR 3425.1-4 allow for an emergency lease sale where the coal is needed within 3 years to maintain production, or where the coal would be bypassed if not leased.

More specifically, the regulations outline two situations in which emergency leasing is allowed. In the first situation, the Federal coal is needed within 3 years either to maintain the mine at its current average annual production levels, or to supply coal for contracts signed prior to July 19, 1979. In the second situation, if the coal deposits are not leased, they would be bypassed in the reasonably foreseeable future, and at least some of the tract applied for would be used within 3 years.

In both cases, the applicant for emergency leasing must also show that the need for the coal

resulted from circumstances that were either beyond the control of the applicant or could not have been reasonably foreseen and planned for in time to allow for the normal leasing process. Leases issued under the emergency provision are limited to 8 years of recoverable reserves at the mine's current rate of production.

### **Will the pause impact current coal production?**

The Interior Department does not anticipate that the pause will significantly alter current production. Under the pause, companies may continue to mine the large reserves of undeveloped coal already under lease.

Based on current production levels, coal companies now have approximately 20 years of recoverable coal reserves under lease on federal lands. This estimate may be conservative as Energy Information Administration analyses and other market trends show continuing declines in demand for coal. Many current lease applications with the BLM are on hold at the companies' request due to reductions in market demand for coal.

Given the abundance of coal reserves under lease, the declining demand for coal, and the accommodations that will be made for emergency circumstances, the pause should have no material impact on the nation's ability to meet its power generation needs.

### **Is there precedent for such actions?**

Yes. In 1973, President Nixon's Interior Secretary Morton suspended coal leasing – including a complete moratorium on the issuance of new prospecting permits, and a prohibition on the issuance of new federal coal leases except in very limited circumstances. The moratorium was lifted in 1981, after a PEIS had been completed, a new leasing system had been adopted, and litigation resolved. In 1984, as part of the 1984 Appropriations Bill, Congress imposed a moratorium on the sale of coal lease tracts starting in 1983 and ending 90 days after publication of the Linowes Commission's report. The Congressional moratorium was set to expire in May 1984, but President Reagan's Interior Secretary Clark continued the moratorium, which continued the suspension of all coal leasing (except for emergency leasing, lease modifications and processing preference right lease applications) while Interior completed its comprehensive review of the program. The leasing moratorium was lifted in 1987.

### **Does the pause impact existing leases? Coal on tribal lands? Forest Service lands? State or private lands?**

The pause does not apply to production on existing leases. The pause only applies to the Federal mineral estate administered by the BLM (regardless of whether the BLM also controls the surface estate), and it does not apply to coal leases on Tribal or allotted lands, which are administered under a different regulatory system. The pause only applies to lease sales and modifications; it does not apply to other BLM actions related to the Federal coal program, including the processing and issuance of coal exploration licenses, the issuance of renewal leases when required by the terms of existing leases, and the development and implementation of resource management plans. Similarly, the pause does not apply to actions undertaken by ONRR, OSMRE, or any other agency, office, or bureau with duties related to the development, production, or reclamation of Federal coal resources. Preparatory work on already-pending

applications may continue, including NEPA analysis, but the BLM will not make final decisions on leases until the review is completed, absent an applicable exemption.

**How long will the pause last?**

The Secretarial Order calls for the limitations on the issuance of federal coal leases to be applied until the completion of the PEIS. A PEIS typically takes several years to complete, providing adequate time for public comment and review at each stage of the process. It is expected that the review will take approximately three years to complete.

**What impact will this pause have on the coal economy? Will this raise electricity rates?**

Given the abundance of coal reserves under lease, the declining demand for coal, and the accommodations that will be made for emergency circumstances, the pause should have no material impact on the nation's ability to meet its power generation needs and is not expected to impact electricity production or prices.

**What authority does the Secretary have to take this action?**

The Secretary has authority under the Mineral Leasing Act, the Mineral Leasing Act for Acquired Lands, and the Federal Land Policy and Management Act to manage federal coal leasing. She has the authority under National Environmental Policy Act to utilize the PEIS process as part of a programmatic review of the federal coal program.

**IMPROVING TRANSPARENCY and MEASURING CARBON EMISSIONS ON PUBLIC LANDS**

**Why are you establishing a database on carbon emissions?**

This year the Interior Department's U.S. Geological Survey will complete a national inventory of carbon that is sequestered (stored) in the lands of the United States. Currently, however, there is no dedicated, official measure of the harmful greenhouse gas emissions from coal, oil and gas produced on public lands. An analysis from a non-governmental organization suggests that the emissions from these activities on public lands could amount to 28 percent of the nation's annual total energy-related fossil fuel emissions.

In order to better understand and manage carbon stocks on public lands, the USGS will establish a baseline and public database that accounts for carbon emitted from fossil fuels produced on public lands. Improved, timely and transparent accounting by one of the world's premier Earth science agencies will provide critical information for the public and federal land managers as we work to reduce carbon pollution from fossil fuel activities.

**What will be measured?**

The USGS will assess for the carbon stored and sequestered on public lands, and the quantities of greenhouse gases emitted from activities on public lands, including potential downstream emissions from fossil fuels.

The publicly available database will include:

- Baseline carbon stocks and sequestration rates;

- Other baseline data products such as habitats, ecosystems, soil conditions, protected status, land use and change, to facilitate analysis of environmental impacts and management policy options;
- Annually updated major land use and land cover change areas (e.g. wildfire, loss of wetlands, new acquisitions) and associated carbon emissions and uptakes;
- Annually updated net ecosystem carbon flux (i.e. sink or source);
- Annual estimates of greenhouse gas emissions resulting from energy development activities;
- Annual quantities of oil and gas extractions from federally managed lands; and
- Potential downstream greenhouse gas emissions associated with oil and gas extraction on federally managed lands.

**Who will be involved in the initiative?**

The USGS will be the lead agency in developing the database. The database would link to existing data from other government sources, such as the Environmental Protection Agency and the Energy Information Administration.

The accounting methodology will rely on ongoing USGS research and completion of the LCMAP (land change monitoring, assessment, and projection) project, which is expected to provide annual updates of land use/land cover change by 2018. It is also dependent on the development and operational use of the LUCAS (land use and carbon scenario simulator) model to track annual carbon fluxes as a result of land use change.

**What are the next steps?**

The USGS will first complete its pilot studies of carbon emissions and sequestration on federal lands and other requisite inputs to the LUCAS model. The database of carbon emissions and storage on federal lands would be established in 2018.

**Why is the BLM issuing guidance that requires State and field offices to post online each pending request to lease coal or to reduce royalties? When will this go into effect?**

Although much of this information is already available online, stakeholders have raised concerns that there is no formal guidance on the matter and not all BLM State and field offices currently post notice of these types of requests in a consistent manner or in real time. The BLM is committed to transparency and providing the public access to the information they need to understand how we are managing public resources, consistent with protections for confidential business information. Updating our guidance to ensure uniform, clear and consistent procedures for posting notice of all coal leasing and royalty rate reduction requests online is simply good government. We anticipate issuing guidance on this matter in the near term.

**Why is the BLM conditioning any exchange or sale of federal coal to another owner on the requirement that the new owner obtain surface owner consent to leasing? When will this go into effect?**

One of the concerns raised by stakeholders and Members of Congress during the listening sessions was about the potential effect of federal coal exchanges or sales on surface owners.

Owners of surface lands above federal coal deposits must consent to leasing of the federal minerals before the BLM will approve the lease sale. This ensures that a rancher, for example, doesn't unwillingly lose all use of their land for 10 or 20 years during a mining operation and before the land is reclaimed. However, when the federal coal is transferred to another owner through an exchange or sale, currently, the surface owner consent to leasing is no longer required. The BLM recognizes the impact of these situations on surface owners and will issue guidance directing that in situations where the BLM has the discretion to make the sale or exchange, the BLM will condition any such sale or exchange on the new owner obtaining surface owner consent prior to development of the coal. The BLM is working to develop this guidance and expects to issue it in the near term.

**Why is the BLM directing new and readjusted leases to authorize the coal lessee to capture and sell methane, provided it does not conflict with pre-existing oil and gas lease interests? When will this go into effect?**

At underground coal mining operations, the natural gas that is commonly present must be removed from the mine for miner safety. Natural gas is largely comprised of methane, a greenhouse gas at least 25 times more potent than carbon dioxide. Traditionally, mine operators have released the gas into the atmosphere, adding methane emissions that drive climate change. Some coal mine operators would like to capture the natural gas for use or sale, but do not have authorization in their coal leases to capture the otherwise vented waste mine methane for use or sale.

The BLM intends to address this problem by issuing guidance that would ensure that, in situations where the oil and gas has not already been leased or is owned by another party, the operator of the coal mine would be authorized to capture the natural gas instead of venting it, and use or sell it. The guidance would provide that, for new coal leases and at the time of lease readjustments, the standard lease language would include a provision allowing the coal lessee to capture and use or sell that waste mine methane that would otherwise be vented from the coal mine, as long as such gas had not already been leased or is owned by another party. In addition, the BLM would add this language to existing coal leases with the agreement of the coal lessee. The language would not require the coal lessee to capture the gas, but would allow it. The BLM is working to develop this guidance and expects to issue it in the near term.

**ADDITIONAL BACKGROUND**

**What is the BLM's role in the federal coal program?**

The BLM has responsibility for coal leasing on approximately 570 million acres where the coal mineral estate is owned by the federal government. The surface estate of these lands could be controlled by the BLM, the United States Forest Service, private land owners, state land owners, or other Federal agencies. The BLM works to ensure that the development of coal resources is done in an environmentally sound manner and is in the best interests of the nation.

**What laws govern the federal coal program?**

The Mineral Leasing Act of 1920, as amended, and the Mineral Leasing Act for Acquired Lands of 1947, as amended, give the Secretary responsibility for managing coal leasing on



approximately 570 million acres of the 700 million acres of mineral estate that is owned by the Federal Government, where coal development is permissible. The Secretary has delegated her authority for this responsibility to the BLM.

### **How does the BLM determine where to lease?**

Public lands are available for coal leasing only after the lands have been evaluated through the BLM's multiple-use planning process. Leasing federal coal resources is prohibited on public lands, such as military reservations, National Parks, or National Wildlife Refuges. In areas where development of coal resources may conflict with the protection and management of other resources or public land uses, the BLM may identify mitigating measures which may appear on leases as either stipulations to uses or restrictions on operations.

There is a rigorous land use planning process through which all public lands are reviewed for potential coal leasing. Requirements for the land use plan include multiple use, sustained yield, protection of critical environmental areas, application of specific unsuitability criteria, and coordination with other government agencies.

### **How does the leasing process work?**

There are two distinct procedures for competitive coal leasing: (1) regional leasing, where the BLM selects tracts within a region for competitive sale, and (2) leasing by application, where the public nominates a particular tract of coal for competitive sale.

Regional coal leasing requires the BLM to select potential coal leasing tracts based on multiple land use planning, expected coal demand, and potential environmental and economic impacts. This process requires close consultation with local governments and citizens through a Federal/state advisory board known as a Regional Coal Team. However, for decades the demand for new coal leasing has been associated with the extension of existing mining operation on authorized federal coal leases, so all current leasing is done by application.

Leasing by application begins with BLM review of an application to lease a coal tract to ensure completeness, that it conforms to existing land use plans, and that it contains sufficient geologic data to determine the fair market value of the coal. The Agency then prepares an environmental analysis in compliance with NEPA. At the same time, the BLM will also consult with tribal governments and appropriate Federal and state agencies, and will determine whether the surface owner consents to leasing in situations where the surface is not administered by the BLM.

Preparations for the actual lease sale begin with the BLM formulating an estimate of the "fair market value" of the coal. This number is kept confidential and is only used to evaluate the bids received during the sale.

Sealed bids are accepted prior to the date of the sale and are publicly announced during the sale. The winning bid will be the highest bid that meets or exceeds the coal tract's presale estimated fair market value, assuming that all eligibility requirements are met and the appropriate fees and payments are attached (at a minimum, this amounts to the first year's annual rental payment and one-fifth of the amount bid).

### **How are revenues generated through leasing coal?**

The BLM receives revenues on coal leasing at three points: a bonus paid at the time BLM issues the lease; an annual rental payment of \$3.00 per acre or fraction thereof; and royalties paid on the value of the coal after it has been mined.

The royalty rate for federal coal is currently set at the minimum level allowed by statute, 12.5% of the gross value of the coal produced. The 12.5% royalty rate applies to coal severed by surface mining methods. For coal mined by underground methods, the statute provides that the Secretary may establish a lesser royalty rate. By regulation, the BLM requires an 8% royalty for coal removed from an underground mine. The federal government and the state where the coal was mined share the revenues equally.

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# Appendix C

List of Commenters

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# APPENDIX C

## LIST OF COMMENTERS

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The formal public comment period as required by NEPA began on March 30, 2016, with the publication of a Notice of Intent in the Federal Register (Vol. 81, No. 61, page 17720, March 30, 2016), and comments were accepted until September 15, 2016. **Table C-1**, Commenters, lists the commenters who submitted comments to the BLM in writing as part of the public scoping process or provided oral comments at scoping meetings. All comments received on or before September 15, 2016, are included in this scoping report. In addition to unique submissions, organizations submitted form letters. In total, the BLM received 213,748 form letter submissions from 19 form letter campaigns; details of the form letter submissions are shown in **Table C-2**.

**Table C-1**  
**Commenters**

	<b>Commenter Name</b>	<b>Affiliation</b>
		<b>Elected Official</b>
1.	Ray Beck	City of Craig
2.	Kelsey Berg	Congressman Jason Chaffetz
3.	Rosie Berger	Wyoming House of Representatives
4.	Joel Briscoe	Utah House of Representatives
5.	James Byrd	Wyoming House District 44
6.	Cantwell	US Senate
7.	Louise Carter-King	Gillete, WY
8.	Dow Constantine	King County
9.	Stan Cooper	Wyoming State Senate
10.	Kerry Donovan	Colorado State Senate
11.	Odgen Driskill	Wyoming Senate District I
12.	Roy Edwards	House of Representatives
13.	Joe Fitzgibbon	House of Representatives
14.	Doug Kary	State of Montana
15.	Dan Kirkbride	Wyoming State House
16.	Bill Landen	Wyoming State Senate

**Table C-1  
Commenters**

	<b>Commenter Name</b>	<b>Affiliation</b>
17.	Strom Peterson	21st District
18.	Keith Ross	House of Representatives
19.	Lee Slade	48 Democratic House Members
20.	Chris Stewart	Utah's Second Congressional District
21.	Michael Von Flatern	Wyoming State Senate
<b>Federal Government</b>		
22.	John Barrasso	United States Senate
23.	Steve Daines	United States Senate
24.	Bill Dardon	United States Congress
25.	Michelle Jenkins	United States Congress
26.	Cynthia Lummis	United States Congress
27.	Mike Penfold	BLM
28.	Jessica Trice	U.S. Environmental Protection Agency
<b>Individuals</b>		
29.	Maris Abelson	
30.	Jim Abshire	
31.	Cari Adamek	
32.	John Adamson	
33.	Donna Albert	
34.	Kathryn Albury	
35.	Pam Alexander	
36.	Ryan Alexander	
37.	Jeff Allen	
38.	Paul Allen	
39.	Laurie Almoslino	
40.	Susan Andersen	
41.	Nicole Andersen	
42.	Rick Anderson	
43.	T Anderson	
44.	Barbara Anderson	
45.	Joe Andrade	
46.	Cindy Angerhoffer	
47.	Barbara Archer	
48.	Monica Ariowitsch	
49.	Jeremiah Armstrong	
50.	Jeremiah Armstrong	
51.	Patrick Arrington	
52.	Steve Arveschoug	
53.	Elias Attea	
54.	Garrett Atwood	
55.	Roxann Backer	
56.	Carl Baer	
57.	Rainerr Bah	
58.	Mary Baine Campbell	
59.	Alicia Baker	

**Table C-1  
Commenters**

	<b>Commenter Name</b>	<b>Affiliation</b>
60.	Connie Ball	
61.	Scott Banbury	
62.	Bruce Bandorick	
63.	Eric Bard	
64.	Wendy Barteaux	
65.	Chris Bateman	
66.	Patricia Baumann	
67.	Laura Baumgartner	
68.	Bill Bear	
69.	Bill Bear	
70.	Mark Benett	
71.	Barbara Bengtsson	
72.	Benjamin	
73.	Bennett	
74.	Donna Berg	
75.	Emery Bernath	
76.	John Betka	
77.	John Beyers	
78.	Erin Bicknese	
79.	Neal Biggart	
80.	Becky Bird	
81.	Merna Blagg	
82.	David Blair	
83.	Laura Blake	
84.	Teri Blanton	
85.	Beth Blattenberger	
86.	Randy Bick	
87.	Maureen Bo	
88.	Nathan Boddie	
89.	Ayja Bounous	
90.	Sheila Bowers	
91.	Joan Bowers	
92.	Marilyn Boyd	
93.	David Bradford	
94.	Charles Brexel	
95.	Mike Briggs	
96.	Bob Brister	
97.	Hugh Broadus	
98.	Nelson Brooke	
99.	Ray Brooks	
100.	Jack Brooks	
101.	Scott Brooks	
102.	Sally Brown	
103.	Kathy Brown	
104.	Elizabeth Brown	

**Table C-1  
Commenters**

	<b>Commenter Name</b>	<b>Affiliation</b>
105.	Debbie Bruse	
106.	Craig Bryan	
107.	Bobbie Bryant-Salvato	
108.	Bobbi Bryant-Salvato	
109.	Kimberly and Rick Buck	
110.	Dan Bucks	
111.	Rick Buell	
112.	Darby Bundy	
113.	Mark Bunnell	
114.	Ethan Burger	
115.	Corinne Burger	
116.	Sandy Burk	
117.	Bruce Burnham	
118.	Laura Burns	
119.	Brad Burritt	
120.	Jan Burton	
121.	James Robert Burton	
122.	Michelle Butler	
123.	Ruth Byrne	
124.	Kelli Cady	
125.	Cory Camasta	
126.	Cate Campbell	
127.	Joel Carlson	
128.	Windy Carlson	
129.	J Carlson	
130.	Lee Carlton	
131.	Dan Carpita	
132.	Jared Carson	
133.	Lance Carter	
134.	Jeff Carver	
135.	Doug Cast	
136.	A Dean Caulfield	
137.	Steven Cave	
138.	Chris Cawley	
139.	Richard Chafee	
140.	Steve Charter	
141.	Rick Chermak	
142.	Brian Cherni	
143.	Carole Chower	
144.	Wyatt Christensen	
145.	Sophia Cinnamon	
146.	Sophia Cinnamon	
147.	Michael Clark	
148.	Jim Clark	
149.	Marcia Clausing	



**Table C-1  
Commenters**

	<b>Commenter Name</b>	<b>Affiliation</b>
150.	Mary Clawsey	
151.	Beth Clay	
152.	Scott Clem	
153.	Brad Cofield	
154.	Jim Collins	
155.	Angel Collinson	
156.	Dave Colton	
157.	Katie Cooper	
158.	R. Coppager	
159.	Robert Coppin	
160.	John Corkran	
161.	Peter Cornelison	
162.	Cheri Cornell	
163.	Lauri Costello	
164.	Annie Jane Cotten	
165.	Rhonda Cowden	
166.	Vince Cowen	
167.	Lecia Craft	
168.	Russ Cranen	
169.	Gerrit Crouse	
170.	John Crystal	
171.	Rich Csenge	
172.	Patricia Culver	
173.	Tim Cummins	
174.	Rob Daggett	
175.	Eric Dalton	
176.	Ken Damon	
177.	David A. Dannenberger	
178.	Carol Dansereau	
179.	Mike Dash	
180.	James Davidheiser	
181.	Jonis Davis	
182.	Mike Davis	
183.	Glen Davis	
184.	Elizabeth Dawson	
185.	Steve Degenfelder	
186.	Ashley Dennehy	
187.	Lea DERENCE	
188.	Beth DeRoog	
189.	Juliane Devlin	
190.	Jordan DeWitt	
191.	Ward DeWitt	
192.	Kelly Dimmick	
193.	Phil Dinsmoor	
194.	G Doddings	

**Table C-1  
Commenters**

	<b>Commenter Name</b>	<b>Affiliation</b>
195.	Pat Doherty	
196.	Rosemary Donaghue	
197.	Charlie Donnes	
198.	Michelle Doyon	
199.	Wilrose Drake	
200.	George Dunlap	
201.	Lois Dunn	
202.	Jean C. Durning	
203.	Bill Dvorak	
204.	Kevin Dwyer	
205.	Jack Dyer	
206.	Tayler Earl	
207.	Taylor Earl	
208.	Michelle Edwards	
209.	Lynden V. Emerson	
210.	Mike and Lorna Emineth	
211.	Michael Enk	
212.	Keith Ervin	
213.	Cynthia H. Ervin	
214.	Wayne Estey	
215.	Raymond Estrada	
216.	Art Etter	
217.	Dorcas Evans Miller	
218.	Jo Everdean	
219.	David Fagin	
220.	Clark Fairbanks	
221.	David Fall	
222.	Mike Fidel	
223.	Marjorie Fields	
224.	Troy Fillmore	
225.	Susan Finbal	
226.	Mary Fitzpatrick	
227.	Terry Fonville	
228.	Forsgren	
229.	Michael Foster	
230.	Wendy Fox	
231.	Anna Fraser	
232.	Maggie Frazier	
233.	Adrian Frazier	
234.	Kevin Frazier	
235.	Pat Freiberg	
236.	Stephen Fribley	
237.	Bonnie Frye Hemphill	
238.	Lynn Fusan	
239.	Deirdre Gabbay	

**Table C-1  
Commenters**

	<b>Commenter Name</b>	<b>Affiliation</b>
240.	John Gage	
241.	Ty Gardiner	
242.	Robert Garlick	
243.	Howie Garver	
244.	Lydia Garvey	
245.	Maddy Gawler	
246.	Paul Gellert	
247.	Gery Gerst	
248.	Sheryl Getman	
249.	Greg Gianforte	
250.	Frans Giddings	
251.	Gilgen	
252.	Mike Gillian	
253.	Darren Ginn	
254.	Caroline Gleich	
255.	Carol Glenn	
256.	Bob Goffena	
257.	Denise Goins	
258.	Albert Good	
259.	RD Goode	
260.	Sarah Goran	
261.	Thomas Gordon	
262.	Diane Gordon	
263.	Paula Gordon	
264.	Tom Gordon	
265.	Shannon Gordon	
266.	Diana L. Gordon	
267.	Louise Gorenflo	
268.	Sandra Goss	
269.	Kathryn Grady	
270.	Margaret Graham	
271.	Lou Grako	
272.	Jordan Grange	
273.	Jordan Grange	
274.	Brent Grassman	
275.	Royal Graves	
276.	Ben Graves	
277.	Lew Gray	
278.	Eric Greene	
279.	Nancy Griffin	
280.	Caleb Griffith	
281.	Jon Grout	
282.	Linda Grove	
283.	Walt Gulick	
284.	Yulia Gurevich	

**Table C-1  
Commenters**

	<b>Commenter Name</b>	<b>Affiliation</b>
285.	Larry Gussin	
286.	Brie Gyncild	
287.	Steve Hall	
288.	Gary Hallemeier	
289.	Bourtai Hargrove	
290.	Rose Haroian	
291.	Mark Harris	
292.	Patricia Harris	
293.	John Hartman	
294.	Michele Haslam	
295.	Cody Haslam	
296.	Steven Hatch	
297.	Ronald Hawk	
298.	Libby Hazen	
299.	Mary Headrick	
300.	Cierra Headswift	
301.	Hayden Heaphy	
302.	William Heaps	
303.	Ben Heaps	
304.	Corey Heaps	
305.	Soulin Heath	
306.	Kathy Heffernan	
307.	David Heiblim	
308.	Luke Helden	
309.	Gary Helming	
310.	Winifred Helper	
311.	Matthew Helper	
312.	Richard Henighan	
313.	Mark Hennon	
314.	Winifred Hepler	
315.	Cal Hertoghe	
316.	Debra HigbeeSudyka	
317.	Jess Highu	
318.	Alan Hilden	
319.	Robert Hill	
320.	Reine Hilton	
321.	Rebecca Himsl	
322.	Jeb Himsl	
323.	Stephen Hinkemeyer	
324.	Jeri Hodgkin	
325.	Janice Hoem	
326.	Harold Hoem	
327.	Steve Hogseth	
328.	(Unknown) Holappa	
329.	Patricia Holm	

**Table C-1  
Commenters**

	<b>Commenter Name</b>	<b>Affiliation</b>
330.	Bruce Holme	
331.	Stanley Holmes	
332.	Allen Holubec	
333.	Mark Homer	
334.	Kevin Hooley	
335.	Carolyn Hooper	
336.	Christopher Horwitz	
337.	Judy Hoy	
338.	Ben Hughey	
339.	Kathleen Hume	
340.	Rhonda Hunter	
341.	Ryan Hutt	
342.	Roe Hyche	
343.	Joe Hyche	
344.	Kenneth Hyche	
345.	Alison Hyder	
346.	Donald Hyndman	
347.	David Inouye	
348.	David louye	
349.	Algore Isnutz	
350.	William Isom	
351.	Kathryn Iverson	
352.	SueAnn Jacobson	
353.	Dan Jaffe	
354.	Amanda Jahshan	
355.	Willo Jarocki	
356.	Gene Jarstad	
357.	Cynthia Jatul	
358.	Kindra Jazwick	
359.	Levi Jensen	
360.	Paul Jensen	
361.	Alan Johnson	
362.	Craig Johnson	
363.	Kristine Johnson	
364.	Sandra Jones	
365.	Monte Jones	
366.	Eugene Jones	
367.	Darryl Jozwik	
368.	Brandon Jubol	
369.	Carol Judy	
370.	Brandon Juhl	
371.	John Justman	
372.	Gary Kalpakoff	
373.	Slyvie Karslda	
374.	Krissy Kasserma	

**Table C-1  
Commenters**

<b>Commenter Name</b>	<b>Affiliation</b>
375.	Joshua Keagle
376.	Jim Keane
377.	Patricia Keeshan
378.	Amy Kelly
379.	John F. Kennedy
380.	Mary Kennedy
381.	Daniel Kennedy
382.	Eric Kettenring
383.	David Kidd
384.	Claudia Kienholz
385.	Keith Kimball
386.	Bill King
387.	Matt King
388.	Warren King
389.	Erik Kingfisher
390.	Dwight Kinnes
391.	Claudia Kirckpatrick
392.	Dolores Kirk
393.	Bodhi Kivalenko
394.	David Kline
395.	Chris Klunker
396.	Simon Knaphus
397.	Terry Kneblík
398.	Randall Knowles
399.	Gary Kochanski
400.	Elias Kocos
401.	Bernard Kohler
402.	Jon Kohn
403.	Wendell Koontz
404.	Ashley Korenblat
405.	Fred Kraybill
406.	Kalee Kreider
407.	Larry Krizan
408.	Kirsten Krueger
409.	Arthur Kukowski
410.	Sandra Kurtz
411.	Jack Laakso
412.	Larry Lambeth
413.	Ian Lane
414.	Ted Lapis
415.	Mary LaPorte
416.	Denise Claire Laverty
417.	Miki Laws
418.	Elise Lazar
419.	Gary Leaming

**Table C-1  
Commenters**

	<b>Commenter Name</b>	<b>Affiliation</b>
420.	Thea LeDonne	
421.	Ben Leers	
422.	Lawson LeGate	
423.	Jodie Leidecker	
424.	Margaret Lekse	
425.	Bob LeResche	
426.	Carol Levanger	
427.	Gene C. Liddell	
428.	Brenda Lindlief Hal	
429.	Elizabeth Lindren	
430.	Cynthia Linet	
431.	Robert Lippincott	
432.	Christopher Lish	
433.	Elke Littleleaf	
434.	Thor Loftsgaard	
435.	Roger Lohrer	
436.	Briana Long	
437.	Jim Long	
438.	Al Lowande	
439.	Wendy Lowe	
440.	Forrest Luke	
441.	Steve Lund	
442.	Shilo Lundvall	
443.	Karl Lybrand	
444.	K. Lynch	
445.	Hamilton MacGregor	
446.	Jill MacIntyre	
447.	Vivian MacKay	
448.	Shayleen Macy	
449.	Kim Maddox	
450.	Thomas Mader	
451.	Travis Madsen	
452.	Bogdana Manole	
453.	j marthaller	
454.	Robin Martin	
455.	Dustin Martinson	
456.	Rod Mathis	
457.	Ray Mathis	
458.	Barry Matney	
459.	Gary Maxwell	
460.	Kenneth May	
461.	Marilyn Mayers	
462.	Roy McAnally	
463.	William McBride	
464.	Leslie McClure	

**Table C-1  
Commenters**

<b>Commenter Name</b>	<b>Affiliation</b>
465.	Kurt McFarlane
466.	Mary McGann
467.	Eugenie (Oogie) McGuire
468.	Melinda McIlwaine
469.	Tom McIntosh
470.	Frankie McIntosh
471.	Don McKay
472.	Erin McKelvy
473.	Michael McLaughlin
474.	Kim Meacham
475.	Scott Mead
476.	Laura Merrill
477.	Jill Merritt
478.	Robert Meyer
479.	Clough Michael
480.	Bonnie Miller
481.	Anne Miller
482.	Jacqueline Miller
483.	Casey Miller
484.	Bob Milligot
485.	Stacey Moeller
486.	Dianna Moesh
487.	Omar Molinar
488.	Oliver and Donna Moore
489.	Patrick Morales
490.	Bobbie Morgan
491.	Bobby Morgan
492.	Tess Morgan
493.	Eileen Morris
494.	A.R. Morris
495.	R. Noah Morris
496.	Jason Mosher
497.	Barbara Mott
498.	Larry Moyer
499.	Nick Mullins
500.	Joseph Mungai
501.	David Murnion
502.	Jeremy Murphy
503.	Brian Murphy
504.	Ethan Murray
505.	Kathryn Myers
506.	Bill Myers
507.	John Nagle
508.	Sue Navy
509.	Dan Neal



**Table C-1  
Commenters**

	<b>Commenter Name</b>	<b>Affiliation</b>
510.	Leroy Neil	
511.	Gerald C. Nelson	
512.	Laura Nelson	
513.	Jerry Nettleton	
514.	Jerry Nettleton	
515.	Kevin Newell	
516.	Newman	
517.	KGH Nicholes	
518.	Nicholas Nielsen	
519.	Mara Nielson Ellison	
520.	Sharman Niemi	
521.	Sharon Nolting	
522.	Weston Norris	
523.	Chris Nutgrass	
524.	Talia O'Brian	
525.	Amy O'Connor	
526.	Jim O'Connor	
527.	Jennifer O'Donnell	
528.	Todd O'Hair	
529.	Michael O'Leary	
530.	Court Olson	
531.	Jerry O'Malley	
532.	James Opfer	
533.	Julius Ostby	
534.	Ramona Owen	
535.	Paul Paad	
536.	Brian Paddock	
537.	Julia Page	
538.	Juan Palma	
539.	Kristina Pappas	
540.	Diane Pasta	
541.	Susan M. Patton	
542.	Don Pauack	
543.	Todd Paulsen	
544.	Steven Payne	
545.	Mary Paynter	
546.	Tom Peeso	
547.	Helen Pent Jenkins	
548.	Pamela Perrott	
549.	Sue Petersen	
550.	Robert Petersen	
551.	Robert Peterson	
552.	Trent Peterson	
553.	Ben Pfeiffer	
554.	Ellen Pfister	

**Table C-1  
Commenters**

	<b>Commenter Name</b>	<b>Affiliation</b>
555.	Thomas Phillips	
556.	Tom Phillips	
557.	Kasie Pickens	
558.	Jerry Pierce	
559.	Suzanne Pierson	
560.	Tyler Pirruccio	
561.	Janette Plunkett	
562.	Paul Pope	
563.	Aaron Porter	
564.	Charlie Post	
565.	Charlie Post	
566.	John Poulos	
567.	Leigh Power	
568.	Jack Pratt	
569.	Jack Preston	
570.	John Prinkki	
571.	Craig J. Provost	
572.	Craig Provost	
573.	Dale Provost	
574.	Renate Puich	
575.	Shawna Punteney	
576.	Laura Quattrochi	
577.	Kendra Quick	
578.	Alby Quinlan	
579.	William Quinn	
580.	Nancy Rabener	
581.	Rachel Rakovan	
582.	Jim Ramey	
583.	Rex Rammell	
584.	David Ramsay	
585.	Timothy Randolph	
586.	Mary Ranii	
587.	Sundipta Rao	
588.	Dan and Shirley Rasmussen	
589.	Nathan Ratledge	
590.	Tarence Ray	
591.	Jazmine Raymond	
592.	Toniann Reading	
593.	Randal Reagan	
594.	Paul Reagor	
595.	Richard Reavey	
596.	Eric Reckle	
597.	Bob Rees	
598.	David Regan	
599.	Maddie Rehn	

**Table C-1  
Commenters**

	<b>Commenter Name</b>	<b>Affiliation</b>
600.	Katie Reilly	
601.	Peter Reum	
602.	Charles Rial	
603.	Janis Rich	
604.	Brenda Rich	
605.	Amanda Richard	
606.	Randy Richardson	
607.	Axel Ringe	
608.	Michael Riordan	
609.	Ray Risho	
610.	Douglas J. Roberts	
611.	Kim Robinson	
612.	Joelle Robinson	
613.	David Robison	
614.	George and Barbara Rofkar	
615.	Andrea Rolando	
616.	Dan Roling	
617.	Colleen Rose	
618.	Alexa Ross	
619.	Ericka Rossi	
620.	Chuck Rourke	
621.	Brett Rowley	
622.	Steve Rubenstein	
623.	Jeremy Rubingh	
624.	Ruby	
625.	Penny Russell	
626.	Holly Russell	
627.	Dave Russell	
628.	Jennifer Sager	
629.	Carol Sanders	
630.	Mike Sauber	
631.	David Saulsbury	
632.	John Savlove	
633.	Bill Schilling	
634.	Alan Schimpff	
635.	Carma Schlegel	
636.	Malgorzata Schmidt	
637.	Phil Schmidt	
638.	Debra Schneider	
639.	Joanna Schoettler	
640.	Molly Schwend	
641.	David Schwend	
642.	Kenneth Scissors	
643.	Robert Scott	
644.	Cindi Schwartz	

**Table C-1  
Commenters**

<b>Commenter Name</b>	<b>Affiliation</b>
645. Jeff Sego	
646. Jake Seiter	
647. John Sellers	
648. Diane Selvaggio	
649. Toni Semple	
650. Sue Sexton	
651. C. Thomas Shaefer	
652. Wyatt Shakespear	
653. Margaret Sharp	
654. Lori Shaw	
655. Eddie Shaw	
656. Charles Sheffield	
657. Jim Shelton	
658. Deejah Sherman-Peterson	
659. Edward Shiloh	
660. Nancy Shimeall	
661. Charlie Shinkle	
662. Michael Shurgot	
663. Sharon Sigrist	
664. Anna Silver	
665. Patricia Simmons	
666. David Simonson	
667. Kimberly Sims	
668. Cameron Sizemore	
669. Yana Slabakov	
670. Tyson Slocum	
671. David Smaldone	
672. Thomas Smith	
673. Musulcha Smith	
674. Janice Smith	
675. Douglas Smith	
676. Jacob Smith	
677. Casey Smith	
678. Joe Smyth	
679. Joe Smyth	
680. Mark Solie	
681. Harris Sondak	
682. Mike Spalding	
683. Jim Spehar	
684. Gretchen Spiess	
685. Storey Squires	
686. Sharon St. Joan	
687. John Stafford	
688. Joe Stein	
689. Jim Steitz	

**Table C-1  
Commenters**

	<b>Commenter Name</b>	<b>Affiliation</b>
690.	Suzanne Stensaas	
691.	Wayne Stevens	
692.	Dan Stewart	
693.	Mary Stewart	
694.	Mandy Still	
695.	Amanda Still	
696.	Jeff Stookey	
697.	Bob Strayer	
698.	Don Sullivan	
699.	Delson Suppali	
700.	Kenneth Sussors	
701.	C. David Swanson	
702.	Spencer Swapp	
703.	Pat Sweeney	
704.	Mary Sweet	
705.	Rocky Swingle	
706.	Nicole Synadinos	
707.	Carla Takacs	
708.	Liz Tally	
709.	Clint Tanner	
710.	Kurt Tatten	
711.	Bruce Taylor	
712.	Joshua Taylor	
713.	Vicky Terry	
714.	Joan Thacher	
715.	Barry Thacker	
716.	Lisa Thalken	
717.	Marc Thomas	
718.	Ann Thomas	
719.	Sandy Thomas	
720.	bret thompson	
721.	Kurtis Thompson	
722.	Suzanne Thrailkill	
723.	Dick Thweatt	
724.	Jason Timbreza	
725.	Jerry Tobe	
726.	David Todd	
727.	Virgil Tollefson	
728.	Patrice Tomcik	
729.	Christian Torp	
730.	Thomas E. Towe	
731.	Karina Toy	
732.	Michael Trainor	
733.	Matt Trebella	
734.	Theresa Trebon	

**Table C-1  
Commenters**

	<b>Commenter Name</b>	<b>Affiliation</b>
735.	Sheryl Tregellas	
736.	Joe Triolo	
737.	Geoffrey Trowbridge	
738.	Angela Tschacher	
739.	Klaas Tuininga	
740.	Tom Tully	
741.	Jack Turner	
742.	Debra Turnquist	
743.	Neal Umphred	
744.	Jim Van Sickle	
745.	Jordan Van Voast	
746.	Matthew Vencill	
747.	Ryan Veuzke	
748.	Sandra Voelker	
749.	Denver Wafkers	
750.	Audrey Wagner	
751.	Lisa Wallace	
752.	John Wallace	
753.	Philip Walling	
754.	Jim Walls	
755.	Elizabeth Walsh	
756.	Marlis Walter	
757.	Justin Wasser	
758.	Jeff Wasserburger	
759.	John Todd Waterman	
760.	Brian Watterson	
761.	Howard Watts	
762.	Corey Weathers	
763.	Robert Henry Weaver	
764.	Janet Weaver	
765.	David Weber	
766.	Sharon Weidner	
767.	Karin de Weille	
768.	Scott Weir	
769.	Randall Weisenmayer	
770.	John Weisheit	
771.	Isa Werny	
772.	Ray Wheeler	
773.	David Wheeler	
774.	Betty Whiting	
775.	Judy Whitmore	
776.	Don Whyde	
777.	Patricia Whyde	
778.	Kim Wilbert	
779.	Tomas Wilde	

**Table C-1  
Commenters**

	<b>Commenter Name</b>	<b>Affiliation</b>
780.	Kayla and Bruce Willett	
781.	Kayla Willett	
782.	John Williams	
783.	Tom Williams	
784.	Donna Williams	
785.	Imogene Williams	
786.	Keith Williams	
787.	Clark Williams-Derry	
788.	Alec Williamson	
789.	Kirt Williamson	
790.	John Williams	
791.	Raymond Willims	
792.	Peggy Willis	
793.	Bea Wilson	
794.	William Wilson	
795.	Ryan Wilson	
796.	Greg Wingard	
797.	Kristin Winn	
798.	Tio Winter	
799.	Dirk Wise	
800.	Marilyn Wolff	
801.	Linda Wolff-Bowen	
802.	William Woodcock	
803.	Jennifer Woodcock-Medicine Horse	
804.	Deborah Woolley	
805.	Ken Wrich	
806.	Ralph Wynn	
807.	John Young	
808.	Barbara Zepeda	
809.	Jacqueline Ziegler	
810.	Bob Ziegler	
811.	Paul Zuekerman	
812.	Richard Zufelt	
813.	Michael Zuteck	
814.	Donna Zwigart	
	<b>Local Government</b>	
815.	Scott Bartholomew	Sanpete County
816.	Jane Berry	Town of Paonia
817.	Paul Blackburn	City of Hood River
818.	Bennett Boeschenstein	City of Grand Junction
819.	Nicole Borner	Musselshell County
820.	Keith Brady	Emery County Commissioner
821.	Dean Brookie	City of Durango
822.	Arlene Burns	City of Mosier
823.	Louise Carter King	City of Gillette

**Table C-1  
Commenters**

	<b>Commenter Name</b>	<b>Affiliation</b>
824.	Joan Cathey	City of Tumwater
825.	Bob Champion	City of Mukilteo
826.	Steve Child	Pitkin County
827.	Patti Clapper	Pitkin County
828.	Kristen Cole	Mesa County Colorado, Board of County Commissioners
829.	Katelin Cook	Rio Blanco County
830.	Christine Cook	City of Mukilteo
831.	Jim Cooper	City of Olympia
832.	Dino Davis	City of Bremerton
833.	Jim Deutsch	North Dakota Public Service Commission
834.	Adam Frisch	City of Aspen
835.	Mark Gamba	City of Milwaukee
836.	Richarderce Garber	Sheridan County Chamber of Comm
837.	Dan Gibbs	Summit County
838.	Art Goodtimes	San Miguel County
839.	Chuck Grobe	Moffat County
840.	Lisa Hatch	County Commissioners of Rio Blanco County
841.	Nigel Herbig	City of Kenmore
842.	Casey Hopes	Carbon County
843.	Wally Johnson	Sweetwater County
844.	Rob Johnson	City of Seattle
845.	Kent	Coalition of Local Governments
846.	John Kolb	Sweetwater County
847.	Mark Kot	Sweetwater County Board of Commissioners
848.	Robbie LeValley	Delta County
849.	Michael Lilliquist	City of Bellingham
850.	Liz Lovelett	City of Anacortes
851.	Diana Madson	Mountain Pact
852.	Roland Mason	Town of Crested Butte
853.	Gary Mason	Sevier County
854.	V.H. McDonald	City of Casper
855.	Leo McKinney	City of Glenwood Springs
856.	Paul Merck	Crested Butte Town Council
857.	Laura Mitchell	Crested Butte Town Council
858.	Doug Monger	Routt County
859.	Ann Mullins	City of Aspen
860.	George Newman	Pitkin County
861.	Garth Ogden	Sevier County
862.	Michael Owsley	Pitkin County
863.	Corinne Platt	City of Ophir
864.	Jay Potter	County Commissioner
865.	Rachel Richards	Pitkin County
866.	Chris Roberts	City of Shoreline
867.	Mark Roeber	Delta County



**Table C-1  
Commenters**

	<b>Commenter Name</b>	<b>Affiliation</b>
868.	Wayne Roth	City of Bainbridge Island
869.	Auden Schlendler	City of Basalt
870.	Jim Schmidt	Crested Butte Town Council
871.	Mickey Shober	Campbell County Commissioner
872.	Robert Short	Converse County
873.	Steve Skadron	City of Aspen
874.	Charles Stewart	Mayor of Paonia
875.	Karn Stiegelmeier	Summit County
876.	Gordan Topham	Sevier County
877.	Don Van Matre	Sweetwater County
878.	Erika Vohman	Crested Butte Town Council
879.	Randal Wendling	Sweetwater County
880.	Dick White	City of Durango
	<b>Organization</b>	
881.	Bill Adams	Saltwater Unitarian Church
882.	Jillian Adams	Climate Reality Project
883.	Shantha Alonso	Creation Justice Ministries
884.	Shannon Anderson	Powder River Basin Resource Council
885.	Lee Anderson	BlueGreen Alliance
886.	Chuck Aurand	Creation Justice Ministries
887.	Jeff Baierlein	Conservation Northwest
888.	Michelle Balleck	Craig/Moffat Economic Development Partnership
889.	Sue Ballenski	350 Colorado Board of Directors
890.	Rashad Barber	Got Green
891.	Cathy Barker	Creation Justice Ministries
892.	Clare Bastable	National Wildlife Federation
893.	Sarah Bates	National Wildlife Federation
894.	Larry Bean	Northern Plains Resource Council
895.	Lindsay Beebe	Utah Sierra Club
896.	Brett Befus	University of Wyoming Foundation
897.	Jason Begger	Wyoming Infrastructure Authority
898.	Susan Beng	Northern Plains Resource Council
899.	LeeAnne Beres	Earth Ministry/Washington Interfaith Power & Light
900.	Diana Best	Greenpeace
901.	Jonathan Betz-Zall	University Friends Meeting
902.	Jill Bierwirth	Creation Justice Ministries
903.	Tamme Bishop	JE Stoer & Associates
904.	John Bohrer	Lignite Energy Council
905.	Leland Bond-Upson	Unitarian Universalist Church of Vancouver
906.	John Bradley	Montana Wildlife Federation
907.	Katie Breen	State of Colorado Organizations
908.	Katie Breen	The Wilderness Society
909.	Ted Brooks	St. Augustine's in the Woods Episcopal Church
910.	Mary Brown	United Methodist

**Table C-1  
Commenters**

	<b>Commenter Name</b>	<b>Affiliation</b>
911.	Sharon Buccino	Natural Resources Defense Council
912.	Sandy Buchanan	Institute for Energy Economics and Financial Analysis
913.	Michael Burger	Sabine Center for Climate Change Law
914.	Kaitlin Butler	Science and Environmental Health Network
915.	Anne Butterfield	Clean Energy Action
916.	Deborah Campbell	350 Seattle.org
917.	Grant Carlisle	Environmental Entrepreneurs
918.	Amy Carter	Creation Justice Ministries
919.	Robyn Cascase	Great Old Boards for Wilderness
920.	Tim Christopher	WildEarth Guardians
921.	Joanne Clavel	Sister of St. Francis
922.	Britten Cleveland	Green Peace
923.	Mark Compton	Utah Mining Association
924.	Marilyn Cornwell	Earth Ministry
925.	Chris Covert-Bowlds	St. Patrick Catholic Church
926.	Gregory Cowan	Wyoming County Commissioners Association
927.	Nada Culver	The Wilderness Society
928.	Jessie Dafoe	Wyoming Agriculture in the Classroom
929.	Luke Danielson	Sustainable Development Strategies Group
930.	Joel Darmstadter	Resources for the Future
931.	Barbara Davenport	Unitarian Church
932.	Mike Denton	Pacific Northwest Conference of the United Church of Christ
933.	Diane Deseck Piazzon	UU Church of Whidbey Isle
934.	Kristi Disney Bruckner	Sustainable Business Development Strategies
935.	Beth Doglio	Climate Solutions
936.	Jessie Dye	Earth Ministry
937.	Pam Eaton	The Wilderness Society
938.	Ross Eisenburg	National Association of Manufacturers
939.	Mike Eisenfeld	San Juan Citizens Alliance
940.	Aimee Erickson	Citizens Coal Council
941.	Crystal Estrada	Celilo Vilalge
942.	Richenda Fairhurst	Camas United Methodist Church
943.	Geoffrey Fettus	Natural Resources Defense Council
944.	Lynn Fitzhugh	350Seattle.org
945.	Jayni Foley Hein	Institute for Policy Integrity
946.	Laura Folkwein	Creation Justice Ministries
947.	Anna Marie Frazier	Dine Citizens Against Ruining our Environment
948.	Kate French	Northern Plains Resource Council
949.	Rhondalei Gabuat	Gabriela Seattle
950.	Richard Gamble	Keystone United Church of Christ
951.	Howie Garber	Utah Physicians for a Healthy Environment (UPHE)
952.	Christy Gerrits	Powder River Basin Resource Council

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Commenters**

	<b>Commenter Name</b>	<b>Affiliation</b>
953.	Kim Glas	BlueGreen Alliance
954.	KC Golden	Climate Solutions
955.	Joanne Golden Hill	Kentuckians for the Commonwealth
956.	Seth Goldstein	Temple Beth Hatfiloh
957.	Beth Goodnough	Western Fields Association and Western Fields Wyoming, Inc.
958.	Chris Gorzalski	Great Old Broads for Wilderness
959.	Gail Greener	Creation Justice Ministries
960.	Patrick Grenter	Center for Coalfield Justice
961.	Ben Greuel	Wilderness Society
962.	Stephen Grumm	Earth Ministry/WAIPL Board Member
963.	Brian Gunn	Climate Reality Project
964.	Mark Haggerty	Headwaters Economics
965.	Holly Hallman	Earth Ministry
966.	Tyler Hamman	Lignite Energy Council
967.	Tonya Hammond	J.E. Stover & Associates
968.	Autumn Hanna	Tax Payers for Common Sense
969.	Jenny Harbine	Earthjustice
970.	Gina Hardin	350 Colorado Board of Directors
971.	Linda Haydock	Intercommunity Peace & Justice Center
972.	Anne Hedges	Montana Environmental Information Center
973.	Hegdahl	Vet Voice Foundation
974.	Tracy Heilman	Creation Justice Ministries
975.	Jayni Hein	Institute for Policy Integrity
976.	John Helmiere	Valley and Mountain United Methodist Church
977.	Doug Henderson	350 Colorado Board of Directors
978.	Mitchell Hescox	Evangelica Environmental Network
979.	Amy Elizabeth Hessel	Lutheran Church of the Good Shepard
980.	Bruce Hoeft	Conservation Committee of Tahoma Audubon
981.	Emily Hornback	Western Colorado Congress
982.	Adam Hughes	Statewide Organizing for Community Empowerment
983.	Debaura James	Securing Economic and Energy Democracy of Southwest New Mexico
984.	Arun Jhaveri	Climate Reality Group
985.	Judy Jinat	Wild Earth First Guardians
986.	Alex Johnson	Western Slope Conservation Center
987.	Matt Johnson	Northwest Animal Rights Network
988.	Alex Johnson	Western Slope Conservation Center
989.	Beth Kaeding	Nothern Plains Resource Council
990.	Eric Kaminetzky	Edmonds Unitarian Universalist Congregation
991.	Duane Keown	Powder River Basin Resource Council
992.	Cecilia Kingman	Edmonds Unitarian Universalist Congregation
993.	Rob Kirby	Creation Justice Ministries
994.	Jane Kirchner	National Wildlife Federation

**Table C-1  
Commenters**

	<b>Commenter Name</b>	<b>Affiliation</b>
995.	Elke L. Kirk	Littlelead Guides
996.	Alysia Kirk	Littleleaf Guides
997.	Katie Klosterman	Browns Point United Methodist Church
998.	James Kotcon	Sierra Club
999.	Joan Kresich	Yellowstone Bend Citizens Council
1000.	Emily Krieger	Washington Environmental Council
1001.	Alan Krupnick	Center for Energy and Climate Economics Resources for the Future
1002.	Mary Ellen Kustin	Center for American Progress
1003.	Jill Lancelot	Taxpayers for Common Sense Making Government Work
1004.	Rich Lang	United Methodist Church
1005.	Bob Laresche	Powder River Basin Resource Council
1006.	Kimberley Larson	Climate Solutions
1007.	Todd Leahy	New Mexico Wildlife Federation
1008.	Todd Leahy	New Mexico Wildlife Federation
1009.	Rebecca Lefton	Climate Advisors
1010.	Doug Lempke	Tri-State Generation and Transmission Association
1011.	Jonathan Levenshus	Sierra Club
1012.	Neil Lindorff	Creation Justice Ministries
1013.	Alice Lockhart	Seattle 350, Seattle Rising Tide
1014.	Roger Lynn	Creation Justice Ministries
1015.	Jim Lyon	Naitonal Wildlife Federation
1016.	Jim Lyon	National Wildlife Federation Action Fund
1017.	Cory MacNulty	National Parks Conservation Association
1018.	Kelly Mader	Energy Policy Network
1019.	Diana Madison	Mountain Pact
1020.	Jim Magagna	Wyoming Stock Growers Association
1021.	Nathaniel Mahlberg	First Congressional United Church of Christ
1022.	Katie Malzbender	Climate Reality Project
1023.	Joshua Mantell	The Wilderness Society
1024.	Ty Markham	Mormon Environmental Stewardship Alliance
1025.	Miguela Marzoff	Washington Environmental Council
1026.	Mascall	Raging Grannies
1027.	Jannah McGrath	Washington Environmental Council
1028.	Taylor McKinnon	Center for Biological Diversity
1029.	Katrina McLaughlin	Resources for the Future
1030.	William McPherson	UnitarianUniversalist Voices for Justice
1031.	Julie Mihalisin	The New Health Club
1032.	Barbara Miner	Creation Justice Ministries
1033.	Paul Mitchell	Vashon United Methodist Church
1034.	Ron Moe-Lobeda	University Lutheran Church
1035.	Malin Moench	Utah Physicians for a Healthy Environment
1036.	Betsy Monseu	American Coal Council

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Commenters**

<b>Commenter Name</b>	<b>Affiliation</b>
1037. Doug Mork	Interfairh worker Justice
1038. Khari Mosley	Blue Green Alliance
1039. David Munson	Creation Justice Ministries
1040. Mariel Nanasi	New Energy Economy
1041. Lincoln Nehring	Voices for Utah Children
1042. Jenny Nell	Salvation Army
1043. Jonathan Neufeld	Seattle Mennonite Church
1044. Jerermy Nichols	Wild Earth Guardians
1045. Jeremy Nichols	Wild Earth Guardians
1046. Pete Nichols	Waterkeeper Alliance
1047. Debbie Notkin	KnowWho Services
1048. Donna Obermiller	Sierra Club
1049. Mike O'Brien	Sierra Club
1050. Linda Olinger	Citizens Climate Lobby
1051. Karen Ortiz	Western Slope Conservation Center
1052. Ian Pajer-Rogers	Interfaith Worker Justice
1053. Marcia Patton	Evergreen Association of American Baptist Churches
1054. Aaron Paul	Grand Canyon Trust
1055. Susan Permut	Climate Reality Project
1056. Ed Perry	NWF
1057. Bonnie Petersen	Associated Governments of Northwest Colorado
1058. James G. Petersen	Creation Justice Ministries
1059. Hunt Priest	Emmanual Episcopal Church, Earth Ministry/WAIPL Board Member
1060. Casey Quinn	Powder River Basin Resource Council
1061. Ken Rait	The Pew Charitable Trusts
1062. Megan Ramer	Seattle Mennonite Church
1063. Peggy Rawlins	CCA and UCC
1064. Christian Reece	CLUB 20
1065. Matt Reed	High County Conservation Advocates
1066. Matt Reed	High Country Conservation Advocates
1067. Mason Rhoads	Veterans for Peace
1068. Nathan Richardson	University of South Carolina
1069. Roger Ridgeway	United Church of Christ
1070. Wendy Ring	Climate911
1071. Nancy Roberts	Audubon Society
1072. Brian Ronremoeller	Sierra Club, Ohio Chapter
1073. John Rosenberg	Earth Ministry/WAIPL Board Member
1074. Catherine Ross	Public Lands Solution
1075. Heather Ross	Children's Advocacy Project
1076. Katie Ross	Public Land Solutions
1077. Barbara Rossing	Lutheran School of Theology at Chicago
1078. David Rowell	Outdoor Gear

**Table C-1  
Commenters**

<b>Commenter Name</b>	<b>Affiliation</b>
1079. Pamela Rucki	Court Appointed Special Advocates
1080. Rick Samyn	St. Leo Catholic Church
1081. Stuart Sanderson	Colorado Mining Association
1082. Tom Sanzillo	Institute for Energy Economics and Financial Analysis
1083. Marnie Satterfield	Industrial Energy Consumers of America (IECA)
1084. Michael Saul	Center for Biological Diversity
1085. Jim Scheff	Kentucky Heartwood
1086. Erik Schlenker-Goodrich	Western Environmental Law Center
1087. Larry Seltweiger	Penn Future
1088. Jo Ann Showalter	Sisters of Providence
1089. Benjamin Sibelman	Sierra Club
1090. Shelley Silbert	Great Old Broads for Wilderness
1091. Lorali Simon	Alaska Coal Association
1092. Soren Simonsen	Mormon Environmental Stewardship Alliance (MESA)
1093. Karen Sjoberg	Citizens for Clean Air
1094. Jason Smalls	Boilermakers Local 11
1095. Robert Smith	Boys and Girls Club of Campbell County
1096. Rachel Smith	Safe Energy Leadership Alliance
1097. Dan Smitherman	The Wilderness Society
1098. Sharon Sneddon	Edmonds Citizens Against Coal and Oil Trains
1099. W. Thomas Soeldner	Earth Ministry/WAIPB Board Member
1100. Richard Spicer	St. Hubert Catholic Church
1101. Bianca Spoci-Belknap	Earth Care
1102. Marc Stewart	Montana-Northern Wyoming United Church of Christ
1103. Marian Stewart	Northlake Unitarian Universalist
1104. Grace Stiller	Nature's Stewards
1105. Sarah Sullivan	Earth Ministry
1106. Frank Szollosi	National Wildlife Federation
1107. Mark Szybist	national resources defense council
1108. Anne Mariah Tapp	Grand Canyon Trust
1109. Bob Thaden	Creation Justice Ministries
1110. Julie Tran	Washington Environmental Council
1111. James Tyson	Colorado Wildlife Federation
1112. Rein Van West	Western Colorado Congress
1113. Richard Vogel	Sierra Club
1114. Glover Wagner	Creation Justice Ministries
1115. Barbara A. Walz	Tri-State Generation and Transmission Association, Inc.
1116. Barbara Webber	Health Action New Mexico
1117. David Weiskopf	NextGen Climate America
1118. Zari Weiss	Kol HaNeshamah
1119. Brian Wenig	Cloud Peak Energy

**Table C-1  
Commenters**

<b>Commenter Name</b>	<b>Affiliation</b>
I 120. Jessica Wentz	Sabin Center for Climate Change Law, Columbia Law School
I 121. Willard Westre	Sierra Club
I 122. Andy Wilson Broadus	Creation Justice Ministries
I 123. Shay Wolf	Center for Biological Diversity
I 124. Joan Woodward	Colorado Congress and Citizens for Clean Air
I 125. Bob Zadow	Creation Justice Ministries
I 126. Madeleine	Greenpeace
<b>Private Industry</b>	
I 127. David Adair	Bowie Resources
I 128. Pat Akers	Norwest Corporation
I 129. Jim Atchison	SEMT Economic Development
I 130. Anoy Ballow	Sufco
I 131. Donna Barker	Decker Coal Company
I 132. Satoshi Bautista	Sufco Mine
I 133. Rose Becker	Cloud Peak Energy
I 134. Randy Black	Bowie Resources
I 135. Randy Block	Bowie Resources
I 136. Brad Brown	Cloud Peak Energy Resources, LLC
I 137. Bob Burnham	Burnham Coal, LLC
I 138. Phil Christopherson	Energy Capital Economic Development
I 139. Bruce Coggeshall	Cloud Peak Energy
I 140. Gene DiClaudio	Bowie Resource Partners, LLC
I 141. Jeffrey C Dubbert	Blue Mountain Energy
I 142. P.C. Emrich	Cloud Peak Energy Inc.
I 143. Jeff Erickson	Bowie Resources
I 144. Christopher Friez	North American Coal Corporation
I 145. Steve Garey	United Steelworkers
I 146. Jed Gordon	Skyline Mine
I 147. Rose Hanser	Colstrip United
I 148. David Hibbs	Utah American Energy
I 149. Chris Horwitz	Electrogrip
I 150. Rick Houskeeper	Dugout Mine
I 151. Jason Jochems	Rocky Mountain Air
I 152. Gabriel Johnson	Cloud Peak Energy
I 153. Larry Johnson	Alton Coal Development
I 154. Michael Kelley	Bowie Hunter Prep Plant
I 155. William King	Dugout Canyon Mine
I 156. Arnold Kirstatter	Bowie Resources
I 157. Tamara Kraft	Duff Norton Air Jack
I 158. Colin Marshall	Cloud Peak Energy
I 159. Troy Mettler	Cloud Peak Energy
I 160. Joe Micheletti	Westmoreland Coal Company
I 161. Jim Miller	West Elk Mine
I 162. Landon Monholland	Over the Edge Sports

**Table C-1  
Commenters**

<b>Commenter Name</b>	<b>Affiliation</b>
1163. Chris Muhr	Outdoor Recreation Coalition
1164. Sabrina Neiman	West Energy Company
1165. Matt O'Laughlin	K2 Sports
1166. Joeg Peterson	Bowie Resources
1167. Stuart Sanderson	Colorado Mining Association
1168. Brenda Schladweiler	BTS Environmental Associates
1169. Brian Sinsel	Bowie Resources
1170. Anthony Skinner	Skyline Mine
1171. Dave Stewart	Vulcan Inc.
1172. Ty Ware	Bowie Resources
1173. Larry Watson	Ziegler Sales
1174. Kathy Welt	Mount Coal Company
1175. Thomas	Dugout Mine
<b>State Government</b>	
1176. Samuel Anderson	University of Utah
1177. Jim Anderson	Wyoming Senate
1178. Duane Ankney	State of Montana
1179. Jillian Ballow	State of Wyoming
1180. Eli Bebout	Wyoming Legislature's Select Federal Natural Resource Management Committee
1181. Steve Bullock	Montana Governor
1182. Leland Christensen	Wyoming Legislature
1183. Kathleen Clarke	Utah Office of the Governor
1184. Geraldine Custer	Montana House of Representatives
1185. Ted Hewitt	Wyoming Legislature's Select Federal Natural Resource Management Committee
1186. Norine Kasperik	Wyoming Legislature's Select Federal Natural Resource Management Committee
1187. Margie MacDonald	State of Montana
1188. Michael Madden	Wyoming Legislature
1189. Matt Mead	State of Wyoming
1190. Brian Meinhart	Office of Congressman Scott Tipton
1191. Tina Orwall	State of Washington
1192. Carol Seeger	County and Prosecuting Attorney's Office, Campbell County, Wyoming
1193. Tim Stubson	Wyoming Legislature
1194. John Swartout	Governor Hickenlooper
1195. Tom Walters	Wyoming House District 38
1196. Yeulin Willett	House District 54
<b>Trade Group</b>	
1197. Mark Compton	Utah Mining Association
1198. Travis Deti	Wyoming Mining Association
1199. Chuck Laine	Tennessee Mining Association
1200. Bill President	Wyoming Business Alliance
1201. Katie Sweeney	National Mining Association



**Table C-1  
Commenters**

<b>Commenter Name</b>	<b>Affiliation</b>
<b>Tribal Government</b>	
I202. Carina Miller	Confederated Tribes of Warm Springs
I203. Kaden Walksnice	Northern Cheyenne Tribe
I204. Dana Wilson	Crow Nation Executive Branch

<sup>1</sup>One commenter requested to keep their personal information private and is not included in this table. In addition, 10 commenters identified as individuals provided no names, or incomplete names (i.e. no last names). These individuals are not included in this table.

**Table C-2  
Form Letter Submissions**

<b>Initiating Organization</b>	<b>Number of Submissions</b>
American Coalition for Clean Coal Electricity	1,416
Care 2 Petitions	24,102
Center for Biological Diversity	14,104
Count on Coal MT	675
EarthJustice	36,907
Friends of the Earth and Friends of the Earth Action	9,816
Grand Junction meeting -North Fork Valley Letter	43
Keep Electricity Affordable.org	499
National Wildlife Federation	12,538
NextGen Climate Change	1,552
Physicians for Social Responsibility	1,351
The Sierra Club	98,603
The Wilderness Society	10,518
Unknown- maximize returns on Federal coal	27
Unknown- concerns with increased royalty rates	9
Unknown- reconsider the increase in royalty rates	19
Western Organization of Resource Councils	366
Western Values Project	713
WildEarth Guardians	490
<b>Total submissions</b>	<b>213,748</b>

Note: The initiating organizations were identified for all but 3 of the form letters. For letters where no organization was identified, a description of the main letter content is included above

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# Appendix D

## Comments by Issue Category

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# APPENDIX D

## COMMENTS BY ISSUE CATEGORY

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Each unique submission, representative form letter, and form letter with additional comments was reviewed by the BLM to identify substantive comments related to the reform of the Federal coal program. In total, 459 comments were identified with references or data, 130 containing a policy option, and 3,199 related to one or more of 33 issue categories. Summaries of the main themes of comments by issue topic are included in **Section 4.6, Comment Summaries**, in Volume I. A full report of comments by issue categories is included in this Appendix. Comments related to references or data and those containing policy options are not included within separate categories here, but appear under the relevant issue topic.

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**Issue I - NEPA Process****ISSUE I.1 - SCOPING MEETING**

Total Number of Submissions: 23

Total Number of Comments: 23

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Comment Number: 00000334 \_ Potter \_ Carbon County \_ 20160519-1

Organization I: County Commissioner

Commenter I: Jay Potter

Comment Excerpt Text:

And I just want to start by telling you that the invitation to come to Carbon, Emery, Sevier, or Sanpete Counties to hold these meetings is always open. You, again, picked the wrong location to really see into the eyes of the people that are affected by the Federal Government and the overreach there. (Applause.) The other thing that goes with that is that, according to NEPA, the best land planning starts in those communities that are affected. Now, you're going across the United States and, yes, we're grateful that you're in Utah, because this is an important part of our economies, but, again, you're not even abiding by your own rules set up by the Federal Government.

---

Comment Number: 0000793-1

Organization I: Skyline Mine

Commenter I: Anthony Skinner

Comment Excerpt Text:

It would be nice to have these meeting in the counties and town were we work.

---

Comment Number: 0000798-1

Commenter I: Paul

Comment Excerpt Text:

Your actions of once again holding a meeting 150 miles away from the nearest mine affected even though the BDAC and Carbon Convention Center could easily support this.

---

Comment Number: 0001166-1

Commenter I: Anne Miller

Comment Excerpt Text:

I would also ask that you expand public hearing to non-stakeholder regions such as New England and California that are also affected by climate change as we all are and they should also be allowed to participate in public hearings about this federal process.

---

Comment Number: 0002001 \_ Stevens \_ 20160607-1

Commenter I: Wayne Stevens

Comment Excerpt Text:

Unfortunately, the opposition had little opportunity to speak due to a "first come, first served" system used. A better system would have be alternating pro coal, then opposed to coal.

Comment Number: 0002009\_CenterBioDiversity\_20160329-10

Organization I: WildEarth Guardians

Comment Excerpt Text:

In publishing the notice of intent, we request that you provide at least a 60-day public comment period. and, at a minimum, we urge you to schedule public hearings in key areas impacted by the federal coal program. We urge you to hold hearings in Billings, MT, Denver, CO, Farmington, NM, and Salt Lake City, UT, and in other locations where federal coal management and/or federal oversight of coal mining is a significant issue, including, but not limited to, Chicago, IL, Pittsburgh, PA, Tulsa, OK, and Charleston, WV. We also strongly urge you to hold hearings in Seattle, WA and Oakland, CA, both areas impacted by the export of publicly owned coal. Finally, we urge you to consider holding hearings in areas of our country already or soon to be hit strongly by coal's climate impacts; place like New York City, Miami, and New Orleans.

---

Comment Number: 0002019\_Emineth\_20160623-1

Commenter I: Mike and Lorna Emineth

Comment Excerpt Text:

Montana has the most recoverable coal resources of any other state in the nation. Yet it is unbelievable that the DOI chose Seattle, a place that produces no federal coal and only has 0.26 percent of our nation's resources, over Montana to gather public comment on the federal coal program.

---

Comment Number: 0002045\_Johnson\_20160620-1

Organization I: Cloud Peak Energy

Commenter I: Gabriel Johnson

Comment Excerpt Text:

Not including coal mining states such as Montana will not provide a representative public hearing process. Omitting the folks who live in the "sticks" who actually produce the coal, denies us of our constitutional right to participate in our democratic process.

---

Comment Number: 0002047\_Kidd\_20160622-1

Commenter I: David Kidd

Comment Excerpt Text:

The DOI chose, Seattle of all places, for public comment on the Federal coal program, a place that produces NO federal coal and only has roughly 1/4 of 1% of our nations resources!

---

Comment Number: 0002050\_Lekse\_20160617-1

Commenter I: Margaret Lekse

Comment Excerpt Text:

First of all, this action by the BLM to not schedule their scoping meetings in Montana is the same as crossing the street so one does not have to talk to a person with whom one disagrees.

---

Comment Number: 0002060\_Rowell\_20160622-1

Organization I: Outdoor Gear

Commenter I: David Rowell

Comment Excerpt Text:

It is unbelievable that the DOI chose Seattle, a place that produces no federal coal and only has 0.26 percent of our nation's resources, over Montana to gather public comment on the federal coal program.

---



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Comment Number: 0002082\_Jensen\_20160329-1

Commenter I: Levi Jensen

Comment Excerpt Text:

The BLM needs to add Gillette, WY as a location for a scoping meeting.

---

Comment Number: 0002100\_OHair\_20160613-6

Commenter I: Todd O'Hair

Comment Excerpt Text:

And finally, it was a rude snub to the coal miners and affected businesses and individuals of Montana to refuse to hold a public comment period in Montana. I understand the BLM held a listening session in Billings in 2015, but to choose Seattle over a location in Billings Montana is an insult to the people of Montana.

---

Comment Number: 0002128\_Walter\_20160623-2

Commenter I: Marlis Walter

Comment Excerpt Text:

It is extremely disappointing that you are not soliciting opinions from the people of Montana. The great state of MT has an enormous amount of coal.

---

Comment Number: 0002129\_Weaver\_20160623-1

Commenter I: Janet Weaver

Comment Excerpt Text:

How unfortunate and how telling it is that the Obama Administration has chosen to only hear from certain people on this issue...and they have turned a deaf ear to the people who will be most affected by their decision against coal energy.

Please give us your ear! You are hand picking winners and losers and that is not how our country was founded and has achieved greatness over the last two centuries! The government is supposed to represent all citizens, not just a chosen segment of citizens.

---

Comment Number: 0002144\_Kot\_20160519\_SweetwtrCnty-1

Organization I: Sweetwater County, Wyoming

Commenter I: Wally Johnson

Comment Excerpt Text:

the county supports Wyoming Governor Mead's request for a public scoping meeting to be held in Rock Springs, WY

---

Comment Number: 0002149\_Hewitt\_20160519\_WyLSO-7

Organization I: Wyoming Legislature's Select Federal Natural Resource Management Committee

Commenter I: Ted Hewitt

Comment Excerpt Text:

The Committee encourages the BLM to host additional scoping meetings in Wyoming

---

Comment Number: 0002189\_Jozwik\_20160517-1

Commenter I: Darryl Jozwik

Comment Excerpt Text:

I ALSO WOULD LIKE TO SEE SOME OF THESE LISTENING SESSIONS TO BE HELD IN AREAS THAT ARE THE MOST IMPACTED, FOR EXAMPLE, CAMPBELL COUNTY AND SWEET WATER COUNTY WYOMING.

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Comment Number: 0002215\_Pierce\_20160622-1

Commenter I: Jerry Pierce

Comment Excerpt Text:

What kind of organization would allow a meeting to be held where public input is being asked for in a place where there is little economic impact realized? You would think if it was a fact gathering opportunity to help make an informed decision possible it would be held in an area where it was going to have the most affect. To talk about coal issues in the city of Seattle makes as much sense as talking about oceanic marine biology issues in Billings.

---

Comment Number: 0002231\_Schwend\_20160620-1

Organization I: Cloud Peak Energy

Commenter I: David Schwend

Comment Excerpt Text:

I am disappointed that in this round of public hearings a session was not held in Montana where coal plays a large role in electrical generation, state economics, and community development.

---

Comment Number: 0002389\_Schwend\_20160721-2

Organization I: Spring Creek Mine

Commenter I: David Schwend

Comment Excerpt Text:

I am disappointed that in this round of public hearings a session was not held in Montana where coal plays a large role in electrical generation, state economics, and community development.

---

Comment Number: 0002409-3

Commenter I: Greg Gianforte

Comment Excerpt Text:

You're holding a public meeting in Seattle, and to my knowledge the state of Washington has no federal coal reserves. Montana has the largest holdings of federal coal in the nation. Why should Seattleites get to weigh in on this topic and not Montanans?

---

Comment Number: 0002493\_Mead\_20160728\_GovWY-5

Organization I: Office of Governor Matthew H. Mead

Commenter I: MATTHEW H. MEAD

Other Sections: 2

Comment Excerpt Text:

I along with Wyoming's Congressional Delegation requested public meetings in Gillette and Rock Springs, Wyoming at a minimum. This did not happen. Coal communities in Wyoming and elsewhere have the most relevant and critical information about the industry and its operation. The "listening" sessions- purposefully or not- did not suggest this kind of action by DOI No one could have anticipated or talked on the impacts. Coal communities deserve an opportunity to provide input. I will assist you in setting up additional public meetings. BLM's NEPA Handbook - Section 6.9- PUBLIC INVOLVEMENT AND RESPONDING TO COMMENTS- requires the BLM to provide for public hearings when there is a substantial interest in holding the hearing. See also 40 C.F.R. § 1506.6(c)(1). I specifically request public hearings be held in Gillette and Rock Springs, Wyoming, now, and at future points in the PEIS process. I expect, in the event the BLM proceeds, that the draft PEIS will be made available to the public at least 15 days in advance of public hearings requested in accordance with 40 C.F.R. § 1506.6(c)(2).

**ISSUE I.2 - COOPERATING AGENCY RELATIONSHIP**

Total Number of Submissions: 6

Total Number of Comments: 11

---

Comment Number: 0002009\_CenterBioDiversity\_20160329-11

Organization I: WildEarth Guardians

Commenter I: Jeremy Nichols

Comment Excerpt Text:

Ensure that other key Interior Department agencies are cooperating agencies in the development of the programmatic environmental impact statement, including the Office of Surface Mining Reclamation and Enforcement, Office of Natural Resource Revenue, and Geological Survey. We also urge you to request that the U.S. Department of Energy, U.S. Department of Labor, U.S. Environmental Protection Agency, and White House Council on Environmental Quality participate as cooperating agencies pursuant to the National Environmental Policy Act.

---

Comment Number: 0002329\_Segger\_20160724\_CambellCntyWY-7

Organization I: County and Prosecuting Attorney's Office, Campbell County, Wyoming

Commenter I: Carol Seeger

Comment Excerpt Text:

Lastly, Campbell County requests that it be given cooperating agency status in the development of the EIS.

---

Comment Number: 0002393-4

Commenter I: Mike Penfold

Comment Excerpt Text:

Federal and State Governments need to start working together to plan for the full range of problems faced by communities, the workers doing the mining and the reclamation of mined land.

---

Comment Number: 0002477\_Saul\_20160728\_CBD\_UPHE-78

Organization I: Center for Biological Diversity

Commenter I: Michael Saul

Comment Excerpt Text:

Because each significant new addition of greenhouse gases increases the extinction risk for many listed species, the massive greenhouse gas emissions stemming from the federal coal program, which contributes 13% of all US fossil fuel CO<sub>2</sub> emissions, clearly affect many listed species. The continuation of the federal coal program jeopardizes climate-change-vulnerable species, while an end to coal leasing on public lands would be consistent with their continued survival and recovery. As such, the Bureau must consult with the Fish and Wildlife Service and National Marine Fisheries Service on the impacts to listed species of the significant greenhouse gas emissions from the federal coal program.

---

Comment Number: 0002490\_Emrich\_20160728\_CloudPeakEnergy-25

Organization I: Cloud Peak Energy Inc.

Commenter I: Andrew C. Emrich, P.C.

Comment Excerpt Text:

BLM must engage in meaningful collaboration with both states and America's coal producers in order to fully

consider the impacts on state and local governments and the coal industry resulting from revisions to the federal coal program. First, as part of its collaboration with interested government stakeholders (see Executive Order No. 12866, Section 1(b)(9) (1993), BLM must perform a federalism assessment. A federalism assessment is required for all regulations and policy statements or actions containing federalism implications. Such implications arise when the actions contemplated by the agency have a substantial direct effect on the states, the relationship between the federal government and the states, or on the distribution of power and responsibilities among various levels of government. Exec. Order No. 12612, Sec. 1(a) (1987). BLM's proposed changes to the federal coal program raise sufficient federalism implications to warrant the preparation of a federalism assessment because any regulatory changes would "have substantial direct effects on the States." *Id.*; see also *id.* Sec. 6(b) (when federalism implications exist, "a Federalism Assessment . . . shall be prepared.").

In preparing a federalism assessment, BLM should identify the extent to which the federal government's proposed changes would impose additional costs and burdens on state governments, infringe on the states' ability to discharge traditional state governmental functions, or infringe on other aspects of state sovereignty. BLM must carefully consider and disclose those impacts on state and local governments, communities, and businesses that rely on federal coal leasing and development.

---

Comment Number: 0002490\_Emrich\_20160728\_CloudPeakEnergy-27

Organization I: Cloud Peak Energy Inc.

Commenter I: Andrew C. Emrich, P.C.

Other Sections: I

Comment Excerpt Text:

BLM must also engage in honest and meaningful discussions with coal producers to better understand the adverse economic impacts associated with federal coal program reform. As discussed throughout this comment letter, America's coal producers are heavily burdened by both current economic conditions and the existing governmental payments required under the current regulatory scheme. To the extent BLM intends to revise the federal regulatory scheme, BLM must prepare a regulatory impact analysis to "assess all costs and benefits of available regulatory alternatives, including the alternative of not regulating." Exec. Order No. 12866, Sec. 1(a)(1993).

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Comment Number: 0002490\_Emrich\_20160728\_CloudPeakEnergy-33

Organization I: Cloud Peak Energy Inc.

Commenter I: Andrew C. Emrich, P.C.

Comment Excerpt Text:

BLM should collaborate with OSMRE to streamline the leasing and permitting process. BLM and OSMRE should jointly clarify that when OSMRE participates as a cooperating agency in a BLM-led environmental analysis, OSMRE may rely on that analysis when making its mining plan approval determination. Further, the agencies should jointly clarify that OSMRE, when considering whether to approve the mining plan for federal coal reserves, need not consider any environmental impacts (such as coal combustion) that have already been considered by BLM and which are outside the scope of OSMRE's administrative discretion.

---

Comment Number: 0002493\_Mead\_20160728\_GovWY-20

Organization I: Office of Governor Matthew H. Mead

Commenter I: MATTHEW H. MEAD

Comment Excerpt Text:

When representing a county as a cooperating agency in matters related to the National Environmental Policy Act and in federal land use planning, implementation and management action, a board of county commissioners shall be deemed to have special expertise on all subject matters for which it has statutory responsibility, including but not limited to, all subject matters directly or

indirectly related to the health, safety, welfare, custom and socioeconomic viability of a county. W.S. 18-5-208(a) (emphasis added). Accordingly, Wyoming's Counties have special expertise in all matters directly or indirectly related to the health, safety, welfare, custom and socioeconomic viability of their county. Wyoming Counties should be engaged as cooperating agencies in accordance with their special expertise.

---

Comment Number: 0002493\_Mead\_20160728\_GovWY-41

Organization I: Office of Governor Matthew H. Mead

Commenter I: MATTHEW H. MEAD

Comment Excerpt Text:

In order to focus the PEIS process and be able to draw conclusions more definitive than mere speculation, BLM will have to pull in experts from a variety of state and federal agencies to predict the changing energy needs. And, as part of that process, BLM must provide a transparent discussion of the methods and analyses it uses to predict energy supplies and demands as it evaluates the role of federal coal in meeting the nation's energy needs in the PEIS.

---

Comment Number: 0002493\_Mead\_20160728\_GovWY-6

Organization I: Office of Governor Matthew H. Mead

Commenter I: MATTHEW H. MEAD

Comment Excerpt Text:

If the BLM proceeds with its PEIS reviewing the federal coal program, I request "cooperating agency" status for the State of Wyoming and its agencies. The State of Wyoming is prepared to engage consistent with the requirements of cooperating agencies as outlined in 40 C.F.R. §1501.6 and 43 C.F.R. § 1610.3-1. The State of Wyoming possesses special expertise and jurisdiction by law relevant to the BLM's environmental analysis. I attach a list of agencies, in addition to the Governor's Office, that the State of Wyoming identifies to BLM as cooperating agencies. (Attachment I).

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Comment Number: 0002493\_Mead\_20160728\_GovWY-64

Organization I: Office of Governor Matthew H. Mead

Commenter I: MATTHEW H. MEAD

Comment Excerpt Text:

Cooperating Agencies

Infrastructure Authority- The Infrastructure Authority (WIA) was created in 2004 under W.S. 37-5-301 to support the advancement of coal technology and advanced energy technology facilities, electrical transmission, and coal exports. The facilities and related supporting infrastructure may include all facilities, structures and properties incidental and necessary or useful in the production or transmission of energy. The WIA has the ability to issue up to \$1 billion in industrial revenue bonds to assist in financing energy infrastructure.

Department of Environmental Quality- The Department of Environmental Quality (DEQ) serves as the state's regulatory agency charged with protecting, conserving and enhancing Wyoming's land, air and water for the benefit of current and future generations. The DEQ is charged with the administration of the Environmental Quality Act, W.S. 35-11-101 through W.S. 35-11-1803, and the Industrial Siting Act, W.S. 35-12-101 through W.S. 35-12-119. DEQ is responsible for enforcing state and federal environmental laws including:

- Clean Air Act,
- Clean Water Act,
- National Pollution Discharge Elimination System (NPDES),
- Environmental Quality Act,
- Resource Conservation and Recovery Act (RCRA),
- Superfund Amendments and Title III Reauthorization Act (SARA), and
- Federal Surface Mining Control and Reclamation Act.

**Land Quality Division-** The Department of Environmental Quality- Land Quality Division is charged with administering sections W.S. 35-11-401 through W.S. 35-11-437 of the Environmental Quality Act. The Division serves the citizens of Wyoming by ensuring environmental protection through permitting, inspection, and enforcement of environmental regulations for all mining operations in Wyoming. In addition, the Office of Surface Mining approved the Land Quality Division Permanent Coal Program on November 11, 1980.30 C.F.R. §§ 950.10, 950.15, 950.20. The Land Quality Division has retained primacy for the Coal Program since this original approval.

**Air Quality Division -** The Department of Environmental Quality - Air Quality Division has primacy to implement the Clean Air Act in accordance with state and federal law. See 42 U.S.C. §§ 7401(a)(3), 7401-7671q, 40 C.F.R. subpart ZZ, and W.S. 35-11-201 through W.S. 35-11-214. Wyoming's Air Quality Division has technical expertise and experience in applying stringent air quality controls and air pollution monitoring requirements in accordance with the Clean Air Act and Wyoming's Environmental Quality Act.

**Water Quality Division-** The Department of Environmental Quality- Water Quality Division is charged with the administration of sections W.S. 35-11-301 through W.S. 35-11-318 of the Environmental Quality Act. The Division is responsible for protecting surface and ground water quality through permitting, inspection, and enforcement of environmental regulations governing the discharge of waste into waters of the state (including ground water). The Division also coordinates with other Divisions and the Department's Spill Response Program to oversee cleanup of spills and other unpermitted releases of oil and/or hazardous substances that have entered, or threaten to enter waters of the state.

**Game and Fish Department-** The Wyoming Game and Fish Commission is created and empowered in sections W.S. 23-1-101 through W.S. 23-6-208. The Wyoming Game and Fish Department is created and placed under the direction and supervision of the Commission in W.S. 23-1-401. The responsibilities of the Commission and the Department are defined in W.S. 23-1-103. In these and associated statutes, the Commission and the Department are charged with providing "an adequate and flexible system for the control, propagation, management, protection and regulation of all Wyoming wildlife." The Department is the only entity of state government directly charged with managing Wyoming's wildlife resources and conserving them for future generations. Accordingly, the Department often participates as a cooperating agency providing information on potential wildlife impacts from coal leasing and other mining activities.

**School Facilities Department-** The School Facilities Department (Department) is under the direction and supervision of the School Facilities Commission (Commission). The Director of the Department is appointed by the Governor. The Department implements policies, guidelines, and standards adopted by the Commission. The Commission includes the State Superintendent of Public Instruction (a statewide elected official) and seven members appointed by the Governor. The Commission is required, primarily by W.S. 21-15-108 through W.S. 21-15-123, to promulgate rules and regulations regarding the planning, design, and construction of schools within the forty eight school districts of Wyoming. The intent is that school facilities be similar to other school facilities in similar situations and that they are adequate to support the delivery of the state approved educational program. Revenue generated from coal leasing and production provides significant funding for the construction of school facilities in Wyoming.

**Department of Administration and Information, Economic Analysis Division -** The core mission of the Economic Analysis Division of the Department of Administration and Information is to coordinate, develop, and disseminate economic and demographic research and information. Under W.S. 9-10-1024 the division shall "Establish uniform criteria for collecting, compiling, analyzing, reporting and distributing economic data for all Wyoming counties related to uses of and economic impacts to state and federal surface and mineral lands, including but not limited to development of agriculture, grazing, minerals, timber, water, industrial resources, recreation and energy production." Accordingly, the Economic Analysis Division of the Department of Administration and Information has special expertise on the economic impact to Wyoming from the federal coal program.

**Department of Revenue -** The Department of Revenue administers the collection of mineral and excise taxes as well as the valuation of property. The Administrative Services Division is responsible for the deposit of tax payments received and the distribution of sales and mineral tax funds. The Mineral Tax Division is responsible for collecting mineral severance taxes and providing county governments with an accurate certificate of the mineral production value in their respective counties for the assessment of ad valorem taxes. The Property Tax Division

is responsible for supporting, training, and guiding local governmental agencies in the uniform assessment, valuation and taxation of locally assessed property; assessing, valuing and allocating public utility property; as well as administering, collecting and distributing designated taxes. The Department values and assess coal, and collects and distributes taxes on coal and coal production according to the requirements outlined in Wyoming's Constitution, article 15 §§ 2, 3 and 19, in addition to W.S. 39-14-101 through W.S. 39-14-111. Accordingly, the Wyoming Department of Revenue has special expertise in identifying the fair market value of coal, and assessing various kinds of taxes on coal and coal production.

**Public Service Commission-** The Public Service Commission regulates the rates, pricing, services, service quality and safety of Wyoming electric, gas, water, essential telecommunications and intrastate pipeline companies. The three commissioners are appointed by the Governor with Senate confirmation. The general statutory authority for the PSC is found in W.S. 37-1-101 through W.S. 37-3-306; W.S. 37-6-101 through W.S. 37-6-107; W.S. 37-12-101 through W.S. 37-12-403; and W.S. 37-15-101 through W.S. 37-17-105. Accordingly, the PSC has special expertise in the contribution of coal and other fuels to the energy market, including the sources and quality of federal coal mined in Wyoming.

**Homeland Security-** The Office of Homeland Security, in accordance with W.S. 19-13-101 through 19-13-414 and W.S. 35-9-151 through W.S. 35-9-159, assists state and local agencies in their efforts to mitigate, prepare for, respond to, and recover from the effects of crisis due to terrorism, natural (fire, flood, earthquake, etc.) or technological (hazardous materials spills, etc.) causes. The Office of Homeland Security has special expertise on confidential nature of critical infrastructure data collected in support of risk, vulnerability, or threat assessments is of vital concern to facility owners, operators, managers, and responders across Wyoming. Additionally, the Office of Homeland Security has special expertise and secured access to information on the importance of coal mining and all of its interdependencies and dependencies on several national critical infrastructure sectors to include, electrical power, rail transportation, road transportation, and diesel fuel.

**Department of Education -** The general supervision of the public schools is entrusted to the State Superintendent of Public Instruction who is the administrative head and chief executive officer of the Wyoming Department of Education (WDE). Wyo. Const. art. 7 § 14; W.S. 21-2-201. The Superintendent and WDE Staff promulgate and enforce rules and regulations consistent with the Wyoming Constitution and state statutes. See W.S. 21-1-101 through W.S. 21-13-721. The WDE acts as the funding agent for state and federal funds that flow to the Wyoming School Districts. Accordingly, the WDE has special expertise on the impact taxes generated by the coal leasing program have on public education in Wyoming.

**Department of Workforce Services-** The Wyoming Department of Workforce Services (DWS) is the primary U.S. Department of Labor (DOI) grantee and contractor in Wyoming. W.S. 9-2-2002 through 9-2-2601. DWS is the principle fact-finding agency in the field of labor economics for the State of Wyoming. For example, DWS produces county unemployment rates each month under contract to the Department of Labor's Bureau of Labor Statistics. DWS manages Unemployment Insurance (UI) benefits payments for those who lose their jobs through no fault of their own, and administer UI tax collections from employers. Through Employment Service offices DWS seeks to re-employ UI claimants by matching job seekers to employer job openings. For dislocated workers, those whose skills no longer match the needs of the labor market, DWS provides training opportunities through administration of the Workforce Innovations and Opportunities Act. Accordingly, DWS has special expertise on the coal labor market and the impacts the federal coal program has on the labor force in Wyoming.

**Department of Audit-** The Department of Audit, authorized by W.S. 9-2-2003, is the independent audit agency for the State of Wyoming. The Department includes the Public Funds Division, the Mineral Audit Division, the Excise Tax Division, the Banking Division, and the Administration Division, which oversees management services and information technology. Specifically, the Mineral Audit Division performs mineral tax and royalty audits to ensure compliance with state and federal laws. In performing the independent mineral audits, the Department works closely with the Department of the Interior, the Office of Natural Resources Revenue, the Wyoming Department of Revenue and the Wyoming Office of State Lands and Investments. Accordingly, the Department of Audit has special expertise on the collection of and compliance with federal and state coal taxes and royalties.

**Wyoming State Geologic Survey-** The Wyoming State Geologic Survey (WSGS) interprets Wyoming's complex geology. W.S. 9-2-801 through W.S. 9-2-809. WSGS scientists work to gain a better understanding of our

planet's history, geologic wonders, potential hazards and natural resources such as water, minerals and energy. The WSGS gathers key information, provides technical analyses, perform scientific investigations and generate maps using Geographic Information Systems (GIS). WSGS teams cover four core subject areas: 1) energy and mineral resources; 2) water resources, mapping and hazards; 3) information technology and GIS; and communications and public outreach. Accordingly, the WSGS has special expertise on the geologic formations in Wyoming's coal regions, including the location and extent of federal coal in Wyoming.

**State Engineer's Office-** The State Engineer's Office and State Board of Control provide for the general supervision of the waters of the state, including surface and underground water, and of its appropriation, distribution, and application to beneficial use as provided under Wyoming statutes and the prior appropriation doctrine. See Wyo. Const. art. 1 § 31, art. 8 §§ 1 through 5, and art. 13 § 5; W.S. 41-1-101 through 41-14-103. The State of Wyoming owns all waters in the state. Id. Further, all water produced or used in connection with federal coal mining in Wyoming is regulated and controlled by the State Engineer's Office and the State Board of Control. Accordingly, the State Engineer's Office and the State Board of Control have special expertise regarding the impact coal production has on the appropriation, distribution and use of the waters of the state.

**Department of Agriculture -**The Wyoming Department of Agriculture (WDA) assists the citizens of Wyoming to live safe and healthy lives, promote and preserve Wyoming's agricultural community, be responsible stewards of Wyoming's natural resources, and achieve integrity in the marketplace. W.S. 11-1-101 through W.S. 11-50-108. It is a duty of the WDA to "foster practicable conservation of state natural resources." W.S. 11-2-202(a)(v). WDA also provides rangeland health technical assistance to evaluate plant communities, soils and water resources in order to sustain healthy grazing and wildlife habitat resources. W.S. 11-2-207. WDA collaborates with private landowners, local governments, other state agencies and federal agencies to provide rangeland health assessments across jurisdictional boundaries and including areas subject to reclamation or renovation projects. Most of the land surrounding ongoing coal mining operations in Wyoming is put to agricultural uses. That same land will likely be reclaimed and returned to agricultural uses. Accordingly, the WDA has special expertise in the condition and health of pre and post mining lands and resources, including the soils, water resources and plant communities that provide healthy grazing and wildlife habitat.

**Office of State Lands and Investments-** Upon admission to the Union, Congress granted the State of Wyoming certain lands, in surface and mineral, for the benefit of Wyoming institutions, primarily the public schools. Wyo. Act of Admission, 26 Stat. 222, §§ 4 through 14 (July 10, 1890). These lands were granted to and accepted by the State of Wyoming for the specific purpose of income production. The Wyoming Constitution, Article 18, Section 3, and Wyoming Statutes 36-2-101 through 36-2-108, statutes mandate that the Office of State Lands and Investments and the Board of Land Commissioners manage and protect the underlying value of and derive revenue from these trust assets for both short- and long-term returns to the public schools and other designated beneficiaries. The value and marketability of Wyoming's coal assets are directly impacted by the federal coal program. The Office of State Lands and Investments works closely with the Bureau of Land Management's coal team to ensure that Wyoming's trust responsibilities to its citizens are accounted for in the federal coal program. Accordingly, the Office of State Lands and Investments has special expertise in the valuation, marketability and sale of coal in Wyoming.

**County Government-** In Wyoming, counties serve as a legal arm of the state and shoulder the responsibility to carry out the state's statutory and regulatory goals at the local level. As such, county government operates on the front lines of ensuring Wyoming's communities are both economically vibrant and safe, healthy places to live. Wyoming statute provides that:

### **ISSUE I.3 - RANGE OF ALTERNATIVES**

Total Number of Submissions: 30

Total Number of Comments: 59

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Comment Number: 00000334 \_ Potter \_ Carbon County \_ 20160519-3

Organization I: County Commissioner



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Commenter I: Jay Potter

Comment Excerpt Text:

If today's alternative is zero coal, which is what I really believe that the BLM and the Department of the Interior is after and to keep it in the ground, the opposite end of that should be full access to all the coal within the United States and to do it now.

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Comment Number: 0000363\_HEIN\_20160519-2

Organization I: Institute for Policy Integrity

Comment Excerpt Text:

First, the Interior should formulate a broad change of alternatives for federal coal leasing. These alternatives could include, for example, no new federal coal leasing, leasing using adjusted royalty rates or carbon adders that aim to maximize social welfare by accounting for all quantifiable costs and benefits of the program, and, three, leasing that serves declining domestic coal demand alone.

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Comment Number: 0000752\_Lempke\_Tri-State\_20160623-1

Organization I: Tri-State Generation and Transmission Association, Inc

Commenter I: Doug Lempke

Comment Excerpt Text:

Tri-State encourages BLM to include alternatives in the PEIS that maximize federal coal use while maintaining the current royalty rate, or even better, proposing ways to reduce it.

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Comment Number: 0000752\_Lempke\_Tri-State\_20160623-3

Organization I: Tri-State Generation and Transmission Association, Inc

Commenter I: Doug Lempke

Comment Excerpt Text:

As BLM develops the PEIS, Tri-State strongly encourages you to consider the following:

- o the impacts on the cost of electricity,
- o federal, state and local government dependence on royalty payments,
- o the true cost to mine federal coal, including state and federal royalty payments, all bonus bids, ad valorem property taxes, ad valorem production taxes, sales and use taxes, severance taxes and the AML fees,,
- o new ways to simplify the reporting and administrative burdens for all parties involved,
- o the long term benefits that coal mining can have for the environment, specifically the reinvigoration of wildlife habitats which may be in decline or of poor quality to start with, and
- o the provisions of the mineral leasing act that specifically identify and mandate the development of these resources for the benefit of the American public.

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Comment Number: 0001187-1

Commenter I: Peggy Willis

Comment Excerpt Text:

After that review of the science, the financial and public benefits and costs, I would urge the Bureau of Land Management to have an option recommending ending the current policy of subsidizing strip mining coal from our public land.

And I really believe this program is broken, and I urge the BLM to include also an option that would permanently end the new leasing of coal permits on public lands and leave the coal in the ground as many others have said earlier today.

Comment Number: 0001188-1

Commenter I: John Stafford

Comment Excerpt Text:

It also seems desirable for the U.S. government to be acting in consistent purposes across its policies. So if we're involved in the Paris accords, the clean power plant from President Obama, in Washington state there's I-732 and the Alliance for Jobs and Clean Energy pending proposal to affect the price on carbon, again, why would the U.S. government enter into something that works in exact -- at cross purposes to that?

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Comment Number: 0002100\_OHair\_20160613-2

Commenter I: Todd O'Hair

Comment Excerpt Text:

it is important that the scope be set to include a possible reduction in royalty rates, reduction in bonus bid payments and streamlined permitting processes.

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Comment Number: 0002240\_Hargrove\_20160701-1

Commenter I: Bourtai Hargrove

Comment Excerpt Text:

The scope of your programmatic EIS must be comprehensive, and concentrate on the impact that burning the coal you lease will have on the cumulative CO<sub>2</sub> already in the atmosphere. The EIS must quantify the amount of CO<sub>2</sub> that will be added to the atmosphere for each ton of coal which will be burned for every prospective lease of coal on federal land. The EIS must also calculate the effect of burning that coal on the carbon reduction levels the U.S. agreed to during the 2015 U.N. Climate Change Conference (COP 21) in Paris, and on the proposed EPA regulations to reduce carbon pollution from coal-fired power plants.

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Comment Number: 0002263\_Davidheiser\_20160710-2

Organization I: German House

Commenter I: James Davidheiser

Comment Excerpt Text:

2) evaluate an alternative to coal leasing that would phase it out entirely

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Comment Number: 0002272\_BURNHAM\_20160707-1

Commenter I: Bruce Burnham

Comment Excerpt Text:

Specifically, I urge the BLM to consider and adopt an alternative that ends new coal leasing in order to keep unburnable coal in the ground and signal U.S. commitment to clean energy. The PEIS should also consider and adopt measures to support and assist coal industry workers and their communities through the coming energy transition.

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Comment Number: 0002279\_Weber\_20160717-1

Commenter I: David Weber

Comment Excerpt Text:

I urge the BLM to consider and adopt an alternative that ends new coal leasing in order to keep unburnable coal in the ground and signal U.S. commitment to clean energy. The PEIS should also consider and adopt measures to support and assist coal industry workers and their communities through the coming energy transition.

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Comment Number: 0002294\_Lowe\_20160606-2

Commenter I:Wendy Lowe

Comment Excerpt Text:

The BLM should look at ways to enhance mining of the coal resource, keep costs reasonable, facilitate leasing and permitting.

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Comment Number: 0002303\_Steitz\_20160705-1

Commenter I:Jim Steitz

Comment Excerpt Text:

I urge you to develop and select an alternative in the federal coal leasing Programmatic Environmental Impact Statement to terminate the sale of federal coal entirely.

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Comment Number: 0002443\_Koontz\_20160727\_BowieResources-13

Organization I:Bowie Resource Partners, LLC

Commenter I:Gene DiClaudio

Comment Excerpt Text:

Order 3338 states that the PEIS will examine several policies that can only be modified by congressional action. These include potential changes in federal royalty rates and the potential imposition of carbon-related fees or taxes. The PEIS should expressly identify which alternatives and actions it considers will require legislative authorization. In addition, there are a variety of legislative reforms that should further be analyzed. These include:

**Bonus Bid Reform for Maintenance Tracts**

Bonus bids under competitive leasing are required under the FCLAA, and are intended to: (a) provide a mechanism for choosing among qualified bidders, (b) incentivize diligence in production, and (c) compensate taxpayers for the disposition of federal natural resources. Diligence is independently achieved by the federal diligence regulations and requirements, and taxpayers can be equally or more effectively compensated by payment of federal royalties. Bonus bids were also an effective tool in the 1970s when there were more frequent greenfield coal mine starts, and remain useful for any future greenfield proposals.

As noted by NMA, there is no evidence of systemic error in the current valuation practices and regulations.

However, the valuation process is time consuming and demanding on federal staff resources, and is more difficult in the current era of stable-to-declining coal prices. Moreover, bonus bids serve no selection function when there is only one bidder, which is the norm for maintenance tracts. Consequently, the Secretary should evaluate abandoning bonus bids for maintenance tracts, and instead employ an adjusted revenue-neutral royalty schedule for those tracts. Shifting taxpayer compensation to royalties would significantly streamline the leasing process, ensure that taxpayers are more attuned to market conditions, and reduce the administrative burden on the BLM and Office of Natural Resources Revenue.

**More Specific Congressional Directives on Leasing**

As noted, federal law presently mandates coal leasing and encourages coal exports, but otherwise affords the Secretary broad discretion in the manner, frequency, and scale of leasing. Since federal coal leasing policy is an integral component of federal energy policy, the Secretary should request more precise guidance from Congress on general leasing targets within the proven Lease-by-Application system. In that way the legislative and executive policies toward federal coal leasing can be better harmonized.

**Congressional Validation, Adjustment, or Rejection of the SCC**

To date the SCC has not undergone notice-and-comment rulemaking, and is deeply problematic at a technical and procedural level. In addition, the discounting and time horizon assumptions in the SCC render the SCC an inter-generational wealth transfer mechanism. This is especially true of any attempt to impose SCC-derived fees or taxes. Finally, the SCC also generates such large value ranges that it is uniquely susceptible to result-driven policy choices, that is, project proponents will always be able to identify values that support denial. Because of these inherent and profound philosophical and policy dimensions, the SCC is poorly suited to the secretive, unilateral Executive processes under which it has been developed to date. Rather, the Secretary (and the

Administration generally) should seek express Congressional authorization and guidance to the extent there is a desire to continue to employ the SCC in federal decision-making. Such authorization, if obtained, would place the Executive on a far sounder democratic and constitutional footing than under current and potentially future practices.

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Comment Number: 0002443\_Koontz\_20160727\_BowieResources-5

Organization I: Bowie Resource Partners, LLC

Commenter I: Gene DiClaudio

Comment Excerpt Text:

The Mineral Leasing Act specifies that the Secretary "shall" lease federal coal. 30 U.S.C. 201 (a)(1). Moreover, federal law has repeatedly directed the Secretary of Energy to examine methods to increase the development of the nation's coal reserves and to increase the export of coal. See, e.g., 42 U.S.C. 13571(1); 42 U.S.C. 13367(a). Revisions to the leasing regulations that have the effect of curtailing federal coal production and the export of coal would be inconsistent with these mandates. At a minimum, the scope of the PEIS must include a discussion of how any proposed regulatory changes would advance the federal policies of development of federal coal resources and the export of U.S.-produced coal.

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Comment Number: 0002464\_Connelly\_20160728\_WyCoaltLocalGov-17

Organization I: Coalition of Local Governments

Commenter I: Kent

Comment Excerpt Text:

The Coalition opposes the proposed landscape-level view to analyzing what areas should or should not be available for leasing. There is no indication as to how these new boundaries would be drawn or what criteria would be used to define a landscape. The management concerns of the BLM Director may not reflect the management concerns the field offices have refined by their on-the-ground experience and resource management. The landscape boundaries may also be defined by one resource, such as sage-grouse habitat, without consideration of all other resources, such as energy, roads, or other wildlife concerns.

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Comment Number: 0002466\_Smith\_20160728\_SELA-1

Organization I: Safe Energy Leadership Alliance

Commenter I: Rachel Smith

Comment Excerpt Text:

To truly understand and address risks and costs to our communities, federal decisions about future coal leases should consider the full range of risks, costs, and impacts from mining, transport, and burning as fuel.

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Comment Number: 0002467\_Fettus\_20160728-12

Organization I: Natural Resources Defense Council

Commenter I: Geoffrey Fettus

Comment Excerpt Text:

As explained in further detail below, in order to achieve this purpose and need, the PEIS must explore alternatives that will achieve the following overarching objectives:

- Delineating the full scope of GHG emissions associated with federal coal leasing, including upstream and downstream emissions;
- Reducing, mitigating, or eliminating the GHG emissions associated with federal coal leasing to align with the Nation's GHG emission reduction goals;
- Identifying and fully presenting a detailed analysis of the direct adverse environmental impacts associated with federal coal leasing and developing new regulations and policies to insure these impacts are minimized, including

insuring proper reclamation; and

- Reforming the coal leasing price structure to advance GHG reduction objectives, insure meaningful competition, and provide a transparent and fair return to taxpayers.

It is of course too early in the process to set out precisely which reforms will best accomplish these objectives. However, at this stage we anticipate that BLM will need to include the following elements to achieve the PEIS's purpose and need:

- An end to leasing by application and regional coal teams, and development of a national framework for when, where, and how much federal coal, if any, must be considered for leasing;
- A revised lease payment framework that takes into account GHG reduction objectives and provides a transparent and fair return to taxpayers, including a new approach to determining FMV and setting rental and royalty fees;
- A systematic examination of the full life-cycle GHG emissions caused by federal coal leasing;
- A Carbon Budget delineating the extent of GHG emissions that the agency will permit from federally leased coal;
- An inter-agency management approach to ensure compliance with all federal laws;
- Limitations on leasing in areas with environmental conflicts or suitable for renewable energy development;
- Limitations on who may obtain leases based on the extent of reserves and the company's demonstrated capacity to complete appropriate reclamation;
- New lease conditions and bonding requirements that will facilitate proper site reclamation; and
- Regulatory requirements for methane capture and/or offsets.

To encompass these issues, we recommend that the agency identify the following major federal action as the driver of consideration in the PEIS:

The proposed federal action is to provide a complete environmental analysis of, potential alternatives to, and mitigation measures associated with federal coal leasing, as well as an informed basis for restructuring the regulatory and policy framework for federal coal leasing with the objectives of minimizing contributions to Greenhouse Gas emissions and other environmental harms, while maximizing returns to the American public.

Comment Number: 0002467\_Fettus\_20160728-14

Organization I: Natural Resources Defense Council

Commenter I: Geoffrey Fettus

Comment Excerpt Text:

Once the impacts are properly characterized and analyzed, the PEIS should consider several approaches to minimize and mitigate GHG emissions associated with federal coal leasing. These approaches should include a set of analytical alternatives of the GHG environmental impacts associated with federal coal leasing:

a. Establishing a "Carbon Budget" for coal leasing

Under this approach, BLM – in coordination with other appropriate agencies – would present an analysis that would determine how much of United States GHG emissions should be permitted to come from federal coal leasing (again, considering full life cycle emissions), taking into account the Nation's GHG reduction objectives and other sources of GHG emissions. Once that Carbon Budget is established, BLM would apply it initially to take account of existing leases. Any remaining Budget would then be allocated to new leasing based on a revised leasing framework, which would incorporate the applicant's ability to achieve GHG emission and other environmental goals. Capping the amount of leasing available, and having coal operators compete for remaining leases, could also create an associated benefit of additional competition for federal coal resources.

Comment Number: 0002467\_Fettus\_20160728-25

Organization I: Natural Resources Defense Council

Commenter I: Geoffrey Fettus

Comment Excerpt Text:

The “no action” alternative

The EIS must consider a “no action alternative,” 40 C.F.R. §1502.14(d), whereby BLM would make no changes to the coal leasing regulatory framework. In the PEIS, the agency should detail each of the problems that would remain should the agency choose this approach, including:

- The conflict between federal coal leasing and the Nation’s GHG emission reduction goals;
- The direct environmental harms caused by coal mining on federal lands, and the failure of current reclamation standards to protect against those harms;
- BLM’s failure to obtain FMV for coal resources or to otherwise obtain a full return for taxpayers; and
- The conflicts between the current regulatory scheme and domestic energy security.

Comment Number: 0002467\_Fettus\_20160728-26

Organization I: Natural Resources Defense Council

Commenter I: Geoffrey Fettus

Comment Excerpt Text:

While the foregoing illustrates many of the alternatives BLM should analyze and consider in the PEIS, we recognize that BLM is likely to choose only a small subset of consolidated alternatives to carry forward for further consideration. We here offer some initial thoughts on how BLM might approach those alternatives. We do not intend this to be a comprehensive list, or to advocate for any particular alternative at this early stage, but intend these consolidated alternatives to simply aid BLM’s thinking in how to address alternatives as the process moves forward. And in any case, all of these alternative analytical scenarios must include and be based on a PEIS that has clearly set forth the environmental impacts; the adverse environmental effects which cannot be avoided should the proposal be implemented; a sharply defined set of comparative alternatives; the relationship between local short-term uses of man’s environment and the maintenance and enhancement of long-term productivity; and any irreversible and irretrievable commitments of resources should the proposed alternative be implemented. See 42 U.S.C. § 4322.

#### A. The 21st Century Coal Alternative

This alternative would contain a combination of the reforms BLM determines will best achieve the goals of reducing GHG emissions, protecting the environment, and maximizing returns for American taxpayers. We anticipate that under this alternative BLM would determine to implement a new leasing framework whereby coal would be leased, solely for domestic use, at appropriate prices and times, from appropriate places, on appropriate terms, and in a manner that insures a complete (or almost complete) accounting for GHG emissions through adder or royalty fees, or other mitigation or offset measures, and only to companies with a demonstrated ability to achieve maximum mitigation and reclamation.

The discussion of impacts under this alternative would demonstrate that it has the least detrimental environmental impacts, maximizes revenue, and poses the least risks to domestic energy security.

#### B. The Taxpayer Return Alternative

This alternative would seek to maximize returns for the public by structuring bonus, rental and royalty rates to provide the highest possible returns to taxpayers over the long term – i.e., a century or more. Because coal prices are currently low relative to other energy sources, this approach may result in a marked reduction in federal coal leasing in the short term. See, e.g. *Coal: Survival of the Fittest* (Citibank May 27, 2015) (discussing anticipated continuing low coal prices). However, BLM would consider whether by requiring higher prices, the agency could achieve a greater return in the long term, while providing greater GHG reductions and environmental protection in the coming decades.

#### C. The Climate Change Focused Alternative

This alternative would focus principally on the GHG emissions aspects of coal leasing, presumably advocating for highly restricted – or no – leasing to best align with GHG emissions reduction goals. Because there would be far fewer leases for which the agency would need to value the coal, engage in enforcement, or insure proper reclamation, a significantly scaled back scope to public lands coal leasing could make other reforms considerably

easier.

#### D. The Land Protection Alternative

This alternative would focus on reclamation, and other non-GHG environmental issues, limiting leasing in areas that pose environmental conflicts and insuring that where leasing occurs, operators follow all environmental protection requirements at every stage, including a guarantee that they complete timely and satisfactory reclamation.

#### E. The Lease Reform Alternative

This alternative would focus on the coal pricing issues, insuring coal leases are properly valued, including incorporating all externalities, especially GHG contribution. It could also include timing and location restrictions that help drive GHG and/or other environmental goals by reducing coal production.

#### F. The Domestic Security Alternative

This alternative would focus on whether coal leasing is necessary to insure domestic energy needs, and restrict or forbid leasing for export to protect these resources for the American people, as Congress intended.

Comment Number: 0002467\_Fettus\_20160728-46

Organization I: Natural Resources Defense Council

Commenter I: Geoffrey Fettus

Other Sections: I

Comment Excerpt Text:

At the outset, we emphasize that, as regards all physical, chemical, radiological and biological, aesthetic, historic, cultural, economic, and social effects areas, the PEIS must address all relevant impacts, including cumulative and related impacts. See, e.g., 40 C.F.R. § 1508.7 (explaining that cumulative effects include “the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (federal or non-federal) or person undertakes such other actions”). Only through a comprehensive analysis can BLM make an informed judgment about changes in the federal coal leasing regulatory framework. (12)

(11) In order to meaningfully address the impacts of federal coal leasing, BLM must take into account important geographical considerations. To assist with that aspect of the analysis, attached as Appendix A are additional comments focusing on geographic information systems and geospatial analysis and data that should be considered in developing the PEIS.

(12) See, e.g., CEQ, *Considering Cumulative Effects Under the National Environmental Policy Act*, January 1997 (explaining that “cumulative effects must be evaluated along with the direct effects and indirect effects... of each alternative...” and that “...as the proposed action is modified or other alternatives are developed (usually to avoid or minimize adverse effects), additional or different cumulative effects issues may arise”); BLM NEPA Handbook at 61 (stating that cumulative effects analysis “must be able to describe the incremental differences in cumulative effects as a result of the proposed action and alternatives”).

Moreover, impacts must be analyzed broadly and include all relevant “effects on natural resources and the components, structures, and functioning of affected ecosystems,” including “effects on air and water and other natural systems.” 40 C.F.R. § 1508.8(b). BLM should also be guided by its statutory mandate to manage public lands “in a manner that will protect the quality of scientific, scenic, historical, ecological, environmental, air and atmospheric, water resource, and archeological values . . . .” 43 U.S.C. § 1701(a)(8) (emphasis added).

To minimize and mitigate these impacts, in the PEIS BLM must also “[r]igorously explore and objectively evaluate all reasonable alternatives” and “[d]evote substantial treatment to each alternative considered in detail.” 40 C.F.R. § 1502.14. Because the alternatives we propose – and those BLM is already considering – are closely tied to the impact area they are designed to address, we present a set of tailored alternatives for each impact area in this section. In the following section we will offer several combined alternatives for BLM to consider carrying forward in the PEIS.

Comment Number: 0002467\_Fettus\_20160728-51

Organization I:Natural Resources Defense Council

Commenter I:Geoffrey Fettus

Comment Excerpt Text:

b. Amending the price structure for coal leasing to account for the significant GHG emissions externalities costs associated with coal

Under this alternative, BLM would analyze incorporation of the life-cycle costs of GHG emissions into the royalty rates charged for access to federally leased coal. For example, the royalties might include an “adder” that would be a flat sum (adjusted over time and keyed to inflation) to reflect these costs.

While BLM might determine it requires a change to its regulations (21), analysis of this alternative would be well within BLM’s broad authority, for the MLA and FLPMA provide the agency with broad discretion to determine appropriate royalty rates.

Finally, BLM should present an analysis of the relevant alternatives associated with where the money raised by such fees should be allocated. Possibilities include:

- paying for carbon mitigation or other efforts to reduce GHG emissions elsewhere – e.g., carbon sequestration;
- assisting coal mine employees displaced by reductions in federal coal leasing; or
- supporting coal reclamation projects in areas where operators have not fulfilled their reclamation obligations.

(22)

21 Although the existing regulation only provides for a 12.5% (for surface mining) floor on royalties, 43 C.F.R. § 3473.32, we recommend BLM amend the regulation to explicitly include the adder for GHG emissions.

22 Although some of these uses may not be within BLM’s present statutory authority, that should not dissuade the agency from giving them serious consideration. See, e.g., 40 C.F.R. § 1502.15(c) (requiring consideration of “reasonable alternatives not within the jurisdiction of the lead agency”).

Comment Number: 0002467\_Fettus\_20160728-52

Organization I:Natural Resources Defense Council

Commenter I:Geoffrey Fettus

Comment Excerpt Text:

c. Requiring CO<sub>2</sub> and/or methane capture and sequestration throughout the coal leasing chain

To the extent CO<sub>2</sub> and methane emissions from the coal supply chain can be captured and sequestered, coal leasing’s impacts on GHG emissions, and therefore on climate change, can be mitigated to some extent. BLM should therefore consider analyzing such a sequestration alternative.

Capture during the coal mining process – where most of the fugitive methane emissions occur – is squarely within BLM’s authority. As noted, at present operators have no requirement to capture fugitive methane. BLM should squarely address this problem by considering an approach that would require every coal lease, permit and plan of operations to provide for the capture of all methane releases, or, at bare minimum, to provide strong incentives for methane capture (i.e., penalties for non-capture).

As for downstream emissions, in this alternative BLM should consider structuring its leasing framework to incentivize companies to insure downstream sequestration. For example, BLM might reduce the externality cost included in leasing prices to the extent the applicants can demonstrate that the downstream emissions will be sequestered.



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Comment Number: 0002467\_Fettus\_20160728-53

Organization I:Natural Resources Defense Council

Commenter I:Geoffrey Fettus

Comment Excerpt Text:

d. Permitting GHG emission mitigation through offsets elsewhere in the economy

Another alternative to address GHG emissions would be an analysis of permitting applicants to offset life cycle GHG emissions by obtaining GHG emissions reductions outside the coal leasing fuel chain. One potential source for this mitigation would be investments in renewable energy. Another possibility would be carbon capture with biological carbon sinks – i.e., restoration or protection of vegetative communities that naturally absorb significantly quantities of carbon dioxide. BLM should identify federal lands that might serve as significant biological carbon sinks, and make them available for this purpose, and should also consider permitting carbon capture elsewhere, such as through forest or coastal habitat restoration, sustainable land management practices, or other measures. See generally CEQ Climate Guidance at 20.

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Comment Number: 0002467\_Fettus\_20160728-54

Organization I:Natural Resources Defense Council

Commenter I:Geoffrey Fettus

Comment Excerpt Text:

e. Prioritizing renewable energy development

Through the Solar PEIS and other initiatives BLM and other agencies have identified areas suitable for renewable energy development, including solar, wind and geothermal projects. BLM should prioritize these efforts by precluding coal leasing in these areas.

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Comment Number: 0002467\_Fettus\_20160728-55

Organization I:Natural Resources Defense Council

Commenter I:Geoffrey Fettus

Other Sections: I

Comment Excerpt Text:

f. Prohibiting new leasing

Finally, BLM should consider the environmental impacts that would be associated with no longer issuing federal coal leases, which – short of terminating existing leases – would have the greatest impact on GHG emissions reduction. Such an alternative would be eminently reasonable given the state of the science on climate change and the contribution federally leased coal is making to GHG emissions. In short, because immediate and substantial reductions in GHG emissions are critical to reduce or prevent serious impacts from climate change, BLM would be well within its broad discretion to maintain a hiatus on further leasing.

It is also evident that further federal coal leasing will not be necessary to meet the Nation's energy demands. Demand for coal is decreasing, and will continue to decrease, while existing federal coal leases will continue to provide adequate coal supplies for decades. See, e.g., U.S. EIA, *Today in Energy: Clean Power Plan reduces projected coal production in all major U.S. supply regions* (July 8, 2016) (available at <http://www.eia.gov/todayinenergy/detail.cfm?id=26992>)

It also bears emphasizing that the statutory requirement for “maximum economic recovery,” 30 U.S.C. § 201(a)(3)(C), would not be impediment to this or any other alternative under which BLM might prioritize environmental concerns over simply achieving the highest economic returns. To the contrary, Congress was clear that this requirement “does not restrict the authority of the authorized officer to ensure the conservation of the recoverable coal reserves and other resources and to prevent the wasting of coal.” 43 C.F.R. § 3480.0-5(21)(emphasis added).

And regardless of whether BLM were to choose such an alternative, fully analyzing what would happen were leasing to be halted is critical to permit BLM to meaningfully compare the relative GHG reductions that can be reasonably achieved through other alternatives.

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Comment Number: 0002467\_Fettus\_20160728-57

Organization I:Natural Resources Defense Council

Commenter I:Geoffrey Fettus

Other Sections: I

Comment Excerpt Text:

A full assessment of the impacts of the federal coal leasing program going forward requires analysis of the amount of development that might occur. See e.g., BLM & DOE, Final Programmatic Environmental Impact Statement (PEIS) for Solar Development in Six Southwestern States (July 2012) at 2-64; Interagency Reference Guide: Reasonably Foreseeable Development Scenarios and Cumulative Effects Analysis (June 2003). Several key factors are relevant to BLM's preparation of reasonably foreseeable development scenarios. The most important factors include: (1) enforceable greenhouse gas reduction targets and policies; (2) other federal and state policies that impact federal coal production; (3) market factors affecting demand for federal coal both domestically and internationally; (4) financial solvency of coal companies; (5) future production costs for federal coal; and (6) the time frame selected for evaluation.

Each alternative that BLM chooses to evaluate in its PEIS should have a reasonably foreseeable development scenario associated with it. A transparent description of the federal coal resource can provide a critical foundation for each development scenario. This accounting should distinguish between federal coal resources already leased and those not yet leased. Economic recoverability will vary in each scenario based on assumptions about available technology, demand, price including royalty rate and greenhouse gas emissions, and other policies and regulations affecting coal production. Such assumptions and choices should be clearly identified. Moreover, the analysis and modeling used to estimate reasonably foreseeable development from the assumptions/ choices should be explained and made publically available. Once a reasonably foreseeable development scenario is determined for each alternative, BLM can then assess the impacts associated with this level of development.

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Comment Number: 0002471\_Reed\_20160728-1

Organization I:High Country Conservation Advocates

Commenter I:Matt Reed

Comment Excerpt Text:

The past, current and reasonable foreseeable impacts from public lands coal mining in Gunnison County are significant. Gunnison County's experience with public lands coal mining is a microcosm of the bigger issue of federal coal leasing, and our local experience with coal mine pollution and climate change impacts is analogous to other rural communities across the west. The federal coal leasing program, which subsidizes the mining and burning of coal, is out of step with priorities to avoid pollution that disrupts our climate and with the president's commitment to better manage public lands. As such, HCCA urges the BLM to consider and adopt an alternative that ends new coal leasing on public lands.

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Comment Number: 0002471\_Reed\_20160728-2

Organization I:High Country Conservation Advocates

Commenter I:Matt Reed

Other Sections: 6 7.1

Comment Excerpt Text:

Coal Mining and Climate Change are Impacting Gunnison County's Public Lands Gunnison County is home to the Gunnison National Forest, Black Canyon of the Gunnison National Park, and biologically diverse BLM-managed

lands. Ranging in elevation from less than 6,000 feet to mountains over 14,000 feet, it is a rich and varied landscape. Yet both subtle and obvious impacts from climate change are impacting millions of acres of local public lands and straining federal budgets. Warmer winters and hotter summers, the proliferation of the spruce beetle and subsequent die-off of vast swaths of forest, Sudden Aspen Decline, larger and more intense wildfires, and reduced snowpack are just some of the climate change impacts we're seeing on our public lands. In 2005, Colorado's greenhouse emissions were 35 percent higher than they were in 1990. They are projected to grow 81 percent above the 1990 levels by 2020.<sup>7</sup> Current and proposed federal coal leasing and development contributes to Colorado's greenhouse gas emissions and directly impacts public lands and communities. (7) U.S. Dept. of Agriculture, Spruce Beetle Epidemic and Aspen Decline Management Response Final Environmental Impact Statement (February 2016), at 228.

On June 20, President Obama spoke at Yosemite National Park, declaring that climate change is "the biggest challenge we're going to face in protecting this place and places like it."<sup>8</sup> He could just have easily been discussing public lands in western Colorado. President Obama condemned those who pay "lip service" to protecting America's natural areas while making climate change worse:

(8) The White House, Remarks by the President at Sentinel Bridge, Yosemite National Park, Office of the Press Secretary (June 20, 2016), available at <https://www.whitehouse.gov/the-press-office/2016/06/20/remarks-president-sentinel-bridge> (last viewed July 28, 2016).

-Make no mistake, climate change is no longer just a threat, it's already a reality. I was talking to some of the rangers here -- here in Yosemite, meadows are drying out. Bird ranges are shifting farther northward. Alpine mammals like pikas are being forced farther upslope to escape higher temperatures. Yosemite's largest glacier, once a mile wide, is now almost gone. We're also seeing longer, more expensive, more dangerous wildfire seasons -- and fires are raging across the West right now. I was just in New Mexico yesterday, which is dealing with a big wildfire, just like folks here in California and four other states -- all while it's still really early in the season.<sup>9</sup>

(9) Id.

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Comment Number: 0002474\_Trice\_20160728\_EPA-5

Organization I:U.S. Environmental Protection Agency

Commenter I:Jessica Trice

Comment Excerpt Text:

The NOI outlines various components of the current BLM Federal coal program and other associated topics that the Draft PEIS will consider addressing. EPA recommends that the BLM identify the key alternatives that it will be evaluating, and consider the impacts of each of these alternatives, including the key issues identified below.

Identifying principal alternatives, and considering the impacts of each alternative in a rigorous way, will allow for comparison among alternatives and provide useful information to decision makers and the public.

The Draft PEIS will also consider the no-action alternative, which in this instance would be continuing the current Federal coal program without any modifications. EPA recommends that the no-action alternative including an analysis of the potential public health and environmental impacts of the current program, including the list of potential impacts described below, so that decision makers and the public can compare the potential impacts of the alternatives with the impacts of continuing the current program.

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Comment Number: 0002474\_Trice\_20160728\_EPA-6

Organization I:U.S. Environmental Protection Agency

Commenter I:Jessica Trice

Comment Excerpt Text:

Given that changes in economic conditions have led to significant changes in the coal market, EPA recommends

the BLM evaluate alternatives for funding reclamation and post closure activities and consider the role of these in leasing decisions to ensure adverse impacts to environmental resources are mitigated.

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Comment Number: 0002475\_Kustin\_20160728\_CAP-4

Organization I:Center for American Progress

Commenter I:Mary Ellen Kustin

Other Sections: 8.5

Comment Excerpt Text:

We suggest considering a modified version of intertract bidding. Rather than hosting a lease sale with multiple tracts up for simultaneous bid, BLM could allow companies to bid on a fixed amount of mining credits. The winning bidders would gain the right to mine a certain amount of coal, as measured in dollars per BTU or dollars per ton. These bidders would then submit applications for the specific tracts of land on which they would like to mine the coal for which they have rights. This process would allow the BLM to better prioritize the fairest return available to taxpayers while allocating credits up to a pre-set carbon, BTU, or tonnage cap. The allocation of credits could also be weighted based on the companies' proven track records of reclamation, financial stability, and worker safety and compensation.

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Comment Number: 0002480\_Culver\_20160728\_TWS-49

Organization I:The Wilderness Society

Commenter I:Nada Culver

Comment Excerpt Text:

BLM Should Develop a Broad Range of Alternatives That Considers Avoiding Environmental Harm and Supporting Conservation.

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Comment Number: 0002480\_Culver\_20160728\_TWS-50

Organization I:The Wilderness Society

Commenter I:Nada Culver

Other Sections: I

Comment Excerpt Text:

In recent cases, courts have found NEPA violations based on an agency's failure to evaluate a conservation-oriented alternative. See, e.g., *New Mexico v. BLM*, 565 F.3d 683, 710-711 (10th Cir. 2009) (Alternative considering closing Otero Mesa to oil and gas leasing must be considered as part of oil and gas amendment to governing land use plan); *Colorado Environmental Coalition v. Salazar*, 875 F.Supp.2d 1233, 1249-1250 (D.Colo. 2012) (BLM required to consider community alternative protecting Roan Plateau from surface disturbance). Accordingly, the BLM should consider a range of alternatives that includes protecting other resources and values in developing alternatives in the Coal PEIS.

Further, the BLM should fully evaluate a true range of alternatives, rather than setting up alternatives that are at far ends of a spectrum with one "compromise." An agency violates its obligation to consider a reasonable range of alternatives and to take NEPA's hard look at environmental impacts when it only looks at "straw men" for comparison, which the agency has no intention of accepting and are put forth only to lead to the agency's already foregone conclusion. See, e.g., *California v. Block*, 690 F.2d 753 (9th Cir. 1982); *Blue Mountains Diversity Project v. U.S. Forest Service*, 229 F.Supp.2d 1140 (D.Or. 2002); *Oregon Natural Desert Association v. Singleton*, 47 F.Supp.2d 1182 (D.Or. 1998). In the context of the Coal PEIS, there are a variety of issues to be addressed and tools to be considered that merit a range of alternatives that is both broad in terms of options and deep in terms of the level of analysis completed. This will provide the agency with a thorough range of options from which to develop its final PEIS.

Comment Number: 0002480\_Culver\_20160728\_TWS-51

Organization I: The Wilderness Society

Commenter I: Nada Culver

Comment Excerpt Text:

Consequently, we recommend that BLM develop alternatives that evaluate the suite of policies that could be used to meet climate goals, including:

- Incorporating a carbon adder into the royalty rate for coal. While measurement and assessment of impacts from upstream emissions (from exploration and production) may be easier to quantify and downstream emissions (from transportation and combustion) may be more challenging because they are more attenuated, a carbon adder may be useful in one or both contexts by offering a straightforward approach and a mechanism to direct funding directly to states and local communities.
- Developing and applying mitigation measures consistent with the mitigation hierarchy, including compensatory mitigation requirements to offset climate impacts.
- Developing a carbon budget and management framework for all fossil fuels developed on federal lands that includes a targeted budget for coal. The budget should inform decisions made by the agency and could be used as a cap to limit future coal sales.
- Incorporating a range of tools to measure carbon emissions and impacts from those emissions, including those discussed above and others that may be under development.

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Comment Number: 0002480\_Culver\_20160728\_TWS-88

Organization I: The Wilderness Society

Commenter I: Nada Culver

Comment Excerpt Text:

BLM Should Evaluate a Range of Approaches to Meet Other Goals of Reforming the Coal Program.

In addition to a range of alternatives that includes a focus on reducing environmental impacts and methods to meet climate goals, BLM should evaluate a range of alternatives to meet the other goals of the PEIS, including;

- Developing a regional mitigation strategy for the Coal PEIS and/or developing regional mitigation strategies that are focused on high priority areas.
- Amending all affected plans or amending a set of priority plans where ongoing development and risks to communities are highest and setting up an approach for remaining plans.
- Incorporating transition approaches for affected communities that can be a set of common elements or tailored to specific regions or communities, or simply setting out priority areas where transition will be addressed.
  - Evaluating use of royalty rates or mitigation or a combination thereof to address impacts to resources and communities.
  - Eliminating LBA or incorporating LBA into a more proactively managed regional leasing program.
  - Identifying opportunities to incentivize competition, which could include bidding on a set Btu of coal, or determining what role competition can play in other ways.
  - Including a range of tools to ensure a fair return to taxpayers from the federal coal program. At a minimum this means identifying and ensuring fair market value for coal produced. It also includes evaluating the other public benefits that would be gained from contracting the coal program and considering whether and how royalty rates, bonding amounts and reclamation standards should be adjusted.

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Comment Number: 0002480\_Culver\_20160728\_TWS-89

Organization I: The Wilderness Society

Commenter I: Nada Culver

Comment Excerpt Text:

Through this PEIS, the BLM can and should protect natural and cultural values through various management

decisions, including by excluding or limiting certain uses of the public lands. See, 43 U.S.C. § 1712(e). Incorporating a robust range of alternatives to address the significant set of issues impacted by the Coal PEIS will require evaluating opportunities and tools to protect other resources, meet climate goals, and improve the fair return of the program as a whole. Setting out an initial purpose and need and range of alternatives in the scoping report will ensure that both the agency and stakeholders get the most benefit from the information provided through the scoping process. Developing a range of alternatives with sufficient breadth and depth will provide the best opportunities to arrive at the most effective set of reforms for the federal coal program.

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Comment Number: 0002490\_Emrich\_20160728\_CloudPeakEnergy-47

Organization I: Cloud Peak Energy Inc.

Commenter I: Andrew C. Emrich, P.C.

Private Industry

Other Sections: 8.1

Comment Excerpt Text:

BLM should consider the following facts and specific recommendations during its PEIS review:

- The current administration has targeted America's coal industry through a series of unlawful regulatory and administrative actions. Given the administration's unwillingness to conduct a fair and objective review of the federal coal program, BLM should lift the federal coal leasing moratorium pending its completion of the PEIS. Cloud Peak Energy also requests that BLM disavow the biased White House Coal Report.
- Although the Secretary has directed BLM to undertake a review of the federal coal program through the PEIS, BLM and federal courts have recently and consistently rejected the notion that a significant overhaul of the federal coal leasing program is legally warranted.
- In determining the FMV of federal coal, BLM should consider federal coal lessees' significant financial contributions to the American people, which we believe are unparalleled across any industry in the United States and clearly represent more than a "fair share."
- BLM should retain the current royalty rate and other leasing costs in order to ensure the continued leasing and production of federal coal in accordance with the MLA. Any increase in coal leasing costs would discourage federal coal development, while also reducing federal and state revenues from future coal lease payments.
- BLM should carefully and thoroughly evaluate the impacts of federal coal program reform on state and local communities through meaningful collaboration with coal-producing states concerning socioeconomic impacts related to federal coal mining.
- BLM should implement the recommendations in the IG Report and GAO Report and evaluate their effectiveness prior to undertaking an unnecessary overhaul of the entire federal coal program. In addition, BLM should reconvene the Royalty Policy Committee to undertake a detailed review of the complex royalty and revenue changes contemplated by BLM in its review of the federal coal program.
- BLM should retain the existing LBA framework, while considering ways to streamline the permitting process and reduce the economic burdens on federal coal lessees.
- BLM should not raise the royalty rate on federal coal production. Any increase in the royalty rate would result in the decreased FMV for federal coal leases and decreased lease bonus payments to federal and state governments.
- BLM should acknowledge, as it did in 2011, that it may not legally impose climate change fees or other climate-related fees under the MLA or any other federal statute. Any increase in coal leasing or production costs to advance the administration's political climate objectives would be unlawful.
- BLM should consider the adverse socio-economic impacts that would result from increased costs on federal coal production. Any increase in coal leasing costs would discourage the production of federal coal and thereby diminish the significant benefits to state and local communities dependent on federal coal production.
- BLM should consider the important role of federal coal in meeting America's domestic energy needs, including the benefits of low-cost, reliable electricity, independence from foreign energy sources, and jobs for workers in coal and coal-related industries.

Comment Number: 0002491\_Weiskopf\_20160728\_NextGenClimateAmer-49

Organization I:NextGen Climate America

Commenter I:David Weiskopf

Other Sections: I

Comment Excerpt Text:

In *Natural Resources Defense Council v. U.S. Forest Service*, the Forest Service Environmental Impact Statement was ruled inadequate for failing to consider the full range of decision alternatives, specifically an analysis of cumulative impacts.<sup>58</sup> The court stated that an EIS “must include a ‘useful analysis of the cumulative impacts of past, present and future projects’ in sufficient detail to be ‘useful to the decision maker in deciding whether, or how, to alter the program to lessen cumulative impacts.’”<sup>59</sup> Interior needs to determine the cumulative effect of the coal leasing program, including both existing and expected future leases, on domestic carbon emissions. The best way to evaluate these impacts is in the context of an overall carbon budget for the program. The cumulative impacts assessment should also consider how the program impedes the development of low-carbon energy pathways for countries receiving exported PRB coal.

[58 Nat. Res. Def. Council v. U.S. Forest Serv., 421 F.3d 797, 814 (9th Cir. 2005).]

[59 Id. (quoting *Carmel-by-the-Sea*, 123 F.3d at 1160).]

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Comment Number: 0002491\_Weiskopf\_20160728\_NextGenClimateAmer-52

Organization I:NextGen Climate America

Commenter I:David Weiskopf

Other Sections: 7.4 I

Comment Excerpt Text:

Interior should evaluate decision alternatives in a manner that reasonably examines a range of climate-consistent scenarios, and should reject alternatives that assume or result in projected carbon emissions above the level set in the carbon budget. Pursuant to the National Environmental Policy Act, environmental impact statements should “include the environmental impacts of the alternatives including the proposed action, any adverse environmental effects which cannot be avoided should the proposal be implemented . . . and any irreversible or irretrievable commitments of resources which would be involved in the proposal should it be implemented.”<sup>63</sup> Critically, this evaluation of environmental effects includes the question of whether a given action exceeds the limited available carbon budget for the Powder River Basin. Interior should evaluate climate consistency under the three 450 Scenarios discussed in Part I: climate consistency with CCS deployment in 2020, climate consistency with widespread CCS deployment in 2030, and climate consistency with no CCS deployment through 2040, in addition to any other climate-consistent scenarios.

[63 40 C.F.R. § 1502.16 – environmental consequences.]

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Comment Number: 0002491\_Weiskopf\_20160728\_NextGenClimateAmer-54

Organization I:NextGen Climate America

Commenter I:David Weiskopf

Comment Excerpt Text:

Interior should investigate decision alternatives that address carbon constraints in a variety of ways: the addition of a carbon adder, changes to royalty and reclamation requirements, or ending leasing by nomination. In addition to the no action reference scenario, this Comment recommends that Interior reject decision alternatives that do not comport with the restrictions of a carbon budget. If a given decision exceeds the 2°C target threshold, then

Interior should reject the decision alternative, and ultimately select an alternative that most closely approximates consistency with the carbon budget and the eventual end of the federal coal program.

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Comment Number: 0002491\_Weiskopf\_20160728\_NextGenClimateAmer-56

Organization I:NextGen Climate America

Commenter I:David Weiskopf

Other Sections: I

Comment Excerpt Text:

Alternative A is the No Action Alternative under which the BLM continues its lease-by-application program. Secretary Jewell has already acknowledged public concerns with the current program, including concerns about global climate change and the impact of coal production and use. The reasonably foreseeable development can be calculated from this no action alternative, which represents developments that would occur over the life of the plan.<sup>64</sup> Emissions associated with business-as-usual have been compiled by Carbon Tracker, in their analysis of the 2016 Annual Energy Outlook. Under the 2016 Reference Case, annual demand in the Powder River Basin declines to 227 Mt in 2040, and the compounded annual growth rate is - 1.7%. This case exceeds the PRB carbon budget.

[<sup>64</sup> Bureau of Land Management, BLM Handbook, at III-7. Available at [http://www.blm.gov/style/medialib/blm/wo/Information\\_Resources\\_Management/policy/blm\\_handbook.Par.59010.File.dat/H\\_1624\\_1.pdf](http://www.blm.gov/style/medialib/blm/wo/Information_Resources_Management/policy/blm_handbook.Par.59010.File.dat/H_1624_1.pdf)]

Annual Demand (Mt) CAGRs (%)

	2015	2020	2030	2040	2015-20	2020-30	2030-40	2015-40
AEO 2016 Reference Supply	350	339	285	227	-0.6%	-1.7%	-2.2%	-1.7%

Source: Modified Table from Carbon Tracker Report (Referencing IEA, EIA, CTI analysis 2016)

Although the no action alternative is customary in an Environmental Impact Statement, the option is climate-inconsistent and in tension with U.S. law and policy, and it should therefore be rejected.

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Comment Number: 0002491\_Weiskopf\_20160728\_NextGenClimateAmer-57

Organization I:NextGen Climate America

Commenter I:David Weiskopf

Other Sections: 8.3 2 I

Comment Excerpt Text:

Alternative B: Proposed Action (Preferred Alternative) Permanently Extending Lease Moratorium

Under this alternative BLM would permanently implement the coal leasing moratorium, allowing all existing leases to naturally sunset without extension. Under this alternative, assuming deployment from CCS, as noted by Carbon Tracker, “the potential production from existing leases is sufficient to meet projected demand in every year through 2040.”<sup>65</sup> In this scenario, the number of leases are sufficient to meet demand for a range of plausible and high levels of CCS deployment: 450 with CCS deployment in 2020, 450 with widespread CCS deployment in 2030, and 450 with no CCS deployment through 2040.<sup>66</sup>

[<sup>65</sup> Carbon Tracker Report, *supra* note 3 at 12.]

[<sup>66</sup> Resources for the Future, “Putting a Carbon Charge on Federal Coal: Legal and Economic Issues.” Available at <http://www.rff.org/files/sharepoint/WorkImages/Download/RFF-DP-15-13.pdf>; Carbon Tracker Report, *supra* note 3 at 10.]



Comment Number: 0002491\_Weiskopf\_20160728\_NextGenClimateAmer-59

Organization I:NextGen Climate America

Commenter I:David Weiskopf

Other Sections: 2 7.1 8.7 1

Comment Excerpt Text:

Alternative C and D: Social Cost of Carbon and Royalty Rate Increases

This alternative would internalize the cost of carbon based on federal social cost of carbon estimates reflecting the “worldwide incremental damage from climatic change brought about by an additional metric ton of CO<sub>2</sub> emissions.”<sup>67</sup> This price is sensitive to discount rates. A midrange price for the year 2020 is \$46 per ton of CO<sub>2</sub>.<sup>68</sup> Similarly, BLM may consider royalty rates as a means to reform the federal coal program. Increased royalty rates can also include royalty carbon adders, which “directly incorporates a carbon price into the royalty paid on federal coal sales, reflecting its climate costs.”<sup>69</sup> Interior should analyze these decision alternatives and compare them against the criterion of budget compatibility – whether the reformed alternatives are consistent with federal climate change targets, as illustrated by the 450 Scenario.

[67 Id. at 29.]

[68 Alan Krupnick et al., Putting a Carbon Charge on Federal Coal: Legal and Economic Issues, Resources for the Future Discussion Paper at 10574; See U.S. GAO, GAO-14-663, Regulatory Impact Analysis: Development of Social Cost of Carbon Estimates (July 2014).]

[69 Spencer Reed and James H. Stock., Federal Coal Leasing Reform Options: Effects on CO<sub>2</sub> Emissions and Energy Markets – Executive Summary, February 2016 at 2-3.]

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Comment Number: 0002493\_Mead\_20160728\_GovWY-7

Organization I:Office of Governor Matthew H. Mead

Commenter I:MATTHEW H. MEAD

Comment Excerpt Text:

A programmatic document should not narrow or otherwise restrict decision(s) that will be addressed in subsequent NEPA review(s)." Effective Use of Programmatic NEPA Reviews, Council of Environmental Quality, pp. 19-20 (Dec. 18, 2014)

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Comment Number: 0002499\_Nichols20160728-4

Organization I:WildEarth Guardians

Commenter I:Jeremy Nichols

Other Sections: 2 8.1 8.7 8.5 7.1 8.9 11

Comment Excerpt Text:

2. Just Transition Alternative

The “Just Transition Alternative” is meant to both wind down the federal coal program in order to keep fossil fuels in the ground and to ensure an orderly, effective, and fair transition of workers and communities away from coal to more prosperous and sustainable economies. The “Just Transition Alternative” is defined by the following key components:

1. An end to federal coal leasing: Consistent with authorities and discretion under the Mineral Leasing Act, the Just Transition Alternative imposes a permanent pause on the leasing of federal coal. The primary basis for adopting this permanent pause would be to ensure the protection of the public interest and the interests of the United States. Such justification for an end to leasing is clearly supported by the Mineral Leasing Act.

This pause would apply to all competitive leases (including all leases by application, including emergency leases, as

defined by 43 C.F.R. § 3425.1-4) and lease modifications. We further believe there is ample justification for applying a permanent pause to other forms of non-competitive leasing, such as preference right lease applications and lease exchanges. With regards to lease exchanges, the BLM has clear authority to reject exchanges that are not in the “public interest.” 43 C.F.R. § 3435.4(a); see also 43 C.F.R. § 3436.0-2(b) (related to alluvial valley floor exchanges) and 43 C.F.R. § 2200.0-6 (generally related to exchanges). With regards to preference right lease applications, the BLM has the authority to reject such applications where there does not exist “commercial quantities” of coal. 43 C.F.R. § 3430.5-1(a)(1). Given the dismal state of the coal industry and the overwhelming climate costs that coal imposes on society, it would be dubious at best to claim that any commercial quantities of coal exist where there are preference right lease applications. Accordingly, the BLM has the authority to reject such applications. (20)

Furthermore, to ensure an orderly end to federal coal leasing, the BLM and the Department of the Interior should issue a rule or guidance requiring that as land management planning is undertaken pursuant to 43 C.F.R. § 1610, et seq., that all lands within a resource management area that are not currently leased for coal, be made unavailable for leasing. The authority to impose such direction is set forth at 43 C.F.R. § 3420.1-4(e), which gives the BLM broad discretion to “eliminate additional coal deposits from consideration to protect other resource values.” 43 C.F.R. § 3420.1-4(e)(3).

(20) The only preference right lease applications that exist are in northwestern New Mexico, where Arch Coal, which is currently bankrupt, has the rights to acquire 21,000 acres of leases. Legislation was introduced in the U.S. House of Representatives that would allow the Secretary to retire these preference right lease applications. See HR-1820, available online at <https://www.congress.gov/bill/114th-congress/house-bill/1820/text>. If this legislation is passed, there would be no additional preference right lease applications requiring action. We support this legislation and urge the Secretary of the Interior to encourage its passage in the U.S. Senate and adoption into law.

Putting a permanent pause on leasing will not destroy the U.S. economy or otherwise endanger our energy security. As a recent report looking at leasing in the Powder River Basin found, existing leased reserves in the Powder River Basin are sufficient to meet demand and effectively contribute to limiting temperature increases.

(21) This report is instructive as the Powder River Basin is the largest coal producing region in the United States and imposes the greatest influence on energy supply and demand in the nation. If an end to federal leasing can be justified in the Powder River Basin, it can be justified for federal leasing elsewhere in the U.S.

21 See Exhibit 11, Fulton, M., D. Koplow, R. Capalino, and A. Grant, “Enough Already: Meeting 20C PRB Coal Demand Without Lifting the Federal Moratorium,” Report Prepared for Energy Transition Advisors, Earth Track, and Carbon Tracker Initiative (July 2016), available online at <http://www.carbontracker.org/report/enough-already-2c-powder-river-basin-coal-demand-federal-moratorium/>.

2. Increased royalty rates and rentals: Coal is exacting a tremendous toll on our nation, costing our society billions in climate damages, adverse health impacts from air pollution, and water contamination. Royalty rates from production on existing coal leases and rentals on existing leases must be increased to begin to recoup the costs of these externalities, which are currently shouldered by the public.

Although royalty rates are normally imposed through new leasing, we recommend that the Interior Department and BLM incorporate higher royalty rates into existing leases as existing leases are readjusted pursuant to 43 C.F.R. § 3451.1. To accomplish this, we urge the amendment of 43 C.F.R. § 3473.3-2(a)(1) and (2) to incorporate increased royalty rates for both surface and underground mining. As leases are readjusted, these royalty rates must be applied to existing leases pursuant to 43 C.F.R. § 3451.1(a)(2).

Increasing royalty rates has been recommended by the White House as both a means to generate revenue and address the costs of environmental externalities, including carbon costs. (22)

(22) See Exhibit 12, Executive Office of the President of the United States, “The Economics of Coal Leasing on Federal Lands: Ensuring a Fair Return to Taxpayers” (June 2016), available online at [https://www.whitehouse.gov/sites/default/files/page/files/20160622\\_cea\\_coal\\_leasing.pdf](https://www.whitehouse.gov/sites/default/files/page/files/20160622_cea_coal_leasing.pdf).

Furthermore, royalty rate reductions should not be approved. Currently, royalty rate reductions are routinely granted as companies claim poverty or difficulty in mining with little apparent scrutiny as to whether the reductions are justified. In Colorado, for example, BLM officials have approved royalty rate reductions to facilitate

methane venting and most recently proposed to approve a retroactive royalty rate reduction for a mine that was not even producing coal. (23) See Exhibits 13 and 14.

Similarly, we urge Interior and BLM to amend 43 C.F.R. § 3473.3-1(a) to raise rental rates for federal coal leases. Currently, rental rates are set at \$3.00 per acre, a figure that has not been adjusted since 1979, if not earlier. This rental rate not only has failed to be adjusted to account for inflation, but fails to account for the fact that some leases may be of small acreage, yet yield significant amounts of coal. Rentals should reflect the value of the lease, which depends on the amount of coal a lease contains. In accordance with 43 C.F.R. § 3473.3-1(a), any increased rental rate must be applied to any readjusted coal lease.

3. Existing leases that are not producing must be canceled: Where a lease is not meeting continued operation requirements under 43 C.F.R. § 3483.1(a)(2), it is subject to cancellation pursuant to 43 C.F.R. § 3452.2. Where a lease is not meeting continued operation requirements, BLM and the Interior Department should make clear that cancellation of the lease must be pursued. To this end, discretionary avenues for avoiding cancellation should be prohibited. Thus, lease suspensions under 43 C.F.R. § 3483.3 and payment of advanced royalties in lieu of continued operation under 43 C.F.R. § 3483.4 should be barred.

The justification for imposing such direction is very clear. Currently, BLM regularly grants lease suspensions and allows payment of royalties in lieu of continued operation with no assessment of whether such actions are appropriate or in the public interest. BLM appears to be under the impression that lease suspensions or advanced royalties are somehow mandated, and that the agency has no choice but to approve company requests. An egregious example of this is with regards to Arch Coal's Carbon Basin Lease in southern Wyoming (No. WYW-139975). Arch acquired this lease with the aim of developing a mine to fuel a proposed coal to liquids facility. However, this coal to liquids facility has never materialized or even shown any promise of materializing. Most recently, the Wyoming Department of Environmental Quality terminated the permit for the proposed facility. (24) Nevertheless, since 2010, Arch has failed to meet continued operation requirements. The BLM has allowed Arch to maintain its lease, however, by routinely allowing the company to pay advanced royalties in lieu of continued operation. (25) These decisions appear to be pro forma in nature, and do not reflect any consideration as to whether it is appropriate or remotely in the public interest to accept advance royalties in lieu of continued operation.

(24) See Exhibit 15, Wyoming Department of Environmental Quality, "Permit Termination, Medicine Bow Fuel and Power Coal to Liquid Project" (June 27, 2016).

(25) See Exhibit 16.

Furthermore, where an existing lease is not producing, yet is part of a producing logical mining unit, BLM and the Interior Department should use their discretion to modify the boundaries of logical mining units to eliminate the non-producing lease and facilitate its cancellation. BLM has such discretion under 43 C.F.R. § 3478.1.

Cancelling leases that are not producing will serve the goal of preventing any potential future development of existing leases and contribute to an orderly end to the federal coal program.

4. Accounting for carbon costs in coal management: It should be made clear, whether through new rules or guidance, that carbon costs must be analyzed, assessed and disclosed as federal coal management decisions are made. Such decisions are most likely to include mining plan modifications issued pursuant to the Mineral Leasing Act, 30 U.S.C. § 207(c), and the Surface Mining Control and Reclamation Act ("SMCRA"), 30 C.F.R. § 746, and lease readjustments. It is imperative that the BLM and Interior maintain close accounting of the carbon emissions and costs resulting from its coal management actions, to ensure full transparency around these emissions and costs, and to meaningfully act to address these emissions and costs. Particularly given that, pursuant to authorities under the Mineral Leasing Act and SMCRA, the Secretary of the Interior has full discretion to disapprove mining plans authorizing the development of leased federal coal, it is imperative that carbon emissions and costs factor into and influence such decisionmaking.

5. Reclamation must be guaranteed: To ensure an orderly end to the federal coal program, full and final reclamation must be guaranteed within a reasonable timeframe. We urge two regulatory changes to ensure this occurs.

First, Interior should amend regulations at 30 C.F.R. §§ 816.100 and 817.100 to provide clarification and specificity around contemporaneous reclamation. Current rules are vague and fail to ensure that reclamation proceeds in a manner that is as “contemporaneously as possible” with mining in accordance with 30 U.S.C. § 1202(e). These regulations should be amended to make clear that the success of contemporaneous reclamation must be measured based on a comparison of Phase III bond release acres, as defined under 30 C.F.R. § 800.40(c)(3), with disturbed acres and ensure that reclamation proceeds at a 1:1 rate, in other words for every acre disturbed, one acre should be fully reclaimed to meet Phase III bond release standards.

Second, just as current BLM rules require diligent development of federal coal, these rules should also require diligent reclamation. To this end, Interior and BLM should consider rule changes to ensure that nonproducing coal leases are fully reclaimed within two years of failing to meet continued operation requirements and set deadlines for the full reclamation of federal coal leases that are no later than 2035. This reclamation deadline should be established by rule and incorporated into lease terms as leases are readjusted.

Finally, Interior should amend self-bonding regulations at 30 C.F.R. § 800.23, and any other regulations, as appropriate, to prohibit self-bonding whenever publicly owned coal is permitted to be mined. This will ensure that, as coal companies continue their decline, that American public resources are fully protected and fully guaranteed to be cleaned up.

6. Prioritizing transition: Above all, the BLM and Interior must make transition away from coal a foremost goal as the federal coal program comes to an end. To do this, the agencies should not only explicitly commit, to the extent possible, their leadership, resources, and expertise to ensure that workers and communities receive the support and assistance they need to transition to more sustainable and prosperous economies. Among the actions that Interior and BLM can and should undertake to ensure transition:

- Work to secure Congressional authorization to direct increased royalty and rental payments toward worker and community support. Under NEPA, agencies are required to rigorously explore and objectively evaluate reasonable alternatives “not within the jurisdiction of the lead agency.” 40 C.F.R. § 1502.14(c). Here, although BLM and Interior may not be able to direct royalties toward transition support, they can recommend that Congress pass legislation that provides such authorization.
- Establishing an Economic Transition Fund, which would be sustained by an increase in reimbursement fees charged by the Interior Department when processing coal-related applications. Under the Federal Land Policy and Management Act (“FLPMA”), Interior has authority to recover reasonable costs associated with its coal management program and to appropriate and spend such monies. Specifically, FLPMA provides the Secretary of the Interior with authority to “require a deposit of any payments intended to reimburse the United States for reasonable costs with respect to applications,” including coal lease application. See 43 U.S.C. § 1734(b). Such payments are “authorized to be appropriated and made available until expended” by FLPMA. Id. Funds from the Economic Transition Fund should be directed toward transition-oriented initiatives.
- Prioritizing support and assistance to help communities transition. In addition to securing funds and making them available, the Department of the Interior can play a key role in helping direct communities to support, steering resources to support conservation and research projects in or near communities, encouraging renewable energy development on public lands. Such leadership could be conveyed through a Secretarial Order that simply makes it an overarching priority of the Interior Department to advance transition

Overall, the Interior Department and BLM must move to keep our publicly owned coal in the ground. However, keeping coal in the ground should not mean that we turn our backs on the workers and communities that have been dependent on coal for so long. Embracing an alternative that ensures “Just Transition,” in other a fair, compassionate, and orderly transition away from coal, is the most effective way to both protect our climate and help our nation effectively move to more sustainable economies and reliable and affordable means of energy production.

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Comment Number: 0002942\_Harbine-14

Organization I: Earthjustice

Commenter I: Jenny Harbine

Comment Excerpt Text:

We urge BLM to adopt a preferred alternative in the PEIS that will phase out federal coal leasing, meet U.S. energy needs with 100 percent clean sources of energy, and require coal producers with existing leases to take immediate steps to limit and offset emissions of greenhouse gases that are hastening global climate disruption

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Comment Number: 0002942\_Harbine-15

Organization I:Earthjustice

Commenter I:Jenny Harbine

Comment Excerpt Text:

BLM also must consider an alternative that would require coal producers to pay to American taxpayers royalties on federal coal sales that reflect the extraordinary costs of mining and burning coal on our global climate.

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Comment Number: 0002942\_Harbine-24

Organization I:Earthjustice

Commenter I:Jenny Harbine

Other Sections: I

Comment Excerpt Text:

A. The PEIS Should Evaluate an Alternative that Ends Federal Coal Leasing Consistent with this country's overarching climate goals, the PEIS should identify as its preferred alternative an end to federal coal leasing, phased in by declining to issue new leases and by not renewing or modifying existing leases. Such an action is both authorized and achievable. BLM has the discretion to end federal coal leasing. The FCLAA provides that the Secretary "is authorized" to identify tracts for leasing and thereafter "shall, in his discretion ... from time to time, offer such lands for leasing ...." 30 U.S.C. § 201; see also *WildEarth Guardians v. Salazar*, 859 F. Supp. 2d 83, 87 (D.D.C. 2012) ("Under the [FLCAA], the Secretary is permitted to lease public lands for coal mining operations after conducting a competitive bidding process" (emphasis added)). Further, the Secretary has discretion to reject lease applications on the grounds that "leasing of the lands covered by the application, for environmental or other sufficient reasons, would be contrary to the public interest." 43 C.F.R. § 3425.1-8(a)(3). Here, the public interest—as will be reflected in BLM's thorough analysis in the PEIS—overwhelmingly supports an end to federal coal leasing. BLM cannot reject this alternative on grounds that creating an electric generating sector in the U.S. that relies on 100 percent clean energy is infeasible. As explained in a recent paper by Environment America "at least seven detailed studies of clean energy systems – conducted by academics, government agencies and nonprofit organizations– suggest that we have the tools we need to make the transition."<sup>300</sup> For many years, scholars explained that the primary barriers achieving a 100 percent clean energy economy were political rather than technological. In 2010, the peer-reviewed journal *Energy Policy* published an article analyzing the feasibility of providing world-wide energy for electric power, transportation, and heating and cooling exclusively from wind, water, and sunlight.<sup>301</sup> In particular, that paper analyzed current and future energy demand; availability of wind, water and sunlight energy resources; the number of facilities then in use and needed to harness sufficient wind, water, and sunlight energy; and the variability of renewable resources; the economics of massive renewable deployment; and material requirements; and policy implications. The paper concluded that a combination of wind turbines, concentrated solar<sup>300</sup> Environment America Research & Policy Center, *WE HAVE THE POWER: 100% RENEWABLE ENERGY FOR A CLEAN, THRIVING AMERICA*, ES-7 (Spring 2016), attached as Ex. 59. <sup>301</sup> Mark Z. Jacobson & Mark A. Delucchi, *Providing All Global Energy with Wind, Water, and Solar Power*, 39 *ENERGY POLICY* 1154–1169 (2011), attached as Ex. 60. 78 plants, PV solar plants, rooftop PV solar systems, geothermal plants, hydro-electric power plants, wave devices, and tidal turbines could supply all the energy the world requires by 2030.<sup>302</sup> Further, the study concludes that doing so would reduce world power demand by 30 percent, require only 0.59 percent more of the world's land for energy production, and entail similar energy costs. <sup>303</sup> More recently, the Intergovernmental Panel on Climate Change ("IPCC") and others have explained that in order to achieve the necessary carbon reductions to keep global temperatures within 2 degrees Celsius of pre-industrial times, the global electricity sector must be decarbonized by 2050.<sup>304</sup>

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Comment Number: 0002942\_Harbine-25

Organization I:Earthjustice

Commenter I:Jenny Harbine

Other Sections: I

Comment Excerpt Text:

BLM Should Evaluate an Alternative that Forces Coal Companies to Internalize the Climate Costs of Mining and Combusting Federal Coal In any alternative that allows for continued coal leasing, the PEIS should ensure that the extraordinary costs of mining and burning coal on our global climate are reflected in the price of federal coal by, at a minimum, incorporating into royalties the social costs of carbon and methane. In addition to identifying the value that would accurately reflect those costs, BLM should analyze whether such an alternative would sufficiently discourage federal coal mining to meet U.S. carbon-reduction targets. In April 2016, researches at Harvard University and Vulcan Philanthropies released a paper that utilized the Integrated Planning Model to analyze the market and climate impacts of incorporating a “carbon adder” into federal coal royalties. 305 Their findings indicated that if the Clean Power Plan (“CPP”) is either struck down or otherwise not implemented, incorporating the Interagency Working Group’s social cost of carbon into federal coal royalty rates could achieve roughly three-quarters of the emissions reductions that EPA anticipates under the Clean Power Plan. The analysis also finds that in a scenario where the CPP is upheld by the courts and ultimately implemented, incorporating the social cost of carbon into federal coal royalties would result in a slight up-tick in mining non-federal coal reserves, but this substitution would be tempered by a shift to electricity generation by gas and renewables. 306 Under both a Clean Power Plan and non-Clean Power Plan Scenario, the modeling conducted as part of the study revealed that adding the social cost of carbon into federal coal royalties would increase revenue to the federal government and states even while reducing the total amount of coal mined and 302 Id. at 1154. 303 Id. 304 Lindee Wong, David de Jager, & Pieter van Breevoort, *The Incompatibility of High-Efficient Coal Technology with 2 Degrees Scenarios*, ECOFYS I (April 2016), attached as Ex. 61. 305 Todd Gerarden and James Stock, *FEDERAL COAL PROGRAM REFORM, THE CLEAN POWER PLAN, AND THE INTERACTION OF UPSTREAM AND DOWNSTREAM CLIMATE POLICIES* (April 2016), attached as Ex. 62. 306 Id. at 3. 79 GHGs emitted from the electric sector. 307 Further, as the White House Council of Economic Advisors recognized, even if carbon dioxide emissions from coal combustion are completely internalized through downstream regulation such as the CPP (which remains to be seen), BLM may achieve additional emissions-reductions benefits by requiring coal producers to internalize the climate costs of coal-bed methane emissions that are released during mining.

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Comment Number: 0002942\_Harbine-3

Organization I:Earthjustice

Commenter I:Jenny Harbine

Other Sections: I

Comment Excerpt Text:

III. THE PEIS SHOULD EVALUATE A RANGE OF REASONABLE ALTERNATIVES BLM must examine reasonable alternatives that meet the nation’s energy needs while avoiding the extreme social and environmental costs of federal coal leasing. NEPA’s implementing regulations require BLM to “[r]igorously explore and objectively evaluate all reasonable alternatives” to its proposed actions. 40 C.F.R. § 1502.14(a). “The alternatives section is ‘the heart of the environmental impact statement.’” *City of Sausalito v. O’Neill*, 386 F.3d 1186, 1207 (9th Cir. 2004) (quoting 40 C.F.R. § 1502.14). The reasonableness of alternatives is governed by the agency’s statement of the “purpose and need” for the action. See *Wyoming v. U.S. Dep’t of Agric.*, 661 F.3d 1209, 1244 (10th Cir. 2011) (alternatives need not be considered that do not meet purpose and need for project); *Pac. Coast Fed’n of Fishermen’s Associations v. Blank*, 693 F.3d 1084, 1100 (9th Cir. 2012) (same). Here, the purpose and need of the PEIS is to “consider whether and how the [federal coal leasing] may be improved and modernized to foster the orderly development of BLM administered coal on Federal lands in a manner that gives proper consideration to the impact of that development on important stewardship values, while also ensuring a

fair return to the American public.”<sup>299</sup> As discussed, those stewardship values include, most prominently for <sup>296</sup> See letter from E. Zukoski, Earthjustice to R. Welch, Colorado State Director, BLM (Feb. 25, 2016) at 1, attached as Ex. 57. <sup>297</sup> Id. at 2-3. <sup>298</sup> See letter from E. Zukoski, Earthjustice to R. Welch, Colorado State Director, BLM (Mar. 16, 2016) at 1, attached as Ex. 58. <sup>299</sup> Secretarial Order No. 3338, at 1. <sup>77</sup> purposes of the PEIS, our nation’s commitments to dramatically reduce greenhouse gas emissions. While these comments suggest numerous opportunities to reduce greenhouse gas emissions attributable to burning federal coal, BLM must examine, at a minimum, two overarching alternatives: first, an alternative that ends federal coal leasing; and second, an alternative that requires coal companies to internalize the climate costs of mining and combusting federal coal.

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Comment Number: 0020052-12

Organization I: Tri-State Generation and Transmission Association, Inc.

Commenter I: Barbara A. Walz

Comment Excerpt Text:

The idea that access to federal coal should be significantly reduced - or even eliminated - would be disastrous and should not be considered as a reasonable alternative in the PEIS. The "Purpose and Need" of the federal coal program is to satisfy, in part, the requirements of the MLA and MMPA. Curtailment or elimination of federal coal outside the confines of these laws is unwarranted and inappropriate.

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Comment Number: 0020052-6

Organization I: Tri-State Generation and Transmission Association, Inc.

Commenter I: Barbara A. Walz

Comment Excerpt Text:

Tri-State encourages BLM to include reasonable alternatives in the PEIS that maximize federal coal use while maintaining the current royalty rate or proposing ways to reduce it. The federal coal program is mature, well established, should be more efficient and should be able to reduce the amount of funding necessary to implement it.

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Comment Number: 0020056-13

Organization I: Bowie Resource Partners, LLC

Commenter I: Gene DiClaudio

Comment Excerpt Text:

Order 3338 states that the PEIS will examine several policies that can only be modified by congressional action. These include potential changes in federal royalty rates and the potential imposition of carbon-related fees or taxes. The PEIS should expressly identify which alternatives and actions it considers will require legislative authorization.

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Comment Number: 002501\_Ring\_20160728-1

Organization I: Climate911

Commenter I: Wendy Ring

Other Sections: 8.1

Comment Excerpt Text:

From our perspective as guardians of the nation's health, the glaring deficit in the BLM's proposal is the failure to consider ending coal leasing on public lands as a legitimate alternative. Greenhouse gas emissions from coal combustion undermine US climate commitments and threaten the world's ability to stay within a 2C carbon

budget. There is no reason to subject public lands and the US population to further risk when we have enough coal through existing leases to meet our needs as we transition to clean sources of energy.

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Comment Number: 002501\_Ring\_20160728-6

Organization I: Climate911

Commenter I: Wendy Ring

Comment Excerpt Text:

Continuing the current moratorium or making it permanent is the true “no action” scenario.

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Comment Number: 0000861\_Ronremoeller-1

Organization I: Sierra Club, Ohio Chapter

Commenter I: Brian Ronremoeller

Comment Excerpt Text:

we'd just like to urge BLM to consider the alternative, to end the federal coal leasing program because we can never fully account for all the public health and environmental impacts coal leasing. In Ohio we estimate that about one out of every 100,000 people die from coal-powered pollution in our state. No number above zero is an acceptable number of deaths from coal pollution. No number above zero is an acceptable number of asthma attacks of our children in our state.

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Comment Number: 0000869\_Kotcon-1

Organization I: Sierra Club

Commenter I: James Kotcon

Comment Excerpt Text:

I am here today to urge that you look very seriously at the no leasing alternative. I realize that from an agency whose mission is to issue leases that's going to be a very heavy lift, and I'd like to give you some reasons why. We have heard a lot about the problems with the leasing program, the need to reform reclamation bonding, the need to end the self-bonding, the need to consider and incorporate the social cost of carbon in the leasing costs, a lot of the adverse impacts on mining communities and so on. And I think you need to consider each of those. EPA asks that you consider both the direct impacts of your alternatives as well as the indirect and cumulative impacts. Much of what we have heard today is testimony from the eastern United States really looks as evidence of the indirect and cumulative impacts of leasing from western states coal. It will be easy to disregard some of this testimony today as not relevant to the western states leasing programs, and I'm urging you to resist that temptation to disregard that and instead look at the impacts on eastern states of the leasing programs in western United States.

For example, about 40 percent of the coal burned in coal-fired power plants in West Virginia is actually western coal. So the air pollution impacts of that western coal, the mercury in the streams, the impacts to fisheries, is an indirect impact of your leasing program, and it's happening in my home State of West Virginia. Please consider that in your analysis.

There are indirect impacts of burning western coals on eastern coal communities, impacts to workers. Right now a number of the major mining companies in West Virginia are bankrupt and don't have the money for reclamation. It is important that you get an estimate of the true cost of coal and that you fully consider those in your analysis.

#### **ISSUE I.4 - OTHER GENERAL**

Total Number of Submissions: 60

Total Number of Comments: 151

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Comment Number: 00000132\_Dinsmoor\_20160517-2

Commenter I: Phil Dinsmoor

Comment Excerpt Text:

I encourage the BLM, in the course of reviewing the valuation that should have been charged, to try and focus their activities or to focus on the leasing process and not all those other extraneous processes. All of that said, the leasing process, as I mentioned earlier, is but an early step in a multi-stage process.

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Comment Number: 00000139\_Craft\_20160517-3

Organization I: Wyoming Coal Company

Commenter I: Lecia Craft

Comment Excerpt Text:

The need to reevaluate the current coal leasing process is unfounded. Prior to BLM leasing any coal, an extensive NEPA evaluation is already required including the evaluation of greenhouse gases. Even once this is completed, additional state and federal permits must be acquired before the first shovel of dirt can be moved

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Comment Number: 0000073\_Reavey\_20160517-1

Commenter I: Richard Reavey

Comment Excerpt Text:

The Mineral Leasing Act, which is a very good data source for you, should you care to read it, is the law under which the federal coal leasing program operates. It directs and requires the Secretary to develop guidelines and regulations for the program that -- and I quote -- "ensure the maximum economic recovery of coal." The coal leasing moratorium violates that requirement.

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Comment Number: 0000082\_Marshall\_20160517-1

Organization I: Cloud Peak Energy

Commenter I: Colin Marshall

Comment Excerpt Text:

As the federal coal leasing program is reviewed, it is important that the statutory authority of the Mineral Leasing Act constantly be referred to along with the directions of the Secretary of the Interior, and all the guidelines and regulations for the federal coal leasing program must ensure the maximum economic recovery of coal. The Secretary is instructed by law to do this, designing regulations to keep federal coal in the ground would be a violation of the law.

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Comment Number: 0000082\_Marshall\_20160517-2

Organization I: Cloud Peak Energy

Commenter I: Colin Marshall

Comment Excerpt Text:

It is Congress, not the Secretary that is empowered to tax. Any efforts to impose new carbon taxes as such on carbon or, as the Secretary suggests, to reflect the administration's climate objectives in royalty and leasing rate hikes would be illegal.

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Comment Number: 0000521\_Lummis\_US Rep\_20160517-1

Organization I: United States Congress

Commenter I: Cynthia Lummis

Comment Excerpt Text:

At a minimum, any serious review of the federal coal program should involve far more meaningful consultation with states, tribes, and industry.

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Comment Number: 0000604-1

Commenter I: Richard Reavey

Other Sections: 7.1

Comment Excerpt Text:

If the administration wants to impose new taxes on coal mined on federal lands, it must seek legislation authorizing such new taxes from Congress. The Secretary has no statutory authority to impose a "social cost of carbon" via royalty or leasing rates. She cannot impose a climate change tax. If she wishes the federal coal program to "reflect the administration's climate objectives", she must obtain Congress' authorization to do so.

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Comment Number: 0000604-2

Commenter I: Richard Reavey

Comment Excerpt Text:

I want to state my objection to this hearing and to Secretarial Order Number 3338 establishing the Programmatic EIS for federal coal leasing as violations of the Mineral Leasing Act, the sole authority to the Secretary of Interior in operating the federal coal leasing program. The Mineral Leasing Act requires that any regulations developed by the Secretary for the federal coal leasing program ensure, and I quote, "the maximum economic recovery of coal".

Comprehensive reviews of the federal coal leasing program have been undertaken in recent years by the Inspector General of the Department of the Interior and by the Government Accountability Office. Neither of these comprehensive reviews called for or recommended a Programmatic EIS. Neither of these comprehensive reviews called for or recommended increasing royalty rates or leasing rates. Further, the Secretary of the Interior has failed to conclusively report on progress, or lack thereof, made against the reforms that these reports did recommend

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Comment Number: 0000752\_Lempke\_Tri-State\_20160623-4

Organization I: Tri-State Generation and Transmission Association, Inc

Commenter I: Doug Lempke

Comment Excerpt Text:

The idea that access to federal coal should be significantly reduced — or even eliminated — would be disastrous and should not be considered as a reasonable alternative in the PEIS. The "Purpose and Need" of the federal coal program is to satisfy, in part, the requirements of the Mineral Leasing Act. Curtailment or elimination of federal coal outside the confines of the Mineral Leasing Act is unwarranted, inappropriate and against the law!

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Comment Number: 0000772\_Nielsen\_20160623-4

Commenter I: Nicholas Nielsen

Comment Excerpt Text:

In the announcement of this EIS it proves this by saying that the "we need to alter the program so that it is consistent with the Nations Goals". What are these goals based on and how are they defined?

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Comment Number: 0000826-2

Organization I: Wyoming State Senate

Commenter I: Stan Cooper

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**Comment Excerpt Text:**

And yet this appears by most measures to be a mostly one sided partnership with the state and local governments losing more ground to the Federal Government in the way of public lands management decisions every year. There is this feeling in the West that the BLM and the Administration have little if any sympathy for their local partners.

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Comment Number: 0001111\_VON FLATERN\_WY state senate\_20160621-3

Organization I: Wyoming State Senate

Commenter I: Michael Von Flatern

**Comment Excerpt Text:**

The fact is the 2013 reports by the Government Accountability Office and the Department of the Interior Inspector General contained minor recommendations for improvements to Federal Coal Program. And the BLM has already acted on reports, the report's recommendations to improve the management of the Federal Coal Program. Today the agency has published an updated coal evaluation manual and handbook as well as seven instruction memorandums to its field offices in response to that report.

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Comment Number: 0002013\_Corkran\_20160623-1

Commenter I: John Corkran

**Comment Excerpt Text:**

Coal mining & mining in general can be done safely and with better environmental quality considerations if everyone payed attention to the laws & regulations that exist today ... MSHA came into being for a reason ... too many mine operators run lethal operations ... laws and regulations unenforced like they are today ... it's a morally bankrupt scenario in far to many places on this planet that we all share.

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Comment Number: 0002100\_OHair\_20160613-1

Commenter I: Todd O'Hair

**Comment Excerpt Text:**

Neither the Government Accountability Office or the Inspector General offered recommendations that included a moratorium or consideration of royalty rate increases. Both entities conducted extensive review of the coal lease program and royalty program and still the Secretary has chosen to undertake an effort that is well beyond the recommendations of the GAO and the IG. The PEIS should note specifically that no independent review of the coal program has recommended efforts under consideration by the PEIS.

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Comment Number: 0002100\_OHair\_20160613-5

Commenter I: Todd O'Hair

**Comment Excerpt Text:**

The PEIS should be held to a strict three year time line to avoid further delays and further layoffs.

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Comment Number: 0002144\_Kot\_20160519\_SweetwtrCnty-5

Organization I: Sweetwater County, Wyoming

Commenter I: Wally Johnson

**Comment Excerpt Text:**

please carefully consider the potential economic impacts that the Coal PEIS may have on individuals, families, all levels of local government and our state.

Comment Number: 0002145\_Buchanan\_20160513\_IEEFA-14  
Organization I: Institute for Energy Economics and Financial Analysis  
Commenter I: Tom Sanzillo  
Other Sections: 2

Comment Excerpt Text:

We also would recommend that Congress work with the Government Accountability Office to establish the coal lease program as “High Risk” and to conduct oversight studies for at least the next five years accordingly.

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Comment Number: 0002152\_Bruse\_20160518-10

Commenter I: Debbie Bruse

Other Sections: 8.1

Comment Excerpt Text:

Impacts to water, soils, vegetation and wildlife are short duration in the whole scheme of things and are already managed by state and federal agencies, including:

- Wyoming DEQ – Land Quality Division, Air Quality Division, Water Quality Division, and Solid & Hazardous Waste Division, Industrial Siting
- Wyoming State Engineers Office – groundwater and surface water use permitting
- BATF – explosives use licensing and inspections
- MSHA – safety and health and inspections
- NRC – nuclear sources related to coal analyzers
- ACOE – any and all wetland impacts
- EPA – drinking water, wastes
- BLM – coal leasing, resource recovery and protection, and inspections
- USFWS – migratory birds of high federal interest

Just to name a few, and BLMs review of addressing impacts to water, soil, vegetation and wildlife, during the PEIS review, are absolutely not necessary.

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Comment Number: 0002152\_Bruse\_20160518-14

Commenter I: Debbie Bruse

Comment Excerpt Text:

A review of energy needs is also not needed during the PEIS review. Current and pending regulations and requirements to meet the climate change commitments are already in place and will dictate energy needs through market conditions.

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Comment Number: 0002152\_Bruse\_20160518-17

Commenter I: Debbie Bruse

Comment Excerpt Text:

A formal comprehensive review of the federal coal program is not necessary and a waste of taxpayer money.

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Comment Number: 0002152\_Bruse\_20160518-19

Commenter I: Debbie Bruse

Comment Excerpt Text:

A series of good government reform to improve transparency and program administration is certainly always a good idea, as long as the reform includes streamlining the process.

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Comment Number: 0002157\_Madder\_20160517\_EnergyPolicyNetwork-I

Organization I:Energy Policy Network

Commenter I:Kelly Mader

Comment Excerpt Text:

EPN agrees that the impact on the projected fuel mix and cost of electricity are relevant considerations in a Programmatic EIS on the Federal coal program. EPN urges BLM to ensure that this analysis is comprehensive and not one-sided, as a one-sided evaluation of these issues will undoubtedly be urged by scores of comments driven by a spoken or unspoken desire to eradicate coal from the resource mix in every state and organized electricity market in the country. The BLM must remain cognizant of that fact that emissions from the combustion of coal are comprehensively and strictly regulated through air quality rules set forth by the Environmental Protection Agency (EPA) and state air regulators under the Clean Air Act. These include, without limitation, the Regional Haze Rule and Mercury Air and Toxics Standards, and may one day include the carbon emission limits imposed by the Clean Power Plan.

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Comment Number: 0002173\_Quick\_20160622-8

Commenter I:Kendra Quick

Other Sections: I

Comment Excerpt Text:

The facts are that the 2013 Reports by the Government Accountability Office and the Department of the Interior Inspector General contained minor recommendations for improvements to the Federal Coal Program. Both of these reports confirmed substantial benefits to American taxpayers. While they offered modest recommendations for improvements, neither report called for wholesale revisions to the program nor do they address in any way royalty rates. The BLM has already acted on the reports' recommendations to improve the management of the Federal Coal Program. To date, the agency has published an Updated Coal Evaluation manual and handbook as well as seven instruction memoranda to its field offices in response to the modest suggestions by the IG and GAO.

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Comment Number: 0002190\_Pfeiffer\_20160627-I

Commenter I:Ben Pfeiffer

Comment Excerpt Text:

BLM's analysis must include:

- increased illness and mortality due to mining pollution
- climate change from greenhouse gas emissions
- particulates causing air pollution
- loss of biodiversity
- cost to taxpayers of environmental monitoring and cleanup
- decreased property values
- infrastructure damages from mudslides resulting from mountaintop removal
- infrastructure damage from mine blasting
- impacts of acid rain resulting from coal combustion byproducts;
- water pollution; and
- federal, state, and local subsidies to the coal industry.

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Comment Number: 0002282\_Bradford\_20160719-4

Commenter I:David Bradford

Comment Excerpt Text:

Other impacts should also include the impacts of increased cost of electricity if coal mining declines and the cost of generating electricity increases. Currently, coal and natural gas compete for the electricity market share. If less

coal is offered for leasing, what impact will this have on the cost of electricity? If the cost of electricity rises due to decreased availability of coal what impacts will this have on the cost of living and the health and welfare of Americans? These impacts need also to be considered.

Current coal lease requirements on the Grand Mesa, Uncompahgre and Gunnison National Forests provide adequate protections for water resources, wildlife, threatened and endangered species and other land uses. These issues are addressed at the time of lease issuance and I believe are the appropriate level for these evaluations to be made. A national PEIS is not the appropriate place to make these determinations, other than to direct that these items be considered at the project level.

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Comment Number: 0002286\_Watts\_20160719-2

Commenter I: Howard Watts

Comment Excerpt Text:

the costs to pristine environments, health, air quality, and climate are factored in

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Comment Number: 0002309\_Monseu\_20160721\_AmericanCoalCouncil-14

Organization I: American Coal Council

Commenter I: Betsy Monseu

Comment Excerpt Text:

As to those who continue to suggest that climate change must be addressed, that suggestion typically has little or nothing to do with how comprehensive the mine permitting process is. Rather, the goal is to keep coal in the ground. This is completely in conflict with the Mineral Leasing Act and BLM's charge to promote mining and provide for the maximum economic recovery for coal mined on federal lands. In any event, injecting environmental policy into this process is clear perversion of BLM's statutory obligation to promote coal use and maximize leasing revenues for taxpayers.

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Comment Number: 0002309\_Monseu\_20160721\_AmericanCoalCouncil-6

Organization I: American Coal Council

Commenter I: Betsy Monseu

Comment Excerpt Text:

the Mineral Leasing Act ("MLA") obligates BLM to promote mining of coal and provide for the maximum economic recovery for coal mined on federal lands. This is paramount as many of the reforms BLM is considering could be in direct conflict with BLM's obligations as a steward of federally owned natural resources.

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Comment Number: 0002329\_Segger\_20160724\_CambellCntyWY-5

Organization I: County and Prosecuting Attorney's Office, Campbell County, Wyoming

Commenter I: Carol Seeger

Comment Excerpt Text:

Another issue identified that will be considered in the federal coal leasing environmental impact assessment is climate change. Campbell County respectfully requests that dollars be invested in exploring cleaner ways to develop and use this valuable resource rather than continued assessments, studies and reports on the federal coal leasing program.

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Comment Number: 0002443\_Koontz\_20160727\_BowieResources-11

Organization I: Bowie Resource Partners, LLC

Commenter I: Gene DiClaudio

Other Sections: 2

Comment Excerpt Text:

There are several potential options to streamline and speed leasing. First, the PEIS itself can be a valuable tool. An organized and practical discussion of national environmental economic conditions and trends will facilitate tiering by BLM state offices in individual leasing decisions, facilitating discussion of cumulative and indirect impacts and reducing duplication of effort. The PEIS should be expressly designed for tiering, both by BLM in leasing and OSMRE in mine planning.

Similarly, the Secretary should expressly adopt the cumulative impact principles articulated by the D.C. Circuit in their recent decisions *Sierra Club v. FERC*, D.C. Cir. No. 14-1275 (June 28, 2016) and *EarthReports, Inc., v. FERC*, D.C. Cir. No. 15-1127 (July 15, 2016), in which the Court recognized that cumulative impact analyses are to be focused on the same geographic area as the proposed action. The PEIS itself would thus have a broad cumulative impact analysis, but individual leasing decisions should have substantially more focused cumulative impact analyses than those urged by environmental activists.

Third, the PEIS should examine more express and firm deadlines for the various steps in lease processing, including NEPA proceedings. Presently, the only deadlines are various statutory and regulatory minimums. There are very few maximums. Consequently leasing processes can drift for months or years, only coming to a head when the applicant is approaching a supply crisis. Firmer regulatory timelines will not only greatly facilitate planning by the mine operators, they will assist the Department of Interior ("Department") in securing necessary appropriations to adequately staff the BLM and other offices to meet those deadlines. At this stage of scoping Bowie will not propose any specific timelines for any particular steps in leasing, but simply requests that this be an express subject of analysis, discussion, and recommendation in the PEIS.

Comment Number: 0002443\_Koontz\_20160727\_BowieResources-7

Organization I: Bowie Resource Partners, LLC

Commenter I: Gene DiClaudio

Comment Excerpt Text:

The PEIS Must Examine How Any Proposed Leasing Reforms are Reconcilable with the Federal Coal Leasing Act Amendments of 1976 ("FCLAA") and the Lessons Learned from the Failed Experiment with Regional Coal Leasing in the Late 1970s and Early 1980s.

Comment Number: 0002443\_Koontz\_20160727\_BowieResources-9

Organization I: Bowie Resource Partners, LLC

Commenter I: Gene DiClaudio

Comment Excerpt Text:

As noted in Order 3338, a current area of controversy is the degree to which the BLM should analyze the effect of leasing decisions on coal combustion downstream. Bowie does not object to the consideration of the impact of federal coal leasing in the aggregate on net coal combustion, but any such analysis must consider the interaction of federal coal leasing with other law and market constraints. The most important of these is EPA's Clean Power Plan ("CPP"). Should the CPP survive judicial review, national coal consumption, and derivatively federal coal production, will be capped. As a result, leasing policy will have little effect on aggregate emissions, and extensive analysis of combustion effects will serve no policy purpose.

Moreover, even if the CPP is overturned, leasing policy is only a small driver of net coal combustion. The combined effect of MATS, CSAPR, regional haze, and NAAQS revisions has been to render fuel costs a continually declining share of consumer operating costs, and to complicate any cause-and-effect relationship between federal coal leasing policy and net coal combustion. As a result, whether the CPP is upheld or not, any PEIS must evaluate net coal combustion effects of various leasing policy proposals with appropriate sensitivity to the highly regulated character of the coal consumer market.

Comment Number: 0002448\_FoleyHein\_20160727-5

Organization I: Institute for Policy Integrity

Commenter I: Jayni Foley Hein

Other Sections: 6

Comment Excerpt Text:

Substitution Analysis and Carbon Budgeting

The third panel centered on substitution analysis and carbon budgeting.

Nathaniel Shoaff (Staff Attorney, Sierra Club) discussed BLM's past substitution analysis and recommendations for approaching substitution in the programmatic review. Shoaff explained that while there is an idea that coal is a global commodity and that consumers will pay to have coal come out of one spot if it does not come out of another; this assumption of "perfect substitution" should be refuted. The Sierra Club takes the position that one cannot make a "reasoned choice among alternatives," as required by the National Environmental Policy Act (NEPA), until the greenhouse gas emission differences are known. This cannot be done without proper substitution analysis. The Sierra Club hopes that through the PEIS, there will be a determination as to whether a federal coal leasing program is consistent with the President's climate objectives and the climate agreements (China, Paris, etc.) that we have already made. All of the emissions from coal production, transportation, and combustion should be quantified in the PEIS; this is a simple calculation. It is harder to analyze how certain policies change the energy market; however, this can and should be done using available tools and models, and is called for in the Secretarial Order itself. The agency should explain its historical views on substitution and why it is changing them, and make its review as transparent and replicable as possible.

Jason Schwartz (Legal Director, Institute for Policy Integrity) discussed how other federal agencies have conducted substitution analysis and provided recommendations for BLM. He suggested that the first place BLM could look was within Interior itself, as its offshore leasing program has an extensive 35 years' worth of experience doing energy substitution analyses. Schwartz explained that before 1982, BLM actually prepared Interior's EIS for offshore leasing, and that today BOEM does much more qualitative and quantitative substitution analysis than BLM does. BLM can learn from its sister agencies'—including BOEM, FERC, the Surface Transportation Board, the U.S. State Department, and EPA—experiences with substitution analyses and should do so by using an economic model that has been used and adopted by other agencies. BOEM's Market Sim, the U.S. Energy Information Administration's NEMS, and ICF International's IPM are all available models that have different benefits and drawbacks. Policy Integrity recommends that environmental impact statements quantify and monetize the full upstream and downstream emission consequences of proposed leasing actions and energy substitute scenarios. This approach is consistent with White House Council on Environmental Quality (CEQ) guidance and is necessary to fulfill NEPA's goals of providing policymakers and the public with information in a way that allows full comparison between alternatives.

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Comment Number: 0002448\_FoleyHein\_20160727-9

Organization I: Institute for Policy Integrity

Commenter I: Jayni Foley Hein

Comment Excerpt Text:

Hayes stated that reforming the federal coal program is important for six reasons:

- (1) the federal government's efforts to earn a fair return have a checkered history outlined in many reports and investigations;
- (2) the status quo in terms of federal policy and valuation is not where it needs to be— federal coal is discounted even compared to regional coal sold by states and private actors, much less the national market;
- (3) we have a new appreciation today of key externality costs (and greenhouse gas emissions in particular) that historically have not been accounted for in the program but are now coming to the forefront. The federal government's coal leasing decisions arguably affect 10 percent of the Nation's overall greenhouse gas emissions; the federal government is both a major player and significant cost center for the impacts associated with climate change, like wildfires, droughts, and reduced snowpack;
- (4) we have a new appreciation that the definition of "fair market value" should mean more than the bidder's



market price. The Outer Continental Shelf Lands Act takes a reasonable approach, and we ought to be considering the totality of a resources' value when deciding whether to lease federal natural resources; (5) Congress recognized that there is a cost to providing federal resources to private parties. In 1964, it created the Land and Water Conservation Fund, paid for by oil and gas royalties; and (6) Secretary Jewell has taken a leadership role on reform, with a comprehensive effort underway right now through the Programmatic review.

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Comment Number: 0002449\_Lyon\_20160727\_NWF-19

Organization I: National Wildlife Federation Action Fund

Commenter I: Jim Lyon

Comment Excerpt Text:

Integration with other critical agencies, particularly OSM. Many of the failings the federal coal leasing program cannot be fully addressed without cooperation with and action from other agencies, particularly OSM. We urge BLM to make this reform process a cross-agency effort that comprehensively addresses all of the aspects of federal coal mining.

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Comment Number: 0002449\_Lyon\_20160727\_NWF-20

Organization I: National Wildlife Federation Action Fund

Commenter I: Jim Lyon

Comment Excerpt Text:

Ensure that federal coal mining is compliant with existing law before permitting new or expanded leasing. The PEIS should examine and recommend implementation of a federal coal leasing framework that establishes an inter-agency management approach to ensure that coal companies operating under current or new federal coal leases bring their operations into full compliance with the SMCRA, the Clean Water Act and other environmental requirements governing coal mining and development as well as BLM's mandates under the MLA, the Federal Land Policy Management Act and other statutes. Any company not in compliance with both the spirit and letter of these laws should be prohibited from receiving new or extended federal coal leases until it achieves compliance.

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Comment Number: 0002449\_Lyon\_20160727\_NWF-46

Organization I: National Wildlife Federation Action Fund

Commenter I: Jim Lyon

Comment Excerpt Text:

Purpose and need. In order to properly arrive at alternatives that will address the current shortcomings of the federal coal leasing program, it is critical that BLM and DOI set forth the purpose and need of the PEIS so as to reflect the public need to protect wildlife, ensure mining occurs in a manner that is compatible with the spirit and requirements of the law, ensure reclamation occurs, ensure the public is protected and receives fair compensation for the use of its resource, ensure a just transition for communities as coal use declines, and achieve the climate reduction goals needed to meet domestic and international carbon reduction goals. The purpose and need must, therefore, address the following concerns:

- o Whether, where, when and how to lease federal coal to best meet the needs of all Americans.
- o Whether adjustments are needed in order to provide a fair return to the American public.
- o How best to protect wildlife, habitat and other natural resources from the impacts of coal mining.
- o How best to assess the climate impacts of federal coal production and combustion.
- o How to ensure that coal mines operating under current and future leases comply with environmental protection and reclamation requirements
- o Whether the current coal program adequately accounts for externalities including environmental, climate, economic and social impacts.

o The degree to which federal coal should support fulfilling the energy needs of the United States and the role of coal exports.

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Comment Number: 0002449\_Lyon\_20160727\_NWF-50

Organization I: National Wildlife Federation Action Fund

Commenter I: Jim Lyon

Other Sections: I

Comment Excerpt Text:

The PEIS is governed by the National Environmental Policy Act (NEPA). NEPA “is our basic national charter for protection of the environment.” (23) NEPA has two fundamental purposes: (1) to guarantee that agencies take a “hard look” at the consequences of their actions before the actions occur by ensuring that “the agency, in reaching its decision, will have available, and will carefully consider, detailed information concerning significant environmental impacts,” (24); and (2) to ensure that “the relevant information will be made available to the larger audience that may also play a role in both the decisionmaking process and the implementation of that decision.”

(25)

(23) 40 C.F.R. § 1500.1(a).

(24) *Robertson v. Methow Valley Citizens Council*, 490 U.S. 332, 349 (1989).

(25) *Id.* at 349.

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Comment Number: 0002449\_Lyon\_20160727\_NWF-51

Organization I: National Wildlife Federation Action Fund

Commenter I: Jim Lyon

Other Sections: I

Comment Excerpt Text:

The Mineral Leasing Act of 1920 (38) (MLA) established a leasing process for all deposits of coal, phosphate, sodium, potassium, oil, and gas on federal land. The goal of Congress in passing the MLA was to encourage better management of federal land and mineral resources. Under the MLA, the two principal methods for leasing coal were public sale by competitive bidding (in areas containing known quantities of coal deposits), (39) and prospecting permits with a right to obtain a preference right lease upon discovery of commercial quantities of coal (in unclaimed and undeveloped areas with no known coal deposits). (40) As is discussed herein, other federal laws impact federal coal mining and leasing decisions. These laws – some of which are administered by other agencies within DOI – must be considered as part of the reform process, particularly issues concerning reclamation, bonding and regulation of surface mining pursuant to the Surface Mining Control and Reclamation Act (SMCRA) administered by OSM. These concerns are addressed below.

(38) 30 U.S.C. §§ 181 et seq. (1920).

(39) *Id.* § 201(a) (1970), amended by scattered sections of 30 U.S.C. §§ 181-352 (1988).

(40) *Id.* § 201(b) (1970), repealed, subject to valid existing rights, by scattered sections of 30 U.S.C. §§ 181-352 (1988).

Congress amended the MLA with the passage of the Federal Coal Leasing Amendments Act (FCLAA) in 1976.

(41) The intent of Congress was to remedy several problems with federal coal leasing and enforcement of the MLA, including:

(41) Pub. L. No. 94-377, 90 Stat. 1013 (codified in scattered sections of 30 U.S.C. §§ 181-352 (1988)); see Harold P. Quinn, Jr., *Lessons from the Coal Law – The Future of Natural Resource Development*, Proceedings of the Rocky Mountain Mineral Law Forty-First Annual Institute (1995); see also Mark Squillace, *The Tragic Story of the Federal Coal Leasing Program*, 27 NAT. RESOURCES J. 3, at 29 (Winter 2013).

Comment Number: 0002449\_Lyon\_20160727\_NWF-54

Organization I: National Wildlife Federation Action Fund

Commenter I: Jim Lyon

Other Sections: I

Comment Excerpt Text:

While not administered by BLM, the Surface Mining Control and Reclamation Act of 1977 (SMCRA), (133) is critical to addressing chief shortcomings in the mining of federally leased coal. As such, coordination with the Office of Surface Mining and Reclamation and Enforcement (OSM) regarding failures in SMCRA regulation and enforcement must be a central component of BLM's and DOI's effort to reform the federal coal leasing program. Failing to coordinate in this manner will not achieve needed reforms and be a much wasted opportunity. This is particularly true regarding significant failures regarding mine site reclamation and bonding to secure that reclamation.

(133) 30 U.S.C. § 1201 et seq.

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Comment Number: 0002454\_Hoeft\_20160727-3

Organization I: Tahoma Audubon

Commenter I: Bruce Hoeft

Comment Excerpt Text:

We ask that the BLM quantify:

-how much the extraction, processing, transport, and use of coal mined from federal property contributes to climate change, including both carbon dioxide, methane, and particulate releases

-how much coal mining on federal lands constrains the government's ability to comply with carbon-reduction provisions of the UN Climate Change Conference

- how much federal support for coal mining on public lands suppressed the development of alternate energy sources and the industries that would develop and deliver alternatives

- how to ensure that the royalties charged for coal mining on federal property reflect the costs imposed on taxpayers to mediate the impacts of the mining, processing, transport, and burning of that coal

- how to ensure that coal mining protocols on public property compel the mining companies to pay for the damage their operation cause, to both the immediate and global environment; the BLM should identify how effective self-bonding has been as a mechanism to ensure that reclamation liabilities are paid for by those responsible for the damage; simply declaring bankruptcy should not enable companies who bid for coal mining leases to evade liability for the environmental, economic, and health impacts of the mining they do, as well as for damages incurred in the transport and burning of coal

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Comment Number: 0002456\_Degenfelder\_20160728-1

Commenter I: Steve Degenfelder

Comment Excerpt Text:

The Department of Interior must recognize the central role "available" coal leases play in the national security of the United States of America. With over forty percent of the Nation's electricity provided by coal fired power plants, the national security of the country depends on the availability of coal leases as fuel stock for our coal burning electrical generation facilities to delivery of a constant electrical stream to governmental agencies, business and homes in our nation. Computer technology is the primary support mechanism for the United States national security system, space program, military, local law enforcement, along with millions of computers in business and health care which require a constant flow of electrons. These important machines cannot operate

with integrity if their electrical supply is not constant and interruptible which is consistent with electrical supply provided by renewable sources. Renewable sources have not proven they can become part of the electrical baseload without carbon based backup. Unless the EIS concludes the Department can verify, without any doubt, renewable energy sources can be placed into the base load, it must continue a coal leasing program until that time ever occurs. Failure to recognize this fact leaves the EIS open to appeal, which will be won, because you have not considered all the alternatives and cumulative impacts of the decision making process and the EIS was formulated with prejudice.

Should the ROD be delayed, as many NEPA documents seem to be, and the Department determines to continue its leasing moratorium, I hereby request you provide the undersigned with the Code of Federal Regulation (CFR) that allows the Department the authority to disregard the national security of the United States of America in lieu of leasing reform. You should also schedule an appearance before the appropriate Congressional Committee to explain the delayed NEPA document.

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Comment Number: 0002456\_Degenfelder\_20160728-2

Commenter I: Steve Degenfelder

Comment Excerpt Text:

The EIS analysis has to include making the public aware of costs associated with electrical generation. Only comparing operating costs and not including the capital expenditure, federal tax credits and life of project will not depict the true costs. As you know, when all "costs" are considered, electrical generation by renewable sources is uneconomic. This data should be included in the EIS analysis. In addition, the EIS has to contain a review of all scientific views on climate change, not just those on the environmental side who you have established friendships with. That analysis should include data readily available basing climate change primarily on tidal changes in the Pacific Ocean and note that some polar regions have increased ice formation. Without acknowledgement of these facts, the EIS will undoubtedly fail the hard look test required in an appeal before the Interior Board of Land Appeals or an appellate court.

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Comment Number: 0002462\_Compton\_20160728\_UtahMineAssoc-2

Organization I: Utah Mining Association

Commenter I: Mark Compton

Comment Excerpt Text:

For example, many of the proposals currently advanced by groups in opposition to leasing federal coal are substantially the same as those raised in a 2011 petition for rulemaking calling for the abandonment of the lease-by-application (LBA) method for lease sales and the imposition of "carbon fees." In denying the petition in 2011, BLM explained: how the LBA method is competitive and ensures receipt of fair market value; the pace of leasing occurred at generally the same rate as reserve depletion at existing mines; the National Environmental Policy Act (NEPA) analyses conducted in conjunction for lease sales adequately evaluate GHG emissions; and, imposing a carbon or other externality-based fee would require congressional action authorizing such fees. DOT points to no evidence or rationale that explains why these conclusions are no longer valid. The failure to explain the change in position and abandon the 2011 analysis is arbitrary and capricious.

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Comment Number: 0002464\_Connelly\_20160728\_WyCoaltLocalGov-12

Organization I: Coalition of Local Governments

Commenter I: Kent

Comment Excerpt Text:

There has been a myriad of proposed and recently finalized regulations that impact coal mining and other energy industries. This includes the Clean Water Act Rule - Definition of Waters of the United States, 80 Fed. Reg. 37054 (June 29, 2015), the Clean Power Plan, 80 Fed. Reg. 64662 (Oct. 23, 2015); BLM's Proposed Planning 2.0

Rule, 81 Fed. Reg. 9674 (Feb. 25, 2016); and the Proposed Regional Haze Rule Revisions, 81 Fed. Reg. 26942 (May 4, 2016).

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Comment Number: 0002464\_Connelly\_20160728\_WyCoaltLocalGov-13

Organization I: Coalition of Local Governments

Commenter I: Kent

Comment Excerpt Text:

The Clean Water Act Rule purports to grant the Environmental Protection Agency (EPA) more discretion in determining whether a water will be considered “waters of the United States” and therefore regulated by the EPA. The impact this rule would have on coal mining is additional permitting requirements, and costs and delays associated with the permits, due to potential impacts to an expansive list of waters now within the EPA’s jurisdiction.

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Comment Number: 0002464\_Connelly\_20160728\_WyCoaltLocalGov-14

Organization I: Coalition of Local Governments

Commenter I: Kent

Comment Excerpt Text:

The Clean Power Plan will also increase costs to the coal mining industry as they have to meet stricter emissions standards in the states’ efforts to lower CO<sub>2</sub> emissions. See Godby at 7-9; Wyoming Mining Association, at 4. It is estimated that the Clean Power Plan will lower Wyoming coal production by 32 percent by 2025 and cause the loss of over 7,000 jobs across the state. Godby at 8. See also U.S. Energy Information Administration, Clean Power Plan Reduces Projected Coal Production in Major U.S. Supply Regions (July 8, 2016), available at <http://www.eia.gov/todayinenergy/detail.cfm?id=26992> (Total U.S. coal production is expected to decline by about 26 percent between 2015 and 2040 with the implementation of the Clean Power Plan). The BLM must analyze this in the cumulative impact section of this Coal PEIS.

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Comment Number: 0002464\_Connelly\_20160728\_WyCoaltLocalGov-15

Organization I: Coalition of Local Governments

Commenter I: Kent

Comment Excerpt Text:

The recent land use plan amendments to protect sage grouse and their habitat will also impact the coal mining industry. These amendments have introduced Sagebrush Focal Areas and sterilized large segments of public land to multiple use and natural resource development. Coal is leased on federal land, so it is also affected by all management actions related to sage grouse protection. The amendments impose strict timing, density, and disturbance limitations for general and priority habitat management areas that will impact coal mining. This must be analyzed in the cumulative impact section of this Coal PEIS.

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Comment Number: 0002464\_Connelly\_20160728\_WyCoaltLocalGov-16

Organization I: Coalition of Local Governments

Commenter I: Kent

Other Sections: I

Comment Excerpt Text:

The NOI states that it will consider developing a “landscape-level approach to identify geographic areas for potential leasing to identify and address potential conflicts.” 81 Fed. Reg. at 17727; see id. at 17725. The push for landscape level review incorrectly assumes this is not done now. Coal lease suitability decisions are made in landscape level land use plans. Regional environmental impact statements (EIS) also address development. See e.g. Powder River Basin Coal EIS.

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Comment Number: 0002464\_Connelly\_20160728\_WyCoaltLocalGov-18

Organization I: Coalition of Local Governments

Commenter I: Kent

Comment Excerpt Text:

Under BLM's Proposed Planning 2.0 Rule, the BLM Director is also given the discretion to decide who manages a landscape-level planning effort. 81 Fed. Reg. at 9725. Local field offices may not be in control of the planning effort involving the lands they manage, and as a result, local input by counties, conservation districts, and community members may get lost in the volumes of other materials addressing other issues on the vast landscape drawn by Washington. The Coalition opposes such broad level planning because it dilutes the involvement of local governments and community members.

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Comment Number: 0002464\_Connelly\_20160728\_WyCoaltLocalGov-19

Organization I: Coalition of Local Governments

Commenter I: Kent

Comment Excerpt Text:

This NOI does not currently propose any amendments to the regulations governing the federal coal program, but it is requesting commenters to identify possible changes to regulations, guidance, and management practices. 81 Fed. Reg. at 17726. Further, any changes to the bonus payments, royalty rates, and rental rates would require amendments to the regulations found at 43 C.F.R. Part 3470, and any changes to the leasing process would require amendments to 43 C.F.R. Part 3420. Amendments to these regulations would trigger rulemaking procedures under the Administrative Procedure Act ("APA"), 5 U.S.C. §553, and analysis under the Regulatory Flexibility Act ("RFA"), as amended by the Small Business Regulatory Enforcement Fairness Act of 1996 ("SBREFA"), 5 U.S.C. §601 et seq.

Section 603(a) of the RFA requires that an agency, at the time of issuance of a notice of proposed rulemaking, publish an initial regulatory flexibility analysis that describes the impact of the proposed rule on small entities. 5 U.S.C. §603(a). Small entities includes small businesses, small organizations, and small governmental jurisdiction. 5 U.S.C. §601(3) - (6). Section 603© also requires that the initial analysis describe "any significant alternatives to the proposed rule which accomplish the stated objectives of applicable statutes and which minimize any significant economic impact of the proposed rule on small entities." 5 U.S.C. §603©.

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Comment Number: 0002464\_Connelly\_20160728\_WyCoaltLocalGov-21

Organization I: Coalition of Local Governments

Commenter I: Kent

Comment Excerpt Text:

Small businesses that work in the coal industry or are indirectly tied to the coal industry will also be impacted by any modifications to the regulations that will increase the cost of mining. The coal mining industry in Wyoming consists of a number of small businesses, such as equipment and parts suppliers, service providers, and other vendors. This includes not only businesses that are located in counties where mines are located, but also reaches businesses and creates jobs outside of these counties. The BLM must analyze the impacts any proposed rule would have on these small businesses, towns, and Coalition member Counties. 5 U.S.C. §603.

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Comment Number: 0002464\_Connelly\_20160728\_WyCoaltLocalGov-22

Organization I: Coalition of Local Governments

Commenter I: Kent

Other Sections: I

Comment Excerpt Text:

In recognition of their duties to protect the safety and welfare of the communities and to protect the public lands and water resources, the Coalition members encourage and support environmentally responsible resource exploration and development. See Sweetwater County Comprehensive Plan at 2.9 - 2.10 (2002); SWCCD Land & Resource Use Plan & Policy at 30 - 34 (2011); Uinta County Comprehensive Plan at 5, 11, 21 (2011); Lincoln County Comprehensive Plan at 5, 7 (2006); Lincoln County Public Lands Policy at 3-5, 3-10, 3-12, 3-32 - 3-35 (2006); LCD Land Use & Natural Management Long Range Plan at 38-39 (2010-2015). Sweetwater, Lincoln, and Uinta Counties and Conservation Districts specifically recognize the importance mining efforts have had and continue to have on their local economies. See SWCCD Land & Resource Use Plan & Policy at 13 (2011); Uinta County Comprehensive Plan at 11, 21 (2011); Lincoln County Public Lands Policy at 3-5 (2006).

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Comment Number: 0002464\_Connelly\_20160728\_WyCoaltLocalGov-3

Organization I: Coalition of Local Governments

Commenter I: Kent

Comment Excerpt Text:

Secretary Jewell issued Order 3338, which directed the BLM to conduct a broad, programmatic review to address the “broad range of issues raised over the course of the past year (and beyond) and the lack of any recent analysis of the Federal coal program.” Id. at 17725.

The rationale for this review is not sufficient and contradicts the long history of sound development that has occurred since the 1986 revisions. There is no new law or development of any existing law that would have triggered this review. There was an extensive statutory and regulatory overhaul of the coal program in the 1970s that brought about the subsequent review in the 1980s, but this is lacking under the current proposed Federal coal program review. The amendments that occurred in 1986 were in response to the approval and implementation of the following statutes and regulations: Federal Coal Leasing Amendments Act of 1976, the Federal Land Policy Management Act of 1976, the Surface Mining Control and Reclamation Act of 1977, and the 1979 regulations implementing these statutes. Environmental Protection in the Federal Coal Leasing Program (Washington, D.C.: U.S. Congress, Office of Technology Assessment, OTA-E-237, May 1984). See 81 Fed. Reg. at 17722. The current proposed review cannot be tied to any similar type of extensive legal overhaul.

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Comment Number: 0002464\_Connelly\_20160728\_WyCoaltLocalGov-4

Organization I: Coalition of Local Governments

Commenter I: Kent

Comment Excerpt Text:

For the Federal coal program review, Congress has not called for any revisions or adopted any new statutes that would require changes to any BLM guidelines or regulations.

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Comment Number: 0002464\_Connelly\_20160728\_WyCoaltLocalGov-6

Organization I: Coalition of Local Governments

Commenter I: Kent

Comment Excerpt Text:

The BLM is also concerned about the other environmental impacts of coal mining and whether reclamation is impacted by market conditions. 81 Fed. Reg. at 17724. The BLM is specifically considering whether to raise royalty rates or require an “adder” to be paid to reflect the cost of the harm to the public from “negative externalities” of coal development, to require environmental harms to be mitigated, or to account in the leasing process for whether reclamation responsibilities have been met. Id. at 17727. Under the Surface Mining Control and Reclamation Act of 1977, the Office of Surface Mining Reclamation and Enforcement (OSMRE) and Land Quality Division (LQD) of the Wyoming’s Department of Environmental Quality regulates surface coal mining operations and reclamation activities. 30 U.S.C. §§1211, 1235, 1253; 30 C.F.R. §740.4(b).

The LQD evaluates surface mining permit applications, revisions, and renewals to ensure mining is accomplished in an environmentally sound manner; approves or disapproves the permit applications; and carries out inspections of coal mines to ensure compliance with state's programs. OSMRE and LQD monitor reclamation and reclamation bonding actions. See 30 U.S.C. §1259; 30 C.F.R. §740.4(c)(4). Since 1980, Wyoming's regulatory program has been a partnership effort between the State and OSMRE and has successfully regulated surface coal mining operations and reclamation activities. Any proposed guidance or regulatory changes by BLM that act to control surface coal mining operations and reclamation activities is therefore outside of its jurisdictional authority.

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Comment Number: 0002466\_Smith\_20160728\_SELA-7

Organization I: Safe Energy Leadership Alliance

Commenter I: Rachel Smith

Comment Excerpt Text:

The DOI should make affirmative findings that the requirements of the Surface Mining Control and Reclamation Act are met in all mining plans approved by the Secretary. Additionally, the DOI should finalize its stream protection rule, including additional protections for water quality and habitat.

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Comment Number: 0002466\_Smith\_20160728\_SELA-8

Organization I: Safe Energy Leadership Alliance

Commenter I: Rachel Smith

Comment Excerpt Text:

The scope of environmental review should assess not only the local impacts of the mining proposal, but also the risks and costs to health, safety, environment, traffic, and the economy in communities along rail and barge transport corridors associated with proposed coal extraction.

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Comment Number: 0002467\_Fettus\_20160728-1

Organization I: Natural Resources Defense Council

Commenter I: Geoffrey Fettus

Comment Excerpt Text:

In terms of timing, we believe it is imperative that BLM complete the PEIS, and move forward with revising its regulations and other initiatives necessary to carry out the decisions that will be made at the conclusion of the NEPA process, as soon as practicable. To that end, we urge that particularly with respect to any regulatory or other reforms, such as Resource Management Plan (RMP) amendments, that will require notice and comment, BLM issue its proposed rules or reforms concurrent with issuance of the Final PEIS. This approach is consistent with the process followed by BLM in completing the Solar PEIS. Within three months of completion of the Final Solar PEIS, BLM issued a Record of Decision (ROD) incorporating final amendments to specific Resource Management Plans with solar energy resources. By proceeding in this manner, BLM can put its revised regulatory framework for coal leasing into effect as expeditiously as possible.

While there are numerous important programmatic decisions that must be considered and resolved in the PEIS, BLM must also be careful not to rely on the PEIS process to resolve issues that should be the subject of further, site-specific consideration in the site-specific EISs to be prepared for any future lease sales. Rather, at most the PEIS should provide guidance for how these issues should be considered in site-specific reviews, which must continue to consider the direct environmental impacts associated with the lease under consideration.

For instance, many direct impacts of mining necessitate review at the site-specific lease or mine level. While the PEIS should discuss these impacts at a programmatic level, discussing them in terms of regional or national trends,



the PEIS analysis should not replace the need for much more detailed analysis at the leasing stage as effects can be extremely site specific. Rather, BLM should appropriately tier to the PEIS when considering impacts on a site-specific level.

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Comment Number: 0002467\_Fettus\_20160728-3

Organization I:Natural Resources Defense Council

Commenter I:Geoffrey Fettus

Comment Excerpt Text:

New concerns arose about FMV for coal leases in the 1980s, particularly with respect to a large lease sale in the PRB. A GAO Report revealed that the agency had received roughly \$100 million less than FMV for the lease. Congress responded by directing formation of a commission – subsequently called the Linowes Commission – to address the FMV issue. Congress also directed a study into whether federal coal leasing was compatible with the Nation’s environmental protection objectives, which resulted in BLM updating its PEIS for the federal coal regulatory scheme.

Once again, coal leasing was halted while these reports were completed, and ultimately the Commission and study recommended that BLM slow the pace of coal leasing, improve procedures to better ensure the government obtains FMV, and more closely consider environmental and other competing resources in making coal leasing decisions. BLM responded by supplementing the PEIS, and then once again modifying the regulatory scheme. And, once again, BLM kept its coal leasing moratorium in place until the revised regulatory scheme was implemented.

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Comment Number: 0002467\_Fettus\_20160728-32

Organization I:Natural Resources Defense Council

Commenter I:Geoffrey Fettus

Comment Excerpt Text:

A PEIS is plainly appropriate at this critical juncture for federal coal leasing. One pressing issue that must be addressed in the PEIS has never been the subject of a comprehensive examination under NEPA or any other federal analytical tool – the impact of federal coal leasing on GHG emissions, and the changes necessary to ensure coal leasing supports GHG emission reduction goals. The many developments since the last PEIS update (in the 1980s) also call for the PEIS to comprehensively address both the other environmental issues posed by federal coal leasing, and the coal leasing valuation issues that have come under recent scrutiny. Moreover, as the Secretarial Order and Scoping Notice reflect, in order to properly inform the federal decision-maker, it is vital that these matters all be considered together given that solutions to some issues – such as GHG reductions – may be found in other areas, such as incorporating the social cost of carbon into coal lease pricing.

It is also entirely consistent with NEPA and implementing regulations for a PEIS to be prepared for the entire coal leasing framework, for, as noted, the CEQ regulations call for a single EIS. Indeed, while a single EIS is appropriate where an agency is considering several actions that are either “closely related,” impose “cumulatively significant impacts,” or possess other similarities “such as common timing or geography,” 40 C.F.R. § 1508.25, here all three of these factors support preparation of a single, comprehensive PEIS. See also CEQ Climate Change Guidance at 30 (recognizing a “programmatic NEPA review may also serve as an efficient mechanism to describe Federal agency efforts to adopt sustainable practices for energy efficiency, GHG emissions avoidance or reduction, petroleum product use reduction, and renewable energy use, as well as other sustainability practices”).

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Comment Number: 0002467\_Fettus\_20160728-72

Organization I:Natural Resources Defense Council

Commenter I:Geoffrey Fettus

## Comment Excerpt Text:

Federal coal leasing and production data. Currently, BLM provides geospatial data pertinent to federal coal leasing. However, this data is largely fragmented. Some state BLM offices, particularly Colorado, provide good quality data for federal coal leasing. In other states, if there is BLM data, it is not easy to use. BLM operates LR2000, a database that contains valuable information regarding coal leases, but it is one that only experts can navigate.

BLM should include a synthesized GIS dataset for all federal coal leasing in the country. Additionally, BLM should create datasets of synthesized geospatial information for each state in which federal coal leasing occurs or is proposed. This will help to ensure that communities are fully aware of the extent of federal coal leasing in their respective regions. Within the scope of a programmatic NEPA analysis, BLM must provide, at minimum, maps of the proposed planning area, and indicate which lands are not suitable for development. This GIS data should also include current and pending leases, existing leases that are not producing, and lease bidders and holders. Other information should include:

- Surface ownership and mineral rights, including split estate
- Coal geology and resources on federal lands
- Conservation areas, species habitat and migration routes
- Groundwater and surface water resources
- Coal mining site reclamation operations and the current status of past mined sites
- Coal transportation and end use (for example, coal-fired power plants)
- Coal employment data and regional market information

Comment Number: 0002467\_Fettus\_20160728-73

Organization I: Natural Resources Defense Council

Commenter I: Geoffrey Fettus

## Comment Excerpt Text:

Non-federal coal leasing and production data. In order to understand cumulative impacts and the context of federal coal leasing within the larger, national context of coal extraction, BLM should also provide stakeholders with GIS data on non-federal coal leasing and production.

Comment Number: 0002467\_Fettus\_20160728-74

Organization I: Natural Resources Defense Council

Commenter I: Geoffrey Fettus

## Comment Excerpt Text:

To ensure that the PEIS considers a broad range of environmental impacts, it is important to create maps that highlight areas where potential federal coal leasing interferes with other significant land uses. BLM will need to conduct a geospatial analysis for programmatic analysis of federal coal leasing including, but not limited to:

- Total acreage of federal coal leases for alternatives
- Overlap of federal coal leasing with conservation areas and wildlife habitat for alternatives
- Federal coal leasing impacts on waterbodies such as streams, rivers, estuaries, lakes, ponds, groundwater and surface water, and subsurface aquifers
- Federal coal leasing impacts on nearby populations, and on areas with subsistence and commercial agricultural practices
- Geospatial extent and locations of climate change impacts from federal coal leasing alternatives
- Cumulative regional environmental impacts of federal coal leasing in combination with other extractive resources such as oil, gas and uranium recovery operations.

Comment Number: 0002467\_Fettus\_20160728-75

Organization I: Natural Resources Defense Council

Commenter I: Geoffrey Fettus

Comment Excerpt Text:

In order to ensure that the federal coal PEIS process is transparent, BLM must make the geospatial data accessible to all stakeholders and the public.

Data must be available in a repository with downloadable GIS files, suitable for a variety of GIS platforms (for example: the Esri ArcGIS Online and ArcMap platforms, and the Google Earth Keyhole Markup Language platform).

In addition to the GIS data files, BLM should create an online, interactive data viewer so that non-GIS experts and broader communities can understand the extent of federal coal leasing in their respective regions. The data viewer should be interactive so that people can view more specific characteristics of each lease. These specifications should also be linked to the data repository associated with that particular lease.

For example, while the general repository will provide all of the federal coal leasing geospatial data, the interactive data viewer will allow communities to explore the lease characteristics that are most likely to affect them. This will drastically improve community efforts to make the most effective and efficient decisions regarding resource use. An example of an interactive data viewer can be found on the Colorado Division of Reclamation Mining & Safety website (<http://mining.state.co.us/Reports/Pages/GISData.aspx>). A similar data viewer should be compiled for all federal coal leasing to satisfy the broad scope of a programmatic NEPA analysis.

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Comment Number: 0002470-17

Organization I: Taxpayer for Common Sense

Commenter I: Ryan Alexander

Comment Excerpt Text:

The BLM should review its guidance and application of standards for the approval of royalty rate reductions during the Programmatic EIS. Reductions in royalty rates should be the exception, not the rule. According to ONRR data, almost half of the federal coal lease sales in the last 25 years received a royalty rate reduction.

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Comment Number: 0002474\_Trice\_20160728\_EPA-7

Organization I: U.S. Environmental Protection Agency

Commenter I: Jessica Trice

Comment Excerpt Text:

EPA requests that the BLM analysis of future coal use scenarios be conducted in a manner that is congruent with projections and assumptions that EPA has factored into our environmental planning and rule development. As one component of its analysis, EPA recommends that the BLM use an electricity sector model to evaluate the impacts on electricity generation and corresponding fuel consumption in order to assess the economic impacts and potential changes in greenhouse gas (GHG) emissions, toxic and criteria pollutant emissions, and water pollution.

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Comment Number: 0002474\_Trice\_20160728\_EPA-8

Organization I: U.S. Environmental Protection Agency

Commenter I: Jessica Trice

Comment Excerpt Text:

Additional NEPA analysis will be necessary to provide for a more site-specific and resource-specific geographical analysis associated with future coal leasing decisions. Therefore, EPA recommends that the Draft PEIS include a well-defined tiering process for future NEPA analysis to explain how Resource Management Plan (RMP) and specific coal leasing decisions will tier from this programmatic document.

Comment Number: 0002477\_Saul\_20160728\_CBD\_UPHE-63

Organization 1: Center for Biological Diversity

Commenter 1: Michael Saul

Organization 2: Utah Physicians for a Healthy Environment

Other Sections: I

Comment Excerpt Text:

Evaluating the market and resulting emissions consequences of the coal leasing programs is both required by NEPA and well within BLM's capabilities. 119 In recent months, at least four sophisticated efforts have been made to evaluate the market and emissions consequences of alternative federal coal leasing policies, and concluded that a policy of ending new federal coal lease issuance or modification would have significant effects on mitigating greenhouse gas emissions, while still exceeding both anticipated coal demand for the coming decades, and the time horizon for exceeding 1.5° and 2°C carbon budgets. BLM can and should acknowledge and make use of the sources and methods in these studies to formulate quantitative assessments of the emissions and carbon budget consequences of leasing alternatives (including cessation of leasing, a declining production schedule based on meeting climate targets, and incorporation of a meaningful carbon charge on leased coal production into new or modified lease terms).

(119) See *Ctr. for Biological Diversity v. National Highway Traffic Safety Admin.*, 538 F.3d 1172 (9th Cir. 2008); *Mid States Coalition for Progress v. STB*, 345 F.3d 520 (8th Cir. 2003); *High Country Conservation Advocates v. United States Forest Serv.*, 52 F. Supp. 3d 1174, 1196 (D. Colo. 2014); for examples of quantifying end-use emissions of coal leasing, see U.S. FOREST SERV., RULEMAKING FOR COLORADO ROADLESS AREAS, SUPPLEMENTAL DRAFT ENVIRONMENTAL IMPACT STATEMENT (Nov. 2015) .

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Comment Number: 0002480\_Culver\_20160728\_TWS-20

Organization 1: The Wilderness Society

Commenter 1: Nada Culver

Comment Excerpt Text:

The BLM should prepare an RFD as part of the Coal PEIS that incorporates sufficient analysis to inform cumulative impact analysis and management decisions. The RFD should follow the elements identified in BLM's guidance for preparing an RFD for oil and gas development. Further, the RFD analysis in the Coal PEIS must not only provide information on the future coal development potential and the amount of coal that will be mined out to at least 2050, but should also look at estimates of the amount of land that will be disturbed by coal mining and the reclamation needs that will be presented by this level of disturbance. There is a need to know disturbance levels and reclamation needs as part of the RFD assessment. The BLM should also update RFDs in existing RMPs to the extent needed.

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Comment Number: 0002480\_Culver\_20160728\_TWS-73

Organization 1: The Wilderness Society

Commenter 1: Nada Culver

Comment Excerpt Text:

An important issue that BLM must address in the PEIS is the Reasonably Foreseeable Development (RFD) level for federal coal that is likely in the next several decades. RFD is a term that is routinely used when the BLM considers oil and gas development activities, but is also used in other contexts, including for coal and as part of the Solar PEIS. As mentioned in section I above, where we discussed scoping issues, the BLM's NEPA Handbook says that in scoping the BLM should identify "reasonably foreseeable actions." This is essentially direction that the BLM consider coal RFD in the PEIS.

An RFD is essentially a long-term projection of exploration, development, production, and reclamation. Activity that can inform the development of alternatives, analysis of environmental consequences, and selection of a management approach are all affected by the RFD analysis.

Comment Number: 0002480\_Culver\_20160728\_TWS-94

Organization I: The Wilderness Society

Commenter I: Nada Culver

Other Sections: 2

Comment Excerpt Text:

In addition, the BLM may need to conduct formal rulemakings to incorporate specific reforms. The BLM can conduct needed NEPA analysis to support the rulemakings and make the ultimate processes more efficient. The BLM should commit to completing these rulemakings, set out a schedule, and prioritize the following rulemakings where the agency determines they are needed to fulfill reforms:

1. Update and expand unsuitability criteria;
2. Update royalty, minimum bid, rental rates and reclamation bonding standards;
3. Incorporate a carbon adder into royalty rates;
4. Develop an updated regional coal leasing approach;
5. Shorten lease review terms;
6. Complete Mine Methane Waste Rule.

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Comment Number: 0002488\_Sanderson\_20160728-13

Organization I: Colorado Mining Association

Commenter I: Stuart Sanderson

Comment Excerpt Text:

To address concerns about fair returns to taxpayers, the BLM will be evaluating whether to raise the royalty rate, limit royalty reductions, identify and require an “adder” to address negative externalities; update the minimum bid and/or establish state-specific minimum bids; raise rental rates to adjust for inflation and/or incorporate lost value of other uses of the land and anticipated externalities of exploratory activities; whether to consider not leasing to companies that have more than 10 years of recoverable reserves coal at the time of lease application; and modification to valuation methodology, among others.

Royalty rates are established under the MLA, as amended (30 U.S.C. 207 (a)); therefore, BLM does not have the authority to raise royalties above 12.5 percent, only Congress does. The assertion made by some stakeholders that current royalty rates do not result in fair return and are lower than the rate established by statute is wildly inaccurate and misrepresents data and fact related to royalty valuation by gerrymandering the metrics used to determine royalties.

BLM must maintain its discretion to reduce royalty rates, because without this discretion it could make extraction of some coal resources uneconomical. BLM has an obligation under the MMPA (30 U.S.C. §21(a)), and FLPMA (43 U.S.C. §1701(a)(12)) to recognize the Nation’s need for domestic sources of minerals. To that end, BLM must be careful that the proposed approaches or combination thereof, comply with the MMPA and FLPMA.

The proposal to evaluate an externality adder is counterproductive. First, the coal industry already pays for climate related impacts through existing regulations. Imposing an adder for other social costs such as loss of recreation will only decrease value of the coal resource by making it costlier to produce, resulting in a decrease in return to taxpayers. Further, the policy to include an adder for practically any conceivable social impact is simply unreasonable, and violates long-standing practice in the management of coal resources. The environmental impacts associated with coal mining are already addressed under a variety of laws, including those cited in these comments.

Comment Number: 0002488\_Sanderson\_20160728-16

Organization I: Colorado Mining Association

Commenter I: Stuart Sanderson

Other Sections: I

Comment Excerpt Text:

The proposal to exclude operators with at least 10 years of reserves from lease sales is, again, counterproductive because it will reduce competition which critics of the Coal Program complain results in a lack of return to taxpayers. This proposal is also unlawful. Lessee qualifications are established under MLA, as amended and provides:

“That the Secretary of the Interior is authorized to, and upon the petition of any qualified applicant shall, divide any of the coal lands or the deposits of coal, classified and unclassified owned by the United States...” (30 U.S.C. 21(a))

As long as an applicant meets the qualification criteria described in Section I of the MLA, (5) the applicant cannot be arbitrarily excluded from applying or bidding on a lease. Proposed approaches that are unlawful are not implementable. As such, for the reasons, described above, BLM must eliminate these proposed approaches from further detailed analysis.

BLM’s proposal to evaluate valuation methodologies is duplicative. As previously stated, BLM has already begun implementing a number of reforms designed to improve and standardize the valuation process, including the establishment of a Memorandum of Understanding with the Department’s Office of Valuation Services. Moreover, any proposed approach to deal with concerns related to fair market value is no longer necessary given the fact DOI issued new rules governing value and revenue collection on June 30, 2016. Re-addressing these concerns under the PEIS is redundant and unnecessary (See 81 FR 43338).

(5) A citizen of the United States; an association of citizens organized under the laws of the United States or any state thereof; a corporation organized under the laws of the United States; or of any state thereof, including a company or corporation operating a common carrier railroad public body, including municipalities. Other special leasing qualifications include: The aggregate acreage in leases and applications in which you can hold an interest, directly or indirectly, cannot exceed 75,000 acres in any one state and no more than 150,000 acres in the United States; you may not acquire any other mineral leases under the Mineral Leasing Act of 1920, as amended, if you hold or have held a federal coal lease for 10 or more years that has not produced commercial quantities of coal. Other minerals that can be leased under the Mineral Leasing Act of 1920 include oil, natural gas, sodium, potassium, phosphate, sulfur, and gilsonite; as a part of your application for a new coal lease, you must provide a self-certified statement that you are in compliance with all applicable laws and regulations.

CMA recommends BLM eliminate from detailed analyses any proposed approaches and modifications related to valuation procedures, including any approaches or modifications rejected or subject to litigation from the recent review. BLM cannot allow environmental groups that failed at pressing their agenda in another DOI agency, use BLM through the PEIS, as a way to push their agenda through the backdoor.

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Comment Number: 0002488\_Sanderson\_20160728-18

Organization I: Colorado Mining Association

Commenter I: Stuart Sanderson

Comment Excerpt Text:

BLM’s proposal to consider whether landscape scale planning for coal resources is needed, is unnecessary and redundant. Under BLM’s Planning 2.0 initiative, BLM is seeking to amend its land use planning regulations to consider landscape scale planning, this includes landscape scale planning for all resources managed by the BLM, which clearly includes coal. While CMA opposes the changes proposed in the Planning 2.0 initiative, that does not

change the fact that re-evaluating landscape scale planning as part of the Coal Program PEIS is redundant, because no new information would be yielded, unless BLM made actual amendments to resource management plans at a landscape scale.

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Comment Number: 0002488\_Sanderson\_20160728-2

Organization I:Colorado Mining Association

Commenter I:Stuart Sanderson

Comment Excerpt Text:

The commencement of the PEIS was accompanied by a moratorium on issuance of new leases or modifications of existing leases with some exceptions, causing great uncertainty among coal producers. All this presupposes some defect in the current leasing program, a defect which has not been demonstrated to exist. Other recent reviews of the leasing program (GAO and the Department's Office of the Inspector General or OIG) recommended relatively minor updates such as enhancing the appraisal process. Neither contained a call for a wide-ranging comprehensive review and moratorium that extends well into the next Administration. The OIG's conclusions state as follows: "Fortunately, most of the identified issues can be resolved with little or no additional funding or personnel."

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Comment Number: 0002488\_Sanderson\_20160728-24

Organization I:Colorado Mining Association

Commenter I:Stuart Sanderson

Comment Excerpt Text:

CMA does recommend that when conducting the cumulative effects analysis all the concurrent reforms impacting coal resources must be considered. The proposed PEIS review must be substantially modified and improved, as described above, before draft documents are made available for public review.

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Comment Number: 0002488\_Sanderson\_20160728-5

Organization I:Colorado Mining Association

Commenter I:Stuart Sanderson

Comment Excerpt Text:

Also, under Office of Management and Budget's (hereinafter OMB's) Circular No. A-4, Guidelines for the Conduct of Regulatory Analysis, regulatory analysis of proposed rules that may have an annual effect on the economy of \$100 million or more requires approval by OMB. As such, BLM must coordinate with OMB throughout the PEIS.

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Comment Number: 0002488\_Sanderson\_20160728-6

Organization I:Colorado Mining Association

Commenter I:Stuart Sanderson

Comment Excerpt Text:

These legal and policy concerns embrace numerous laws, including the:

- > Surface Mining Control and Reclamation Act (30 U.S.C. 25 et seq., hereinafter SMCRA)
- > Mining and Minerals Policy Act (30 U.S.C. 21a; hereinafter MMPA);
- > Mineral Leasing Act, as amended (30 U.S.C. 181 et seq., hereinafter MLA);
- > Federal Land Policy and Management Act of 1976 (43 U.S.C 1701 et seq., hereinafter FLPMA);
- > National Environmental Policy Act (42 U.S.C. 4321 et seq., hereinafter NEPA)
- > Data Quality Act (Pub. L. No. 106-554, § 515, 114 Stat. 2763, 2764a-153-154 (2000), hereinafter DQA).

BLM must address the following issues in the NEPA documents associated with this Notice to ensure compliance with these laws.

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Comment Number: 0002488\_Sanderson\_20160728-8

Organization I: Colorado Mining Association

Commenter I: Stuart Sanderson

Comment Excerpt Text:

The Notice indicates that the PEIS will examine where to lease and where not to lease, through BLM's land use planning authority under FLPMA consistent with the recent BLM Planning 2.0 initiative to conduct landscape scale planning. It also will assess whether BLM's unsuitability screening criteria adequately address the questions of where and/or where not to lease for coal production, as well as other potential factors that could be applied during the planning process to provide guidance on the most appropriate locations for coal leasing. (81 FR 17725).

Review of this issue is unnecessary and duplicative. BLM already analyzes during land use planning the availability of certain lands that are open, closed, or limited to mineral leasing. When conducting land use planning BLM is required to conduct NEPA analysis. As such, thorough environmental and impact analyses are required when deciding what lands are available to coal leasing.

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Comment Number: 0002488\_Sanderson\_20160728-9

Organization I: Colorado Mining Association

Commenter I: Stuart Sanderson

Other Sections: I

Comment Excerpt Text:

The question of whether the unsuitability criteria are adequate to determine where and where not to lease is inappropriate because the unsuitability criteria is already established by statute. Neither BLM nor DOI have the authority to revise or change statutory direction; only Congress holds the authority to make changes to the unsuitability criteria. As such, any findings regarding adequacy of the unsuitability criteria during the PEIS review cannot be implemented by BLM or DOI without Congressional action. Therefore, expending resources on something that BLM lacks authority to change is an exercise in futility. Thus, further consideration of whether the unsuitability criteria are adequate must be eliminated from further detailed analysis.

In addition, CMA opposes the approach outlined in BLM's Planning 2.0 initiative, as it violates FLPMA, MMPA, among other issues. CMA incorporates by reference the comments of the American Exploration & Mining Association regarding the flaws and legal shortcomings related to BLM Planning 2.0, and landscape scale planning. (3)

(3) See, AEMA "Comments on Proposed Amendments to Resource Management Planning Regulations (BLM 2.0)," (81 FR 9674). Incorporated by reference. Available at: <https://www.miningamerica.org/wp-content/uploads/2016/07/AEMA-Planning-2-0-comments-final-5-24-16-attachments-included.pdf>.

CMA reminds BLM that any proposed approaches or combination of approaches revising the Coal Program must comply with FLPMA, MMPA, and all other laws governing minerals. Any proposed approaches, revisions or combination thereof that do not comply with law must be eliminated from detailed analysis.

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Comment Number: 0002490\_Emrich\_20160728\_CloudPeakEnergy-18

Organization I: Cloud Peak Energy Inc.

Commenter I: Andrew C. Emrich, P.C.



## Comment Excerpt Text:

Although Secretarial Order No. 3338 now directs BLM to prepare the nation-wide PEIS, BLM has recently expressed its unwavering position that a significant overhaul of the federal coal program is unnecessary. As an initial matter, neither the MLA, NEPA, or any other statute compels BLM to perform supplemental environmental analysis with respect to the existing coal program or to modify the current program. Even the Secretary admits that BLM has no affirmative or mandatory obligation to conduct programmatic review of the federal coal program. See Secretarial Order No. 3338, Sec. 4 (Jan. 15, 2016) (directing BLM to perform a “[d]iscretionary” programmatic review of the federal coal program). More importantly, in the context of rejecting an administrative petition to overhaul the federal coal program in Wyoming and Montana, and the extensive federal court litigation that followed this decision, BLM has flatly rejected any contemplated overhaul of the federal coal program as both unwarranted and unlawful. The recent attempts by environmental groups to compel BLM’s modification to the federal coal leasing program have been uniformly rejected by BLM and two federal judges in three separate legal decisions.

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Comment Number: 0002490\_Emrich\_20160728\_CloudPeakEnergy-19

Organization I: Cloud Peak Energy Inc.

Commenter I: Andrew C. Emrich, P.C.

## Comment Excerpt Text:

In the face of BLM’s recent rejections of calls by environmental groups to overhaul the federal coal program, and federal court decisions unanimously affirming BLM’s decisions, Secretarial Order No. 3338 represents an unnecessary and unsupported administrative “about-face.” There is simply no legal justification for the Department’s current proposal to substantially modify the federal coal leasing program.

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Comment Number: 0002490\_Emrich\_20160728\_CloudPeakEnergy-20

Organization I: Cloud Peak Energy Inc.

Commenter I: Andrew C. Emrich, P.C.

## Comment Excerpt Text:

BLM proposes to consider changes to the federal coal program which contravene the congressional mandate under the MLA to obtain maximum economic recovery and encourage the development of federal coal resources. For example, BLM intends to consider “rais[ing] the royalty rate . . . [and] limit[ing] the use of royalty rate reductions.” 81 Fed. Reg. at 17726. To do so would contravene clear and long-standing congressional direction under the MLA.

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Comment Number: 0002490\_Emrich\_20160728\_CloudPeakEnergy-22

Organization I: Cloud Peak Energy Inc.

Commenter I: Andrew C. Emrich, P.C.

Other Sections: I

## Comment Excerpt Text:

The Secretary is not authorized under the MLA to impose any new or additional taxes, fees, or penalties on coal production, including any fees related to indirect environmental considerations. The Secretary’s rulemaking authority under the MLA is limited to promulgating regulations “necessary to carry out and accomplish the purposes of this chapter [the MLA leasing provisions.]” 30 U.S.C. § 189. As detailed above, the purpose of the MLA’s leasing provisions is to encourage coal development, not render it uneconomical or undesirable. Any effort to impose additional costs on coal leasing and development with the intention of lowering federal coal production volumes to achieve the administration’s climate objectives, or promote renewable energy growth, is not an authority granted to the Secretary under the MLA or any other federal statute. The imposition of new revenue measures must be initiated and voted on by Congress. See *Meriwether v. Garrett*, 102 U.S. 472, 501

(1880) (“The power of taxation is legislative, and cannot be exercised otherwise than under the authority of the legislature.”).

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Comment Number: 0002490\_Emrich\_20160728\_CloudPeakEnergy-24

Organization I: Cloud Peak Energy Inc.

Commenter I: Andrew C. Emrich, P.C.

Comment Excerpt Text:

Cloud Peak Energy requests that BLM ensure that any changes to the federal coal program comport with BLM’s statutory mandates under the MLA. Specifically, BLM should not consider any changes to the federal coal program which would restrict, diminish, or penalize coal production on federal lands by raising leasing and production costs or otherwise making federal coal reserves economically unrecoverable. The scope of BLM’s programmatic review must not contravene the Secretary’s authority to obtain maximum economic recovery of federal coal.

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Comment Number: 0002490\_Emrich\_20160728\_CloudPeakEnergy-3

Organization I: Cloud Peak Energy Inc.

Commenter I: Andrew C. Emrich, P.C.

Comment Excerpt Text:

No fundamental changes to the federal coal program—including the changes now suggested by the Department of the Interior in the PEIS—were recommended by either the Government Accountability Office or the Inspector General of the Department of Interior. Both the Government Accountability Office and the Inspector General undertook thorough reviews of the federal coal program in 2013. While both entities made recommendations for improving the implementation of the current coal program, neither recommended the substantial changes to the program contemplated in the PEIS.

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Comment Number: 0002490\_Emrich\_20160728\_CloudPeakEnergy-34

Organization I: Cloud Peak Energy Inc.

Commenter I: Andrew C. Emrich, P.C.

Other Sections: 2

Comment Excerpt Text:

In order to reduce the burdens associated with federal coal leasing, BLM (and the Department of the Interior more broadly) should consider: (1) spreading bonus bid payments over a longer period of time; (2) decreasing rental payments; (3) withdrawing the coal royalty valuation regulations; (4) waiving BLM cost-recovery imposed during the federal coal leasing process; and (5) improving or consolidating the NEPA process associated with federal coal leasing such that applicants are not required to incur the costs associated with hiring a third party contractor in order to complete the leasing process in a timely fashion.

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Comment Number: 0002490\_Emrich\_20160728\_CloudPeakEnergy-8

Organization I: Cloud Peak Energy Inc.

Commenter I: Andrew C. Emrich, P.C.

Comment Excerpt Text:

In reviewing the federal coal program, BLM must comply with the limits imposed by Congress under the MLA and other federal statutes. As it currently stands, many of the contemplated changes to the federal coal program would exceed BLM’s statutory directives under the MLA. Prior to making any revisions to the federal coal program, BLM must ensure that each proposed change is consistent with the underlying statutes from which BLM derives its authority.

Comment Number: 0002491\_Weiskopf\_20160728\_NextGenClimateAmer-16

Organization I:NextGen Climate America

Commenter I:David Weiskopf

Other Sections: I

Comment Excerpt Text:

The effectiveness of the programmatic review relies on the credibility of Interior’s assessment of the alternatives it considers. The Ninth Circuit Court of Appeals addressed the matter in *Natural Resources Defense Council v. U.S. Forest Service*, which held that the U.S. Forest Service violated NEPA by failing to present complete and accurate information to decision makers through its decision alternatives. In particular, the opinion addressed the risk of overstating economic benefits. “Presenting accurate market demand information [is] necessary to ensure a well-informed and reasoned decision, both of which are procedural requirements under NEPA.”<sup>15</sup>

[15 *Nat. Res. Def. Council v. U.S. Forest Serv.*, 421 F.3d 797, 812 (9th Cir. 2005)]

The current leasing program neglects the carbon budget constraint that will reduce the value of coal assets, which compromises the NEPA requirement for well-informed decision making. Interior should use the opportunity afforded by the programmatic review to remedy this deficiency in the current program by undertaking reforms that will right-size the level of assets on offer to better reflect true market conditions in a carbon-constrained economy.]

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Comment Number: 0002491\_Weiskopf\_20160728\_NextGenClimateAmer-17

Organization I:NextGen Climate America

Commenter I:David Weiskopf

Other Sections: 8.2 I

Comment Excerpt Text:

The Mineral Leasing Act requires BLM to modify its coal leasing program to serve the public interest, which includes climate consistency

The Mineral Leasing Act of 1920 (“MLA”) states that the Secretary of the Interior is authorized to divide any lands for coal leasing if found in the public interest.<sup>16</sup> Interior has capacious legal authority to interpret this term. “The Secretary of the Interior is authorized to prescribe necessary and proper rules and regulations and to do any and all things necessary to carry out and accomplish the purposes of this chapter.”<sup>17</sup> This authority extends to Interior’s discretion to reject individual leases or to end the practice of offering new leases and lease extensions altogether if the department determines that these practices are not in the public interest, on the basis of a broad array of factors.

[16 30 U.S.C § 201]

[17 30 U.S.C § 189]

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Comment Number: 0002491\_Weiskopf\_20160728\_NextGenClimateAmer-26

Organization I:NextGen Climate America

Commenter I:David Weiskopf

Other Sections: 6 I

Comment Excerpt Text:

The National Environmental Policy Act provides a framework for how Interior can interpret its relative contribution to climate change and the corresponding risk to the public interest through cumulative impacts.<sup>27</sup> The Council on Environmental Quality (“CEQ”) draft guidance for greenhouse gas emissions states that agencies should consider the “potential effects of a proposed action on climate change as indicated by its GHG emissions.”<sup>28</sup> The draft guidance also accounts for indirect effects of agency actions, defined as effects that are

caused by the action and are “later in time or farther removed in distance, but are still reasonably foreseeable.”<sup>29</sup> Up until now, BLM has inadequately evaluated the climate change impacts of its coal leasing program by failing to address indirect and cumulative impacts. The programmatic review provides an opportunity to correct this shortcoming.

[27 40 C.F.R § 1508.8 defining direct, indirect, and cumulative effects.]

[28 Council on Env'tl. Quality, Exec. Office of the President, Revised Draft Guidance for Federal Departments and Agencies on Consideration of Greenhouse Gas Emissions and the Effects of Climate Change in NEPA reviews, 79 Fed. Reg. 77,802 (Dec. 24, 2014).]

[29 Id.]

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Comment Number: 0002491\_Weiskopf\_20160728\_NextGenClimateAmer-28

Organization I:NextGen Climate America

Commenter I:David Weiskopf

Other Sections: I

Comment Excerpt Text:

Other agencies have relied on climate impact assessments when evaluating whether or not a decision is in the public interest. For example, the Department of State decision rejecting the TransCanada Keystone Pipeline (“Keystone XL”) provides additional context for construing the public interest. The determination turned on whether the project served the national interest, and the environmental impact statement for reaching this determination was conducted in a manner consistent with NEPA requirements.<sup>30</sup> The decision to reject the pipeline relied on many factors, critically including the fact that approval would undermine U.S. climate change policy:

[30 Department of State, Record of Decision and National Interest Determination: TransCanada Keystone Pipeline, L.P. Application for Presidential Permit. Available at <https://keystonepipeline-xl.state.gov/nid/249254.htm>]

[A] decision to approve this proposed Project would undermine U.S. objectives on climate change; it could call into question internationally the broader efforts of the United States to transition to less-polluting forms of energy and would raise doubts about the U.S. resolve to do so. In turn, this could raise questions for some countries about how aggressively they should combat climate change domestically, and potentially reduce the United States’ ability to advance climate and broader objectives with allies and other partners in various bilateral and multilateral contexts... [A] decision to deny the permit would support U.S. relationships with countries where climate issues are important and encourage actions that combat climate change and benefit the United States.<sup>31</sup>

[31 Id.]

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Comment Number: 0002491\_Weiskopf\_20160728\_NextGenClimateAmer-47

Organization I:NextGen Climate America

Commenter I:David Weiskopf

Other Sections: I

Comment Excerpt Text:

Interior will conduct its Programmatic Environmental Impact Statement pursuant to the National Environmental Policy Act as amended (42 U.S.C § 4321, et seq.) and the Council on Environmental Quality (“CEQ”) Regulations for Implementing the Procedural Provisions of NEPA (40 C.F.R § 1500-1508). Crucial to the NEPA process is identifying and comparing credible decision alternatives for a proposed action, which the CEQ describes as the

“heart of the environmental impact statement.”<sup>51</sup> CEQ regulations for implementing NEPA require that agencies “rigorously explore and objectively evaluate all reasonable alternatives.”<sup>52</sup> The purpose of the Programmatic EIS as laid out by Secretary Jewell in her Secretarial Order, is to “determine whether and how the current system for developing federal coal should be modernized.”<sup>53</sup> The Review is broad in nature, ultimately deciding “where, when, and under what terms and conditions, mineral development should occur, including with regard to the issuance of federal coal leases.”<sup>54</sup>

[51 40 C.F.R § 1502.14 – Alternatives including the proposed action.]

[52 Id.]

[53 Secretarial Order No. 3338, supra note 1 at 1.]

[54 United States Department of the Interior, Planning for Fluid Mineral Resources. Available at [http://www.blm.gov/style/medialib/blm/wo/Information\\_Resources\\_Management/policy/blm\\_handbook.Par.59010.File.dat/H\\_1624\\_1.pdf](http://www.blm.gov/style/medialib/blm/wo/Information_Resources_Management/policy/blm_handbook.Par.59010.File.dat/H_1624_1.pdf)]

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Comment Number: 0002491\_Weiskopf\_20160728\_NextGenClimateAmer-51

Organization I:NextGen Climate America

Commenter I:David Weiskopf

Other Sections: 1

Comment Excerpt Text:

In *WildEarth Guardians v. United States Office of Surface Mining Reclamation and Enforcement*, plaintiffs successfully alleged that OSM violated NEPA by failing to consider indirect effects of mining planning modifications.<sup>60</sup> According to NEPA, indirect effects are those “caused by the action and are later in time or rather removed in distance . . . but are still reasonably foreseeable.”<sup>61</sup> These indirect effects must also be accounted for in the analysis of cumulative impacts. In *WildEarth Guardians*, the court found that “the interdependence between the mines and [power plants] effectively guarantees the foreseeability of combustion-related effects.” The court therefore approved a remedy requiring OSMRE to conduct a new NEPA analysis.<sup>62</sup>

[60 *WildEarth Guardians v. United States Office of Surface Mining, Reclamation & Enft*, 104 F. Supp. 3d 1208, 1229 (D. Colo. 2015)]

[61 40 C.F.R § 1508.8(b).]

[62 *WildEarth Guardians v. United States Office of Surface Mining, Reclamation & Enft*, 104 F. Supp. 3d 1208, 1230 (D. Colo. 2015).]

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Comment Number: 0002493\_Mead\_20160728\_GovWY-1

Organization I:Office of Governor Matthew H. Mead

Commenter I:MATTHEW H. MEAD

Other Sections: 2

Comment Excerpt Text:

Order No. 3338 refers to "concerns raised by the Government Accountability Office (GAO), the Department's Office of Inspector General (OIG) and Members of Congress and interested stakeholders" centered on whether taxpayers are receiving fair market value (FMV) from the sale of coal. It is clear from the GAO and OIG reports that, in every instance, the BLM Wyoming's implementation of the federal coal program met or exceeded all requirements. It was not the focus of the GAO and OIG concerns. In fact, the BLM Wyoming program provides the standard by which other state's federal coal leasing programs are measured. Wyoming's program received

positive recognition in the GAO report, including the combination of approaches and subsequent adjustments used to estimate FMV, appraisal reporting and sign off, adjustments made to account for differences in market conditions over time, and comprehensive lease sale information provided on the Wyoming BLM website. The BLM Wyoming office should be consulted to better understand the federal coal program before deciding a change is necessary.

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Comment Number: 0002493\_Mead\_20160728\_GovWY-10

Organization I: Office of Governor Matthew H. Mead

Commenter I: MATTHEW H. MEAD

Comment Excerpt Text:

For example, to accomplish its objective at what it subjectively considers to be "fair," the BLM is proposing to create an "adder" to internalize the environmental costs from coal development. 81 Fed. Reg. at 17726. Congress has not delegated to the BLM any authority to impose an "adder," much less make policy choices and value judgments on what should be included in calculating the environmental adder. See 30 U.S.C. §§ 181 through 207 and 30 U.S.C. §§ 351 through 360. Additionally, the BLM is proposing to by-pass Interior's Royalty Policy Committee and study how it can create out of whole cloth a system for internalizing several environmental costs into the royalty rate imposed on federal coal leases. 81 Fed. Reg. at 17726. Congress has authorized the BLM to impose a royalty rate starting at 12.5%, with exceptions. 30 U.S.C. § 207. That royalty rate is to be applied against the fair market value of the federal coal. Id. §§ 201 and 207. Nothing about that simple formula Congress developed to incentivize the exploration and development of the federal coal asset calls for the BLM to compensate for externalities. Congress has not delegated any authority to the BLM to create policy on what the rate should compensate for and what it should, as a result, penalize or deter. See 30 U.S.C. §§ 181 through 207.

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Comment Number: 0002493\_Mead\_20160728\_GovWY-21

Organization I: Office of Governor Matthew H. Mead

Commenter I: MATTHEW H. MEAD

Other Sections: 2

Comment Excerpt Text:

The taxable value of coal in Wyoming is based on the FMV of the product extracted. To reach that value the Wyoming Department of Revenue (WDOR) allows for deduction of many of the expenses currently allowable by the BLM's Coal Evaluation Handbook H-3073-1 (Oct. 2, 2014). The WDOR Property Tax Division values industrial properties in the State and utilizes the income approach in establishing FMV of these properties. This approach is the same as that used by BLM in the Coal Evaluation Handbook. Wyoming has a great deal of experience in the process of valuing property to establish FMV. The Wyoming constitution and statutes require it. See Wyoming Constit., art. 15 § 11(a); W.S. 39-14-103(b)(ii). The BLM must consider its existing guidance and Wyoming's expertise and role in determining fair market value and should engage the WDOR when considering any changes.

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Comment Number: 0002493\_Mead\_20160728\_GovWY-3

Organization I: Office of Governor Matthew H. Mead

Commenter I: MATTHEW H. MEAD

Other Sections: 8.3

Comment Excerpt Text:

The PEIS process is having a disproportionate impact on Wyoming and time is of the essence for Wyoming and Wyoming mine workers. DOI has suggested that this review is temporary and time limited- three years. However, there is no written commitment by the DOI or the BLM to a three-year schedule. It regularly takes a minimum of seven to ten years to complete an Environmental Impact Statement in Wyoming. Interestingly the BLM's Solar Energy Development PEIS- considered a priority of the Obama administration- took more than four

years to complete and the BLM is only now proceeding with updating its rules and regulations. The BLM needs to stop the PEIS, but at a minimum it needs to commit in writing what it has promised repeatedly, that the PEIS will be completed by January 15, 2019 and, completed or not, that the moratorium will expire on that date.

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Comment Number: 0002493\_Mead\_20160728\_GovWY-52

Organization I: Office of Governor Matthew H. Mead

Commenter I: MATTHEW H. MEAD

Comment Excerpt Text:

One thing the BLM should do is "[i]dentify and eliminate from detailed study the issues which are not significant[.]" 40 C.F.R. § 1501.7(a)(3). For instance, the BLM is proposing to reevaluate how the coal leasing program imposes a royalty on produced coal, and how the agency values that coal. 81 Fed. Reg. 17723-24, 17726-27. Yet the BLM in 2014 already made changes to its federal coal program leasing process and FMV calculations to address concerns raised by the U.S. Government Accountability Office (GAO) and the U.S. Department of the Interior's Office of Inspector General (OIG). See *infra* 2.3. The BLM developed new protocols and issued policy guidance, a manual, and a handbook to implement the changes. *Id.* And, just this month, the Office of Natural Resources Revenue (ONRR) issued a final rule updating the royalty and production valuation regulations that cover federal coal. 81 Fed. Reg. 43338 (July 1, 2016). In that final rule, the agency determined that the changes it was making to its coal royalty and production valuation regulations were not significant and did not warrant review under NEPA. *Id.* at 43368. Likewise, the BLM should eliminate from its PEIS a study of the royalty rate and coal valuation.

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Comment Number: 0002493\_Mead\_20160728\_GovWY-53

Organization I: Office of Governor Matthew H. Mead

Commenter I: MATTHEW H. MEAD

Comment Excerpt Text:

The BLM's request for scoping comments identifies a number of issues that the BLM intends to study. 81 Fed. Reg. at 17725-27. In that notice, the BLM claims authority to administer the federal coal program under the Mineral Leasing Act, 30 U.S.C. §§ 181 through 207, and the Mineral Leasing Act for Acquired Lands, 30 U.S.C. §§ 351 through 360. 81 Fed. Reg. at 17721. However, many of the things the BLM is proposing to study in the PEIS cannot be made into law unless and until Congress changes the Mineral Leasing Acts to give BLM the authority to make those changes.

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Comment Number: 0002493\_Mead\_20160728\_GovWY-60

Organization I: Office of Governor Matthew H. Mead

Commenter I: MATTHEW H. MEAD

Comment Excerpt Text:

The way the BLM Wyoming State Office runs the federal coal program in Wyoming shows that the program is not broken. Wyoming dwarfs all other states in federal coal production. 2015 U.S. Energy Information Administration- Sales of Fossil Fuels Produced from Federal and Indian Lands, FY 2003 through FY 2014- Page 1 (Figure 1); (Attachment 3 WY0-00006, 00020). Federal coal produced from the Powder River Basin in Montana and Wyoming accounts for more than 85 percent of all federal coal production, and approximately 40 percent of all coal mined in the U.S. Therefore, the administration's call for revisions to the federal coal program targets coal production in Wyoming, but the administration cannot identify any issues with the way BLM Wyoming manages the program.

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Comment Number: 0002493\_Mead\_20160728\_GovWY-61

Organization I: Office of Governor Matthew H. Mead

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Commenter I: MATTHEW H. MEAD

Comment Excerpt Text:

The PEIS further states that the BLM will consider ways to compensate for externalities, such as climate change, in an attempt to obtain what is now being called a "fair return." That new term, fair return, does not appear in any statute granting the Secretary authority to administer the federal coal program. Additionally, Congress has never given the Secretary authority to develop a system for internalizing any of the external costs now being analyzed in the PEIS process or to determine what is "fair." This PEIS process appears to be an attempt to bypass Congress and impose by administrative fiat a Carbon Tax.

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Comment Number: 0002493\_Mead\_20160728\_GovWY-63

Organization I: Office of Governor Matthew H. Mead

Commenter I: MATTHEW H. MEAD

Comment Excerpt Text:

This Programmatic Environmental Impact Statement (PEIS) states its purpose as environmental stewardship. States like Wyoming, where coal is produced and environmental stewardship is a model for the nation, were not consulted and were caught by surprise. Companies with expertise in mining and reclamation were given no warning. Now, national revenues, energy users across the nation, coal miners and their families are at risk. The justification for this PEIS and the manner it was unveiled are unjustifiable.

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Comment Number: 0002493\_Mead\_20160728\_GovWY-65

Organization I: Office of Governor Matthew H. Mead

Commenter I: MATTHEW H. MEAD

Comment Excerpt Text:

The BLM must narrow the scope of issues being addressed in the PEIS or its analysis will get out of control chasing down every little sub- issue that leads to another sub-issue. Wyoming and its citizens are being significantly impacted every day that the moratorium continues to be in place. Therefore, it is imperative that the BLM identify only the relevant, truly significant and appropriate issues that need to be studied and get through the PEIS process in as efficient a pace as possible.

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Comment Number: 0002493\_Mead\_20160728\_GovWY-66

Organization I: Office of Governor Matthew H. Mead

Commenter I: MATTHEW H. MEAD

Comment Excerpt Text:

The policy choices that must go into deciding what the royalty rate, rental, bonus, or any other charge imposed on a federal coal lease should compensate for are Congress's to make in the first instance. These issues should not bog down the BLM's PEIS process. Congress has not even authorized or directed the BLM or the DOI to study these issues in order to make recommendations for changing the Mineral Leasing Act, or any other act of Congress. Only after Congress provides direction and authorization through legislation for the BLM to embark on finding ways to address externalities in the federal coal program may BLM create regulations to carry out the policy choices made by Congress. Therefore, the BLM should eliminate from the PEIS process any analysis of how to internalize costs not already covered by the federal coal program.

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Comment Number: 0002493\_Mead\_20160728\_GovWY-70

Organization I: Office of Governor Matthew H. Mead

Commenter I: MATTHEW H. MEAD

Comment Excerpt Text:

Finally, exclusion section 6(b) contradicts the Energy Policy Act of 2005, in which Congress repealed the 160 acre



limitation on coal lease modifications in favor of a higher threshold of 960 acres. Compare Order 3338 at 9, with 30 U.S.C. § 203(a)(3)(A) (codifying Energy Policy Act of 2005, Pub. L. 109-58, 119 Stat. 594, § 432 (Aug. 8, 2015)). The BLM has recognized that its regulation that still uses the lower 160 acre threshold was superseded by the Act. See 42 C.F.R. § 3432.1(a); BLM Instruction Memorandum No. 2006-004, Interim Guidance for Implementation of the Energy Policy Act of 2005 [P.L. 109-58] for Federal Coal Leasing (Oct. 4, 2006). The Secretary should revise Order 3338 to comply with the law and, during the PEIS process, the BLM should apply this exclusion as contemplated by Congress.

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Comment Number: 0002493\_Mead\_20160728\_GovWY-8

Organization I: Office of Governor Matthew H. Mead

Commenter I: MATTHEW H. MEAD

Comment Excerpt Text:

What is more, the BLM should eliminate from study those things that cannot be made part of a final decision by the agency because the BLM lacks statutory authority to make the regulatory change. Cf. *Effective Use of Programmatic NEPA Reviews*, Council of Environmental Quality, pp. 19-20 (explaining that potentially significant environmental impacts are those that flow from the proposed federal action and that the proposed action drives the issues addressed in the NEPA review); (WY0-00057 to 00058). "A federal agency is a creature of statute and derives its existence, authority and powers from Congress alone. It has no constitutional or common law existence or authority outside that expressly conveyed to it by Congress." *Wyoming v. US. Dep 't of the Interior*, No. 15-cv-043, 2016 WL 3509415, \*12 (June 21, 2016) appeal filed, No. 16-8069 (10th Cir.) (citation omitted); (WY0-00130). "Regardless of how serious the problem an administrative agency seeks to address, [] it may not exercise its authority in a manner that is inconsistent with the administrative structure that Congress enacted into law." *Id.* at \*3. (citation and quotation omitted); (WY0-00119). Therefore, if the BLM lacks authority to take a particular action it should not amass needless detail on environmental impacts that might flow from that unavailable action.

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Comment Number: 0002493\_Mead\_20160728\_GovWY-82

Organization I: Office of Governor Matthew H. Mead

Commenter I: MATTHEW H. MEAD

Comment Excerpt Text:

One benefit of the "stay in your lane" approach is to avoid creating inconsistent, incompatible, or duplicative requirements. Duplicative regulations frustrate and delay development and they incentivize operators to move development activity off of federal lands negatively impacting states that rely heavily on those revenues to fund public projects and services. The BLM must avoid the impact and consequences of straying outside of its lane and the attendant effect of inconsistent, incompatible, and duplicative requirements on state and local governments, tribes, and the U.S. economy, and on air pollutant emissions

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Comment Number: 0002493\_Mead\_20160728\_GovWY-9

Organization I: Office of Governor Matthew H. Mead

Commenter I: MATTHEW H. MEAD

Comment Excerpt Text:

For example, the BLM's scoping notice uses language implying that the BLM will consider impacts from all forms of coal development, not just federal coal development and not just the impacts caused by the leasing and mining process. 81 Fed. Reg. at 17726. Congress has not delegated BLM authority to use the federal coal program to compensate for externalities that result from all "coal development." See 30 U.S.C. §§ 181 through 207 and 30 U.S.C. §§ 351 through 360. The BLM should limit the scope of its PEIS analysis to the federal coal leasing process Congress has charged it to administer and not engage in an analysis of matters beyond the scope of its authority. In this vein, the BLM is proposing to study whether the U.S. is receiving a "fair return" on its coal assets. 81 Fed.

Reg. at 17723. The BLM asserts that there is concern that the public is not getting the full value of the coal being leased. *Id.* However, the BLM already made adjustments to its processes that addressed concerns raised by the OIG and GAO. *Id.*; see also *infra* 2.3. Moreover, the ONRR has finalized changes to the royalty and valuation regulations that impact the return on coal. 81 Fed. Reg. at 43338. Therefore, the BLM is proposing to study how to make leasing coal "fair" by charging for the climate change the BLM attributes to coal development and use. 81 Fed. Reg. at 17723. However, nothing about the Mineral Leasing Acts shows an intent from Congress to delegate to the BLM any authority to create a "fair" system based on the environmental concerns raised by BLM. See 30 U.S.C. §§ 181 through 207 and 30 U.S.C. §§ 351 through 360. The Acts direct the BLM to promote coal leasing, they do not contain any provision authorizing the BLM to address climate change. *Id.* Those authorities are found in other acts of Congress and were delegated to states and agencies outside of the U.S. Department of the Interior (DOI) that have the expertise to analyze and manage the issues.

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Comment Number: 0002499\_Nichols20160728-10

Organization I: WildEarth Guardians

Commenter I: Jeremy Nichols

Other Sections: 1 6

Comment Excerpt Text:

As BLM and Interior prepare the PEIS, the agencies must analyze and assess the impacts of similar and cumulative action consistent with NEPA. Indeed, in accordance with NEPA, the scope of an EIS must include all "[c]umulative" and "[s]imilar" actions. 40 C.F.R. § 1508.25(a)(2) and (3). Cumulative actions are defined as those that "when viewed with other proposed actions have cumulatively significant impacts and should therefore be discussed in the same statement." 40 C.F.R. § 1508.25(a)(2). Similar actions are defined as those that "when viewed with other reasonably foreseeable or proposed agency actions, have similarities that provide a basis for evaluating their environmental consequences together, such as common timing or geography." 40 C.F.R. § 1508.25(a)(3). Pursuant to NEPA regulations, both cumulative and similar actions must be analyzed and assessed together with alternatives and any proposed agency actions in the same EIS.

With regards to cumulative and similar actions, it is imperative that the PEIS, at a minimum, address the following:

i. The impacts of oil and gas development in the western United States

Oil and gas development, particularly the development of federal oil and gas as authorized by the BLM, is not only a cumulative action, but a similar action under NEPA. Oil and gas development, particularly federal oil and gas development, often occurs on or near mines that are producing federal coal. For example, a massive oil and gas project under consideration by the BLM in the Powder River Basin of Wyoming would take place where extensive coal mining is currently occurring. See 80 Fed. Reg. 65,242 (Oct. 26, 2015). At a minimum, oil and gas development occurs extensively throughout the coal producing regions of the western United States, where the vast amount of federal coal is located and mined.

See Attached for Graphic - Federal oil and gas wells in the Uinta Basin of northeastern Utah adjacent to the Bonanza coal-fired power plant. The Bonanza power plant is fueled by the nearby Deserado coal mine in northwestern Colorado, which is comprised almost entirely of federal coal reserves.

Not only does oil and gas development take place in similar geographies and at similar times as coal mining, it poses similar impacts, particularly in terms of air emissions and climate impacts. Indeed, as reports indicate, the onshore and offshore development of federal oil and gas contributes to nearly 10% of all U.S. greenhouse gas emissions. (46) Onshore development of federal oil and gas, which largely occurs in the western United States, often at or near coal mining operations, accounts for nearly 4% of all U.S. greenhouse gas emissions. To this end, climate concerns related to oil and gas development are entirely relevant to addressing the climate impacts of the federal coal program and must be fully analyzed and assessed in the PEIS as similar and/or cumulative actions.

The need to address the impacts of oil and gas development in the PEIS together with the impacts of the federal coal program is critical given that there are a number of reasonably foreseeable proposed oil and gas developments currently under consideration by the BLM, including:

- The Continental Divide-Creston oil and gas project in southern Wyoming, approval of which would open the door for 8,950 new oil and gas wells. See 81 Fed. Reg. 22,628 (April 18, 2016).

- The Monument Butte oil and gas project in northeastern Utah, approval of which would open the door for 5,750 new oil and gas wells. See 81 Fed. Reg. 41,331 (June 24, 2016).
- The Converse County oil and gas project in eastern Wyoming, approval of which would open the door for 5,000 new oil and gas wells. See 79 Fed. Reg. 28,538 (May 16, 2014).
- The Greater Crossbow oil and gas project in northeastern Wyoming, approval of which would open the door for 1,500 oil and gas wells. See 80 Fed. Reg. 65,242 (Oct. 26, 2015).
- Extensive oil and gas leasing in Colorado, Montana, New Mexico, Utah, and Wyoming. As the BLM's own statistics show, millions of acres of these states have been leased over the years, opening the door for extensive oil and gas development. In the remainder of 2016, the BLM is proposing lease 87 parcels in August comprising 89,137 acres in Wyoming, 21 parcels in November comprising 30,197 acres in Wyoming, 91 parcels in October comprising 19,790 acres in Montana, 28 parcels in November comprising 12,344 acres in Utah, 36 parcels in September comprising 13,876 acres in New Mexico, and 37 parcels in November comprising 25,298 acres in Colorado. (47) It is reasonable to believe that the BLM is likely to propose, offer for sale, and issue millions more acres of federal oil and gas leases in the near future. The climate consequences of such leasing actions must be addressed in the PEIS.

(47) See BLM, "Notice of Competitive Oil and Gas Lease Sale" (May 4, 2016), available online at <https://eplanning.blm.gov/epl-front-office/projects/nepa/61292/73465/80674/08list.pdf>; BLM, "Environmental Assessment, November 1, 2016 Competitive Oil and Gas Lease Sale Parcels," EA No. DOI-BLM-WY-D040-2016-0138EA (April 2016), available online at <https://eplanning.blm.gov/epl-front-office/projects/nepa/60579/72678/79780/EAv1.pdf>; BLM, "Notice of Competitive Oil and Gas Lease Sale" (July 2016), available online at [http://www.blm.gov/style/medialib/blm/mt/blm\\_programs/energy/oil\\_and\\_gas/leasing/lease\\_sale/s/2016/oct16\\_2016.Par.89806.File.dat/10\\_18\\_16%20SaleNotice\\_Map\\_List\\_Stips\\_for%20postin.g.pdf](http://www.blm.gov/style/medialib/blm/mt/blm_programs/energy/oil_and_gas/leasing/lease_sale/s/2016/oct16_2016.Par.89806.File.dat/10_18_16%20SaleNotice_Map_List_Stips_for%20postin.g.pdf); BLM, "Environmental Assessment, November 2016 Competitive Oil and Gas Lease Sale," EA No. DOI-BLM-UT-G010-2016-033-EA, available online at [http://www.blm.gov/style/medialib/blm/mt/blm\\_programs/energy/oil\\_and\\_gas/leasing/lease\\_sale/s/2016/oct16\\_2016.Par.89806.File.dat/10\\_18\\_16%20SaleNotice\\_Map\\_List\\_Stips\\_for%20postin.g.pdf](http://www.blm.gov/style/medialib/blm/mt/blm_programs/energy/oil_and_gas/leasing/lease_sale/s/2016/oct16_2016.Par.89806.File.dat/10_18_16%20SaleNotice_Map_List_Stips_for%20postin.g.pdf); BLM, "Notice of Competitive Oil and Gas Lease Sale" (April 20, 2016), available online at [http://www.blm.gov/style/medialib/blm/nm/programs/0/og\\_sale\\_notices\\_and/2016/july\\_2016.Par.97830.File.dat/July%202016%20OG%20Lease%20Sale%20Notice.pdf](http://www.blm.gov/style/medialib/blm/nm/programs/0/og_sale_notices_and/2016/july_2016.Par.97830.File.dat/July%202016%20OG%20Lease%20Sale%20Notice.pdf); BLM, "November 10, 2016 Oil and Gas Lease Sale" website available at [http://www.blm.gov/co/st/en/BLM\\_Programs/oilandgas/oil\\_and\\_gas\\_lease/2016/november\\_2016.html](http://www.blm.gov/co/st/en/BLM_Programs/oilandgas/oil_and_gas_lease/2016/november_2016.html).

The climate impacts of the federal coal program cannot be analyzed in a piecemeal fashion that overlooks BLM's twin role in managing onshore oil and gas. Particularly given that the scope of the PEIS will necessarily be national in focus, if not broader, the BLM is compelled under NEPA to ensure these similar actions are fully accounted for.

The need to address the reasonably foreseeable climate impacts of oil and gas development is underscored by the greenhouse gas emissions that are likely to result. As reported, if fully developed, unleased onshore oil and gas reserves stand to release nearly 30 billion metric tons of carbon. (48) See Table below.

See Attached for Table - Carbon Emissions (in billion metric tons) Projected from Unleased Federal Onshore Oil and Gas Reserves(48) See Exhibit 5 at 18

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Comment Number: 0002499\_Nichols20160728-11

Organization I: WildEarth Guardians

Commenter I: Jeremy Nichols

Comment Excerpt Text:

State and Private Coal Development

The PEIS must analyze and assess the impacts of state and private coal development, particularly as such development is often connected to the mining of federal coal.

Under NEPA, the direct, indirect, and cumulative impacts of connected actions must be analyzed in the same

NEPA document as a proposed action. As the Interior Board of Land Appeals (“IBLA”) has held, “connected action must be considered to be a part of the proposed action when determining whether a proposed action will have a significant effect on the human environment.” *Glacier-Two Medicine Alliance, et. al.*, 88 IBLA 133 (1985), 134. The 10th Circuit has explained, “[o]ne of the primary reasons for requiring an agency to evaluate ‘connected actions’ in a single NEPA analysis is to prevent agency from minimizing the potential environmental consequences of a proposed action (and thus short-circuiting NEPA review) by segmenting or isolating an individual action that, by itself, may not have a significant environmental impact.” *Citizens’ Committee to Save our Canyons v. U.S. Forest Service*, 297 F.3d 1012, 1029 (10th Cir. 2002) (citations omitted).

A “connected action” is defined as one that is “closely related” to other actions and is identified based on three factors in NEPA’s implementing regulations. Actions are “connected” if they:

- (i) automatically trigger other actions which may require environmental impact statements.
- (ii) cannot or will not proceed unless other actions are taken previously or simultaneously.
- (iii) are interdependent parts of a larger action and depend on the larger action for their justification.”

40 C.F.R. § 1508.25(a)(1). To determine whether actions are connected, the Tenth Circuit applies the “independent utility test,” which asks whether “each of the two projects would have taken place with or without the other” *Wilderness Workshop v. U.S. Bureau of Land Mgmt.*, 531 F. 3d 1220, 1229 (10th Cir. 2008) (emphasis added) (quoting *Great Basin Mine Watch v. Hankins*, 456 F.3d 955, 969 (9th Cir. 2006); see also *Wetlands Action Network*, 222 F.3d at 1118 (“[W]e have rejected claims that actions were connected when each of the two projects would have taken place with or without the other and thus had independent utility.” (internal quotation marks omitted)); *South Carolina v. O’Leary*, 64 F.3d 892, 899 (4th Cir. 1995) (holding that actions are not “connected” when they are “independent and separable”).

Here, it is often the case that approval of federal coal mining facilitates the mining of state and privately owned coal. In many cases, mines in the western United States consist of an amalgam of privately owned, state owned, and federal coal. Not only that, but approval of federal coal mining can influence the development of state and privately coal on a larger scale. For instance, if cheap Powder River Basin coal continues to be mined and sold, there will be less incentive to develop private and state coal. Conversely, if Powder River Basin coal production declines, would private and state coal production necessarily increase?

See attached for graphic - Twenty Mile Federal Coal Leases

An example of a mine with extensive state, private, and some federal coal reserves. The Foidel Creek (or Twentymile) mine, owned by Peabody Energy, is in northwestern Colorado. The map above shows the location of federal coal leases in green. Outside these leases, the coal is state owned (under the blue lands) or private (under the white lands). (50) Map from BLM, “Environmental Assessment for the Peabody Twentymile Coal, LLC COC54608 Lease Modification” (Oct. 2014), available online at [https://eplanning.blm.gov/epl-front-office/projects/nepa/41852/55032/59723/DOI-BLM-CO-N010-2014-044-EA-Public\\_Comment.pdf](https://eplanning.blm.gov/epl-front-office/projects/nepa/41852/55032/59723/DOI-BLM-CO-N010-2014-044-EA-Public_Comment.pdf).

The PEIS must rigorously analyze the effects that the federal coal program has on the connected action of private and state coal mining, not only as it relates to direct access to state and federal reserves, but also as it relates to economic impacts. Furthermore, where private and state coal mining may not actually be “connected” to the federal coal program, Interior and BLM must continue to address the impacts of this coal mining given that they represent cumulative actions that must be analyzed and assessed as part of the scope of analysis for the PEIS.

Comment Number: 0002499\_Nichols20160728-12

Organization I: WildEarth Guardians

Commenter I: Jeremy Nichols

Other Sections: I

Comment Excerpt Text:

Interim Federal Coal Management Measures

We are concerned that as the PEIS process is unfolding, the Interior Department and BLM have be falling short of ensuring that actions are not undertaken that would prejudice the ultimate decision pursuant to 40 C.F.R. § 1506.1(c)(3). In the Secretary’s January 16, 2016 statement regarding coal reform, it was indicated that the BLM would be moving forward in the near-term to provide guidance related to transparency, royalty rate reductions,

and waste mine methane. (51) As we conveyed in an earlier letter, we support this effort. However, we would urge you to add clarity as follows:

- On transparency, BLM state and field offices must be directed to immediately post online pending requests to lease coal, pending applications to reduce royalties, pending lease readjustments, pending lease suspensions and pending proposals to accept advance royalties in lieu of continued operation, and any and all findings that operators are not diligently developing or meeting continued operation requirements. Ensuring that these proposals and findings are made public will be critical for buttressing the integrity that Interior expects to bring to its reform efforts.

- With regards to royalty rate reductions, the BLM must be directed to pause consideration of any pending or new royalty rate reduction requests until completion of the programmatic environmental impact statement. With recent media reports indicating royalty rate reductions may be enriching coal companies at the expense of the public, these reductions are uncalled for in the near-term. (52)

- On waste mine methane, the Interior Department must be directed to pause approval of any coal lease or mining plan that would lead to underground mining activities requiring degasification systems (i.e., systems that vent methane other than normal ventilation air systems) pending completion of BLM regulations meant to address coal mine methane. (53)

(51) See “Fact Sheet: Modernizing the Federal Coal Program,” available at [http://www.blm.gov/style/medialib/blm/wo/Communications\\_Directorate/public\\_affairs/news\\_release\\_attachments.Par.47489.File.dat/Coal%20Reform%20Fact%20Sheet%20Final.pdf](http://www.blm.gov/style/medialib/blm/wo/Communications_Directorate/public_affairs/news_release_attachments.Par.47489.File.dat/Coal%20Reform%20Fact%20Sheet%20Final.pdf).

(52) See Rucker, P., “U.S. taxpayer due to subsidize Koch-controlled coal mine,” Reuters (Jan. 12, 2016), available at <http://www.reuters.com/article/usa-koch-coal-idUSL2N14W1JJ20160112>.

(53) In 2014, the Bureau of Land Management issued an Advanced Notice of Proposed Rulemaking requesting comments to assist in developing a “program to capture, use, or destroy waste mine methane that is released into the mine environment and the atmosphere as a direct consequence of underground mining operations[.]” 79 Fed. Reg. 23,923 (April 29, 2014). The agency has yet to initiate a rulemaking, however.

See attached for graphic - Methane Venting Above the West Elk Coal Mine in Colorado. (54)

(54) More pictures of methane venting above the West Elk mine can be viewed at [https://www.flickr.com/photos/wildearth\\_guardians/albums/72157628013512966](https://www.flickr.com/photos/wildearth_guardians/albums/72157628013512966)

Comment Number: 0002499\_Nichols20160728-17

Organization I: WildEarth Guardians

Commenter I: Jeremy Nichols

Comment Excerpt Text:

Given all this, we urge the Department of the Interior and the BLM to ensure that as the PEIS is developed, that the purpose and need for the review and the proposed actions is to put an end to the federal coal program and lead our nation away from coal toward cleaner, mores sustainable forms of energy. A purpose and need is required for an EIS pursuant to 40 C.F.R. § 1502.13. We strongly urge the Interior Department to make clear that, given the collapse of the coal industry, the need to combat climate change, and mounting support for keeping coal in the ground, the purpose and need for the PEIS is to ensure an orderly transition away from coal and an end to the leasing and future mining of all publicly owned coal reserves.

Such a purpose and need is entirely within the scope of the Interior Secretary’s discretion and duties under the U.S. Mineral Leasing Act. As the Act makes clear, the Secretary is “authorized,” but not compelled to lease coal. 30 U.S.C. § 201(a)(1). It is telling that not only is the Secretary not only is not required to lease coal, but also is authorized to lease coal “as [s]he finds appropriate and in the public interest[.]” Id. Further, the Secretary is even authorized to “disapprove” of plans to allowing the mining of leased federal coal. 30 U.S.C. § 207(c). Taken together, there is overwhelming authority and discretion for the Interior Department and the BLM to begin to say “no” to more federal coal leasing and production and “yes” to a brighter future that is not ruined by fossil fuels and driving our world deeper into climate debt.

Given the public’s immense interest in limiting, if not reversing, the impacts of climate change and preventing

trillions in potential climate damages, there is ample reason for the Interior Department and the BLM to use their discretion to make the goal of the PEIS and any future reforms to be to end the federal coal program. (19) (19) It is further telling that the BLM is not simply authorized, but actually compelled, to reject coal lease applications if “leasing of the lands covered by the application, for environmental or other sufficient reasons, would be contrary to the public interest.” 43 C.F.R. § 3425.1-8(a)(3). This applies to leasing by application, which is the only way the BLM currently offers leases for competitive sale. Similarly, a lease modification, which is a form of non-competitive leasing, cannot be issued if it is not “in the interest of the United States.” 30 U.S.C. § 203(a)(2)(A).

We do not suggest that the Interior Department and BLM simply shut down all publicly owned coal mining overnight. Rather, we urge the Interior Department and the BLM to consider, consistent with the National Environmental Policy Act (“NEPA”), 42 U.S.C. § 4332(C)(iii), a range of alternatives to determine the most effective and orderly means of ending the federal coal program. At a minimum, we urge the detailed consideration, analysis, and assessment of the following alternative, which we describe as the “Just Transition Alternative”:

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Comment Number: 0002499\_Nichols20160728-24

Organization I: WildEarth Guardians

Commenter I: Jeremy Nichols

Other Sections: 6

Comment Excerpt Text:

The climate impacts of all Interior Department fossil fuel management. Additionally, if Interior and the BLM are to properly analyze and assess the climate impacts of federal coal management, the climate impacts of all Interior Department overseen fossil fuel development must be taken into account. This includes, but is not limited to, the impacts of offshore oil and gas development, oil shale, and tar sands development. As reports indicate, the potential climate impacts of offshore oil and gas, oil shale, and tar sands stand to be tremendous, with more than 222.14 billion metric tons of carbon projected, nearly as much as the total carbon emissions that could be released if all unleased federal coal reserves are developed. (49) See Exhibit 5 at 18

See Attached for Table - Carbon Emissions (in billion metric tons) From Other Interior Department-overseen Fossil Fuel Development

Similar to onshore oil and gas development, the Interior Department and BLM’s management of offshore oil and gas, oil shale, and tar sands are both cumulative and similar in nature, and therefore must be a part of the scope of the analysis for the PEIS. Indeed, if the climate impacts of the federal coal program are to be completely understood, they must be analyzed together with the impacts of other fossil fuel management programs that are under the control and authority of the Department of the Interior.

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Comment Number: 0002499\_Nichols20160728-25

Organization I: WildEarth Guardians

Commenter I: Jeremy Nichols

Comment Excerpt Text:

Greater Transparency Must be Achieved

Finally, we urge the BLM and the Interior Department to live up to its commitment to making federal coal management more transparent and accessible to the American public. Currently, information related to federal coal management is not readily available, is difficult to track down in a consistent manner, and is not affirmatively made available to the public through the internet.

WildEarth Guardians experienced this firsthand recently. In 2015, we sought to prepare maps presenting information related to federal coal leases in the United States. (55) In embarking upon this project, we found many shortcomings in the way the BLM manages data regarding coal leases.

(55) This series of interactive maps is available at

[http://www.wildearthguardians.org/site/PageServer?pagename=priorities\\_climate\\_energy\\_coal\\_public\\_land\\_interactive\\_map#.V5qVxyMrlIdY](http://www.wildearthguardians.org/site/PageServer?pagename=priorities_climate_energy_coal_public_land_interactive_map#.V5qVxyMrlIdY).

For example:

-BLM does not maintain consistent GIS data for coal leases in the United States. Although some state offices maintain shapefiles showing accurate lease boundaries, most state offices do not appear to maintain such data. (56) The most reliable form of geographic data is accessible through BLM's LR2000 database. However, this data is not easily transferrable to spreadsheets or databases and does not easily translate into precise geospatial presentation. It seems reasonable to expect BLM to maintain consistent, reliable, accurate, and accessible GIS data regarding coal leases. (56) The Colorado State Office has very accessible, accurate, and up-to-date coal lease GIS data available on its website,

[http://www.blm.gov/co/st/en/BLM\\_Programs/geographical\\_sciences/gis/GeospatialData.html](http://www.blm.gov/co/st/en/BLM_Programs/geographical_sciences/gis/GeospatialData.html).

-Information related to coal management actions is not made available online. Information regarding readjustments, lease suspension reviews, royalty rate reductions, etc. is not regularly posted online and made available to the public. Furthermore, even though these actions are subject to NEPA, they are not made readily available to the public, even on BLM's NEPA logs. Certainly, the BLM often provides no notice to the public that these decisions are being contemplated and/or undertaken.

-LR2000 is useful (albeit not user-friendly), but it would be more useful if BLM would provide consistent and more detailed entries for coal lease cases. We found that LR2000 entries for coal leases varied by state, with some states providing greater detail and others not so much. If LR2000 is meant as a clearinghouse for public information related to federal coal leases, it could be improved considerably to ensure consistent and more useful data is available. LR2000, if it is to be utilized as a public database of federal coal information, should also include information regarding mining plan and mining plan modification approvals for federal coal leases. This would take coordination with OSMRE and the Secretary, but would provide more robust information regarding the status of current leases.

-Production data for individual federal coal leases has not been made available. It is unclear why this is the case. For members of the public wishing to determine whether a specific coal lease is producing and if so, how much coal it produces, such data is not available. BLM and Interior should strive to make this data available to provide greater transparency around federal coal production.

BLM and Interior should strive to ensure that records related to federal coal management are made available online so that the public can be more informed and engaged in the management of their coal resources. As it stands, federal coal management often occurs in a black box, making it very difficult to foster public trust and acceptance of BLM and Interior management actions.

Comment Number: 0002499\_Nichols20160728-5

Organization I: WildEarth Guardians

Commenter I: Jeremy Nichols

Comment Excerpt Text:

a. OSMRE Must be Involved in the PEIS Process and Federal Coal Reform Efforts

We take issue with the apparent exclusion of the Office of Surface Mining Reclamation and Enforcement ("OSMRE") from the PETS process. While Secretarial Order 3338 states that it does not "apply to any action of the Office of Surface Mining Reclamation and Enforcement" (Order 3338 § 1), this statement does not appear to preclude or otherwise prevent OSMRE's involvement in the PETS and the broader effort to reform the federal coal program. In fact, this statement appears to speak to the applicability of the coal leasing moratorium set forth under the Order, which clearly does not affect actions undertaken by OSMRE. That OSMRE and its management authorities should be implicated in the development of the PETS seems entirely consistent with the Order, which directs that a PETS be prepared to, "analyz[e] potential leasing and management reforms to the current Federal coal program." Order 3338 § 1. As the Order acknowledges, OSMRE's coal management responsibilities are considered part of the "Federal Coal Program." Order 3338 § 2(a).

In fact, OSMRE (as well as the Secretary) has extensive authorities and responsibilities related to the management of publicly owned coal that are highly relevant, if not indispensable, to the purpose of the PETS. These authorities

and responsibilities include reviewing and taking action on mining plans and mining plan modifications for the mining of leased federal coal pursuant to 30 C.F.R. § 746, ensuring state-issued permits authorizing the mining of leased federal coal are consistent with non-delegable federal laws pursuant to 30 C.F.R. § 745, and exercising oversight of state permitting of the mining of leased federal coal pursuant to 30 C.F.R. § 740. These duties are entirely germane to the core issues that will be addressed in the PETS, including the climate impacts of the federal coal program, other impacts of the federal coal program, socio-economic considerations, exports, and energy needs.

For example, the PETS could and should address how OSMRE can best measure, assess, and address the climate impacts of continued federal coal production when reviewing and taking action on mining plans and mining plan modifications. Especially given that OSMRE and the Secretary have been directly admonished by federal courts for ignoring the climate impacts of coal mining decisions, such a move seems imminently wise. (26) To this end, it would make sense to consider changes to 30 C.F.R. § 746 (or other provisions of 30 C.F.R. § 740, et seq.) to ensure that, even after publicly owned coal has been leased, that reforms are integrated into OSMRE and Secretarial reviews and decisionmaking regarding the mining of leased federal coal. Ultimately, it just makes sense to ensure OSMRE's role in the management of federal coal is taken into account to ensure the most effective reforms are implemented.

(26) The Department of the Interior and OSMRE have recently lost and/or conceded on at least lawsuits challenging their failure to comply with the National Environmental Policy Act when reviewing and taking action on mining plan modifications in accordance with 30 C.F.R. § 746. See *WildEarth Guardians v. OSMRE*, 104 F.Supp. 3d 1208 (D. Colo. 2015), *WildEarth Guardians v. OSMRE*, Nos. CV14-13-BLG-SPW, CV14-103-BLG-SPW, 2016 WL 259285 (D. Mont. Jan. 21, 2016), and *Federal Defendants' Motion for Voluntary Remand and Memorandum in Support, WildEarth Guardians v. OSMRE*, Civ. No. 1:14-cv-00112-RJ-CG, filed July 18, 2016. The latter motion is attached to these comments as Exhibit 17.

Furthermore, although the Secretary has the authority to disapprove of mining plans, there are currently no explicit criteria to guide the Secretary in making such decisions. We would urge the Interior Department to consider changes to 30 C.F.R. § 746 that would require the Secretary to make, at a minimum, a finding that mining leased federal coal is in the public interest for environmental or other sufficient reasons. This "public interest" standard is similar to what the BLM considers when determining whether leasing is appropriate. Because at times, after a lease is issued, new information or circumstances may arise calling into question any "public interest" determination made at the leasing stage, it would make sense to ensure that, even after a lease is issued, the mining of the leased federal coal remains firmly within the public interest.

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Comment Number: 0002500\_Sweeney\_20160728-11

Organization I: National Mining Association

Commenter I: Katie Sweeney

Comment Excerpt Text:

I. Department of the Interior (DOI) Previously Rejected Motivations for the Moratorium and Should Not Change Course Based on Third Party Conjectures

In moving forward with the moratorium and preparation of the PEIS, DOI is apparently fully embracing the flawed reasoning it had rejected out of hand just a few years earlier. In the PEIS scoping meetings and in the media, various anti-development organizations have resurrected these claims by deploying a combination of incomplete, misleading data and misinformation to produce a fictional narrative about the revenue and other economic returns to the public through bonus bids, royalties and surface rental fees. The Secretarial Order rests upon the uncritical acceptance of these contrived "fair market value" concerns by allowing them to serve as proxies for substituting climate-centric for market-based policies in the management of the nation's largest energy resource.

For example, many of the proposals currently advanced by groups in opposition to leasing federal coal are substantially the same as those raised in a 2011 petition for rulemaking calling for the abandonment of the lease-by-application (LBA) method for lease sales and the imposition of "carbon fees." In denying the petition in 2011,



BLM explained: how the LBA method is competitive and ensures receipt of fair market value; the pace of leasing occurred at generally the same rate as reserve depletion at existing mines; the National Environmental Policy Act (NEPA) analyses conducted in conjunction for lease sales adequately evaluate GHG emissions; and, imposing a carbon or other externality-based fee exceeds BLM's delegated authority under the Mineral Leasing Act (MLA) and the Federal Land Policy Management Act (FLPMA) and would require congressional action. DOI points to no evidence or rationale that explains why these factual and legal conclusions are no longer valid. DOI's change in position from its well-considered and legally sound 2011 decision is arbitrary and capricious.

Similarly, DOI seems to now blithely accept the "keep it in the ground" organizations' characterization of two key government reports as the rationale for the moratorium. These two reports on coal leasing, one conducted by the DOI Inspector General (IG) and the other by the General Accountability Office (GAO) however, did not identify systemic weaknesses in the current leasing system. Specifically, GAO did not repudiate its 2010 finding that the LBA method can achieve the objectives of ensuring fair return to the public. When the IG testified before Congress, she confirmed in response to questions that taxpayers are receiving a fair return from the federal coal program, and in many cases receiving more than fair market value. In fact, in the months after the reports were released, DOI informed members of the U.S. Senate that neither report identified concerns meriting a moratorium on federal coal leasing. While each report identified some inconsistencies in the application of guidance or documentation for decisions, BLM has since addressed those concerns. To date, the agency has published an updated Coal Evaluation manual and handbook as well as seven instruction memoranda to its field offices in response to the modest suggestions by the IG and GAO.

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Comment Number: 0002505\_Brooke\_20160729-3

Organization I: Black Warrior River Keeper

Commenter I: Nelson Brooke

Other Sections: 8.4

Comment Excerpt Text:

While the applicant states in the EA on page 48 that the ADEM NPDES permit "provides strict water quality restrictions that control the quality of water that will be allowed to be discharged into the nearby streams," ADEM's NPDES permits actually allow for rain event exemptions on pollutant limitations, essentially permitting coal mines to discharge sediment and heavy metals-laden water over spillways or through pipes into receiving streams during rain events. These unfortunate exemptions circumvent the intent of the Clean Water Act, and place downstream waters and species in harm's way at times when pollutant limitations are needed most. ADEM's coal mining NPDES permits are designed to allow massive quantities of sediment to discharge into receiving waters during rain events. The idea touted on page 48 that sediment basins are adequate to trap sediment in runoff from coal mines cannot be trusted. There is a lot of talk in the EA about all the regulations and plans in place to protect the environment, but the reality on the ground is: strip mines in Alabama are overseen by lax regulations and minimal regulatory oversight.

A misleading representation of the NPDES compliance history of the applicant at its Narley Mine was provided as a justification for the lease in this EA. Such misinformation should not be taken lightly, and should be ample fodder for revocation of this lease. The EA states on page 48: "Best Coal, Inc. has not experienced a non-compliance discharge from any of its basins associated with the NPDES Permit AL0075752 since March 15, 2011." Upon a quick Black Warrior Riverkeeper review of NPDES Permit AL0075752 monthly discharge monitoring reports publicly available on ADEM's eFile database, we found this statement to be patently false. From March 15, 2011 to January 2012, Narley Mine had 217 violations of its NPDES permit – by exceeding limitations for toxicity and selenium.

On page 48 the following was stated: "In addition, there are no issues or concerns brought forth relating to the past mining operations in the area according to their past compliance records." Additionally on page 35 the following was stated: "Best Coal had tested the Narley Mine overburden and interburden to determine whether

acid or other toxic-forming substances were present in amounts that might pollute water resources. The results indicated that toxicity issues with respect to the materials tested were minimal. The three overburden cores contained small amounts of acid-forming shale zones near one or more of the coal beds to be mined. The volume of this toxic material was small compared to the total volume of overburden. Excavation of the overburden would not necessarily mix the spoil thoroughly. Therefore, there is a possibility that pods of toxic shale might be positioned within the backfill where they could have some localized environmental effect. However, considering the volumes involved, that effect would be limited to a few patches of sparse vegetation, which could be mitigated with an application of agricultural lime.” Taking these two items into consideration, it is of note that some of the NPDES permit violations at the Narley Mine were with respect to toxicity failures in their discharges. It is clear that the applicant’s representation of operations at Narley Mine differ from the facts on the ground.

The stretch of the Locust Fork near Narley Mine No. 3 is classified as federal Critical Habitat under the Endangered Species Act for six species of freshwater mussels: Alabama moccasinshell (*Medionidus acutissimus*) [Threatened], Dark pigtoe (*Pleurobema furvum*) [Endangered], Orange-nacre mucket (*Hamiota perovalis*) [Threatened], Ovate clubshell (*Pleurobema perovatum*) [Endangered], Triangular kidneyshell (*Ptychobranhus greenii*) [Endangered], and Upland combshell (*Epioblasma metastrata*) [Endangered]. It is also known habitat for the following rare species: Black Warrior waterdog (*Necturus alabamensis*) [Candidate], Cahaba shiner (*Notropis cahabae*) [Endangered], Flattened musk turtle (*Sternotherus depressus*) [Threatened], and Plicate rocksnail (*Leptoxis plicata*) [Endangered]. Amazingly, Table 4 in the EA erroneously states about the Cahaba Shiner: “this species is only found in the main channel of the Cahaba River.” Actually, the most robust population of the Cahaba shiner lives within the Locust Fork near this mine site. With such a clear mistake, it is hard to imagine that a Section 7 Consultation meaningfully took place, even though the U.S. Fish & Wildlife Service informed the BLM on 6/27/13 that Best Coal’s contractor met consultation requirements. Unfortunately, without a serious cumulative impacts review, these species well-being and the habitat and water quality impacts from coal mining were not seriously considered through this process. The habitat assessment performed by MEC simply focused on the immediate area of the mine – an area already impacted by multiple activities over the years, but failed to survey areas immediately downstream that will be impacted by polluted runoff from the mine during operation, during reclamation activities, and well into the future beyond post-reclamation closure. Alabama is the number one state in the U.S. for aquatic biodiversity, and the Locust Fork is a key priority watershed for rare species habitat, reintroductions, and recovery. If the BLM’s federal coal EA process were adequate, the importance of the Locust Fork, its water quality, its aquatic habitat, and its inhabitants would not have been glossed over as it was here.

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Comment Number: 0002506\_Nichols\_20160729-7

Organization I: Wild Earth Guardians

Commenter I: Jeremy Nichols

Comment Excerpt Text:

Finally, we urge you to ensure your Interior Department follows through to produce its scoping report by the end of 2016 and ensures that the aforementioned principles are integrated into any identified alternatives for future coal management.

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Comment Number: 0002507\_Nettleton\_20160801-1

Commenter I: Jerry Nettleton

Other Sections: 8.3

Comment Excerpt Text:

Along with preparation of the EIS, the Secretary of Interior has imposed a de-facto moratorium on coal leasing pending completion of this review.

Part of the stated justification for these actions is reports resulting from review by the Government Accounting

Office (GAO) and the DOI-Office of Inspector General (OIG) of the current coal program. Given, however, that the referenced reports stated that the current leasing program is sound and contributes significant benefits to the taxpayers, that the reports offered only modest recommendations for program improvements, and that in 2014 the BLM already developed new protocols, policy guidance, and a manual and handbook to implement the GAO/OIG recommendations, there is a reasonable basis to question the need and motivation for both the EIS and the leasing moratorium. It must also be noted that the proposed regulatory changes illegally conflict with and attempt to supercede existing law and regulation under SMCRA (30 U.S.C. 25), FLPMA (30 U.S.C. 1701), MLA (30 U.S.C. 181), MMPA (30 U.S.C. 21a), NEPA (40 U.S.C. 4321, and DQA (Pub. L. No. 106-554, 515).

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Comment Number: 0002507\_Nettleton\_20160801-12

Commenter I: Jerry Nettleton

Other Sections: 8.5

Comment Excerpt Text:

Multiple levels of broad-scope National Environmental Policy Act (NEPA) review should also be eliminated (currently required at the leasing stage - BLM, mine permitting stage - OSMRE, and the utility permitting stage - Various agencies). Separate analyses of the impacts of each action would be more realistic and appropriate (limit "related and connected" actions).

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Comment Number: 0002507\_Nettleton\_20160801-5

Commenter I: Jerry Nettleton

Comment Excerpt Text:

How, When, and Where to Lease - The BLM already has an established and robust land use planning process, which addresses current economic, land-use, and environmental considerations. The process includes an evaluation of fair market value, consideration of special and restricted land use designations, and a full NEPA review process. The proposed re-evaluation of unsuitability criteria is inappropriate and illegal since the existing criteria were established by Congress, and the DOI does not have the authority to re-visit or change them. Similarly, any proposed regulatory changes which supersede or conflict with established authority under FLPMA, MLA, or MMPA, exceed the DOI's authority and purview and would be inappropriate and illegal. It must be noted that issues with the federal coal leasing process that have been identified over time, have been addressed through changes in BLM guidelines and procedures, most notably and recently in 2014. The concerns noted and identified with the timing and scope of leasing activity have either already been addressed or are irrelevant and impractical given current and anticipated future conditions in the coal industry, and the realities of mine location and potential future development.

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Comment Number: 0002507\_Nettleton\_20160801-7

Commenter I: Jerry Nettleton

Other Sections: 6

Comment Excerpt Text:

Climate Impacts - Due to pressure from environmental interest groups, consideration of potential climate impacts is being mandated at every stage of the process, including coal leasing, mine permit approvals, and required approvals for powerplant construction and operation. This approach results in multiple redundant reviews, does not accurately characterize direct or indirect impacts from those actions preceding combustion of coal in a powerplant, and results in significant unnecessary costs and delays. Under the current BLM leasing process and practices, potential climate impacts are required to be evaluated and analyzed in the NEPA documents prepared for each leasing action. While this requirement is duplicative of subsequent environmental reviews, it adequately addresses and satisfies the requirement to evaluate these potential impacts. The suggestion that potential climate impacts should be evaluated on a broader scale relative to identification of potential lease offerings creates a

situation where the linkage between action and potential impacts is even further removed and speculative, is adding one more layer to an already duplicative and redundant review process, and is therefore inappropriate and unjustified.

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Comment Number: 0002507\_Nettleton\_20160801-8

Commenter I: Jerry Nettleton

Comment Excerpt Text:

As an over-riding consideration, maintain a viable coal leasing program consistent with the purpose and intent of the Mineral Leasing Act and amendments.

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Comment Number: 0002510\_Cowan\_20160728-1

Organization I: Wyoming County Commissioners Association

Commenter I: Gregory Cowan

Comment Excerpt Text:

And because our concerns run deep and broad, it is paramount that the BLM consider not only the appropriate scope of issues but so too the appropriate scope of outreach to - and the involvement of - local government during development of the PEIS.

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Comment Number: 0002510\_Cowan\_20160728-4

Organization I: Wyoming County Commissioners Association

Commenter I: Gregory Cowan

Comment Excerpt Text:

Wyoming's counties need to be meaningfully engaged throughout the Coal PEIS process.

Coordination and cooperation between local government and the BLM are based on the understanding that concerns and expertise are best conveyed, and therefore decisions made more robust and durable, when the BLM and local governments engage in dialogue. This is because the federal agency decision maker is in a position to be more responsive and flexible to the concerns of local government during rule development. Simply put, coordination and cooperation provide the context necessary to help the BLM make the right decision the first time, and doing so with the buy-in of the local communities most affected by that decision.

During the PEIS process, the BLM should consider including joint fact finding on issues of high relevance specific to areas of local government expertise (socioeconomics, custom and cultural attributes, travel management, etc.). Wyoming's counties should also be looked to by the BLM to help with issue identification; arranging for the collection and/or assembly of necessary resource, environmental, social, economic, and institutional data; analyzing data; identifying alternatives, evaluating alternatives and estimating the effects of implementing each alternative; and carrying out any other tasks necessary for the development of the environmental analysis and documentation.

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Comment Number: 0002942\_Harbine-13

Organization I: Earthjustice

Commenter I: Jenny Harbine

Comment Excerpt Text:

BLM also must satisfy its NEPA obligation to evaluate feasible alternatives to the status quo that would satisfy the needs for federal action

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Comment Number: 0002942\_Harbine-19

Organization I:Earthjustice

Commenter I:Jenny Harbine

Comment Excerpt Text:

In short, the Secretary of the Interior—through both BLM and OSM—has substantial discretion and control in implementing the federal coal program.

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Comment Number: 0002942\_Harbine-20

Organization I:Earthjustice

Commenter I:Jenny Harbine

Comment Excerpt Text:

Changed Circumstances Warrant Renewed Programmatic Review of the Federal Coal Leasing Program Because the federal coal program “is a coherent plan of national scope, and its adoption surely has significant environmental consequences,” NEPA requires BLM to prepare a programmatic environmental impact statement for the Program as a whole. *Kleppe v. Sierra Club*, 427 U.S. 390, 400 (1976) (recognizing need for programmatic EIS for federal coal leasing program). BLM’s most recent full programmatic environmental review for the program was in 1979—37 years ago—at a time when the federal government’s policy was to increase reliance on coal and the threat of climate change had not yet been fully realized or understood. 10 The fundamental reversal of these factors requires BLM to renew its programmatic analysis. 10 See Bureau of Land Mgmt., Final Environmental Statement: Federal Coal Management Program (Apr. 1979) (“1979 PEIS”). 9 BLM committed to update its 1979 PEIS “when conditions change sufficiently to require new analyses of [national and interregional] impacts.” 11 In commencing that update now, BLM complies with a key requirement of NEPA to supplement a past EIS when there are “significant new circumstances or information relevant to environmental concerns and bearing on the proposed action or its impacts.” 40 C.F.R. § 1502.9(c)(1)(ii).

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Comment Number: 0002942\_Harbine-31

Organization I:Earthjustice

Commenter I:Jenny Harbine

Comment Excerpt Text:

The U.S. Energy Information Administration (“EIA”) estimates total U.S. coal production in 2015 was about 895 million short (MMst), 10 percent lower than in 2014 and the lowest level since 1986. EIA projects that coal production will fall by another 12 percent in 2016, then rise by 2 percent in 2017. U.S. EIA, Short Term Energy Outlook: Coal (Mar. 8, 2016), available at <http://www.eia.gov/forecasts/steo/report/coal.cfm> (visited July 28, 2016). 10 have increased the availability of clean energy sources that obviate the need for federal coal. 14 In short, NEPA mandates that it is time for BLM to re-evaluate the need for the federal coal leasing program altogether

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Comment Number: 0020031\_Parkins\_20160722-3

Organization I:

Commenter I:438596

Other Sections: 2

Comment Excerpt Text:

The BLM should also have specific guidelines on what does and does not need to be included in the NEPA work for a lease. Many leases are derailed by nuisance lawsuits by NGO's over extraneous items such as Climate Impacts when an overall review such as this Programmatic EIS should answer that question for all leases possibly moving the NEPA to a faster and less onerous EA.

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Comment Number: 0020034\_Koontz\_TownofHotchkiss\_20160729-4

Organization I: Town of Hotchkiss

Commenter I: Wendell Koontz

Other Sections: I

Comment Excerpt Text:

The federal government's own agencies, the Government Accountability Office and the Department of the Interior Inspector General, developed detailed reports and recommendations in 2013 which provided recommendations for improvements to the Federal Coal Program. Both these reports confirmed that the federal leasing program is sound and contributes substantial benefits to American taxpayers. These reports offered modest recommendations for improvements, however, neither report called for wholesale revisions to the program nor do they address in any way royalty rates. BLM has already acted on the recommendations of these reports to improve the management of the federal coal program. To date, the agency has published an Updated Coal Evaluation manual and handbook as well as seven instruction memoranda to its field offices in response to the modest suggestions by the IG and GAO.[3]

[3] See:

- \* Coal Management Program, U.S. Department of the Interior; Report No.: CR-EV-BLM-0001-2012; June 2013
- \* COAL LEASING; BLM Could Enhance Appraisal Process, More Explicitly Consider Coal Exports, and Provide More Public Information; U. S. Government Accountability Office; GAO-14-140; December 2013.
- \* Letter from BLM Director N. Kornze to Senator E. Markay; August 14, 2014.

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Comment Number: 0020052-8

Organization I: Tri-State Generation and Transmission Association, Inc.

Commenter I: Barbara A. Walz

Comment Excerpt Text:

The development and production of federal coal must comply with strict environmental regulations and is historically more regulated than other coal sources. If the federal royalty rates are increased, production will shift to privately held coal reserves and reduce overall oversight of coal produced nationally (not to mention it will also reduce the revenue currently received by the public from the development of this resource).

The federal coal program is directed and governed by numerous federal statutory and regulatory programs already. The following key laws establish the primary authorities, responsibilities, and requirements for developing federal coal resources:

- Mineral Leasing Act of 1920
- National Historic Preservation Act of 1966 (NHPA)
- National Environmental Policy Act of 1969
- Mining and Minerals Policy Act of 1970 (MMPA)
- Clean Air Act of 1970 (CAA)
- Clean Water Act of 1972 (CWA)
- Endangered Species Act of 1973 (ESA)
- Colorado Surface Coal Mining Reclamation Act of 1973
- Federal Land Policy and Management Act of 1976 (FLPMA)
- Federal Coal Leasing Amendments Act of 1976 (FCLAA)
- Surface Mining Control and Reclamation Act of 1977
- Federal Mine Safety and Health Act of 1977

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Comment Number: 0020052-9

Organization I: Tri-State Generation and Transmission Association, Inc.

Commenter I: Barbara A. Walz

## Comment Excerpt Text:

The following laws and executive orders apply to the mining of federal coal.

- Noise Control Act
- Clean Air Act
- American Indian Religious Freedom Act
- Antiquities Act
- Archaeological and Historic Preservation Act
- Archaeological Resources Protection Act
- Executive Order 11593: Protection and Enhancement of the Cultural Environment
- Executive Order 13007: Indian Sacred Sites
- Executive Order 13175: Consultation and Coordination with Indian Tribal Governments
- Executive Order 13287: Preserve America
- Historic Sites, Buildings, and Antiquities Act (Historic Sites Act)
- Illegal Trafficking in Native American Human Remains and Cultural Items
- National Historic Preservation Act
- Native American Graves Protection and Repatriation Act
- Theft and Destruction of Government Property
- Bald and Golden Eagle Protection Act
- Endangered Species Act
- Executive Order 11988: Floodplain Management
- Executive Order 11990: Protection of Wetlands
- Executive Order 12996: Management and General Public Use of the National Wildlife Refuge System
- Executive Order 13112: Invasive Species
- Executive Order 13186: Responsibilities of Federal Agencies to Protect Migratory Birds
- Federal Insecticide, Fungicide, and Rodenticide Act
- Fish and Wildlife Coordination Act
- Migratory Bird Treaty Act
- National Wildlife Refuge System Administration Act
- Noxious Weed Act
- Rivers and Harbors Act
- Wild Free-Roaming Horses and Burros Act
- Surface Mining Control and Reclamation Act
- Executive Order 12898: Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations
- Comprehensive Environmental Response, Compensation, and Liability Act
- Emergency Planning & Community Right-to-Know Act
- Executive Order 12856: Federal Compliance With Right-to-Know Laws and Pollution Prevention Requirements
- Federal Insecticide, Fungicide, and Rodenticide Act
- Hazardous Materials Transportation Act
- Pollution Prevention Act
- Resource Conservation and Recovery Act
- Toxic Substances Control Act
- Emergency Planning & Community Right-to-Know Act
- Executive Order 13045: Protection of Children From Environmental Health Risks and Safety Risks
- Federal Mine Safety and Health Act
- Occupational Safety & Health Act
- Air Commerce and Safety Act
- Farmland Protection and Policy Act
- National Trails System Act
- Rivers and Harbors Act

- Soil and Water Resources Conservation Act
  - Wild and Scenic Rivers Act
  - Wilderness Act
  - Antiquities Act
  - Paleontological Resources Preservation
  - Theft and Destruction of Government Property Act
  - Farmland Protection and Policy Act
  - Soil and Water Resources Conservation Act
  - Clean Water Act
  - Safe Drinking Water Act
- Tri-State's Recommendations for the PEIS

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Comment Number: 0020056-16

Organization I: Bowie Resource Partners, LLC

Commenter I: Gene DiClaudio

Comment Excerpt Text:

The Secretary enjoys considerable discretion in the management of coal leasing. However, this discretion is not unlimited. The Mineral Leasing Act specifies that the Secretary shall "lease federal coal. 30 U.S.C. § 201(a)(1). Moreover, federal law has repeatedly directed the Secretary of Energy to examine methods to increase the development of the nation's coal reserves and to increase the export of coal. See, e.g., 42 U.S.C. § 13571(1); 42 U.S.C. § 13367(a). Revisions to the leasing regulations that have the effect of curtailing federal coal production and the export of coal would be inconsistent with these mandates. At a minimum, the scope of the PEIS must include a discussion of how any proposed regulatory changes would advance the federal policies of development of federal coal resources and the export of U.S.-produced coal.

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Comment Number: 0020056-8

Organization I: Bowie Resource Partners, LLC

Commenter I: Gene DiClaudio

Comment Excerpt Text:

The PEIS should be expressly designed for tiering, both by BLM in leasing and OSMRE in mine planning.

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Comment Number: 0020056-9

Organization I: Bowie Resource Partners, LLC

Commenter I: Gene DiClaudio

Comment Excerpt Text:

Similarly, the Secretary should expressly adopt the cumulative impact principles articulated by the D.C. Circuit in their recent decisions *Sierra Club v. FERC*, D.C. Cir. No. 14-1275 (June 28, 2016) and *EarthReports, Inc., v. FERC*, D.C. Cir. No. 15-1127 (July 15, 2016), in which the Court recognized that cumulative impact analyses are to be focused on the same geographic area as the proposed action. The PEIS itself would thus have a broad cumulative impact analysis, but individual leasing decisions should have substantially more focused cumulative impact analyses than those urged by environmental activists.

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Comment Number: WO\_CoalPEIS\_0002437\_Downing\_20160727\_WyMineAssoc-1

Organization I: Wyoming Mining Association

Commenter I: Jonathan Downing

Other Sections: I

Comment Excerpt Text:



The WMA is compelled to address the release of the President's Council of Economic Advisors, "Economics of Coal Leasing on Federal Lands: Ensuring a Fair Return to Taxpayers". We find the release and content of this study very inappropriate, because it was issued prior to the closing of the scoping comment period for the Programmatic Environmental Impact Statement (PEIS) for evaluating the federal coal leasing program. The PEIS is a National Environmental Policy Act (NEPA) activity and is intended to be the vehicle to be used to analyze environmental impacts of federal agency actions. The President's Council report offers biased analyses in response to the same questions posed in the Notice of Intent for the PEIS. The report presumes to be the preferred position of the federal administration, since it was issued by the Office of the President. The issuance of the President's study makes a mockery of the NEPA process in general and the PEIS for coal leasing in particular. The existence of the study and the obvious bias against coal production in the Powder River Basin of Wyoming leads us to question whether the integrity of the NEPA process has been violated. The potential legal impact of this presumptuous document calls to question whether the PEIS should be withdrawn and the Secretary's moratorium on federal coal leasing be suspended. This administration is obviously incapable of and cannot be trusted to conduct a fair and impartial environment analysis. As part of the scoping process the BLM must consider whether Secretarial Order No. 3338, "Discretionary Programmatic Environmental Impact Statement to Modernize the Federal Coal Program" should be withdrawn, and the scoping report should explain and justify the resulting decision. WMA is in general agreement with several United States Senators who have voiced objection to the report, and includes their letter for the record in these comments (Attachment 1).

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Comment Number: 000001202\_Meinhart\_20160623-3

Organization I: Office of Congressman Scott Tipton

Commenter I: Brian Meinhart

Comment Excerpt Text:

And then, you go back to the OIG and GAO reports. And they didn't actually suggest that a complete overhaul of the Federal Coal Program was necessary to ensure a fair, a fair return to taxpayers. Rather, they focused on some potential improvement to calculating fair market value to comply with the Mineral Leasing Act's requirements on fair market value standards.

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Comment Number: 000001202\_Meinhart\_20160623-4

Organization I: Office of Congressman Scott Tipton

Commenter I: Brian Meinhart

Comment Excerpt Text:

Well, what about environmental impacts? What about CO2 emissions? Are they skyrocketing? Well, according to the Environmental Protection Agency, their data shows that CO2 emissions for 2014 were about equal to the mid-1990s. That was a downward trend. What about methane? Those levels are lower than the 1990s. As the Congressman is fond of saying, if you want to develop a resource the right way, the most environmentally responsible way, then no one does it better than we do here in American. And that includes our coal industry. Yet despite those facts, the administration insists on pushing forward with rules and regulations, like the [indiscernible] power plan, which some economists estimated will cost a whopping \$366 to \$479 billion from 2017 to 2031, and would result in a decrease in CO2 emissions by 2030 of less than 1 percent of current level emissions. So, if you can't make a compelling case that the coal industry is unfairly benefiting from a public resource, and you can't demonstrate that the industry is the cause of some large-scale environmental crisis, then why push forward with these efforts? It's because coal does not have a role to play in this administration's misguided energy vision. In 2008, the President famously advocated an energy policy in which he said, "if someone wants to build a coal-fired power plant, they can. It's just it will bankrupt them". And there is absolutely no ambiguity in that statement whatsoever.

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Comment Number: 000001202\_Meinhart\_20160623-5

Organization I: Office of Congressman Scott Tipton

Commenter I: Brian Meinhart

Comment Excerpt Text:

the Department has not made a compelling case that a complete overhaul of the Coal Program and a delay in new leasing would achieve a cost-effective and measurable improvement to any of those questions above. It seems like it's more just another blow to an industry that's vital to our economic wellbeing.

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Comment Number: 000001204\_Swartout\_20160623-1

Organization I: Governor Hickenlooper

Commenter I: John Swartout

Comment Excerpt Text:

And while this review is certainly appropriate, we also ask that you expedite it.

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Comment Number: 000001249\_WILSON\_20160623-3

Commenter I: Ryan Wilson

Comment Excerpt Text:

It shouldn't take a decade for a lease to go through the NEPA process. It should not take a year for the BLM to sign a record of decision. It shouldn't take six months for a notice to be published in the Federal Register.

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Comment Number: 000001255\_Nettleton\_20160623-1

Organization I: Twenty Mile Coal

Commenter I: Jerry Nettleton

Commenter Type: Individual

Comment Excerpt Text:

There's a reasonable basis to question the need and motivation for both the PEIS and the leasing moratorium; more specifically, addressing the stated reasons for the proposed PEIS and moratorium.

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Comment Number: 000001255\_Nettleton\_20160623-4

Organization I: Twenty Mile Coal

Commenter I: Jerry Nettleton

Comment Excerpt Text:

Number 1, maintain a viable policing program consistent with Mineral Leasing Act and Amendments.

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Comment Number: 000001257\_Petersen\_20160623-2

Organization I: Associated Governments of Northwest Colorado

Commenter I: Bonnie Petersen

Comment Excerpt Text:

Opponents of coal mining allege there are serious flaws in the Federal Coal Leasing Program. This is unsubstantiated. Reports from 2013 by the Government Accountability Office in the Department of Interior and Inspector General contain minor recommendations for improvements to the Federal Coal Program. Neither report recommended wholesale revisions to the program, nor do they address in any way royalty rates. BLM has already acted on the reports' recommendations to improve the management of the Federal Coal Program. To date, the agency has published an updated Coal Evaluation Manual and Handbook, as well as seven instruction memorandum to its field offices in response to the suggestions by the IG and the GAO. We

believe large-scale changes in the program are unnecessary and may serve to harm the industry and result in less revenue to the American taxpayer.

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Comment Number: 00001303\_Leahy\_20160623-2

Organization I: New Mexico Wildlife Federation

Commenter I: Todd Leahy

Comment Excerpt Text:

Second, reconsider how to balance multiple uses. The nation has relied on fossil fuel sources extracted from public land since its founding. In the Federal Lands Policy Management Act requires that the BLM balance extractive uses against other public, public land uses. It's clear that coal mining doesn't simply compete with other uses. Coal [indiscernible] be stabilized and degrade, making other uses impossible. Given the long-term impacts of carbon dioxide, the effects of mining public coal today will affect public lands for centuries, damaging recreational opportunities, water supplies, wildfire resilient, and even other extractive uses, such as timber and grazing. If a disparity exists between the high, long-term cost of coal usage and the low, short-term windfalls from sale, then the BLM must consider this disparity when making its decisions.

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Comment Number: 0000850\_Mosley\_BluegreenAlliance-2

Organization I: Blue Green Alliance

Commenter I: Khari Mosley

Comment Excerpt Text:

The review of the federal coal leasing systems must evaluate BLM authority and opportunities, as well as actions of other agencies and Congress could take, to help ensure a just transition for workers and communities to a clean energy economy. Such actions should include robust investment in community economic development, protection of worker livelihoods, and development of new tax revenue sources for local economies. A combination of factors is forging a new reality where lower gas prices, rising coal costs, and the competitive cost of renewable energy sources are driving a shift to clean energy. The new energy technologies coming on-line will create hundreds of thousands of new jobs and will continue to do so in communities across the country. But, as our nation makes this transition, some workers and communities may be impacted. Coal mines, coal-fired power plants, coal transportation infrastructure, coal handling facilities and their associated supply and maintenance industries are often the lifeblood of small towns, providing significant employment and contributing to their communities' tax base. Moving toward clean energy could result in fewer jobs at a local level and a reduction in the tax stream going to local governments in these communities. Therefore, we must consider what authority and opportunities the federal government possesses, having succeeded in capturing a fair return for extracted coal, to ensure that some portion of that increased return is put to use ensuring a just transition for workers, communities and regional economies occurs.

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Comment Number: 0000854\_Doyon\_20160628-5

Commenter I: Michelle Doyon

Other Sections: 6

Comment Excerpt Text:

We call on BLM to prepare a thorough Environmental Impact Statement under the National Environmental Policy Act that critically evaluates the programs's climate and economic impacts for the very first time. The review must be comprehensive in scope. It must be transparent with public participation, and the review must acknowledge the scientific consensus that the vast majority of fossil fuels must remain in the ground in order to avoid the worst effects of climate disruption.

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Comment Number: 0000861\_Ronremoeller-2

Organization I:Sierra Club, Ohio Chapter

Commenter I:Brian Ronremoeller

Other Sections: 2

Comment Excerpt Text:

Second of all, like to urge BLM to also conduct Programmatic EIS for the development of all fossil fuels on our public lands. For example, there was an environmental assessment, national forest to lease up to 30,000 acres, oil and gas, where the environmental assessment issued a finding of no significant impact because the climate impacts were beyond the scope of that study. So we urge that Secretary Jewell also issue an order for Programmatic EIS for oil, gas, mine

## **Issue 2 - Air quality (local/regional impacts)**

Total Number of Submissions: 36

Total Number of Comments: 52

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Comment Number: 00000174\_ HEADRICK\_20160517-2

Commenter I:Mary Headrick

Comment Excerpt Text:

Consider our air safety. Burning coal pollutes our air. (Inaudible) surface ozone through the nitrogen oxide pathways. Burning releases black carbon, fine particulate matter.

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Comment Number: 00000179\_ FUSAN\_20160517-1

Commenter I:Lynn Fusan

Comment Excerpt Text:

Keeping unmined coal in the ground improves air quality and reduces the need for coal ash storage impoundments.

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Comment Number: 00000356 \_ Provost \_20160519-1

Commenter I:Craig Provost

Comment Excerpt Text:

I moved to Utah a couple of years ago to enjoy the beautiful landscapes and clean air but found out that we have a problem out here with particulates in the air.

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Comment Number: 00000356 \_ Provost \_20160519-2

Commenter I:Craig Provost

Comment Excerpt Text:

I'm very aware that it's not coal mining that's the problem, but as the previous gentleman said, that it is the coal power production that gets most of the bad stuff in the air. And that needs to be worked on.

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Comment Number: 00000367 \_ Rossi \_20160519-1

Commenter I:Ericka Rossi

Other Sections: 1 10

Comment Excerpt Text:

According to information I have received, toxic coal mined from our public lands and burned in Utah's coal fire plants -- power plants have significantly affected the health of many people. The Hunter and Huntington coal-fired power plants are responsible for 40 percent of all of our state's dangerous haze causing nitrogen oxide pollution

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from the electricity sector. According to the Clean Air Task Force, pollution from the plants contributes to 11 premature deaths and 233 asthma attacks every year.

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Comment Number: 0000516\_Whyde\_20160517-1

Commenter I: Don Whyde

Comment Excerpt Text:

The coal industry has a huge problem. The 1st problem is stringent air quality rules for power plants

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Comment Number: 0000618-2

Organization I: Citizens for Clean Air

Commenter I: Karen Sjoberg

Comment Excerpt Text:

We stand with those neighbors in nearby Delta County and beyond who have legitimate concerns about the effects of coal mining on air quality. We urge the BLM to prioritize air quality and the environment in your forthcoming recommendations

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Comment Number: 0000764\_Fidel\_20160623-1

Commenter I: Mike Fidel

Other Sections: I

Comment Excerpt Text:

In 2010, an independent post mortem study by Berkeley Economic Consulting & the San Francisco State University was conducted to determine the haze reduction with the Mohave shutdown. The results of this study concluded that: "Mean visibility (deciview) and light extinction in the Grand Canyon National Park did not respond to the plant closure in a statistically significant fashion.

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Comment Number: 0000782-2

Commenter I: Lawson LeGate

Comment Excerpt Text:

In addition BLM should examine the contributions to diminished air quality and the deposition of toxic materials that result from burning leased coal.

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Comment Number: 0000819-1

Organization I: Utah Physicians for a Healthy Environment

Commenter I: Howie Garber

Comment Excerpt Text:

The emissions of all the coal power plants in this country have been calculated by the American Lung Association, to cause about 25,000 premature deaths every year, or an average of 30 to 50 deaths per plant per year. Coal power plant pollution is responsible for half a million asthma attacks, 16,000 episodes of chronic bronchitis, and 38,000 non-fatal heart attacks every year. This pollution increases the annual health care bill by about 170 billion dollars according to the California EPA. The American Heart Association and the American Lung Association state that air pollution on average shortens the life span of everyone one to three years.

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Comment Number: 0001147-1

Organization I: University of Washington

Commenter I: Dan Jaffe

Other Sections: I

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**Comment Excerpt Text:**

I'm sure you're aware of the recent DEIS for the Millennium bulk terminal project out of Longview. I reviewed that carefully. Based on our data it looks like they've underestimated the coal dust effect by about a factor of 3, so this is a real impact and it's quite important.

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Comment Number: 0002001\_Stevens\_20160607-2

Commenter I: Wayne Stevens

**Comment Excerpt Text:**

Many blamed President Obama for the decline of coal. This is patently false. The decline of coal began in 1963 with the passage of the Clean Air Act. In 1970 the Act was amended and strengthened. It was weakened in 1977, and strengthened again in 1990. The six "criteria pollutants" in the 1970 Clean Air Amendment Act are: sulfur oxides, particulates, carbon monoxide, hydrocarbons, nitrogen oxides, and photochemical oxidants. All of these compounds are found in coal and/or petroleum products in varying amounts.

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Comment Number: 0002139\_Simonsen\_20160519\_MESA-1

Organization I: Mormon Environmental Stewardship Alliance (MESA)

Commenter I: Soren Simonsen

**Comment Excerpt Text:**

Coal fired power plants are a major contributor to poor air quality

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Comment Number: 0002183\_Jarstad\_20160619-1

Commenter I: Gene Jarstad

**Comment Excerpt Text:**

The price to the environment has got to be considered in the fuel that we use. There is a price to the public of polluted air in the form of asthma, global warming, etc. If we are going to be a free market society, all costs to "we the people" must be considered.

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Comment Number: 0002226\_Tobe\_20160603-2

Commenter I: Jerry Tobe

Other Sections: I

**Comment Excerpt Text:**

An example is - the costs incurred as the result of coal dust emissions from coal cars. Please note that a minimum of 182,231 tons of coal dust that was emitted from coal cars in 2012, if the coal in every coal car was treated to reduce coal dust emissions by 85%, which they weren't. "182,231 tons of coal dust" is the result of calculations based on information in the GAO's report "COAL LEASING: BLM Could Enhance Appraisal Process, More Explicitly Consider Coal Exports, and Provide More Public Information" GAO-14-140: Published: Dec 18, 2013 and information the BNSF Railway website.

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Comment Number: 0002318\_Gordon\_20160722-2

Commenter I: Diana L. Gordon

**Comment Excerpt Text:**

We know that coal is a dangerous pollutant. It produces volumes of CO2 and other climate-changing greenhouse gases. Its use anywhere around the globe imperils not only the communities nearby but all of us, especially the children.

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Comment Number: 0002318\_Gordon\_20160722-3

Commenter I: Diana L. Gordon

Other Sections: 8.10

Comment Excerpt Text:

Of course, we can take some mitigation measures. However, there is just no way to mitigate the quantity of GHG produced by the mining of coal with huge machines in open pit mines and the transport of the coal to plants in this country or possibly across the ocean to Asia. Further, that coal will be burned in plants that may or may not have effective pollution control devices.

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Comment Number: 0002326\_Moench\_20160724\_UtahPhysicHealthyEnviron-42

Organization I: Utah Physicians for a Healthy Environment

Commenter I: Malin Moench

Other Sections: I

Comment Excerpt Text:

Burning coal produces airborne compounds, known as fly ash and bottom ash (collectively referred to as coal ash), which can contain quantities of heavy metals that settle or wash out of the atmosphere into oceans, streams, and land. In 2012, coal plants in the United States produced over 75 million short tons of coal ash, 70% of which was disposed of landfill. See

[www.epa.gov/epawaste/conservation/tools/warm/pdfs/Fly\\_Ash.pdf](http://www.epa.gov/epawaste/conservation/tools/warm/pdfs/Fly_Ash.pdf).

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Comment Number: 0002326\_Moench\_20160724\_UtahPhysicHealthyEnviron-46

Organization I: Utah Physicians for a Healthy Environment

Commenter I: Malin Moench

Other Sections: I0

Comment Excerpt Text:

Cigarette smoke contains 69 known carcinogens. Coal-fired power plant emissions contain 67 known carcinogens or neurotoxins (U.S.EPA, 1998)—many of the same ones found in cigarette smoke. Cigarette smoke and power-plant emissions both contain

- Fine particulate matter (PM2.5)
- Carbon monoxide
- Ozone precursors
- Volatile Organic Compounds (VOCs), such as benzene, toluene, and formaldehyde;
- Acid gases, such as hydrogen chloride and hydrogen fluoride;
- Dioxins and furans;
- Lead, arsenic, and other toxic heavy metals;
- Mercury;
- Polycyclic Aromatic Hydrocarbons (PAH); and
- Thorium, Uranium, Polonium and other radioactive metals

The harm to public health that second-hand cigarette smoke and fossil fuel emissions pose is remarkably similar. The difference is primarily quantitative, not qualitative. A typical life-long smoker will shorten his life by ten years. The American Lung Association reports that the typical urban dweller in the United States is exposed to enough airborne fine particulate matter to shorten his life by one-to-three years. (Pope, C.A. III, 2000.) Nearly all of that exposure is due to pollution from the burning of fossil fuels. This shortened life span of a typical urban dweller is not just the effect of his exposure to fine particulate pollution. Exposure to other components of air pollution caused by burning fossil fuels--such as ozone and Hazardous Air Pollutants (HAPs)--further shortens his life.

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Comment Number: 0002326\_Moench\_20160724\_UtahPhysicHealthyEnviron-47

Organization I:Utah Physicians for a Healthy Environment

Commenter I:Malin Moench

Comment Excerpt Text:

Fossil fuel emissions permeate entire air sheds of most urbanized regions of the country. The largest single source of fossil fuel emissions is coal-fired power plants. To escape fossil fuel pollution, one would have to find a region without coal-fired power plants or concentrated automobile traffic. Air quality maps show that most regional air sheds in the United States are moderately or heavily polluted—almost entirely the result of burning fossil fuels

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Comment Number: 0002326\_Moench\_20160724\_UtahPhysicHealthyEnviron-68

Organization I:Utah Physicians for a Healthy Environment

Commenter I:Malin Moench

Comment Excerpt Text:

Across the U.S., high concentrations of PM2.5 and ozone usually occur together because the sources are largely the same—coal-fired power plants and heavy vehicular traffic. There are, however, regional variations. In the Mountain West, the summer forest fire season and winter temperature inversions in mountain valleys also contribute to high concentrations of PM2.5. In the Ohio Valley, where coal-fired power plants are heavily relied on to produce electricity, concentrations of PM2.5 are higher than most of the rest of the country year round. This reflects the fact that burning coal as fuel generates 33 times as much fine soot (the main component of PM2.5) as burning oil or gas, on a per-Btu basis.

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Comment Number: 0002326\_Moench\_20160724\_UtahPhysicHealthyEnviron-83

Organization I:Utah Physicians for a Healthy Environment

Commenter I:Malin Moench

Other Sections: I

Comment Excerpt Text:

Emissions from the burning of fossil fuels come directly from the production of electric power and domestic heat, or indirectly in mining, , or activity. Several natural processes contribute to air pollution including forest fires, volcanic eruptions, windstorms, and turpene emissions from conifers. The extent and damage from these natural sources, however, is a minute portion of the air pollution emitted by manmade activities.  
[www.eoearth.org/view/article/149931/](http://www.eoearth.org/view/article/149931/).

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Comment Number: 0002326\_Moench\_20160724\_UtahPhysicHealthyEnviron-84

Organization I:Utah Physicians for a Healthy Environment

Commenter I:Malin Moench

Other Sections: I

Comment Excerpt Text:

Clean air standards have yet to catch up to the science. Up to now, the approach that Federal and state governments have taken to regulating fossil fuel emissions has been based on an assumption that the harm from these pollutants at concentration levels commonly experienced is minor, and is a small price to pay for a healthy economy. This reflects a precept that was once central to the science of toxicology--that “the poison is in the dose.”

This precept assumes that most poisons, including those in ambient air, are harmless below a certain threshold concentration, and the public policy task is to find that threshold and keep the poisonous substance below it. This precept, however, has been shown to be false by a wealth of more recent studies that show that the principal fossil fuel pollutants (lead, mercury, fine particulates, and ozone) harm human health at every level of concentration.



In a major survey of recent research the World Health Organization concluded (World Health Organization Report, 2004):

The potential for serious consequences of exposure to high levels of ambient air pollution was made clear in the mid-20th century, when cities in Europe and the United States experienced episodes of air pollution, such as the infamous London Fog of 1952 and Donora Smog of 1948, that resulted in large numbers of excess deaths and hospital admissions. Subsequent clean air legislation and other regulatory actions led to the reduction of ambient air pollution in many regions of the world, and particularly in the wealthy developed countries of North America and Europe. New epidemiological studies, however, conducted over the last decade, using sensitive designs and methods of analysis, have identified adverse health effects caused by combustion-derived air pollution even at the low ambient concentrations that now generally prevail in cities in North America and western Europe (Health Effects Institute 2001).

If fact, many studies show that these pollutants not only cause significant damage at very low concentrations, but that the damage is proportionally the greatest (on a parts per billion basis) at the lowest concentrations. Just as the first five cigarettes have been found to do more damage to the lung, per cigarette smoked, than the next 15, the relationship between concentrations of such pollutants as fine particulates and their impact on health shows a similar non-linear curve, i.e. further reductions in atmospheric levels have even more public health benefit when levels are comparatively low than when they are high. (Peters, A., 2009.)

The U.S. Center for Disease Control ranks toxic heavy metals as the number one environmental health threat to children.(22) Recent research on the effects of lead pollution, for example, invalidates the notion that exposure to lead is safe below a particular threshold concentration.

(22) ATSDRA/EPA Priority List for 2005: Top Hazardous Substances. Agency for Toxic Substances and Disease Registry, U.S. Department of Health and Human Services, [www.atsdr.cdc.gov/clist.html](http://www.atsdr.cdc.gov/clist.html).

Human activity has increased the concentration of lead in the environment more than 1,000-fold over the past three centuries. This reflects the fact that lead does not break down, so its concentration in the environment continually increases. <http://www.atsdr.cdc.gov/PHS/PHS.asp?id=92&tid=22>. A typical coal-fired power plant without pollution controls emits 114 pounds of lead each year.

<http://www.ucsusa.org/cleanenergy/coalswind/c02c.html#.VG4Z3YvF-H4>. Lead pollution from power plants enters the by several pathways. It begins as vapor, is deposited in the soil, leaches into streams, lakes, and aquifers, and ends up in drinking water and food supplies.

Lead is a powerful neurotoxin. At levels that currently prevail in developed countries, it causes substantial harm to public health. In the United States, for example, until very recently the Center for Disease Control defined an “” lead blood level (the level assumed to require additional pollution controls and/or medical intervention) as 10.0 micrograms per deciliter. [www.cdc.gov/mmwr/preview/mmwrhtml/mm5420a5.htm](http://www.cdc.gov/mmwr/preview/mmwrhtml/mm5420a5.htm).

Recent research indicates that the 10.0 µg/dL tolerance level of lead exposure is too high by a factor of 50.

Acknowledging the findings of more recent research, the CDC conceded in 2012 that there is no level of lead in blood serum that is small enough to be considered “safe.” At that time, the CDC cut its tolerance level for blood-level lead from 10.0 µg/dL to 5.0 µg/dL (rather than zero) without a clear explanation of the basis for the new tolerance level. See [www.cdc.gov/mmwr/preview/mmwrhtml/mm6213a3.htm](http://www.cdc.gov/mmwr/preview/mmwrhtml/mm6213a3.htm). Even CDC’s current tolerance level of 5.0 µg/dL is 25 times too high, according to the most recent research.(23)

(23) It is important to note that the EPA’s current National Ambient Air Quality Standard (NAAQS) for lead [0.15 µg/m<sup>3</sup>] was adopted in 2008. Because it has yet to be reconciled with the current research, the EPA’s NAAQS for lead pollution that is now in effect still reflects the CDC’s now-abandoned (and exceedingly lax) blood-lead tolerance level of 10.0 µg/dL.

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Comment Number: 0002328\_Paddock\_20160724-14

Commenter I: Brian Paddock

Other Sections: 6

Comment Excerpt Text:

Burning coal causes smog, soot, acid rain, global warming, and toxic air emissions. Burning coal is the single largest source of air pollution.(16)

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Comment Number: 0002331\_Kalpakoff\_20160725-1

Commenter I: Gary Kalpakoff

Comment Excerpt Text:

dust from the mine and the haul trucks is out of control and i have sent emails and phone calls to the Utah air quality describing the lack of adequate dust control.

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Comment Number: 0002443\_Koontz\_20160727\_BowieResources-3

Organization I: Bowie Resource Partners, LLC

Commenter I: Gene DiClaudio

Comment Excerpt Text:

Aggressive new regulatory initiatives in the consumer market have further sensitized coal consumers to the precise characteristics of their coal. The Mercury Air Toxics Standards ("MATS") Rule, Cross-State Air Pollution Rule ("CSAPR"), regional haze regulations, and ongoing revisions to Sulfur Dioxide, Nitrogen Oxide, Ozone, and Particulate National Ambient Air Quality Standards ("NAAQS") have prompted numerous older generating unit retirements, but they have also spurred extremely expensive and sophisticated new pollution controls on surviving units. These pollution controls in turn often require very precise management of influent airstream quality, emphasizing the need for consistent and precise fuel characteristics. It is simply not possible for utilities and other consumers to haphazardly swap out fuel suppliers - or for fuel suppliers to haphazardly substitute coals - and maintain the high degree of environmental performance mandated by current regulations. Notably, this often means that a coal mining company must have several lease tracts simultaneously at its disposal, so that it can appropriately blend coals from different sources or seams to manage the naturally occurring variation in coal qualities and deliver a consistent product.

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Comment Number: 0002449\_Lyon\_20160727\_NWF-11

Organization I: National Wildlife Federation Action Fund

Commenter I: Jim Lyon

Other Sections: I

Comment Excerpt Text:

Substantial air emissions arise from every stage of coal fuel cycle that have impacts on wildlife: from coal mining to transportation to combustion. These emissions significantly impact air quality at local, regional, and global scales. The harms caused by these emissions on the climate, the environment, and human health are widely documented. (94)

(94) See, e.g., Center for Health, Environment & Justice, *The Health Impacts of Mountaintop Removal Mining*, available at [http://www.chej.org/wp-content/uploads/MTR\\_Mining\\_Final\\_April\\_18\\_2013.pdf](http://www.chej.org/wp-content/uploads/MTR_Mining_Final_April_18_2013.pdf); Synapse Energy Economics, Inc., *The Hidden Costs of Electricity: Comparing the Hidden Costs of Power Generation Fuels (Hidden Costs)*, available at

<http://www.civilsocietyinstitute.org/media/pdfs/091912%20Hidden%20Costs%20of%20Electricity%20report%20FINAL2.pdf>.

Air pollution from coal mining comes from the engines driving mining equipment, from mine construction and development activities, (95) and from the transportation of coal away from the mine pit. (96) As discussed in more detail below, coal mining emits greenhouse gases (GHGs) via the release of such gases in coal deposits, the release of carbon sequestered in plant matter, and exhaust from the many engines used. (97) Fugitive emissions are a major source of air pollution from coal mining. (98) The air pollutants released by surface coal mines include:

- Carbon Dioxide (CO<sub>2</sub>). Carbon dioxide is released in great quantities from the burning of fossil fuels and is an

important GHG. A 2012 EPA inventory of industry-reported emissions shows that coal mines nationwide release the equivalent of nearly 28 million metric tons of carbon dioxide annually, as much as 8 coal-fired power plants. (99)

- Methane. Methane is the naturally occurring product of the decay of organic matter as coal deposits are formed. Methane is a GHG with more than 25 times the heat-trapping effect of carbon dioxide over a hundred year period. (100)

- Nitrogen dioxide (NO<sub>2</sub>). A poisonous gas that reacts with sunlight to form ozone, nitrogen dioxide forms from blasting at surface coal mines, which creates poisonous orange clouds. According to a petition filed by environmental groups, in Wyoming alone, the amount of nitrogen dioxide released by strip mining equals the amount normally released by 1.12 million passenger vehicles. (101)

- Particulate matter (PM). During the coal mining process, PM originates from: use of haul roads; wind erosion of overburden, exposed areas, and coal piles; bulldozing; blasting a drilling; draglines; loading and dumping overburden and coal; conveyors and transfers; and transportation of coal on conveyors, trains, and trucks. (102) In the U.S., coal mines release more than 17,000 tons of PM annually, including more than 10,000 tons of PM less than 2.5 microns in diameter, the most dangerous form of particulates. (103)

- Volatile organic compounds (VOCs). VOCs are gases that react with sunlight to form ground-level ozone, the key ingredient of smog. Coal mines nationwide release more than 1,790 tons of VOCs every year. (104)

(95) Fugitive dust emissions are increased by the removal of vegetative cover, hauling and stockpiling of topsoil, construction of haul roads, excavation and blasting of coal seams and overburden, displacement of overburden, and hauling of coal. Storage and handling of coal generates dust at rates which can be 3 kilograms (kg) per metric ton of coal mined, with the ambient dust concentration ranging from 10 to 300 micrograms per cubic meter (above the background level) at the mine site. Multilateral Investment Guarantee Agency, World Bank Group, Coal Mining and Production, available at <http://www.miga.org/documents/CoalMiningandProduction.pdf>.

(96) Synapse Energy Economics, Hidden Costs, *supra*.

(97) *Id.*

(98) Fugitive emissions are unintended emissions of any type (including carbon dioxide and methane) that arise during the production of coal. Fugitive emissions are released from the coal and surrounding rock strata when previously trapped methane and carbon dioxide gas are released into the atmosphere as coal seams are mined. See International Council of Mining and Metal, Fugitive Methane Emissions in Coal Mining (Aug. 2011), available at <http://www.icmm.com/news-and-events/fugitive-emissions-and-climate-change>.

(99) U.S. Environmental Protection Agency, Facility Level Information on Greenhouse Gases Tool (FLIGHT), 2012 Greenhouse Gas Emissions from Large Facilities, available at <http://ghgdata.epa.gov/ghgp/main.do>.

(100) U.S. Environmental Protection Agency, Overview of Greenhouse Gases, Methane Emissions, <https://www3.epa.gov/climatechange/ghgemissions/gases/ch4.html>.

(101) Earthjustice, Press Release, Coal Mines Clouding America's Air: Lawsuit filed against EPA to protect public health, safety, and the climate from coal mine air pollution (Nov. 23, 2011), available at

<http://earthjustice.org/news/press/2011/coal-mines-clouding-america-s-air>; see WildEarth Guardians, Center for Biological Diversity, the Environmental Integrity Project, and Sierra Club, Petition for Rulemaking Under the Clean Air Act to List Coal Mines as a Source Category and to Regulate Methane and Other Harmful Air Emissions from Coal Mining Facilities Under Section 111 (filed with the U.S. Environmental Protection Agency June 16, 2010) at 13-14, available at

[http://www.wildearthguardians.org/Portals/0/support\\_docs/Petition\\_Coal\\_Mine\\_6\\_16\\_10.pdf](http://www.wildearthguardians.org/Portals/0/support_docs/Petition_Coal_Mine_6_16_10.pdf).

(102) New South Wales Office of Environment and Heritage, NSW Coal Mining Benchmarking Study: International Best Practice Measures to Prevent and/or Minimise Emissions of Particulate Matter from Coal Mining (June 2011) at 151-194, available at <http://www.epa.nsw.gov.au/resources/air/KE1006953volumel.pdf>.

(103) Earthjustice, Press Release, Coal Mines Clouding America's Air: Lawsuit filed against EPA to protect public health, safety, and the climate from coal mine air pollution, *supra*.

(104) Earthjustice, Press Release, Coal Mines Clouding America's Air: Lawsuit filed against EPA to protect public health, safety, and the climate from coal mine air pollution, *supra*; see WildEarth Guardians et. al, Petition for

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Rulemaking Under the Clean Air Act to List Coal Mines as a Source Category and to Regulate Methane and Other Harmful Air Emissions from Coal Mining Facilities Under Section 111, *supra*, at 12-13.

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Comment Number: 0002459\_Ball\_20160728-1

Commenter I: Connie Ball

Comment Excerpt Text:

Coal dust is a problem all along the line from extraction to transport.

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Comment Number: 0002459\_Ball\_20160728-5

Commenter I: Connie Ball

Comment Excerpt Text:

Burning coal produces fly ash which cannot reasonably be disposed of and as happened in the past, can lead to disasters for inhabited areas.

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Comment Number: 0002461\_breen\_20160728-5

Organization I: The Wilderness Society

Commenter I: Katie Breen

Comment Excerpt Text:

Federal coal reforms improves our air quality. During blasting operations, coal mines release significant amounts of air pollution, and make our air hazier, not to mention contributing to ozone levels.

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Comment Number: 0002467\_Fettus\_20160728-17

Organization I: Natural Resources Defense Council

Commenter I: Geoffrey Fettus

Comment Excerpt Text:

Air Quality Impacts

The PEIS must evaluate the impacts of coal leasing on local and regional air quality. BLM's own regulations require that the agency manage federal lands according to federal and state air quality standards. (25) The Mineral Leasing Act also mandates that the agency insert in each coal lease provisions that require compliance with the Clean Air Act (as well as the Clean Water Act). 30 U.S.C. § 201. The PEIS should include a discussion of current local and regional air quality conditions and modeling of future compliance under various leasing scenarios. Pollutants which require specific attention include PM10 and PM2.5, as well as NOx and ozone.

(25) See 43 C.F.R. § 2920.7(b)(3) (requiring that BLM "land use authorizations shall contain terms and conditions which shall . . . [r]equire compliance with air . . . quality standards established pursuant to applicable Federal or State law") (emphasis added); see also 43 U.S.C. § 1712(c)(8) ("In the development and revision of land use plans, the Secretary shall . . . provide for compliance with applicable pollution control laws, including State and Federal air, water, noise, or other pollution standards or implementation plans.").

In a related issue, the PEIS should disclose and discuss Air Quality Related Values (AQRVs) as established by land managers. Although AQRVs lack the legal force of criteria pollutant emission limits, for example, they are not without legal significance. The PEIS should provide discussion and analysis of AQRVs and how they factor in the air quality permitting process for federal coal leases.

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Comment Number: 0002467\_Fettus\_20160728-6

Organization I: Natural Resources Defense Council

Commenter I: Geoffrey Fettus

Comment Excerpt Text:

Air Quality Impacts: During blasting operations, coal mines emit significant amounts of toxic air pollution, contributing to regional haze and higher ozone levels. Coal haul trucks are surrounded in a cloud of air pollution that is carried by the wind to neighboring lands. B LM's planning documents must ensure compliance with Clean Air Act standards for nitrogen oxides and particulate matter, but the mines have violated these standards. Coal mines must also mitigate dust under their state SMCRA permits. Mitigation measures to reduce air quality impacts must be addressed in the PEIS.

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Comment Number: 0002474\_Trice\_20160728\_EPA-3

Organization I: U.S. Environmental Protection Agency

Commenter I: Jessica Trice

Comment Excerpt Text:

In addition to consideration of the impact of the alternatives on domestic air quality in the immediate regions of mining activity and nationally through fuel use change, EPA recommends that the Draft PEIS consider the impact of the alternatives on broader impacts to air quality through long range transport. EPA recommends the Draft PEIS address the potential role of U.S. coal exports on industrial coal use and coal-fired generation in Asia and the potential of that coal use to affect U.S. air quality with respect to mercury, criteria pollutants and visibility in the United States.

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Comment Number: 0002477\_Saul\_20160728\_CBD\_UPHE-17

Organization I: Center for Biological Diversity

Commenter I: Michael Saul

Other Sections: I

Comment Excerpt Text:

Once coal is mined and washed, it must be transported to power plants via truck, ship, barge or train. Railroad engines and trucks together release over 600,000 tons of nitrogen oxide and 50,000 tons of particulate matter into the air every year in the process of hauling coal, largely through diesel exhaust.<sup>161</sup> Coal trains and trucks also release coal dust into the air, exposing nearby communities to dust inhalation. There are essentially six potential local environmental effects of concern related to coal transportation: (1) emission of particulate matter in the form of coal dust; (2) emission of particulate matter in the form of diesel locomotive exhaust; (3) production of noise and vibration by train movement; (4) congestion and collisions along roadways and rail lines; (5) train derailments; and (6) fires due to spontaneous combustion of coal.<sup>162</sup>

(161) D.A. Lashof, D. Delano, J. Devine, et al., *Coal in A Changing Climate*, Natural Resources Defense Council (2007), available at: <http://www.nrdc.org/globalwarming/coal/coalclimate.pdf>

(162) Multnomah County Health Department, *The Human Health Effects of Rail Transport of Coal Through Multnomah County, Oregon: A Health Analysis and Recommendations for Further Action*, Health Assessment and Evaluation (2013).

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Comment Number: 0002477\_Saul\_20160728\_CBD\_UPHE-18

Organization I: Center for Biological Diversity

Commenter I: Michael Saul

Other Sections: 10 I

Comment Excerpt Text:

The "external costs" of electricity generation from coal are the burdens to society that are not included in the electricity's monetary price. Estimates of the external costs of electricity generation from coal suggest that 95% of the external cost consists of the adverse health effects on the population.<sup>163</sup> When coal is burned, it produces air-borne pollutants of sulfur dioxide, particulate matter (PM), nitrogen oxides, mercury, arsenic, chromium,

nickel, and other heavy metals, acid gases, hydrocarbons, and dozens of other substances known to be hazardous to human health.<sup>164</sup> It also contributes to smog through the release of oxides of nitrogen, which react with volatile organic compounds (VOCs) in the presence of sunlight to produce ground level ozone, the primary ingredient in smog. In 2011, the World Health Organization compiled air quality data from 1,100 cities in 91 countries and found that residents living in many urban areas are exposed to persistently elevated levels of fine particle pollution, partly due to coal-fired power plants, as well as the burning of coal for cooking and heating.<sup>165</sup>

A 2007 article published in the medical journal, *The Lancet*, summarizes the burden of the health effects of generating electricity from coal and lignite (a type of coal). It estimated that for every TWh (Terrawatt-hour) of electricity produced from coal in Europe, there are 24.5 deaths, 225 serious illnesses including hospital admissions, congestive heart failure and chronic bronchitis, and 13,288 minor illnesses.<sup>166</sup> When lignite, the most polluting form of coal, is used, each TWh of electricity produced results in 32.6 deaths, 298 serious illnesses, and 17,676 minor illnesses.<sup>167</sup> To give these data perspective, consider the fact that nearly half of the 4,160 TWh of electricity generated in the United States in 2007 came from coal-fired power plants.<sup>168</sup> If these estimates are applied to the U.S., as many as 50,000 deaths per year may be attributable to burning coal.<sup>169</sup>

The major health effects linked to coal combustion emissions damage the respiratory, cardiovascular, and nervous systems and contribute to four of the top five leading causes of death in the United States: heart disease, cancer, stroke, and chronic lower respiratory diseases.<sup>170</sup> Although it is difficult to ascertain the proportion of this disease burden that is attributable to coal pollutants, even very modest contributions to these major causes of death are likely to have large effects at the population level, given high incidence rates.

(163) E. Burt, et al., *Health Effects from Coal Use* at 4.

(164) See id. at 3.

(165) *Tackling the Global Clean Air Challenge*, News Release, World Health Organization (Sept. 2011).

(166) A. Markandya & P. Wilkinson, *Energy and Health 2: Electricity Generation and Health*, *The Lancet* 979-990 (2007)

(167) Id.

(168) Id.

(169) A. Lockwood, et al., *Coal's Assault on Health* at 2.

(170) See generally E. Burt, et al., *Health Effects from Coal Use*; A. Lockwood, et al., *Coal's Assault on Human Health*

Comment Number: 0002477\_Saul\_20160728\_CBD\_UPHE-25

Organization I: Center for Biological Diversity

Commenter I: Michael Saul

Other Sections: I

Comment Excerpt Text:

According to a 1993 Norfolk Southern Rail Emission study, each open car carrying metallurgical coal from mines in Appalachia to the port terminals in Hampton Roads and Baltimore releases roughly 300 pounds coal dust into the air, water, and soil in the communities through which it travels.<sup>225</sup> According to a 2011 Burlington Northern Santa Fe (BNSF) study, each rail car carrying Powder River Basin [thermal] coal loses between 250 and 700 pounds of coal and coal dust on each trip, or over 30 tons of coal for a typical 120-car coal train.<sup>226</sup> BNSF estimates that around 3,600 lbs. per car can be lost in the form of dust.<sup>227</sup>

(224) Burlington Northern Santa Fe Railway, "Coal Dust FAQ," Mar 2011, found at <http://www.coaltrainfacts.org/docs/BNSF-Coal-Dust-FAQs1.pdf>.

(225) Simpson Weather Associates, *Norfolk Southern Rail Emission Study: Consulting Report Prepared for Norfolk Southern Corporation*, Charlottesville, VA (30 December 1993) found at [http://leg2.state.va.us/dls/h&sdocs.nsf/By+Year/SD581994/\\$file/SD58\\_1994.pdf](http://leg2.state.va.us/dls/h&sdocs.nsf/By+Year/SD581994/$file/SD58_1994.pdf). (appendix E).

(226) See BNSF Coal Dust FAQ.

(227) See Id.

Comment Number: 0002477\_Saul\_20160728\_CBD\_UPHE-26

Organization I: Center for Biological Diversity

Commenter I: Michael Saul

Comment Excerpt Text:

U.S. coal emissions from combustion overseas, namely in Asia, returns to the U.S. in the form of particulate matter, ozone and mercury deposition. Multiple studies have shown that, depending on the season and meteorological conditions, a significant portion of particulate pollution in California originates in Asia, as well the precursors for ozone, the ozone itself, and gaseous mercury.<sup>237</sup> Indeed, a University of California at Berkeley study found that 29% of particulate matter pollution in the San Francisco Bay area originated from fossil fuel use in China.<sup>238</sup> Another study found that the majority of particulate pollution in Lake Tahoe originated in Asia.<sup>239</sup> Coal's pollution footprint is extremely large, spanning thousands of miles across oceans and continents. The health impacts stemming from this pollution are significant and should be addressed in any environmental review of the federal coal program.

(237) Lin, Jintai, et al. China's international trade and air pollution in the United States, Proceedings of the National Academy of Sciences of the United States of American, vol. 111 no. 5, pgs. 1736-1741, January 21, 2014.

(238) Ewing, A. Stephanie, et al., Pb Isotopes as an Indicator of the Asian Contribution to Particulate Air Pollution in Urban California, Environ. Sci. Technol. Journal, 44 (23), pp 8911–8916. October 29, 2010.

(239) See Id.

Comment Number: 0002477\_Saul\_20160728\_CBD\_UPHE-3

Organization I: Center for Biological Diversity

Commenter I: Michael Saul

Organization2: Utah Physicians for a Healthy Environment

Other Sections: 6

Comment Excerpt Text:

Effects on air quality: "The evidence concerning adverse air quality impacts provides strong and clear support for an endangerment finding. Increases in ambient ozone are expected to occur over broad areas of the country, and they are expected to increase serious adverse health effects in large population areas that are and may continue to be in nonattainment. The evaluation of the potential risks associated with increases in ozone in attainment areas also supports such a finding."<sup>19</sup>

(19) Final Endangerment Finding, 74 Fed. Reg. at 66,497

Comment Number: 0002477\_Saul\_20160728\_CBD\_UPHE-69

Organization I: Center for Biological Diversity

Commenter I: Michael Saul

Organization2: Utah Physicians for a Healthy Environment

Other Sections: 1 10

Comment Excerpt Text:

Ports are also a significant source of coal dust. When a train arrives at a coal export terminal, it may dump its coal into an open air storage pile or holding silo. Alternatively, a train arriving at a port terminal may wait for days in a train yard at the port before its coal is unloaded. These waiting train cars and open-air coal piles are significant sources of coal dust particulate matter at export terminals because typical wind speeds and wind gusts prevalent in near-coastal areas cause coal particles from the storage piles and from the uncovered tops of waiting coal cars to be released into the air.<sup>228</sup> Unloading the coal from rail cars into storage piles at the port facility and storing the coal in these piles emits coal dust into the air, soil, and water nearby. In addition, coal dust is carried off the storage piles as runoff when the piles are exposed to rain.<sup>229</sup> This runoff can impact both surface water and underlying groundwater. When a ship is ready for loading, conveyor belts transport the coal from the train

car, silo, or coal pile, and dump the coal onto the ship, releasing additional coal dust into the air and water.

Coal dust, once emitted, can have multiple impacts on humans and the environment. Fugitive coal dust that is 10 micrometers or less in diameter is classified as PM10, and fugitive coal dust that is 2.5 micrometers or less in diameter is classified as PM2.5. PM10 can travel up to 30 miles, and PM2.5 can travel 500 miles.<sup>230</sup> Both PM10 and PM2.5 are extremely harmful to human health. The particles can travel deep into the lungs and into the bloodstream, causing premature death in people with heart or lung disease, heart attacks, decreased lung function, and increased respiratory effects, including irritation of the airways, aggravated asthma, coughing, and breathing difficulties.<sup>231</sup> Groups that are most at risk due to PM10 and PM2.5 exposure include children, older adults, low-income communities, and individuals with asthma or preexisting heart and lung disease. Inorganic arsenic found in coal dust deposited in soil near coal export terminals is a human carcinogen.<sup>232</sup> Human exposure to inorganic arsenic by inhalation has been strongly associated with lung cancer, and ingestion has been linked to skin, bladder, liver, and lung cancers.<sup>233</sup> Chronic inhalation has been associated with irritation of the skin and mucous membranes, as well as effects in the brain and nervous system. Gastrointestinal effects, anemia, peripheral neuropathy, skin lesions, hyperpigmentation, and liver or kidney damage have resulted from chronic oral exposure to elevated levels of inorganic arsenic.<sup>234</sup>

In addition to coal dust, the trains and ships used to transport coal emit diesel exhaust. Diesel exhaust contains significant sources of harmful air pollutants including particulate matter (PM/PM2.5), volatile organic compounds (VOCs), toxic compounds known as air toxics, carbon monoxide (CO), nitrogen oxides (NOx) and, in the case of ships, sulfur oxides (SOx), and contributes to elevated ozone levels.<sup>235</sup> This pollution causes poor air quality, reduced visibility, water and soil contamination, and ecosystem damage. Health effects associated with exposure to this pollution include premature mortality, increased hospital admissions, heart and lung diseases, asthma, reduced lung function, and increased cancer risk.<sup>236</sup>

<sup>228</sup> Bounds, WJ and Johannesson, KH. "Arsenic addition to soils from airborne coal dust originating at a major coal shipping terminal." *Water, Air, and Soil Pollution* 185 (2007): 195-207.

<sup>229</sup> See Id. at 198.

<sup>230</sup> See Id. at 200.

<sup>231</sup> See Environmental Protection Agency, Integrated Science Assessment on PM at 25.

<sup>232</sup> See Bounds, WJ and Johannesson.KH at 196.

<sup>233</sup> World Health Organization Fact Sheet on Inorganic Arsenic found at <http://www.who.int/mediacentre/factsheets/fs372/en/>.

<sup>234</sup> See Id.

<sup>235</sup> California EPA's Fact Sheet on Health Impacts of Diesel Exhaust emissions found at: <http://oehha.ca.gov/media/downloads/calenviroscreen/indicators/diesel4-02.pdf>,

<sup>236</sup> See Id.

Comment Number: 0002493\_Mead\_20160728\_GovWY-48

Organization I: Office of Governor Matthew H. Mead

Commenter I: MATTHEW H. MEAD

Comment Excerpt Text:

In addition to analyzing and permitting coal mine development activities, Wyoming also analyzes and permits coal combustion and other facilities that process or consume coal. These facilities are required to obtain air quality permits and demonstrate that their air emissions will comply with all applicable emission standards, including the health and welfare standards. These facilities include major sources such as power plants (see Basin Electric's DEQ/AQD Permit Application Analysis NSR-AP-3546 and Permit CT-4631), activated carbon production facilities (see Atlas Carbon's DEQ/AQD Permit Application Analysis A0000253 and Permit P0014996), and coal drying and briquetting facilities (see White Energy Coal's DEQ/AQD Permit Application Analysis AP-14387 and Permit CT-14387), and others. (WY0-03211 to 03286; WY0-03288 to 03330 and WY0-03332 to 03372) The BLM's analysis in the PEIS must recognize Wyoming's air quality primacy and consider the regulatory control



and permitting expertise of the DEQ, AQD related to coal mine development, combustion, and processing activities.

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Comment Number: 0002493\_Mead\_20160728\_GovWY-49

Organization I: Office of Governor Matthew H. Mead

Commenter I: MATTHEW H. MEAD

Comment Excerpt Text:

When considering the environmental impact of mining coal, BLM must consider and evaluate current emission trends. See M. J. Bradley & Associates, *Benchmarking Air Emissions of the 100 Largest Electric Power Producers in the United States* (2016). (WY0-03374 to 03447). For example, from 1990 to 2014 emissions of nitrogen oxides have fallen 51% from 25.5 million tons to 12.4 million tons and sulfur dioxide emissions have fallen 78% from 23 million tons to 5 million tons. EPA Air Emission Trends (1974- 2014); [20] and Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990-2014, Chapter 2- Trends (WY0-03449 to 03482). Methane emissions from the mining sector have demonstrated a decreasing trend from 1990 to 2014. Emissions were reduced 29% from 96.5 million metric tons of CO<sub>2</sub> equivalent emissions to 68.1 million metric tons. Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990-2014, Executive Summary; [21] (WY0-03484 to 03510). Considering the critical role played by the abundant supply of federal coal mining in Wyoming to meet national energy needs, the BLM must consider the ability of our nation to continue to meet our environmental requirements (i.e., sulfur, mercury, etc.) if coal from the PRB and elsewhere in Wyoming is reduced or eliminated. Wyoming coal has less sulfur than eastern coals, making it attractive to utilities for meeting Clean Air Act requirements.

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Comment Number: 0002499\_Nichols20160728-15

Organization I: WildEarth Guardians

Commenter I: Jeremy Nichols

Comment Excerpt Text:

The PEIS must review the air quality impacts of coal mining, including the impacts of nitrogen dioxide emissions produced during blasting at surface mines.

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Comment Number: 0002499\_Nichols20160728-16

Organization I: WildEarth Guardians

Commenter I: Jeremy Nichols

Comment Excerpt Text:

ii. Coal Combustion Impacts

The full scope of reasonably foreseeable coal combustion impacts must be analyzed and assessed in the PEIS.

These impacts include, but are not limited to:

- Coal burning impacts to air quality: The impacts of burning coal to air quality, including impacts related to criteria pollutant emissions, hazardous air pollutant emissions, greenhouse gas emissions, and black carbon must be fully analyzed and assessed. It is imperative that the PEIS provide information and analysis disclosing to what extent federal coal production and the reasonably foreseeable impacts of coal combustion contribute to local, regional, and national air quality concerns.

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Comment Number: 0002505\_Brooke\_20160729-5

Organization I: Black Warrior River Keeper

Commenter I: Nelson Brooke

Other Sections: 13

Comment Excerpt Text:

Additionally, we have concerns with the use of Powder River Basin coal from out West being burned at Alabama Power Company's Miller Steam Plant on the Locust Fork in Jefferson County. This massive coal-fired power plant burns a lot of coal – predominantly from the Powder River Basin – coal which has elevated levels of mercury and potentially radionuclides (radioactive isotopes). These contaminants are better left in the ground than put into our air and water near Birmingham, Alabama. Miller Steam Plant is one of the largest CO<sub>2</sub> emitting power plants in the entire U.S., and the BLM does not need to be feeding this beast.

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Comment Number: 0002942\_Harbine-45

Organization I: Earthjustice

Commenter I: Jenny Harbine

Other Sections: 10

Comment Excerpt Text:

The PEIS must consider all air pollutant impacts from coal transport on downstream communities. Coal transport by rail also causes significant air quality and health impacts through coal train exhaust, which includes diesel particulate matter (DPM), and criteria pollutants including NO<sub>x</sub>, SO<sub>2</sub>, PM<sub>10</sub>, PM<sub>2.5</sub> and CO. Trains emit these pollutants while in motion and idling. 189 Communities and workers in close proximity to rail tracks, coal terminals, and shipping lanes are at highest risk for DPM exposure. DPM is associated with “acute short term symptoms such as headache, dizziness, light headedness, nausea, coughing, difficulty breathing, tightness of chest, and irritation of eyes, nose and throat. Long-term exposure can result in increased probability of heart attacks, lung cancer, worsening of asthma, and infant mortality. 190 Health risk assessments of rail terminals and ports have found significant cancer risks associated with DPM up to two miles from coal terminals. 191 The PEIS should quantify health impacts along the entire coal transportation corridor. In addition, the PEIS should analyze air emissions from coal export and shipping activities. For instance, air modeling for a proposed state of the art covered coal export at the Port of Morrow in Oregon showed major exceedances of particulate matter and NAAQs for NO<sub>x</sub>. 192 Storing coal in communities also generates large amounts of PM. 193 It is also well known that coal export can increase acid rain and mercury deposition in the Pacific Ocean and Western US from Asia. 194 These impacts should also be analyzed. In evaluating the significance of air quality impacts due to coal storage and transportation, the analysis should not base its conclusions solely on National Ambient Air Quality Standards (“NAAQS”) because harms may occur at pollutant concentrations below the NAAQS standards. For example, epidemiological studies have shown associations between SO<sub>2</sub> 188 Pastor, Manuel Jr., et al., *Waiting to Inhale? The Demographics of Toxic Air Release Facilities in 21st Century California*, 85 *SOCIAL SCIENCE QUARTERLY*, no. 2, June, 2004. 189 Comments of Phyllis Fox, *Environmental Health and Safety Impacts of the Proposed Oakland Bulk and Oversized Terminal*, September 21, 2015, at 19 (Ex. 35). 190 *Id.* 191 *Id.* 192 See, e.g., AMI International, *AIR QUALITY MODELING FOR THE PROPOSED ENCLOSED COAL EXPORT FACILITY AT THE PORT OF MORROW* (2012), [http://media.oregonlive.com/environment\\_impact/other/AERMOD\\_Modeling\\_Morrow\\_vfin.pdf](http://media.oregonlive.com/environment_impact/other/AERMOD_Modeling_Morrow_vfin.pdf) (last visited July 28, 2016), attached as Ex. 38. 193 See *id.* 194 Comments of Phyllis Fox, *Environmental Health and Safety Impacts of the Proposed Oakland Bulk and Oversized Terminal*, September 21, 2015, at 7 (Ex. 35). 54 concentrations and emergency room visits and hospital admissions down to the 50 ppb level even though the NAAQS for SO<sub>2</sub> is 85 ppb. 195 Moreover, NAAQS does not account for the fact that some pollutants have higher localized impacts—pollutants like SO<sub>2</sub> concentrate locally. The PEIS should analyze the significance of the health impacts of the program associated with air emissions on downstream communities.

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Comment Number: 0003051\_Taylor\_20160729-1

Commenter I: Bruce Taylor

Comment Excerpt Text:

Transport of coal produces dust and particulate matter which contains toxic heavy metals and polycyclic aromatic hydrocarbons (PAH's), many of which are carcinogenic. Finally, combustion of coal also releases sulfur dioxides

that contribute to smog and respiratory distress, and dangerous fine particulate matter. The amount of carbon dioxide produced per BTU is far greater than the other major energy sources.

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Comment Number: 0020001\_Murnion\_20160712-4

Commenter I: David Murnion

Other Sections: 10

Comment Excerpt Text:

The emission control apparatus on all coal generating power plants needs more modifications now, as we continue to learn that several chemical agents in the coal emissions are causing lung and heart diseases such as heart failure, asthma and cancer.

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Comment Number: 0020006\_Cowden\_20160712-1

Commenter I: Rhonda Cowden

Other Sections: 1 10

Comment Excerpt Text:

The UN Environmental Program reported on May 24, 2016 that according to WHO the air pollution level has risen 8% between 2008-2013, threatening to kill 7 million people yearly. 80% of these people living in areas where are pollution is monitored.

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Comment Number: 0020056-15

Organization I: Bowie Resource Partners, LLC

Commenter I: Gene DiClaudio

Comment Excerpt Text:

Aggressive new regulatory initiatives in the consumer market have further sensitized coal consumers to the precise characteristics of their coal. The Mercury Air Toxics Standards (“MATS”) Rule, Cross-State Air Pollution Rule (“CSAPR”), regional haze regulations, and ongoing revisions to Sulfur Dioxide, Nitrogen Oxide, Ozone, and Particulate National Ambient Air Quality Standards (“NAAQS”) have prompted numerous older generating unit retirements, but they have also spurred extremely expensive and sophisticated new pollution controls on surviving units. These pollution controls in turn often require very precise management of influent airstream quality, emphasizing the need for consistent and precise fuel characteristics. It is simply not possible for utilities and other consumers to haphazardly swap out fuel suppliers or for fuel suppliers to haphazardly substitute coals - and maintain the high degree of environmental performance mandated by current regulations. Notably, this often means that a coal mining company must have several lease tracts simultaneously at its disposal, so that it can appropriately blend coals from different sources or seams to manage the naturally occurring variation in coal qualities and deliver a consistent product.

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Comment Number: 000001287\_Wrich\_20160623-1

Organization I: Bowie Resources

Commenter I: Ken Wrich

Comment Excerpt Text:

I am proud to deliver high BTU coal. And it's for all of us. One thing that was brought up earlier, we talked about the pollution here in Grand Junction. We did this several years ago in Denver over the coal-fired power plants. And they ended up converting those coal-fired power plants. The percentage of pollution that all those coal-fired power plants had in Denver was four percent. Likesomebody mentioned that we -- the guys that drove here today, produced more pollution than all these coal-fired power plants.

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Comment Number: 00001270\_Smyth\_20160623-4

Commenter I: Joe Smyth

Commenter Type: Individual

Comment Excerpt Text:

Spring coal is a major cause of air pollution, particularly in lower-income communities.

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Comment Number: 00001271\_Sussors\_20160623-1

Commenter I: Kenneth Sussors

Comment Excerpt Text:

Processing and burning fossil fuels contributes significantly to air pollution, which in turn causes health problems, especially in the oldest and youngest and those with pulmonary disease. As a doctor, I've seen these health problems firsthand, especially here at the VA with its vulnerable population. These health affects are caused both directly by inhaling harmful chemicals and particles and indirectly by upsetting the balance of nature and weather

### Issue 3 - Climate change

Total Number of Submissions: 166

Total Number of Comments: 276

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Comment Number: 0000005\_Kurtz\_20160526\_Oral-1

Commenter I: Sandra Kurtz

Comment Excerpt Text:

Combined with other U.S. steps curbing climate change as we move into an alternative energy economy, your stopping this present leasing arrangement will not only get us more quickly to breaking the addiction, but also preserve ecosystems so vital to quality of life for future generations.

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Comment Number: 0000005\_Kurtz\_20160526\_Oral-2

Commenter I: Sandra Kurtz

Comment Excerpt Text:

Those are the reasons I urge you to include in your study of PEIS requirements climate change considerations, an in-depth study of the cumulative impacts of mining on water, soil, and vegetation along with an existing species inventory, plus risk of environmental disturbance and the related ecosystem as it affects any immediate or future use of the land.

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Comment Number: 0000015\_Gorenflow\_TNInterfaithPwr\_20160525-2

Organization I: Tennessee Interfaith Power and Light

Commenter I: Louise Gorenflo

Other Sections: 1

Comment Excerpt Text:

Michael Greenstone, the Milton Friedman professor of economics at the University Of Chicago, has found that the climate damages from coal mined from the Powder River Basin are five-to-six-times greater than its market value. The actual return the public receives from the extraction and combustion of coal from public resources is ever-greater suffering.

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Comment Number: 0000015\_Gorenflow\_TNInterfaithPwr\_20160525-3

Organization I: Tennessee Interfaith Power and Light

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Commenter I: Louise Gorenflo

Other Sections: I

Comment Excerpt Text:

A study published in Nature in 2015 concluded that the U.S. needs to keep 92% of its coal reserves in the ground as part of an overall slashing of fossil fuel use if we are to avoid catastrophic climate change. Because 40% of coal burned in U.S. power plants comes from federal public lands, the decision of the federal government to ban further coal extraction from public lands will have a major impact on improving our well being

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Comment Number: 00000174\_ HEADRICK\_20160517-4

Commenter I: Mary Headrick

Comment Excerpt Text:

Burning coal from public lands accounts for thirteen percent of our nation's greenhouse gas emissions. And greenhouse gas emissions lead to extreme weather events, such as drowning in floods, extreme heat deaths, or infections from warm weather vectors like ticks, mosquitoes.

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Comment Number: 00000178\_ RINGE\_20160517-1

Commenter I: Axel Ringe

Comment Excerpt Text:

Public lands coal leasing produces forty percent of this country's coal output. That coal, a significant proportion of which comes east to be burned, contributes, I think, thirteen percent of this country's carbon emissions contributing to climate change.

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Comment Number: 00000179\_ FUSAN\_20160517-3

Commenter I: Lynn Fusan

Comment Excerpt Text:

A permanent moratorium on federal coal leases is needed to fulfill our country's commitment to reducing greenhouse gases to fulfill our commitment to reduce global temperature rise to two degrees Celsius.

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Comment Number: 00000200\_ QUATTROCHI\_20160517-1

Commenter I: Laura Quattrochi

Comment Excerpt Text:

According to an article by Climate Central, every month in 2016 has made record to being the warmest, including this month. In fact, this past year actually set records to being the longest streak in temperature data that is kept by the National Oceanic and Atmospheric Administration. It boggles my mind that to this day, people continue to refrain from acknowledging the impact that coal and CO2 emissions have on climate change.

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Comment Number: 00000355\_ Thomas\_20160519-4

Commenter I: Ann Thomas

Other Sections: I

Comment Excerpt Text:

On a broader scale, I believe it is important to transition to a more sustainable trajectory of energy production. According to the Center for Climate and Energy Solutions, coal burning produced 24.5 percent of greenhouse gas emissions in the US in 2012 and the US is the second largest producer and consumer of coal.

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Comment Number: 00000360\_ Gilgen\_20160519-2

Commenter I: Gilgen

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**Comment Excerpt Text:**

The fossil fuel industry and our political leaders that seek the votes of those employed therein contend that the science of climate change is not settled. However, the evidence suggests otherwise, the climate scientists of NOAA and NASA, the EPA, the scientists at the National Academy of Scientists, the scientists that advise the US military and the insurance industry. In fact, every science organization and scientific union in the world has issued policy statements confirming their conviction that the threat of climate change is real, ominous, and is the consequence of burning fossil fuels.

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Comment Number: 00000366 \_ Brady \_20160519-2

Organization I: Emery County

Commenter I: Keith Brady

**Comment Excerpt Text:**

a key rationale seems for the moratorium -- however, seems to address climate change, which used to be global warming, but since that didn't work out, the moniker has changed. And while I'm not a climate change denier, in truth the climate does change season by season, year by year. And to say that science has settled makes a mockery of science. Science should always be subject to scrutiny.

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Comment Number: 0000066 \_Keowa\_20160517-1

Organization I: Powder River Basin Resource Council

Commenter I: Duane Keown

**Comment Excerpt Text:**

Wyoming leads all states and most nations for its coal contribution to increasing CO<sub>2</sub>. No state except for Wyoming has ever produced more than 200 million tons of coal in a year. Best peak for Wyoming was in 2008 when it produced 462 million tons of coal. It was shipped out of this state. In less abstract terms, in 100 ton coal cars, that's 46,000 miles of coal or enough coal to reach around the earth nearly two times at the equator. Most of the 462 million tons of coal, Wyoming coal of 2008 is now in the atmosphere as CO<sub>2</sub>. Where is Wyoming in relation to cooling the temperature? 41 percent of U.S. coal comes from the federal land, and 75 percent of it comes from just Wyoming.

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Comment Number: 0000082 \_Marshal\_20160517-6

Organization I: Cloud Peak Energy

Commenter I: Colin Marshall

**Comment Excerpt Text:**

Unfortunately, the current thinking about climate change in the U.S. has evolved to the point where stopping coal production appears to be the number one objective. The climate scientists know that eliminating U.S. coal will not fix climate change, and as Secretary Jewell said last week, "The keep in the ground movement is naive."

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Comment Number: 0000090 \_Nichols\_WildEarthGuard\_20160517-1

Organization I: Wild Earth Guardians

Commenter I: Jeremy Nichols

**Comment Excerpt Text:**

I want to express our honest belief that we do feel that the result of this reform effort needs to be more coal being kept in the ground. We are facing a climate crisis, a global climate crisis right now. We have an enormous challenge just to keep global temperatures in check. We're in the all-hands-on-deck era right now, and keeping as much fossil fuel in the ground as possible is key to eliminating greenhouse gas emissions and safeguarding our climate. I also want to be honest, though, that I firmly believe that keeping coal in the ground shouldn't mean that

people are just kicked down the street and communities are left hanging. I believe that this reform effort presents a once-in-a-generation opportunity to chart a just transition.

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Comment Number: 0000094\_Gerrits\_20160517-1  
Organization I: Powder River Basin Resource Council  
Commenter I: Christy Gerrits  
Comment Excerpt Text:

Last week the level of CO<sub>2</sub> in the atmosphere rose to 407.5 parts per million. The historic average or the historic high was 208 -- 80 parts per million. This 407.5 parts per million is the highest level measured in over 800,000 years. Coal-fired electric power plants were responsible for a quarter of the CO<sub>2</sub> emitted by the U.S.

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Comment Number: 0000098\_Strayer\_20160517.txt-1  
Commenter I: Bob Strayer  
Comment Excerpt Text:

But this is a time of transition, and I think it's a cruel deceit on the part of politicians whether it's at the state or on the federal level to mislead people into thinking that things are not going to be changing -- changing and specifically in the energy we use in this country and primarily I'm talking about coal. It's one of the dirtiest sources of pollution that we use for energy. There's no question about that. And 95 percent of the scientists in the world plus are convinced that the climate is changing, is warming. And the increase in CO<sub>2</sub> is a major cause in that, and that's coming from human use of carbon fuels.

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Comment Number: 0000099\_Wilbert\_20160517-1  
Commenter I: Kim Wilbert  
Comment Excerpt Text:

First, the new program must address the tremendous costs of coal mining on federal lands in terms of climate change.

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Comment Number: 0000099\_Wilbert\_20160517-5  
Commenter I: Kim Wilbert  
Comment Excerpt Text:

The burning of federally owned coal is a huge contributor to the ever-rising carbon dioxide of atmosphere. The tremendous future costs of dealing with climate change must be accounted for when the taxpayers of this country sell their coal.

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Comment Number: 0000274\_Nolting\_20160515-1  
Commenter I: Sharon Nolting  
Other Sections: I  
Comment Excerpt Text:

In January, an article in Climate Progress stated that "the combustion of coal from federal lands accounts for more than 57 percent of all emissions from fossil fuel production on federal lands." An even more recent study by Greenpeace found that almost 80% of the coal produced by the 3 leading coal companies is taken from our public lands. There is a serious contradiction in your administration's climate policy here which I am hoping your review will make clear so that policy can be changed to align with what must be our highest priority: reducing greenhouse gas emissions to fight climate change.

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Comment Number: 0000363\_HEIN\_20160519-4

Organization I: Institute for Policy Integrity

Commenter I: Jayni Hein

Comment Excerpt Text:

For each alternative, the Interior should model its climate impacts and the effects on coal prices, royalty revenue, energy markets, including energy substitution effects. The Interior should also calculate the upstream and downstream greenhouse gas emissions with its selected alternative. This is consistent with neither requirement and the White House Council on Environmental Quality's latest guidance.

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Comment Number: 0000518\_Madden\_20160517-2

Organization I: Wyoming Legislature

Commenter I: Michael Madden

Other Sections: I I

Comment Excerpt Text:

As an economist, I submit that raising taxes and leases will not increase revenue to the Federal government - it will decrease, it will not increase the viability of low cost energy - it will reduce it, it will not increase the stability and dependability of the nations power grid - it will reduce both. It will not increase economic growth, but rather drastically reduce it. Nobody benefits. Most important, it will not contribute any measurable impact on the climate, whatsoever.

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Comment Number: 0000539-1

Organization I: Gabriela Seattle

Commenter I: Rhondalei Gabuat

Comment Excerpt Text:

Climate scientists are clear on this issue: evidence shows that warmer ocean waters contribute to a higher risk of more intense hurricanes. And these warmer ocean waters contribute to a higher risk of more intense hurricanes. And these warmer ocean waters are due in large part to humanity's continued burning of fossil fuels...fossil fuels like coal.

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Comment Number: 0000543-1

Commenter I: Dianna Moesh

Comment Excerpt Text:

Climate impacts need to be included in analysis

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Comment Number: 0000548-1

Commenter I: Peggy Willis

Comment Excerpt Text:

To meet the UN Climate Change Conference Accords of 1.5 degrees Celsius global warming, the Federal government should continue investing in clean energy and stop subsidizing private companies taking coal from public lands.

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Comment Number: 0000555-2

Organization I: US Senate

Commenter I: Cantwell

Comment Excerpt Text:

Third, reconsider how to balance multiple uses over time. The U.S. has relied on fuels extracted from public



lands since its founding. The Federal Land Policy and Management Act requires the BLM to balance extractive uses against other uses of public lands. As part of that responsibility, the BLM must take into account the long-term needs of future generations. What has become clear is that coal mining doesn't merely compete as one use among others. Coal combustion without carbon sequestration ultimately destabilizes and degrades the conditions that make those other uses possible. Given the long atmospheric lifetime of carbon dioxide, the effects of mining a ton of public coal today may rebound on public lands for centuries, damaging opportunities for recreation, water supply, wildfire resilience, and even other extractive uses like grazing and timber. A huge disparity exists between the high, long-term costs of burning the public's coal and the low, short-term return for selling it. The BLM needs to address this disparity.

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Comment Number: 0000608-3

Organization I: JE Stoer & Associates

Commenter I: Tammé Bishop

Comment Excerpt Text:

In 1974 we were concerned about global cooling. Now global warming. Has an honest effort been made to look at the data and conclude that these changes are a natural occurrence

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Comment Number: 0000611\_Leahy\_NMWF-2

Organization I: New Mexico Wildlife Federation

Commenter I: Todd Leahy

Comment Excerpt Text:

First, rely on independent, peer-reviewed science. We strongly believe that the nation cannot continue to lease coal without taking into account that it is the most significant source of greenhouse gas emissions. The current Programmatic Environmental Impact Statement (PEIS) under which federal coal is leased predates the first congressional hearings on climate change and the creation of the intergovernmental Panel on Climate Change. Every one of our hottest years on record has occurred in the last 20 years. A scientific consensus has developed around the reality of global warming. The BLM must ground its new PEIS in this new reality.

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Comment Number: 0000620-3

Organization I: University of Illinois

Commenter I: Gerald C. Nelson

Comment Excerpt Text:

Both my own research and my professional assessment of the scientific literature on the effects of climate change lead me to the conclusion that climate change poses an existential threat to the human species. Life on our planet will survive as it has for several billion years, but we could be the first species to be responsible for its own extinction. To reduce the probability of this happening, we must act quickly to slow and eventually stop the net addition of greenhouse gasses (GHGs), particularly carbon dioxide, to the atmosphere. Coal, along with the other fossil fuels, represents stored sunlight. Unfortunately, with current practices, converting that ancient energy into useful energy today requires adding more GHGs to the air at a time when we need to be ending this practice. Until commercially viable technology is developed to reduce carbon pollution from coal burning, we need to expeditiously phase out the use of coal for energy generation.

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Comment Number: 0000626-1

Commenter I: Michael Clark

Other Sections: I

Comment Excerpt Text:

Please see attached. I'd ask the BLM to lead a review of the data behind the consensus claim and act accordingly

on discrepancy that I suspect the re-analysis will uncover.[See attached PDF "American Thinker: Debunking the 97% consensus on global warming"]

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Comment Number: 0000749\_Doddings\_20160623-3

Commenter I:G Doddings

Comment Excerpt Text:

Coal Leasing and Climate Considerations - Coal built our country and is a key foundation for our success and prosperity. A rational energy policy should be based on a true, "all of the above" approach. In fact, this approach is essential if we are to meet our projected future energy needs. Much of the current focus is on addressing climate considerations, but this must be balanced with the critical need to maintain reliable energy generation and distribution systems and provide affordable power for our households and businesses. Any impact analysis should include an alternative which takes this critical balance into consideration.

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Comment Number: 0000750\_Atwood\_20160623-1

Commenter I:Garrett Atwood

Other Sections: I

Comment Excerpt Text:

In the last 80 years, we have increased the amount of CO<sub>2</sub> in the atmosphere from 0.03% to 0.04% (Scripps Institute of Oceanography merged ice core data),and the warming has been barely more than the natural warming that occurred in the 80 years before that, when there were virtually no CO<sub>2</sub> emissions (Source: UK Met Office Hadley Centre).

---

Comment Number: 0000750\_Atwood\_20160623-2

Commenter I:Garrett Atwood

Other Sections: I

Comment Excerpt Text:

According to the international disaster database (Emergency Events Database EM-DAT), climate-related deaths are down 98 percent over the past 80 years. In 2013, there were 21,122 such deaths worldwide compared to a high of 3.7 million in 1931, when world population was less than a third of its current size. Why is the climate killing less people? Because while fossil-fuel use has only a mild warming impact, it has an enormous protecting impact. Nature doesn't give us a stable, safe climate that we make dangerous. It gives us an ever-changing, dangerous climate that we need to make safe. And the driver behind sturdy buildings, affordable heating and air-conditioning, drought relief and everything else that keeps us safe from climate is cheap, plentiful, reliable energy, overwhelmingly from coal and other fossil fuels.

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Comment Number: 0000750\_Atwood\_20160623-4

Commenter I:Garrett Atwood

Other Sections: I

Comment Excerpt Text:

I'd like to show you a chart. This chart illustrates 102 different climate change prediction models that have been used to predict climate change since 1975. While they vary somewhat on how much, all of the models predict rapid increase in global temperatures. Now the line at the bottom shows what has actually occurred. Not even the most conservative of these 102 models got it right (See Attached).

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Comment Number: 0000750\_Atwood\_20160623-5

Commenter I:Garrett Atwood

Other Sections: I

Comment Excerpt Text:

The only thing that climate scientist have proven over the last 40 years is that their climate prediction models are incapable of accurately predicting the climate. Nearly all of the models (102) used by manmade climate change alarmists over the last 40 years have predicted rapidly increasing global temperatures that would result in worldwide catastrophic climate events. Instead, these models have been proven false as we have actually witnessed a mild warming effect and an enormous climate protection effect from fossil fuel energy. (Source: Dr. John Christy of the University of Alabama Huntsville). We cannot accurately predict climate change at all, let alone home much of it is attributable to man or to a specific fuel source such as coal.

---

Comment Number: 0000750\_Atwood\_20160623-6

Commenter I: Garrett Atwood

Other Sections: I

Comment Excerpt Text:

This chart illustrates CO2 emissions in China and India over the last 40 yrs and average life expectancy in China and India over the same period. While fossil fuel use has significantly increased in these countries, the average life expectancy has increased over 10 years! (See Attached).

---

Comment Number: 0000750\_Atwood\_20160623-7

Commenter I: Garrett Atwood

Other Sections: I

Comment Excerpt Text:

This chart illustrates climate related deaths in correlation to CO2 emissions and ambient CO2 in our atmosphere. (See Attached).

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Comment Number: 0000762\_CSUMountaineeringClubetal\_20160623-1

Organization I: Mountaineering Club, 180 Degree Shift at the 11 Lb House, Gunnison Sockeyes, The CSU Snowboarding Team, Student Sustainability Center, Wildlife Society, Harmels Ranch and Resort, Animal Welfare Society, Uplift, Society for Conservation of Biology, EnAct, Ecosystem Science and Sustainability Club, Sustainability Coalition, Gillette Entomology Club, Wellness Peer Advisory Council

Comment Excerpt Text:

Climate change is the biggest threat to the places that we love to spend time outdoors, yet today, 20% of all U.S. climate emissions comes from coal mining on public lands. One of the single largest climate change contributors is happening on the land we should be protecting. As the voice of America's next generation of public land stewards, we ask you to acknowledge coal production's toll on public lands and to mitigate climate change effects when reforming the federal coal program.

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Comment Number: 0000770\_Clarke et al (PETITION)\_20160623-2

Commenter I: Petition

Comment Excerpt Text:

Forty percent of all coal produced in the U.S., about 400 million tons per year, comes from federal public lands - contributing to 13% of total climate emissions in the United States. Now is the time for the Bureau of Land Management to address the impacts of mining and burning coal on our climate, natural resources and Western quality of life.

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Comment Number: 0000770\_Clarke et al (PETITION)\_20160623-4

Commenter I: Petition

Comment Excerpt Text:

Disclose the impacts of mining and burning publicly-owned coal on the climate and create a national plan for federal coal leasing that meets our climate emission reduction targets.

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Comment Number: 0000809-1

Commenter I: Beth Blattenberger

Comment Excerpt Text:

Climate change: Burning coal increases climate change that hurts everyone in the world including in Utah. We are losing the greatest snow on earth. That means lost jobs. We can look forward to increasingly severe heat waves that kill people. There will be more and more dead trees and forest fires.

---

Comment Number: 0000812-4

Organization I: National Parks Conservation Association

Commenter I: Cory MacNulty

Comment Excerpt Text:

Coal combustion is also a major contributor to climate change, responsible for a quarter of all of American greenhouse gas emissions. (<http://www.c2es.org/energy/source/coal> just for your reference, Cory) Ninety percent of our national parks are currently experiencing conditions that scientists link to climate-changing air pollution: They are hotter, wetter, or drier than they were for most of the past century. Secretary Jewell, herself, said "Climate change is visible at national parks across the country...[we need] to help protect some of America's most iconic places-from the Statue of Liberty to Golden Gate and from the Redwoods to Cape Hatteras-that are at risk from climate change."

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Comment Number: 0000824-3

Commenter I: Garrett Atwood

Comment Excerpt Text:

One thing that climate scientist have proven over the last 40 years is that their climate prediction models are incapable of accurately predicting the climate. Nearly all of the models (102) used by manmade climate change alarmists over the last 40 years have predicted rapidly increasing global temperatures that would result in worldwide catastrophic climate events. Instead, these models have been proven false as we have actually witnessed a mild warming effect and an enormous climate protection effect from fossil fuel energy. (Source: Dr. John Christy of the University of Alabama Huntsville).

---

Comment Number: 0000824-4

Commenter I: Garrett Atwood

Comment Excerpt Text:

In the last 80 years, we have increased the amount of CO<sub>2</sub> in the atmosphere from 0.03% to 0.04% (Scripps Institute of Oceanography merged ice core data and the warming has been barely more than the natural warming that occurred in the 80 years before that, when there were virtually no CO<sub>2</sub> emissions (Source: UK Met Office Hadley Centre).

---

Comment Number: 0000835-1

Commenter I: Steve Hogseth

Comment Excerpt Text:

Deniers often site scientific facts from millions of years ago. Such ancient facts are irrelevant since modern man did not walk the planet until 200,000 years ago. In the 400,000 years prior to the Industrial Revolution, CO2 levels cycled between 180 and 290ppm, and in the two+ centuries since, we quickly crossed that threshold, now exceeding 400ppm. During those 400,000 years, the most rapid change in CO2 levels - EVER!! - was a 90ppm change that required 15,000 years. Since 1930, the CO2 level has increased 100ppm ... like a skyrocket! ... a rate 175 times FASTER than the FASTEST change in those previous 400,000 years! Again ... what required 15,000 years THEN, took only 85 years NOW! These fuels have clearly been a monumental factor in this dilemma. The well-being of seven billion people is at risk.

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Comment Number: 0001102\_CONSTANTINE\_KingCnty\_20160621-5

Organization I: King County

Commenter I: Dow Constantine

Comment Excerpt Text:

Interior's review should also confront the obvious conflict between our ambitious U.S. climate goals and the reality that coal from federal lands contributes roughly 10 percent of total U.S. climate emissions. In effect, our current federal coal leasing policies don't just allow; they subsidize the use of an energy source that undermines other public investments in clean air and water and economic development and in combating climate change.

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Comment Number: 0001105\_BODDIE\_20160621-2

Organization I: Bend

Commenter I: Nathan Boddie

Comment Excerpt Text:

The Federal Coal Program doesn't account for its contributions to climate change and the resulting impacts facing communities everywhere. It's time to factor in the environmental and economic burden of a warmer climate when considering the future of the program.

We need to internalize these costs while easing the transition to more sustainable economies throughout the country, but especially in coal country. By adequately considering the scope of impact, we can more appropriately factor in coal's associated costs.

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Comment Number: 0001106\_CORNELISON\_20160621-2

Organization I: City of Hood River, OR

Commenter I: Peter Cornelison

Comment Excerpt Text:

And we really need the Department of Interior to account for the toll of climate change and internalize all the factors when considering the future of the federal coal and its contributions to a warmer climate.

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Comment Number: 0001107\_GREUEL\_TWS\_20160621-1

Organization I: Wilderness Society

Commenter I: Ben Greuel

Comment Excerpt Text:

Going forward we should reduce production in order to align the Federal Coal Program with the nation's climate change targets. This includes measuring the climate impacts of all federal coal up for lease, and in turn, using information to make land management decisions. Our shared resources should not contribute a disproportionate amount to global climate change.

A problem we are keenly aware of in the Pacific Northwest is the export of coal. We absolutely should not be leasing our public lands to coal companies with the expectation that the coal is burned in other countries.

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Comment Number: 0001109\_MADSON\_MtnPact\_20160621-1

Organization I: The Mountain Pact

Commenter I: Diana Madson

Comment Excerpt Text:

The costs of responding to and adapting to a changing climate are rising, but at the same time, coal companies are able to pay well below market rate for coal extracted from taxpayer-owned lands. This deprives many Western States and taxpayers across the country their fair share of revenues that should be going to schools, roads and other priorities.

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Comment Number: 0001110\_FITZGIBBON\_20160621-1

Organization I: House of Representatives

Commenter I: Joe Fitzgibbon

Comment Excerpt Text:

We are already in Washington state seeing devastating impacts from just the early onset of climate change. Ocean acidification is having severe impacts on our shellfish growers in some of the most economically depressed parts of our state as more of what's traditionally fallen as precipitation has fallen as snow is now falling as rain. We are seeing less ability to store water for irrigation of our crops in Eastern Washington, less ability to store water for hydropower purposes, and of course, the last two summers we've seen the most devastating wildfires in our state's history.

So the impacts of climate change are already taking place in Washington. We contribute less than 2 percent of the total United States greenhouse gas emissions here in Washington, but we're suffering the impact nonetheless. There's only so much that we in our state can do to reduce our fossil fuel emissions, but we're already doing what we -- we're doing much of what we can as we shift towards greater reliance on electric vehicles, on public transportation, on renewable energy, but the fossil fuels being burned from coal produced on federal lands are -- vastly outweigh anything we can do in Washington state to reduce our own contributions to climate change.

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Comment Number: 0001111\_VON FLATERN\_WY state senate\_20160621-2

Organization I: Wyoming State Senate

Commenter I: Michael Von Flatern

Comment Excerpt Text:

The Bureau of Land Management includes consideration of potential greenhouse gas emissions and production and use of coal when potential lease sales are analyzed under the National Environmental Policy Act. And you can look this up under the -- as defending itself under the WildEarth Guardians versus Salazar; WildEarth Guardians versus Forest Service; and Western Organization of Resource Council versus Jewell. Thank you.

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Comment Number: 0001130-2

Organization I: Climate Reality Project

Commenter I: Jillian Adams

Comment Excerpt Text:

I would just like to reiterate that the climate impacts of granting new federal coal leases make a permanent moratorium essential, both to allow the U.S. to meet its Paris commitment and to allow my generation to parent healthy children who have a fair return on our land, our climate, and our future.

---

Comment Number: 0001140-2

Commenter I: Cheri Cornell

Comment Excerpt Text:

A federal coal leasing program that gives away coal leases at below-market rates and fails to account for the costs of climate change makes the adults in this room complicit in a scheme to condemn Ethan and Corrine and all the other children in this world to perpetual slavery and service of a ruined climate.

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Comment Number: 0001149-1

Organization I:Climate Solutions

Commenter I:KC Golden

Comment Excerpt Text:

I don't think you should think of climate as one of those factors to be traded off against others. We know the mathematics, the physics of climate. We know the carbon budget that we must live within in order to preserve human civilization as we know it. Those numbers are embodied in the human framework on climate change and in the Paris treaty, and I think we can treat that as a hard constraint as an imperative so that whatever you decide on coal leasing needs to operate and keep us within that carbon budget.

---

Comment Number: 0001153-1

Commenter I:Cynthia Linet

Comment Excerpt Text:

We must stop all use and extraction of fossil fuels now before it's too late. We are already seeing the ravages of climate change and those in the poor South who have done nothing to bring about these changes are those who have been most affected. Droughts, floods, and mass migrations due to war brought about by scarcity of resources, 60 million migrants in the world right now.

---

Comment Number: 0001158-1

Organization I:Seattle 350, Seattle Rising Tide

Commenter I:Alice Lockhart

Comment Excerpt Text:

I ask that in the unlikely and sad event that further coal extraction on our public lands is allowed, BLM must please create rules that allow the flexibility to change your policy as the climate emergency progresses.

---

Comment Number: 0001163-1

Organization I:University Unitarian Church

Commenter I:Deejah Sherman-Peterson

Comment Excerpt Text:

Coal-fueled climate change is already hurting Washington and the other Western states. We have a lower snowpack, we have droughts, we have flooding. We have longer and more intense wildfire seasons.

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Comment Number: 0001170-1

Organization I:Earth Ministry

Commenter I:Jessie Dye

Comment Excerpt Text:

When I ask you to consider climate change, that's going to take some technical evaluation. How much is the coal that is sold in the federal leasing program, how does that affect global climate change, what's the temperature, what's the effect of blowing back to our coasts in Washington, our glaciers.

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Comment Number: 0001174-2

Commenter I:Donna Albert

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**Comment Excerpt Text:**

I understand that you are implementing the PEIS according to set laws and policies. However, you do not have three years if we are to achieve the goals of COP21. As human beings who are dependent on the earth for a stable climate, food and water, please recognize that BLM must do whatever is necessary to protect Americans from climate change.

---

Comment Number: 0001186-1

Commenter I: Imogene Williams

**Comment Excerpt Text:**

Hundreds of coal plants planned for India, but the people -- the people are fighting it just like us. The message is that the market for coal in Asia is shifting sands. Climate change is proceeding -- is progressing faster than we expected.

---

Comment Number: 0001187-2

Commenter I: Peggy Willis

**Comment Excerpt Text:**

And I want to lastly also add that the review should include complete environmental costs of using coal, and that I'm talking here about the climate change costs that are seen in our lower snowpacks, droughts, flooding and extreme wildfires and the ocean acidification that others have mentioned and that I have experienced personally while living here in Washington.

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Comment Number: 0002015\_Dash\_20160623-1

Commenter I: Mike Dash

**Comment Excerpt Text:**

Climate change has become so severe that it would be irresponsible and reckless to issue any new coal leases.

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Comment Number: 0002020\_Enk\_20160623-2

Commenter I: Michael Enk

**Comment Excerpt Text:**

Climate change is already impacting the lives of Montanans and it's only going to get worse the more coal is mined and burned.

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Comment Number: 0002022\_Garvey\_20160429-1

Commenter I: Lydia Garvey

**Comment Excerpt Text:**

Coal leasing is not consistent with national climate change objectives. This must be factored into the review.

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Comment Number: 0002058\_Richardson\_20160621-1

Commenter I: Randy Richardson

**Comment Excerpt Text:**

But the biggest damage is to the atmosphere. We cannot continue to extract carbon that took hundreds of millions of years to deposit, in only a couple hundred years. Climate change is definitely upon us, and we must stop making it worse.

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Comment Number: 0002064\_Trebon\_20160620-1

Commenter I: Theresa Trebon

Comment Excerpt Text:

Given the severity of climate change and its affect on our environment it is way past time to deliberately and clearly study the impacts of coal use in our nation and our world.

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Comment Number: 0002081\_Inouye\_20160626-2

Organization I: University of Maryland

Commenter I: David Inouye

Comment Excerpt Text:

ecological impacts of fossil fuel extraction include:

1) Climate change due to the increase in releases of carbon dioxide and methane associated with coal mining.

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Comment Number: 0002106\_Ramsey\_20160623-1

Commenter I: David Ramsay

Other Sections: 8.7

Comment Excerpt Text:

Please price coal on public lands at its true value. Climate change is a very real and serious issue.

---

Comment Number: 0002109\_Reading\_20160618-1

Commenter I: Toniann Reading

Other Sections: 8.1

Comment Excerpt Text:

I fully support changes to keep carbon based fuels in the ground (and certainly not to use our public lands for private coal company leasing subsidized at ridiculous rates on both ends of the privatization scheme!) and to move toward using our public lands for environmentally sound & taxpayer responsible purposes reflecting current scientific research and climate change modeling.

---

Comment Number: 0002110\_Reagor\_20160626\_att-2

Commenter I: Paul Reagor

Other Sections: 1

Comment Excerpt Text:

The EPA is wrongly asserting that CO<sub>2</sub> is dangerous gas that falls under their purview. The attached chart of global temperatures and CO<sub>2</sub> levels over 600 million years shows that the EPA contention (that human caused CO<sub>2</sub> increases are causing higher global temperatures) is false. This chart is important in that it is the only one I found that shows results from several CO<sub>2</sub> studies, and unusual in that it shows visually the relationship between temperature and CO<sub>2</sub> over the full 600 million years for which there is evidence available.

The chart, produced by the editors at New Scientist for their May 16, 2007 issue, in an article titled Climate Myths... shows conclusively that there is no relationship between CO<sub>2</sub> and global temperatures. The chart shows that CO<sub>2</sub> has been as high as 7,000 ppm in the past (17 times current levels of 400 ppm) without any effect on the temperature range of 4 degrees. The chart shows long periods of time where CO<sub>2</sub> and temperature move together (as in the current time period), and long periods where they move in opposite directions, showing no correlation at all. All the studies I looked at that do show a correlation depend on the stopped watch phenomenon (being right 2 seconds in each 24 hour period), or a careful selection of the time period.

As is obvious from the attached chart, the 100 million year Ice Age (from 350 million years ago - 250 million years ago) probably caused a world-wide plant die-off, which lead to the spike in CO<sub>2</sub> levels from 300 ppm (250 million years ago) to over 4,000 ppm (200 million years ago). Thus the chart tells us that the only relationship

between CO<sub>2</sub> and temperatures is that very low temperatures can cause an ice age, which can cause a biosphere die off, which can cause higher CO<sub>2</sub> levels when the biosphere no longer absorbs the CO<sub>2</sub> generated by volcanoes.

What's especially interesting is that the chart shows that the 50 million year spike in CO<sub>2</sub> from 300 ppm to 4,000 ppm corresponds with the global temperature dropping 4 degrees. Exactly the opposite of what the EPA and NASA claim is happening now. As is also obvious from the chart, the current warming period started 20 million years ago, well before humans.

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Comment Number: 0002110\_Reagor\_20160626\_att-3

Commenter I: Paul Reagor

Comment Excerpt Text:

Not only is CO<sub>2</sub> not having any effect on global temperatures, but it is, in fact, a beneficial plant food. Plant studies show that the earth's biosphere needs a CO<sub>2</sub> level of 900 - 1,200 ppm (depending on the species). This is obvious when you consider that most plant species can trace their genetic roots back 100 - 200 million years when the CO<sub>2</sub> content of the atmosphere was at that level or higher.

Many studies, from 1986 on show all plants do better at higher CO<sub>2</sub> levels. Many large European growers have been placing their new greenhouses next to power plants so they use the CO<sub>2</sub> from the power plant to enhance plant growth. As any greenhouse man knows, a proper level of CO<sub>2</sub> (900 - 1,200 ppm) increases plant growth by 50%. There is now a whole industry devoted to providing CO<sub>2</sub> generators to greenhouses.

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Comment Number: 0002110\_Reagor\_20160626\_att-4

Commenter I: Paul Reagor

Comment Excerpt Text:

as any physicist can tell you, a greenhouse gas that has a density of 1 in 2,500 (400 ppm = 1/2,500) can not have a measurable temperature effect on the surrounding gas. The experiments that show CO<sub>2</sub> raising the temperature by 6 degrees depend on 100% pure CO<sub>2</sub>. When converted to actual densities, the effect is 6/2,500 or .0024 degrees, too small to measure.

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Comment Number: 0002111\_Ross\_20160623-1

Commenter I: Alexa Ross

Comment Excerpt Text:

Your organization seems to ignore the climate impacts from coal production in relation to meeting national and international climate commitments.

At least 80 percent of global coal reserves and 90 percent of U.S. coal reserves must remain in the ground to have a 50 percent chance of avoiding catastrophic levels of global warming. Unleased federal coal contains up to 212 billion tons of potential greenhouse gas emissions, which is 43 percent of the potential emissions of all remaining federal fossil fuels, including oil and gas. With more than 57 percent of fossil fuel emissions from federal areas coming from the combustion of federal coal, there is no place for the federal coal program in a carbon-constrained world.

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Comment Number: 0002115\_Schaefer\_20160623-3

Commenter I: C. Thomas Shaefer

Comment Excerpt Text:

Nearly all reputable scientific experts agree that our dependence on fossil fuels--especially coal, the most carbon-intensive of those fuels--is responsible for potentially catastrophic climatic warming and a drop in the pH of the oceans on a global scale.

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Comment Number: 0002123\_Thweatt\_20160623-2

Commenter I: Dick Thweatt

Comment Excerpt Text:

It is essential for the entire planet, Montana included, to act meaningfully to slow down global warming. The clean coal program is the first significant step that the United States has taken in this direction and it is critical to give other nations to take action too.

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Comment Number: 0002131\_Zuteck\_20160408-2

Commenter I: Michael Zuteck

Comment Excerpt Text:

President Obama will soon sign the climate accord, along with the Chinese and many other nations. Curtained mining on our public lands should be part of this climate solution.

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Comment Number: 0002137\_Zeigler\_20160607-1

Commenter I: Bob Ziegler

Other Sections: I

Comment Excerpt Text:

Former Secretaries of Defense and State as well as national security advisers have stressed the importance of stopping the climate crisis for our national security. See their statement for Partnership for a Secure America: <http://www.psaonline.org/2015/10/22/republicans-democrats-agree-u-s-security-demands-global-climate-action/>

---

Comment Number: 0002137\_Zeigler\_20160607-3

Commenter I: Bob Ziegler

Other Sections: I

Comment Excerpt Text:

Recent studies have shown ever more sea level rise impacts than previously thought: [http://www.nytimes.com/2016/03/31/science/global-warming-antarctica-ice-sheet-sea-level-rise.html?smprod=nytc-ore-iphone&smid=nytc-ore-iphone-share&\\_r=1](http://www.nytimes.com/2016/03/31/science/global-warming-antarctica-ice-sheet-sea-level-rise.html?smprod=nytc-ore-iphone&smid=nytc-ore-iphone-share&_r=1)

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Comment Number: 0002137\_Zeigler\_20160607-4

Commenter I: Bob Ziegler

Other Sections: I

Comment Excerpt Text:

King County Superior Court Judge Hollis Hill has ruled that the threat of climate change is so urgent that the state must be placed on a court-ordered deadline to hold polluters accountable now. She commented: "The reason I'm doing this is because this is an urgent situation. (...) These children can't wait, the polar bears can't wait, the people of Bangladesh can't wait. I don't have jurisdiction over their needs in this matter, but I do have jurisdiction in this court, and for that reason I'm taking this action."

<http://www.king5.com/tech/science/environment/teens-shocked-to-win-lawsuit-against-government/140295400>

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Comment Number: 0002137\_Zeigler\_20160607-5

Commenter I: Bob Ziegler

Comment Excerpt Text:

Total Greenhouse Gas Emissions and Climate Change Impacts (Methane, and Coal Combustion, Mining and Transport) from existing leases as well as future leases considered in your program.

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Comment Number: 0002137\_Zeigler\_20160607-6

Commenter I: Bob Ziegler

Comment Excerpt Text:

Secondary impacts to climate if US fails to meet greenhouse gas emission reductions on other countries also failing to meet goals.

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Comment Number: 0002151\_Cinnamon\_20160629-2

Organization I: Unacceptable Risk Film

Commenter I: Sophia Cinnamon

Comment Excerpt Text:

Warming temperatures and extended drought conditions are not only shifting our fire regime but creating a year-round fire season.

Last year was the hottest and most fire-intense year on record. More than 10 million acres burned and the USFS spent 1.7 billion dollars on fire suppression. Fire budgets and staff are being stretched as never before. And the climate is changing. Warmer temperatures, drought conditions and our earlier and -faster melting snowpack leads to drier conditions with more fuel to ignite wildfires. Warming temperatures contribute to extreme weather events that create unpredictable, and sometimes deadly conditions for firefighters.

---

Comment Number: 0002152\_Bruse\_20160518-21

Commenter I: Debbie Bruse

Comment Excerpt Text:

I can't argue that we all need to do our part to meet climate change directives and I would like to leave this earth better for my children.

---

Comment Number: 0002155\_Krupnick\_20160622-8

Organization I: Center for Energy and Climate Economics Resources for the Future

Commenter I: Alan Krupnick

Other Sections: 2

Comment Excerpt Text:

Exploration with the Bureau of Ocean Energy Management (BOEM) and other federal agencies as to whether downstream climate impacts from the combustion of federally produced fossil fuels must be disclosed or otherwise considered prior to individual lease sales and EIS's, as opposed to only on a programmatic level.

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Comment Number: 0002158\_Burger\_SabineCenter\_9132016-2

Organization I: Sabine Center for Climate Change Law

Commenter I: Michael Burger

Other Sections: 8.10 2

Comment Excerpt Text:

The federal government has a duty to mitigate climate impacts from downstream GHG emissions associated with the coal leasing program

There are at least four potential non-statutory sources of the federal government's affirmative duty to mitigate greenhouse gas emissions and associated climate impacts from federal coal: the principles of international law and the requirements set forth under the United Nations Framework Convention on Climate Change; the public trust doctrine; the federal common law of public nuisance; and private nuisance under state common law.

Although it is plausible that none of these sources would result in an affirmative court decision holding the government liable for a breach of its duty, that shortfall does not negate the existence of the duty itself. The statutes and regulations that govern Interior's management of public lands provide other, and potentially even

more forceful, sources for a duty to mitigate upstream and downstream greenhouse gas emissions and associated climate change impacts arising from the federal coal leasing program. Pursuant to the Federal Land Policy and Management Act (FLPMA), the Mineral Leasing Act (MLA) and NEPA, BLM has a duty to analyze and implement mitigation measures for the adverse environmental, social and public health impacts attributable to its management of fossil fuels on public lands.

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Comment Number: 0002158\_Burger\_SabineCenter\_9132016-3

Organization I: Sabine Center for Climate Change Law

Commenter I: Michael Burger

Other Sections: 2 8.10

Comment Excerpt Text:

Federal statutes, regulations and policy provide Interior and BLM with ample authority to adopt a fee as a form of compensatory mitigation

BLM has recognized that compensatory mitigation for unavoidable or residual climate change impacts arising from agency decisions is fully consistent with its mission and its multiple use mandate and that it possesses the discretion to require it, and has clarified that doing so is in fact the agency's policy. A climate change impacts fee for downstream GHG emissions fits within the agency's NEPA obligations and its compensatory mitigation policy. The climate change impacts at issue in this paper are those that occur as a result of GHG emissions both at the coal mine and downstream, when the extracted coal is transported and eventually combusted for its end use. These downstream GHG emissions are considered "indirect effects" under NEPA, and the climate change impacts associated with those emissions are unavoidable or "residual" impacts. In undertaking the Programmatic EIS, Interior has recognized that NEPA requires it to analyze downstream emissions – a conclusion that comports with the current trajectory of courts' interpretations of NEPA. Under NEPA, then, the agency must also identify and assess appropriate mitigation measures for these emissions, including compensatory mitigation measures. The mitigation measures discussed in the Programmatic EIS should follow the "mitigation hierarchy," and should include both a "net zero" emissions offset program as well as a climate change impacts fee. A climate change impacts fee would be consistent with recent directives, including the Presidential Memorandum Mitigating Impacts on Natural Resources from Development and Encouraging Related Private Investment; Secretarial Order 3330, Improving Mitigation Policies and Practices of the Department of the Interior; and "Landscape-Scale Mitigation Policy," a new chapter in its Departmental Manual, which effectively operationalizes Order 3330. The sum total of the White House and Interior guidance is that BLM can and should assess and potentially implement mitigation measures, which might operate through any number of mechanisms, including lease stipulations and chargeable fees, among other things. The mitigation measure should first seek to avoid GHG emissions and their climate impacts; second, seek to minimize emissions and impacts; and third, compensate for unavoidable impacts, as through a climate change impacts fee.

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Comment Number: 0002158\_Burger\_SabineCenter\_9132016-6

Organization I: Sabine Center for Climate Change Law

Commenter I: Michael Burger

Other Sections: 8.10 2

Comment Excerpt Text:

The federal government has the discretion to mitigate climate impacts from downstream GHG emissions associated with the coal leasing program

Even if the duty to mitigate is of uncertain scope or enforceability, FLPMA, the MLA and NEPA all confer a definite discretion to mitigate climate change impacts. The multiple use mandate and unnecessary and undue degradation prohibition of FLPMA, the public interest requirements of the MLA and the ambitious goals and

specific analytical requirements of NEPA individually and taken together grant the agencies broad discretion to mitigate foreseeable impacts, and to require compensation for impacts that cannot be avoided or minimized.

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Comment Number: 0002158\_Burger\_SabineCenter\_9132016-7

Organization I: Sabine Center for Climate Change Law

Commenter I: Michael Burger

Comment Excerpt Text:

The duties imposed on and remedies available against lessors under tort and property law offer a persuasive rationale for assigning a climate change impacts fee to federal coal

Climate change impacts from the coal leasing program's downstream GHG emissions will occur in locations, and to persons, both proximate to and remote from a given leased parcel. These impacted locations will include the leased parcel, other public lands and resources under BLM's jurisdiction, other federal lands and resources under Interior's jurisdiction, and private and public property within and outside the United States. Impacts to federal lands—including the leased parcel and off-site lands—and even to the public fisc, more broadly writ, are compensable under the general principles of property law. For instance, it is a general principle of property law that tenants are required to restore leased property to its former condition, or else be subject to termination and/or damages. And although there may not be a hornbook principle along these lines to cite to, it makes profound sense that a lessor has within its authority the ability to protect its other properties, or to require compensation for impacts to them, from activities it permits on its land. Moreover, the federal government, as lessor to coal mining companies, could, in principle, be held liable for damages for the climate change impacts associated with downstream GHG emissions. Section 379A of the Restatement (Second) of Torts and Section 18(4) of the Restatement (Second) of Property maintain similar standards for lessor liability for remote nuisances or personal injuries attributable to lessees' activities. Because the federal government is consenting to the coal mining, and because the federal government is at this time well aware that coal leasing either involves an unreasonable risk or else contributes to the identifiable nuisance of climate change impacts, these principles of lessor liability put the government on the theoretical hook for damages.

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Comment Number: 0002158\_Kasperik\_20160517\_StateRep-7

Organization I: HD 32 Wyoming State Legislature

Commenter I: Norine Kasperik

Comment Excerpt Text:

Comments made by EPA Administer Gina McCarthy repeatedly concede that the Agency's sweeping climate regulation of America's fossil fuels fired power plants will have no impact on Earth's climate. McCarthy openly admits that the Clean Power Plan (CPP) "is not about the end of pipe controls." She said "it is about driving in renewable investment." "That's what...reinventing a global economy looks like. "The value of this rule is not measured by its output. It's measured by showing strong domestic action."

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Comment Number: 0002162\_Jones\_20160519-1

Commenter I: Eugene Jones

Other Sections: I

Comment Excerpt Text:

In today's issue of USA Today, the following headline –

"Global Temperatures Soar for the 12th Straight Month" appeared in the "In Brief" section, directly linking it to a 50% increase in the average amount of carbon dioxide in the environment.

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Comment Number: 0002170\_Garber\_20160622-4

Organization I: Utah Physicians for a Healthy Environment (UPHE)

Commenter I: Howie Garber

Comment Excerpt Text:

COAL-FIRED ELECTRICITY CONTRIBUTES THE SINGLE LARGEST AMOUNT OF GLOBAL WARMING POLLUTION OF ANY INDUSTRY.

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Comment Number: 0002173\_Quick\_20160622-9

Commenter I: Kendra Quick

Other Sections: I

Comment Excerpt Text:

Another myth among the opponents is that the current leasing system does not consider the climate impacts of federal coal lease sales. Currently, the BLM addresses all environmental issues including, but not limited to, greenhouse gas (GHG) emissions in the production and use of coal when potential lease sales are analyzed under the NEPA. The Department of the Interior has successfully defended its analyses of climate impacts in a series of legal challenges brought by coal project opponents.

See *Wildearth Guardians V Salazar*, 880 F. Supp. 2d 77 (D.D.C.2012) aff'd 738 F. 3d 298 (D.C. Cir. 2013); *Wildearth Guardians V Forest Service*, No. 12-CV-85 D. Wyo 2015); *Western Organization of Resource Councils V Jewell*, No. 14-1993 (D.D.C. 2015)

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Comment Number: 0002175\_Woodcock\_20160627-1

Organization I: MSU Department of American Studies

Commenter I: Jennifer Woodcock-Medicine Horse

Comment Excerpt Text:

Montana has, very unfortunately, been a major contributor to world climate change through our production of oil, gas and coal

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Comment Number: 0002178\_Reum\_20160622-1

Commenter I: Peter Reum

Other Sections: 8.1

Comment Excerpt Text:

Please keep coal in the ground in Montana. The use of it only prolongs badly needed change to less climate changing energy.

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Comment Number: 0002189\_Jozwik\_20160517-11

Commenter I: Darryl Jozwik

Comment Excerpt Text:

HOW CAN WE BEST MEASURE AND ASSESS THE CLIMATE IMPACTS OF CONTINUED FEDERAL COAL PRODUCTION, TRANSPORTATION, AND COMBUSTION – THIS IS NOT PART OF THE ACT AND SHOULD NOT BE TAKEN INTO CONSIDERATION IN THIS PROGRAM.

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Comment Number: 0002190\_Pfeiffer\_20160627-3

Commenter I: Ben Pfeiffer

Other Sections: I

Comment Excerpt Text:

Since the National Research Council published its findings, the Intergovernmental Panel on Climate Change (IPCC)

has revised its analysis of the effects and costs of climate change and has even more emphatically demanded that we reckon with the future costs of our greenhouse gas emissions and the extent to which delays in reductions of emissions dramatically exacerbate the consequences for many centuries. Since the IPCC issues its fifth assessment, scientists have uncovered fresh evidence indicating that the effects of climate change may well be much more serious than they had predicted.

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Comment Number: 0002190\_Pfeiffer\_20160627-4

Commenter I: Ben Pfeiffer

Other Sections: I

Comment Excerpt Text:

The National Research Council warned:

“All of the model results available to the committee estimated that the climate-related damages per ton of CO<sub>2</sub>-eq would be 50–80% worse in 2030 than in 2005....

Because IAM simulations usually report their results in terms of mean values, this approach does not adequately capture some possibilities of catastrophic outcomes. Although a number of the possible outcomes have been studied—such as release of methane from permafrost that could rapidly accelerate warming and collapse of the West Antarctic or Greenland ice sheets, which could raise sea level by several meters—the damages associated with these events and their probabilities are very poorly understood.”

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Comment Number: 0002190\_Pfeiffer\_20160627-5

Commenter I: Ben Pfeiffer

Comment Excerpt Text:

Climate scientists have concluded that we must keep a large proportion of fossil fuel reserves in the ground in order to have a reasonable chance of avoiding a catastrophic destabilization of our climate and extremely damaging rises in sea level. In fact, we have already emitted enough greenhouse gas to set in motion catastrophes. We must avoid compounding the damage even more. We must achieve urgent reductions in emissions to give us more than just a reasonable chance of avoiding the worst possible damage. To do so we need to treat the climate challenge as an emergency. We owe that to our grandchildren, their grandchildren, their grandchildren, their grandchildren, to generations even further in the future, and to the biosphere upon which we all depend.

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Comment Number: 0002197\_Wise\_20160519-3

Organization I: Kiewit Mining Group Inc.

Commenter I: Dirk Wise

Comment Excerpt Text:

If the dept. of interior or the president truly believe that coal is the biggest source of environmental impact then there needs to be more funds/research provided to help with technological advances. Currently coal pays over 1 Billion dollars in taxes whereas alternative energy sources pay little to none and also receive government subsidies. It should also be noted that alternative energy sources receive over 11 Billion dollars in subsidies and can only generate 4.5% of this nation's energy needs. Climate impact needs to be studied along with economic impact with switching to alternative energy (Can we afford to use alternative energy with this type of government funding, is it even economically viable???)

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Comment Number: 0002199\_Gyncild\_20160626-3

Commenter I: Brie Gyncild

Comment Excerpt Text:

We're already seeing devastating effects of climate change, and based on scientific models, we can only expect the



devastation effects to accelerate. It is simply irresponsible to continue practices that are detrimental not only to our country but to our species and nearly every other species on the planet.

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Comment Number: 0002201\_UpSkyRanch\_20160622-1

Commenter I: John Betka

Comment Excerpt Text:

Coal has virtually nothing to do with the Climate Changes that are taking place worldwide.

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Comment Number: 0002208\_Manole\_20160622-2

Commenter I: Bogdana Manole

Comment Excerpt Text:

Although coal and oil contributed to the last century's industrial development and modernization, they are the primary cause of climate change, which threatens future life on planet. The effects of climate change are already dire, and they are predicted to impact future generations on more drastic scale. Our children are bound to live lives threatened by lack of water, polluted air, increased related health hazards, powerful storms, forest fires, drought or floods to enumerate only few.

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Comment Number: 0002209\_Williamson\_20160627-1

Commenter I: Kirt Williamson

Comment Excerpt Text:

The world's climate scientists are almost unanimous in their warnings that Climate Change is arguably the most serious problem facing this nation and the world--more serious than any other issue. To combat this threat we must expeditiously transition to clean energy to power our homes and transport vehicles.

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Comment Number: 0002210\_Gabbay\_20160621-1

Commenter I: Deirdre Gabbay

Comment Excerpt Text:

I am asking you to consider the effect that coal burning is producing on the climate. Coal releases the highest amount of heat trapping CO<sub>2</sub> per BTU of energy of any fossil fuel.

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Comment Number: 0002210\_Gabbay\_20160621-2

Commenter I: Deirdre Gabbay

Comment Excerpt Text:

If we do not ratchet back greenhouse gas emissions to sustainable levels that can be processed by the biosphere, we will drive our climate to dramatic and irreversible temperature increases, with potentially catastrophic results.

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Comment Number: 0002225\_Wheeler\_20160519-2

Commenter I: Ray Wheeler

Comment Excerpt Text:

Global warming and all of its disastrous subsidiary effects

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Comment Number: 0002226\_Tobe\_20160603-4

Commenter I: Jerry Tobe

Comment Excerpt Text:

impact of mining operations and the mined coal on climate change

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Comment Number: 0002228\_Graves\_20160627-3

Commenter I: Royal Graves

Comment Excerpt Text:

Coal-fired power plants produce major carbon dioxide emissions thereby becoming a major contributor to climate change. Rising temperatures are likely to increase the spread of disease (through increased mosquito and tick ranges). The environmental effects are likely to cause worsening drought and flooding which will have detrimental effects on food supply from crop failure.

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Comment Number: 0002231\_Schwend\_20160620-3

Organization I: Cloud Peak Energy

Commenter I: David Schwend

Comment Excerpt Text:

If the government is convinced that coal generated electricity is increasing the CO<sub>2</sub> level in the atmosphere, where does the use of vehicles come into play? Or mother nature in the form of volcanos, thunder storm created fires, decay of organic material, and breathing. Does putting more concrete and pavement on the ground have an effect? Is coal really the cause of CO<sub>2</sub> increase or is that just what the Administration and NGO's want to focus on?

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Comment Number: 0002233\_Sheffield\_20160618-1

Commenter I: Charles Sheffield

Comment Excerpt Text:

The climate impacts from coal extraction make any increase in production unacceptable.

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Comment Number: 0002237\_Hilden\_20160622-2

Commenter I: Alan Hilden

Comment Excerpt Text:

Coal as an extraction industry has lead to massive global warming and out of date power plants continue to operate without sufficient environmental safeguards.

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Comment Number: 0002238\_Bengtsson\_20160619-1

Commenter I: Barbara Bengtsson

Other Sections: I

Comment Excerpt Text:

I urge the Bureau of Land Management to let science and the public good guide its policy regarding carbon extraction on public land. The last IPCC report released in 2013/2014, included a carbon budget that showed that in order to limit Climate Change to a 2°C increase of the average global temperature, three quarters of global fossil fuel reserves must be left in the ground (<http://www.wri.org/blog/2014/03/visualizingglobalcarbonbudget>).

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Comment Number: 0002238\_Bengtsson\_20160619-2

Commenter I: Barbara Bengtsson

Other Sections: I

Comment Excerpt Text:

Moreover a Harvard study estimates “that the life cycle impacts of coal and the waste stream generated are costing the U.S. public a third to over onehalf of a trillion dollars annually.” Pollution from the burning of coal

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harms people and wildlife (<http://www.chgeharvard.org/resource/exploretruecostscoal>) and costs the public \$100 billion dollars annually ([http://www.rmi.org/RFGraphhealth\\_effects\\_from\\_US\\_power\\_plant\\_emissions](http://www.rmi.org/RFGraphhealth_effects_from_US_power_plant_emissions)). Public land, our shared treasure, should not contribute to environmental degradation, ill public health, and climate change.

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Comment Number: 0002239\_Baierlein\_20160621-7

Organization I: Conservation Northwest

Commenter I: Jeff Baierlein

Comment Excerpt Text:

Wildfire linked to climate change from coal and other fuel combustion destroys homes for people and wildlife, wreaking economic havoc and destroying our precious natural heritage.

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Comment Number: 0002240\_Hargrove\_20160701-2

Commenter I: Bourtai Hargrove

Comment Excerpt Text:

Climate disruption is already scorching India, where the temperature reached 123.8 F in April, killing hundreds and destroying crops in at least 13 states. Climate disruption is fueling the massive Alberta wildfire that forced 90,000 people to evacuate their homes and is now spreading into Saskatchewan. In Africa 36 million people are on the verge of famine, due to climate-change escalated drought, while in Australia 93 percent of the Great Barrier Reef has suffered heat-related coral bleaching and death. Climate disruption is accelerating the sixth great extinction of life on earth, an extinction which if it continues at the present rate, will eliminate half the plants and animals on our planet by the end of the century. We are facing the greatest threat to survival humans have ever faced. "Because CO2 stays in the atmosphere for over a century, the only thing that matters in limiting temperature is cumulative emissions, the total concentration of greenhouse gases we dump into the atmosphere" warns Kevin Anderson, climate advisor to the British government and former director of the Tyndall Energy Program. What would it take, Anderson asks, to target 2 degrees C realistically? "No carbon tax is going to do that. We won't get there through innovation or new technology, even if we spend a trillion a year for the next few years. The only conceivable way to produce that level of reductions," says Anderson, "is a full-scale, all-hands-on deck mobilization, what William James called 'the moral equivalent of war.'"

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Comment Number: 0002260\_Gleich\_20160707-2

Commenter I: Caroline Gleich

Comment Excerpt Text:

Our \$66 billion snowsports industry is already starting to feel it's impacts. Winter is shorter, snowfall is less abundant, glaciers are melting at astounding rates. We cannot wait any longer to reduce our dependency on fossil fuels and stand up against climate change.

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Comment Number: 0002275\_Petersen\_20160716-1

Commenter I: Sue Petersen

Comment Excerpt Text:

This program does not take into account the effect of coal on the environment, and the cheap price which is subsidized by taxpayers. Please revise the rules to take into account climate change and this use of public lands.

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Comment Number: 0002276\_Henderson\_20160715\_350Colorado-10

Organization I: 350 Colorado Board of Directors

Commenter I: Gina Hardin

## Comment Excerpt Text:

Coal plays a major role in exacerbating climate change as a result of greenhouse gas (GHG) emissions from mining, processing, transportation, burning of coal, and un-reclaimed abandoned mined lands.

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Comment Number: 0002282\_Bradford\_20160719-3

Commenter I: David Bradford

## Comment Excerpt Text:

Any evaluation of the effects of coal mining on climate impacts needs to be based on accurate and factual information and analysis. While there seems to be some evidence of a warming trend, that evidence also seems to be within the natural variability that exists for the earth. Much of the climate impact “science” is theoretical and based on computer modeling. Any climate science needs to be accepted, proven science.

As noted in the Notice in the Federal Register, the coal produced on Federal lands, while comprising 41% of all coal produced in the U.S. produced only 10% of the U.S. Green House Emissions. In addition, the coal produced in the North Fork Valley of western Colorado is among the cleanest coal. It is reputed to be cleaner than natural gas.

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Comment Number: 0002284\_Madsen\_20160719-1

Commenter I: Travis Madsen

## Comment Excerpt Text:

We should prioritize climate protection as the highest goal of all of our resource management programs.

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Comment Number: 0002300\_Csenge\_20160710-2

Commenter I: Rich Csenge

## Comment Excerpt Text:

The science is abundantly clear that burning carbon- based fuels to meet the needs of industry and modern lifestyles is rapidly raising CO2 levels in the atmosphere

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Comment Number: 0002303\_Steitz\_20160705-3

Commenter I: Jim Steitz

## Comment Excerpt Text:

To keep climate change within a level tolerable for human civilization requires, as a mathematical certainty, that 80% of known remaining fossil fuel reserves must remain underground, not converted into atmospheric carbon dioxide. This includes federally owned bodies of coal, oil, and gas on public lands, which account for 40% of domestic coal production

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Comment Number: 0002310\_Payne\_20160721-2

Commenter I: Steven Payne

## Comment Excerpt Text:

Coal is one of the largest sources of climate pollution

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Comment Number: 0002314\_Beres\_EarthMinWAInterfaithPower\_20160722-2

Organization I: Creation Justice Ministries

Commenter I: Shantha Alonso

## Comment Excerpt Text:

nor its impact on the climate

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Comment Number: 0002318\_Gordon\_20160722-1

Commenter I: Diana L. Gordon

Comment Excerpt Text:

In Washington State Greenhouse gas emissions are a serious matter. We can see this in a recent lawsuit brought by Our Children's Trust against the Washington State Department of Ecology. They were seeking the legal right to a healthy atmosphere and stable climate. On April 29, 2016, Judge Hollis Hill ruled ordered Ecology to come up with an emissions reduction rule by the end of 2016 and make recommendations to the state legislature on science-based greenhouse gas reductions in the 2017 legislative session. I feel that we should pay attention to Judge Hill's ruling when we consider the matter of leasing public lands to produce more coal often at low, subsidized prices.

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Comment Number: 0002318\_Gordon\_20160722-4

Commenter I: Diana L. Gordon

Other Sections: 11

Comment Excerpt Text:

This pollution causes ocean acidification and climate change. We have already evidenced both of these phenomena. Ocean acidification which, for example, interferes with the ability of oysters to form shells, has already had repercussions in our shellfish industry, especially with oysters. The shellfish industry brings in about 270 million dollars to Washington's economy and provides jobs for about 3,200 people. Can we afford to do anything that we know might affect it further?

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Comment Number: 0002318\_Gordon\_20160722-5

Commenter I: Diana L. Gordon

Other Sections: 8.1

Comment Excerpt Text:

Climate change is amply demonstrated by the number of super storms we are now experiencing. Burning coal causes illness, scars our landscape, ties up our railroads, and threatens our way of life.

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Comment Number: 0002319\_ODonnell\_20160722-1

Commenter I: Jennifer O'Donnell

Comment Excerpt Text:

According to the Fact Sheet: Modernizing the Federal Coal Program, independent analysis of coal, oil, and gas produced on public lands could be about 28 percent of the U.S.'s total annual energy-related greenhouse gas emissions. Since the United States is the second largest carbon dioxide emitter globally, the emissions from coal are consequential to global warming, and, thus, climate change

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Comment Number: 0002321\_Gordon\_20160722-1

Commenter I: Thomas Gordon

Comment Excerpt Text:

Peter Cornelius, a Hood River City Councilman, at the June 21, 2016, PEIS hearing in Seattle, put it very succinctly, "Climate costs outweigh coal profits."

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Comment Number: 0002321\_Gordon\_20160722-2

Commenter I: Thomas Gordon

Other Sections: 16

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**Comment Excerpt Text:**

As the acidity the oceans increase, coral reefs die and harvestable fish die; here in the Northwest, oyster growers are moving their oyster start operations to Hawaii. The acidic sea water here on our coasts dissolve the fragile beginning calcium shells of the oysters and the starts die. This industry is in danger of disappearing.

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Comment Number: 0002323\_Gordon\_20160722-1

Commenter I: Thomas Gordon

**Comment Excerpt Text:**

The burning of fossil fuels, of which coal is a big part, is radically changing our climate.

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Comment Number: 0002323\_Gordon\_20160722-5

Commenter I: Thomas Gordon

**Comment Excerpt Text:**

Another man from Climate Solutions said he had heard on “Market Place” the day before that more coal might need to mined and burned to allow more air conditioners to be run.

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Comment Number: 0002323\_Gordon\_20160722-6

Commenter I: Thomas Gordon

**Comment Excerpt Text:**

Please include climate change in your PEIS scoping.

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Comment Number: 0002324\_Dubbert\_20160722\_BME-6

Organization I: Blue Mountain Energy

Commenter I: Jeffrey C Dubbert

**Comment Excerpt Text:**

Our nation's climate objectives should ensure that we maintain diversified energy sources.

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Comment Number: 0002326\_Moench\_20160724\_UtahPhysicHealthyEnviron-2

Organization I: Utah Physicians for a Healthy Environment

Commenter I: Malin Moench

**Comment Excerpt Text:**

Subsidizing the price of Federal coal increases the pollution and climate disruption caused by coal beyond what it would otherwise be, and ultimately undercuts the president’s Climate Action Plan.

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Comment Number: 0002326\_Moench\_20160724\_UtahPhysicHealthyEnviron-26

Organization I: Utah Physicians for a Healthy Environment

Commenter I: Malin Moench

**Comment Excerpt Text:**

The damage from exporting this amount of subsidized coal to Asia would go beyond encouraging more coal consumption in that region which is struggling to respond to an air pollution crisis. As the world’s top emitting countries, efforts by the United States and China to reduce carbon pollution are watched closely by other countries. If the United States government does nothing to stop the current plans of the PRB mining companies to ship massive quantities of publicly-owned coal to Asia at drastically subsidized prices, it will signal to the rest of the world that the United States’ efforts to mitigate climate change are hypocritical, as the United States suppresses coal burning at home while it promotes it abroad.

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Comment Number: 0002326\_Moench\_20160724\_UtahPhysicHealthyEnviron-31

Organization I:Utah Physicians for a Healthy Environment

Commenter I:Malin Moench

Comment Excerpt Text:

Additional reasons for recertifying the PRB is that climate change is a far more serious risk to the physical and economic wellbeing of this nation's citizens than it was recognized to be 25 years ago. Coal is the nation's largest source of greenhouse gases and PRB coal has become the nation's largest single source of greenhouse gas emissions--accounting for 10% of the total. On a Btu basis, it is twice as carbon intense as natural gas. For that reason, the current Administration has acknowledged that burning coal for electric power poses a uniquely grave threat of further climate disruption.

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Comment Number: 0002326\_Moench\_20160724\_UtahPhysicHealthyEnviron-58

Organization I:Utah Physicians for a Healthy Environment

Commenter I:Malin Moench

Comment Excerpt Text:

Coal mining on federal lands accounts for an estimated 14% of U.S. CO<sub>2</sub> emissions. This is a very large number compared to the emissions of any individual facility or project. The approximately 160 billion tons of coal that remain to be potentially mined in the Powder River Basin, and the 272 billion tons of CO<sub>2</sub> which burning that coal would emit, are also very large numbers. According to the declaration by climate scientist Mike MacCracken in High Country, this amount, by itself, would equal 1/2 of the world's remaining carbon budget if the global warming is to be kept below 2 degrees Celsius. This is the amount of coal (and associated CO<sub>2</sub> emissions) that falls within this updated programmatic EIS. It is no longer possible to deflect an assessment of the BLS coal leasing program on the earth's climate. This PEIS must undertake that assessment.

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Comment Number: 0002326\_Moench\_20160724\_UtahPhysicHealthyEnviron-60

Organization I:Utah Physicians for a Healthy Environment

Commenter I:Malin Moench

Other Sections: I

Comment Excerpt Text:

The most recent fourteen years include 13 of the 14 hottest years the earth has experienced since recording of global temperatures began in 1880. As reported in March, 2013, in the journal Science, global temperatures now are warmer than at any time in at least 4,000 years. If this rate of warming continues, global temperatures in the coming years will exceed levels not experienced since before the last ice age, which ended roughly 12,000 years ago.(33) As a result, an economic and public health catastrophe looms for the Western United states generally, and for Utah, in particular.

(33) See news article "Global Temperature Highest in 4,000 Years," by Justin Gillis, New York Times, March 7, 2013, summarizing research published in the journal Science. [DOI: 10.1126/science.1228026, Science 339, 1198 (2013); Shaun A. Marcott et al. A Reconstruction of Regional and Global Temperature for the Past 11,300 Years.] This study reconstructed global temperatures over virtually the entire Holocene period (the period since most recent ice age).

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Comment Number: 0002326\_Moench\_20160724\_UtahPhysicHealthyEnviron-61

Organization I:Utah Physicians for a Healthy Environment

Commenter I:Malin Moench

Other Sections: I

Comment Excerpt Text:

Global warming has weakened the force of the giant convection cells (the Polar, Ferrel, and Hadley Cells) that

circulate air from the tropics to the North Pole and back. As a result, the subtropical jet stream that brings winter snows and spring rains into the parched Western states has been weakening and retreating northward since the mid-1900s, predicted by climate models. See <http://robertscribblers.wordpress.com/2013/07/16/dr-jennifer-francis-top-climatologists-explain-how-global-warming-wrecks-the-jet-stream-and-amps-up-hydrological-cycle-to-cause-dangerous-weather/>; <http://www.sciencedaily.com/releases/2008/04/080416153558.htm>. The result has been increasingly severe drought expanding from the Southwest through Nevada, Utah, and Colorado, and now into the Northwestern state

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Comment Number: 0002326\_Moench\_20160724\_UtahPhysicHealthyEnviron-88

Organization I: Utah Physicians for a Healthy Environment

Commenter I: Malin Moench

Comment Excerpt Text:

According to the National Climate Assessment and most other climate modelling research, climate change is affecting all of the United States, but its greatest impacts are being felt in the Western United States, including Utah. There is near unanimity among the scientifically literate that these effects are being driven by the burning of fossil fuels. The largest of those drivers is coal. Heat, drought, dust, and fire are what the future holds for the American West America and the world quickly shift to low-carbon alternatives. A critical first step in that process is an end to subsidies in the Federal coal leasing program.

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Comment Number: 0002326\_Moench\_20160724\_UtahPhysicHealthyEnviron-89

Organization I: Utah Physicians for a Healthy Environment

Commenter I: Malin Moench

Comment Excerpt Text:

The disruptive effect that global warming is having on this cycle is summarized by the Bureau of Land Management and the National Forest Service. Rising temperatures associated with global warming have already altered the characteristics of a broad range of plant and animal species (80% of species from 143 studies). These changes include reduced species density, northward or range shifts, altered timing of organism growth and reproduction, and reductions in the diversity of species' gene pools.

There has been a rapid expansion of invasive species. This can be attributed primarily to the direct and indirect effects of climate change, including elevated CO<sub>2</sub> and N deposition. Changes in past and present land uses, such as intense grazing, have also contributed. Consequently, approximately 20% of the sagebrush ecosystem's native flora and fauna are considered imperiled, and the remaining components of the sagebrush-based ecosystem are in decline. (Miller and Tausch, 2000, pp. 15–30).

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Comment Number: 0002326\_Moench\_20160724\_UtahPhysicHealthyEnviron-90

Organization I: Utah Physicians for a Healthy Environment

Commenter I: Malin Moench

Comment Excerpt Text:

As discussed in more detail below, global warming is dramatically increasing the frequency and intensity of fire in the Great Basin. Increased wildfires in shrublands in the Great Basin that have been converted to cheatgrass have now transformed rangelands that were carbon sinks into carbon sources on a large scale (Bradley et al., 2006). The combined effects of increased burn area and overgrazing mean that, by the end of the century, almost 59% of sagebrush-bunchgrass communities throughout the western U.S. could be replaced by communities of annual grasses and noxious weeds, or juniper and pinyon pines. The consequences for mule deer, pronghorn and other species that depend on the sagebrush ecosystem will be devastating. (Glick, 2006). The consequences for the Great Basin's soils will be equally grim. Juniper, pinyon, annual grasses, and noxious weeds do little to prevent fluvial erosion, and do not facilitate infiltration of moisture into soil and ground water recharge. The decline in the sagebrush-bunchgrass ecosystem in the Great Basin will expose those soils to erosion by wind, rain, and



flood. Although overgrazing, road building, and urban construction all contributing to demise of the sagebrush ecosystem, global warming is the main forcing mechanism, largely through its facilitation of fire. (Humboldt-Toiyabe Report, . 9).

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Comment Number: 0002326\_Moench\_20160724\_UtahPhysicHealthyEnviron-91

Organization I:Utah Physicians for a Healthy Environment

Commenter I:Malin Moench

Comment Excerpt Text:

Among earth scientists there is nearly complete consensus that accumulating greenhouse gas emissions have the planet on a long-run path to an ever hotter atmosphere and ocean, and ever greater climate disruption. The debate about this survives only at the political level. It is kept alive primarily by commercial interests who are aware of the implications of climate science, but would be disadvantaged if this country to deal with them seriously. As rangeland scientist Dr. Thad Box observes, the controversy between scientists and climate change critics over whether human-induced changes simply exacerbate “natural” climatic cycles or drive the major changes is irrelevant. The countermeasures required in either case are the same, and the diverts society from making the responses that it must in order to survive.

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Comment Number: 0002326\_Moench\_20160724\_UtahPhysicHealthyEnviron-92

Organization I:Utah Physicians for a Healthy Environment

Commenter I:Malin Moench

Comment Excerpt Text:

The damage to these biological crusts caused by changes to the climate, combined with the mechanical damage from human activity, has increased erosion of Utah’s desert soils. One ominous impact of this increased erosion is a substantial increase in the amount of dust that coats the snowpack of the Rocky Mountains. Dust on snow causes it to absorb rather than reflect solar radiation. It is estimated that increases in the dust that coats the mountain snowpack has reduced the flow of the Colorado River by 6%.

<http://www.colorado.edu/news/releases/2013/11/14/new-study-dust-warming-portend-dry-future-colorado-river>. Since the population centers of Arizona, Southern Nevada, and Southern California are utterly dependent on the Colorado River, an ongoing reduction in its flow will have a major impact on those desert cities.

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Comment Number: 0002326\_Moench\_20160724\_UtahPhysicHealthyEnviron-93

Organization I:Utah Physicians for a Healthy Environment

Commenter I:Malin Moench

Comment Excerpt Text:

Changes in temperature and precipitation associated with climate change are causing widespread deforestation across the globe. (Bonan, et al., 2008.) Deforestation, in turn, is responsible for 20% of the “greenhouse effect.” In the Great Basin, climate change is expected to continue to produce hotter, drier conditions at high elevations, drought-weakened trees, broader insect infestations, more frequent and more intense wildfires, and impaired forest ecosystems. White Pine and Aspen are in special peril. [http://www.deq.utah.gov/BRAC/Climate/docs/FinalReport/Sec-A-I SCIENCE REPORT.pdf](http://www.deq.utah.gov/BRAC/Climate/docs/FinalReport/Sec-A-I%20SCIENCE%20REPORT.pdf).

Of particular concern are the greatly expanded burn acreage caused by a warming climate and the effects of extreme wildfire events on ecosystems. It is estimated that increases in temperature will cause annual mean area burned in the western United States to increase by 54% by the 2050s relative to the present-day. The forests of the Pacific Northwest and Rocky Mountains will experience the greatest increases--78% and 175% respectively. The increase in the area burned is expected to cause a near doubling of wildfire carbonaceous aerosol emissions by mid-century. (Spraklen et al., DOI:10.1029.) In 2004, researchers at the U.S. Forest Service’s Pacific Wildland Fire Lab looked at past fires in the West to create a statistical model of how future climate change may affect

wildfires. They found that by the year 2100, the area annually burned in Montana, New Mexico, Washington, Utah, and Wyoming could be five times greater than at present. (McKenzie, et al., 2004, pp. 890-902.)

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Comment Number: 0002326\_Moench\_20160724\_UtahPhysicHealthyEnviron-94

Organization I:Utah Physicians for a Healthy Environment

Commenter I:Malin Moench

Comment Excerpt Text:

Current trends suggest that the fastest and most wide spread mass extinction of species in the Earth's history is very likely underway. In the tropics alone, we may now be losing 27,000 species per year to extinction. [http://www.pbs.org/wgbh/evolution/library/03/2/1\\_032\\_04.html](http://www.pbs.org/wgbh/evolution/library/03/2/1_032_04.html). By the year 2050, it is estimated that 15–37% of land plants and animals will become extinct as a result of climate change. (Thomas, C. et al., 2004.) Many species will die because they will not be able to migrate to places where the climate remains suitable. Others will die because suitable habitat will no longer exist. <http://www.nature.com/nature/links/040108/040108-1.html>. When viewed on an evolutionary time scale, the current pace of climate change is essentially instantaneous. For example, studies of the fossil record indicate that for tree species to adapt to the current pace of climate change, they would have to migrate to suitable habitats ten times faster than most species were able to respond to climates shifts in the past two million years. Few tree species have this ability. (Davis and Shaw, 2001.) Species mortality has serious consequences. In plant communities, reduced diversity leads to lower productivity, less nutrient retention in ecosystems and ecosystem instability. An average plot containing one plant species is less than half as productive as an average plot containing 24–32 species. As plant diversity is lost, leaching of nutrients from the soil increases, reducing its fertility. (Tilman, D., 2000).

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Comment Number: 0002326\_Moench\_20160724\_UtahPhysicHealthyEnviron-95

Organization I:Utah Physicians for a Healthy Environment

Commenter I:Malin Moench

Comment Excerpt Text:

A. Impaired Respiratory Function from Increased Ground-Level Ozone.

The chemical reaction that forms ozone is, in part, heat driven. Hotter temperatures will create higher ozone concentrations. The incidence of forest fires is also heat driven. Forest fires are a major source of ground-level ozone. As forest fires become more frequent and intense, exposures to ground-level ozone will increase. The significance of forest fires as sources of ozone can be appreciated by considering that smoke plumes from forest fires in Alaska have been shown to significantly increase ground-level ozone concentrations as far away as Europe. (Real E., et al., 2007).

Ozone creates a positive feedback mechanism for global warming because ozone itself is a greenhouse gas. In yet another feedback mechanism, higher ozone concentrations retard the growth of trees, which reduces the ability of forests to absorb CO<sub>2</sub>.

The American Lung Association estimates that at least one-third of Utah is vulnerable to the impacts of air pollution. Of a population of 2.8 million, more than 1 million are under 19 or over 64. About 230,000 have asthma, and nearly 494,000 have cardiovascular disease. The effect of ground-level ozone pollution on the delicate lining of the lungs is analogous to the effects of sunburn on the skin. It aggravates respiratory diseases like asthma, and impairs lung function in the population generally.

Until recently, high concentrations of ground-level ozone in the Mountain West had been observed only in the summer in population centers, as auto and industrial emissions reacted in the presence of sunlight and heat. Now high concentrations of ground-level ozone are appearing in the Mountain West's remote areas as well, especially in areas where oil and gas producers have recently drilled thousands of wells. Oil and gas drilling, as presently practiced, releases large quantities of ozone precursors, such as nitrogen oxide (NO<sub>x</sub>), volatile organic compounds (VOCs), and formaldehyde. <http://rd.usu.edu/files/uploads/ubos2011-12finalreport.pdf>. Recently, for the first time, concentrated ozone has appeared in the winter in the remote energy development areas of Wyoming and Colorado and Utah's Uinta Basin.

Utah's Uinta Basin covers nearly 6 million acres. In winter, emissions from energy production collect in the lower atmosphere where they are transformed into ozone by interacting with sunlight and snow. Air pollution monitors installed in the Uinta Basin measured ozone concentrations exceeding federal health standards more than 68 times in the first three months of 2010. <http://www.nytimes.com/gwire/2010/10/01/01greenwire-air-quality-concerns-may-dictate-uintah-basins-30342.html?pagewanted=all>. Maximum 8-hour average ozone concentrations at the Ouray air monitoring station during 2013 reached 142 ppb. This exceeds federal air quality standards by 89%. <http://www.deq.utah.gov/envrpt/Planning/s12.htm>. For long periods of time, ground-level ozone concentrations in the Uinta Basin now exceed those of Los Angeles County, where the nation's highest ozone concentrations traditionally occur.(36)

(36) The Uinta Basin's average ozone concentration for 2010-2011 was 116.5 ppb (based on the NAAQS-created measurement of the fourth-highest value averaged over the two years). In comparison, Los Angeles County averaged 108 ppb over the same two years.

[http://www.blm.gov/pgdata/etc/medialib/blm/ut/lands\\_and\\_minerals/oil\\_and\\_gas/november\\_2011.Par.75557.File.dat/Email%20July%2015%202011%20Garbett%20-%20SUWA%20Comments%20Nov%202011](http://www.blm.gov/pgdata/etc/medialib/blm/ut/lands_and_minerals/oil_and_gas/november_2011.Par.75557.File.dat/Email%20July%2015%202011%20Garbett%20-%20SUWA%20Comments%20Nov%202011).

Atmospheric currents are capable of transporting ozone and particulate matter thousands of miles away from their original sources. Ozone is showing up now in high concentrations in the air over the middle of the Atlantic Ocean. This raises the prospect that the rapidly growing supply of ozone precursors in the Uinta Basin, combined with the higher temperatures that global warming will bring, will increase ground-level ozone both there and in adjacent regions, such as the mountain valleys of the heavily populated Wasatch Front.

Another source of ozone adjacent to the Wasatch Front is the ultraviolet light that reflects off of the surface of the Great Salt Lake and interacts with the chemical soup produced by the refinery emissions and the vehicle exhaust emitted near the shore of the lake. This adds to the concentration of ozone along the Wasatch Front, and makes the Wasatch Front all the more vulnerable to the ozone-promoting effects of global warming.

A recent study of ozone by Utah's Division of Air Quality reports annual concentrations of ozone in the Salt Lake City of 0.079 ppb, violating the National Ambient Air Quality Standard of 70 ppb (based on the 4th highest annual 8-hour maximum). Furthermore, the study shows, ozone is expanding far beyond the areas traditionally affected by photochemical reaction. It reports ozone levels virtually as high in the parks of Southern Utah as in the urbanized North. [http://www.airquality.utah.gov/Public-Interest/Current-Issues/Ozone/2012 Utah Ozone Study.pdf](http://www.airquality.utah.gov/Public-Interest/Current-Issues/Ozone/2012%20Utah%20Ozone%20Study.pdf). Utah's air quality is already being affected by events and policies in other parts of the world, this trend will intensify.

A recent, landmark study led by Brigham Young University's Arden Pope has enhanced our understanding of the impact of ozone on public health. It clearly demonstrates that ozone exposure increases rates of respiratory death. Along the Wasatch Front, the study concludes, exposure to ground-level ozone increases the rate of respiratory death by about 25%. Other studies establish that ground-level ozone negatively impacts lung function across all segments of the population, including young, healthy adults, even at levels below current national air quality standards.

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Comment Number: 0002326\_Moench\_20160724\_UtahPhysicHealthyEnviron-96

Organization I: Utah Physicians for a Healthy Environment

Commenter I: Malin Moench

Comment Excerpt Text:

Models from climate researchers indicate that climate change will not just warm the average climate, but will also increase extreme climate events, such as heat waves. Studies show a correlation between temperature and hospital admissions for respiratory failure and for cardiac death. For example, a study published in *The American Journal of Respiratory and Critical Care Medicine* examined populations in 12 different European cities. For each city they found a temperature/humidity threshold beyond which each degree of increase resulted in a 4% increase in respiratory admissions for all ages, but especially those over 75

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Comment Number: 0002326\_Moench\_20160724\_UtahPhysicHealthyEnviron-97

Organization I:Utah Physicians for a Healthy Environment

Commenter I:Malin Moench

Comment Excerpt Text:

As described earlier, hotter temperatures and reduced precipitation expected in the Great Basin as a result of climate change is likely to result in widespread loss of native vegetation in the already water-stressed Great Basin. This can be expected to expand the sources of dust, or particulate matter pollution, to which Utah residents are exposed. Earlier this spring, for example, a storm moving in from the Great Basin filled the atmosphere with enough dust to send levels of fine particulates in northern Utah ten times higher than the EPA maximum limit. Kinds of particulate exposure that are likely to increase as a result of global warming, and the additional threats that they pose to the health of Utah's residents, are discussed below.

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Comment Number: 0002326\_Moench\_20160724\_UtahPhysicHealthyEnviron-98

Organization I:Utah Physicians for a Healthy Environment

Commenter I:Malin Moench

Comment Excerpt Text:

Soils in the Western United States also harbor significant concentrations of microorganisms like coccidiomycosis, the fungal spores that cause Valley Fever. Valley Fever is a disease with flu-like symptoms that is difficult to diagnose, and is sometimes fatal. It is spread by inhaling windblown coccidiomycosis spores, known by the inhabitants of the Southwest as "Death Dust." Valley Fever has quadrupled in the last ten years in the Southwest. The American Academy of Microbiology estimates that 200,000 people per year contract the disease, which is fatal in about one in 1,000 cases. People who are immunosuppressed, women who are pregnant, and diabetics, are particularly susceptible to serious courses of this disease.

Hotter temperatures associated with global warming will give the cocci a survival advantage over other microorganisms. More frequent and intense dust storms are the perfect delivery system for increasing this infectious disease among residents of the Western U.S. Dale Griffin, a USGS microbiologist, says that one gram of desert soil can contain as many as one billion microorganisms. Fungi can travel long distances because the spore "housing" acts like a cocoon, protecting the fungus from environmental stresses. More than 140 different organisms have been identified as "hitchhiking on to dust particulates." These include SARS, meningitis, influenza and foot and mouth disease. <http://wwwp.dailyclimate.org/tdc-newsroom/valley-fever/Valley-Fever-blowin2019-on-a-hotter-wind>.

Climate change, through weather extremes, pollution, habitat fragmentation and destruction, and widespread extinction of species, is reducing the viability of world's ecosystems. If allowed to continue, the collapse of these ecosystems is likely to be a major contributor to future pandemics of infectious disease.

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Comment Number: 0002328\_Paddock\_20160724-1

Commenter I:Brian Paddock

Comment Excerpt Text:

the contributions that the coal leasing program makes to U.S. Greenhouse Gas emissions (GHG) are significant. Extraction of coal from federal lands should be ended as quickly as possible as a measurable contribution to reducing our national release of GHGs in an effort to avoid the most terrible and irreversible effects of global warming and climate disruption.

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Comment Number: 0002328\_Paddock\_20160724-10

Commenter I:Brian Paddock

Comment Excerpt Text:

No profit our government could make by selling the remaining coal on federal lands will match the costs we in the U.S. and in the world will suffer from climate change.

Comment Number: 0002328\_Paddock\_20160724-11

Commenter I: Brian Paddock

Other Sections: 1

Comment Excerpt Text:

Reforming the coal leasing program is insufficient.(8) Any amount of increased revenue to the federal government will be minuscule compared to the costs of adaptation and response to climate disruption.(9) This year (2016) the mainland U.S. has already suffered six (6) severe climate-weather events which each caused economic losses of \$1 Billion or more(10) – thus a single severe event may cause losses that must be replaced that equals the current annual revenue of the Coal Leasing Program. This situation will only worsen. The best we can do is to stop the release of GHG as rapidly and effectively as possible in an effort to avoid the worst.

The cost of droughts and flooding and resulting infrastructure damage and crop losses together with forest fire fighting costs(11) are greater than the annual revenue for the program even if adaptation to sea level rise is not included. If sea level rise is included(12) the Secretary could start by noting “More than \$40 billion of National Park Service assets, including infrastructure and historic and cultural resources, are at high risk of damage from sea-level rise caused by climate change.”(13)

(8) For typical suggestions for financial management reform of the coal leasing program

see:<http://www.taxpayer.net/library/article/federal-coal-leasing-fair-market-value-and-a-fair-return-for-the-american-t#Recommendations>

(9) Some of the great changes that are increasing occurring are discussed at: <http://climate.nasa.gov/effects/> For a much more detailed discussion see the 2014 National Climate Assessment. <http://nca2014.globalchange.gov/>

(10) <http://www.ncdc.noaa.gov/billions/> and authorities there cited.

(11) <http://blogs.usda.gov/2015/08/05/the-cost-of-fighting-wildfires-is-sapping-forest-service-budget/>

(12) <https://www3.epa.gov/climatechange/science/indicators/oceans/sea-level.html>

(13) <https://www.doi.gov/pmb/ocean/highlights/sea-level-rise-cost> and Adapting To Climate Change in Coastal Parks: Estimating the Exposure of Park Assets to 1 m of Sea-Level Rise Natural Resource Technical Report NPS/NRSS/GRD/NRR—15/916 [http://www.nature.nps.gov/geology/coastal/coastal\\_assets\\_report.cfm](http://www.nature.nps.gov/geology/coastal/coastal_assets_report.cfm)

Comment Number: 0002328\_Paddock\_20160724-14

Commenter I: Brian Paddock

Other Sections: 5

Comment Excerpt Text:

Burning coal causes smog, soot, acid rain, global warming, and toxic air emissions. Burning coal is the single largest source of air pollution.(16)

Comment Number: 0002328\_Paddock\_20160724-17

Commenter I: Brian Paddock

Other Sections: 1

Comment Excerpt Text:

The threats to national defense and security from climate disruption were recognized as long as 2009 when the CIA set up a climate change unit. About 26 months ago the headline was “Climate Change Deemed Growing Security Threat by Military Researchers” because the rate of change was increasing.(20) It has since accelerated further.

(20) [http://www.nytimes.com/2014/05/14/us/politics/climate-change-deemed-growing-security-threat-by-military-researchers.html?\\_r=0](http://www.nytimes.com/2014/05/14/us/politics/climate-change-deemed-growing-security-threat-by-military-researchers.html?_r=0)

Comment Number: 0002328\_Paddock\_20160724-20

Commenter I: Brian Paddock

## Comment Excerpt Text:

It is time to move beyond “adaption” and take steps to end fossil carbon extraction in an effort to avoid the worse effects of increasing GHG releases from our species activities.

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Comment Number: 0002328\_Paddock\_20160724-9

Commenter I: Brian Paddock

## Comment Excerpt Text:

The Secretary must fully consider and act upon what science is telling us – that we have become a world of melting ice and rising sea levels. Look at the projections on sea level rise and the loss of large parts of New York City, Boston, Miami, New Orleans, Galveston, and our eastern barrier islands. Burning coal increases atmospheric energy and ocean temperatures which increases the strength of land falling hurricanes. We are suffering longer deeper droughts, massive forest fires, widespread flooding and deadly heat waves.

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Comment Number: 0002335\_Webber\_20160725\_HealthActionNM-10

Organization I: Health Action New Mexico

Commenter I: Barbara Webber

Other Sections: I

## Comment Excerpt Text:

While these localized threats are extremely important to address, we ask the agencies to consider coal’s global impacts: climate change. According to CHGE, coal generates 4/5 of utility sector greenhouse gases even though it comprises less than half of the nation’s electricity (4). Soot absorbs solar radiation, further warming the atmosphere. Coal mines themselves emit methane (5).

(4) <http://www.chgeharvard.org/resource/explore-true-costs-coal>

(5) [http://www.chgeharvard.org/sites/default/files/epstein\\_full%20cost%20of%20coal.pdf](http://www.chgeharvard.org/sites/default/files/epstein_full%20cost%20of%20coal.pdf)

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Comment Number: 0002335\_Webber\_20160725\_HealthActionNM-9

Organization I: Health Action New Mexico

Commenter I: Barbara Webber

Other Sections: I

## Comment Excerpt Text:

Because of climate change, we are already seeing impacts to the environment and public health. We are witnessing stronger hurricanes and more frequent floods (6). After heavy rain events and intense storms there are increases in asthma and clusters of illnesses (7). Heat waves affect vulnerable populations such as the elderly. Droughts contribute to food insecurity. These wide-ranging climate impacts must be considered as the agency evaluates the federal coal program. Finally, the government should not incentivize the use of coal through subsidies and loopholes. In 2007, the level of federal government subsidies for electricity and mining activities was estimated by the Environmental Law Institute to be \$5.37 billion or 0.27¢/kWh (8).

(6) <http://www.chgeharvard.org/resource/explore-true-costs-coal>

(7) [http://www.chgeharvard.org/sites/default/files/epstein\\_full%20cost%20of%20coal.pdf](http://www.chgeharvard.org/sites/default/files/epstein_full%20cost%20of%20coal.pdf)

(8) [http://www.chgeharvard.org/sites/default/files/epstein\\_full%20cost%20of%20coal.pdf](http://www.chgeharvard.org/sites/default/files/epstein_full%20cost%20of%20coal.pdf)

This not only shortchanges taxpayers billions of dollars in lost revenues, but actually incentivizes damages to public health, costing society many billions of dollars.

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Comment Number: 0002436-4

Organization I:

Commenter I: Sharon St Joan

## Comment Excerpt Text:

Dead trees do not emit life--giving oxygen; instead, as they decay, they emit carbon dioxide. This pollution when added to the sum total of the pollution given off by the new coal mining itself is a significant addition to green house gases

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Comment Number: 0002442\_Wolf\_20160727\_CenterBioDiversity-2

Organization I:Center for Biological Diversity

Commenter I:Shay Wolf

Comment Excerpt Text:

According to a large body of scientific research, holding temperature rise to “well below 2°C” requires that the vast majority of global and US fossil fuels stay in the ground. (4) Effectively, this means that fossil fuel emissions must be phased out globally within the next few decades. (5) The global carbon budget — the remaining amount of carbon that can be released to the atmosphere before we lose any reasonable chance of holding global temperature increase well below 2°C — is extremely limited and is rapidly being consumed by continued fossil fuel use. (6) The United States alone has enough recoverable fossil fuels, split about evenly between federal and nonfederal resources, that if extracted and burned, would exceed the global carbon budget for a 1.5°C limit, and would consume nearly the entire global budget for a 2°C limit. (7) The unleased federal coal resource alone is estimated at 212 GtCO<sub>2e</sub>, or almost two-thirds of the remaining global carbon budget for a reasonable probability of limiting warming to 1.5°C. (8)

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Comment Number: 0002442\_Wolf\_20160727\_CenterBioDiversity-3

Organization I:Center for Biological Diversity

Commenter I:Shay Wolf

Comment Excerpt Text:

In the United States, coal is the largest and most carbon dioxide-intensive conventional fossil fuel resource, (9) with federal coal comprising approximately 41% of total US coal production. (10) Coal mining contributes substantial additional methane emissions. (11) Mitigation pathways for holding temperature rise well below 2°C mandate a rapid phase-out of coal emissions. (12) For example, a recent study estimates that 95% of US coal reserves, including both federal and nonfederal coal, must remain unburned to preserve a reasonable probability of remaining below 2°C. (13) Coal mining, transport, combustion, disposal, and cleanup also have significant external costs on public health and the environment. (14)

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Comment Number: 0002445\_Madson\_20160727-1

Organization I:Mountain Pact

Commenter I:Diana Madson

Other Sections: 8.7

Comment Excerpt Text:

As western mountain communities, we represent nearly 200,000 permanent residents and millions of annual visitors. Coal extraction and use as a fuel source poses a number of costs currently unaccounted for in federal coal program. Onsite, these costs include air pollution from exploration, development, and transportation to and from the mine site; fugitive methane emissions; habitat disruption; noise pollution; and water contamination. From the perspective of our mountain communities, the coal’s contribution to climate changes poses the greatest cost. Economic, public health, and environmental damages from catastrophic wildfire, floods and reduced snowpack are some of the threats we face.

Failing to account for coal’s contribution to these costs in federal coal leases shifts them onto taxpayers -- and in our case, at a time when our towns are shouldering the financial burden of climate impacts and proactive adaptation. In the face of climate change, it is time to modernize the federal coal program to accurately account for its costs to communities, taxpayers and the environment while supporting a transition to a more sustainable and resilient economy.

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Comment Number: 0002448\_FoleyHein\_20160727-5

Organization I: Institute for Policy Integrity

Commenter I: Jayni Foley Hein

Other Sections: 4.6

Comment Excerpt Text:

Substitution Analysis and Carbon Budgeting

The third panel centered on substitution analysis and carbon budgeting.

Nathaniel Shoaff (Staff Attorney, Sierra Club) discussed BLM's past substitution analysis and recommendations for approaching substitution in the programmatic review. Shoaff explained that while there is an idea that coal is a global commodity and that consumers will pay to have coal come out of one spot if it does not come out of another; this assumption of "perfect substitution" should be refuted. The Sierra Club takes the position that one cannot make a "reasoned choice among alternatives," as required by the National Environmental Policy Act (NEPA), until the greenhouse gas emission differences are known. This cannot be done without proper substitution analysis. The Sierra Club hopes that through the PEIS, there will be a determination as to whether a federal coal leasing program is consistent with the President's climate objectives and the climate agreements (China, Paris, etc.) that we have already made. All of the emissions from coal production, transportation, and combustion should be quantified in the PEIS; this is a simple calculation. It is harder to analyze how certain policies change the energy market; however, this can and should be done using available tools and models, and is called for in the Secretarial Order itself. The agency should explain its historical views on substitution and why it is changing them, and make its review as transparent and replicable as possible. Jason Schwartz (Legal Director, Institute for Policy Integrity) discussed how other federal agencies have conducted substitution analysis and provided recommendations for BLM. He suggested that the first place BLM could look was within Interior itself, as its offshore leasing program has an extensive 35 years' worth of experience doing energy substitution analyses. Schwartz explained that before 1982, BLM actually prepared Interior's EIS for offshore leasing, and that today BOEM does much more qualitative and quantitative substitution analysis than BLM does. BLM can learn from its sister agencies'—including BOEM, FERC, the Surface Transportation Board, the U.S. State Department, and EPA—experiences with substitution analyses and should do so by using an economic model that has been used and adopted by other agencies. BOEM's Market Sim, the U.S. Energy Information Administration's NEMS, and ICF International's IPM are all available models that have different benefits and drawbacks. Policy Integrity recommends that environmental impact statements quantify and monetize the full upstream and downstream emission consequences of proposed leasing actions and energy substitute scenarios. This approach is consistent with White House Council on Environmental Quality (CEQ) guidance and is necessary to fulfill NEPA's goals of providing policymakers and the public with information in a way that allows full comparison between alternatives.

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Comment Number: 0002449\_Lyon\_20160727\_NWF-12

Organization I: National Wildlife Federation Action Fund

Commenter I: Jim Lyon

Other Sections: 17.1

Comment Excerpt Text:

Likewise, in western Montana and the northwestern United States, "warmer and drier conditions have helped increase the number and extent of wildfires ... Higher temperatures and drought stress [] contribut[e] to outbreaks of mountain pine beetles that are increasing pine mortality." (119) Climate change also threatens western fisheries by "increas[ing] disease and/or mortality in several iconic salmon species," (120) as well as "lead[ing] to increasing fragmentation of remaining habitats and accelerated decline" of Montana's native Bull trout. (121) To reduce other stressors, fishing restrictions during periods of high water temperatures are being put in place for trout fisheries like the Bitterroot, Blackfoot, and Clark Fork Rivers due to warm water conditions. The average number of days each year that are thermally stressful for trout has nearly tripled in Montana's Madison River since the 1980s. (122) Closures of these popular fishing locations during summer



vacations can have major economic implications. The fishing opportunities in Yellowstone National Park, where there have also been closures, are valued at between \$67.5 and \$385 million annually. (123)

(119) U.S. National Climate Assessment, *supra*, at 495.

(120) *Id.* at 491.

(121) Bruce E. Reiman et al., Anticipated Climate Warming Effects on Bull Trout Habitats and Populations Across the Interior Columbia River Basin, 136 *TRANSACTIONS AM. FISHERIES SOC'Y* 1552, 1552 (2007).

(122) NWF, *Wildlife in Hot Water*, at 8.

(123) *Id.*

Comment Number: 0002449\_Lyon\_20160727\_NWF-13

Organization I: National Wildlife Federation Action Fund

Commenter I: Jim Lyon

Other Sections: I

Comment Excerpt Text:

Additionally, a report commissioned by the Wilderness Society in 2012, updated in 2014, that details the carbon emissions from fossil fuel extraction on federal lands, and how these emissions compare to the ability of federal lands to absorb carbon. The report found that CO<sub>2</sub> emissions in 2012 generated from energy development on public lands could make up almost 21% of all U.S. greenhouse gas emissions – equal to the annual emissions from more than 280 million cars. (126)

(126) Stratus Consulting, *Greenhouse Gas Emissions from Fossil Energy Extracted from Federal Lands and Waters: AN Update* (Prepared for: The Wilderness Society, Washington D.C. 2014) at 11, available at <http://wilderness.org/sites/default/files/Stratus-Report.pdf>.

Comment Number: 0002449\_Lyon\_20160727\_NWF-14

Organization I: National Wildlife Federation Action Fund

Commenter I: Jim Lyon

Other Sections: 8.7 I

Comment Excerpt Text:

A recent study has concluded that introduction of higher royalty rates would reduce carbon dioxide emissions of coal even with demand side policies, like the Clean Power Plan, in place. (127) This would be in part due to the induction of substitution of lower carbon emitting fuel and energy sources for coal. (128) The study finds significant reductions in CO<sub>2</sub> emissions with the imposition of royalty rates that internalized carbon pollution costs by reflecting the social cost of carbon in the royalty rate. (129) While scenarios vary depending on demand side policy, with strong CPP implementation a carbon adder to royalty rates as low as 20% of the SCC could further lower carbon emissions by between 59 and 25 million metric tons in 2020 and by 39 and 10 million metric tons in 2030 depending on CPP implementation schemes. (130) The reason for the larger near term increase in emissions reductions is that the increased costs of coal will speed near term investment in lower carbon fuel sources including renewables. (131) The effects of a royalty rate increase without the CPP is also quite substantial. If the CPP is not implemented, a royalty rate at or equal to 100% of the SCC would result in carbon emission reduction equal to 70% of those that would have been achieved by the CPP as currently designed. (132)

(127) Spencer Reed and James H. Stock, *Federal Coal Leasing Reform Options: Effects on CO<sub>2</sub> Emissions and Energy Markets*, Executive Summary (Feb 2016) at 1, available at

[http://www.vulcan.com/MediaLibraries/Vulcan/Documents/FedCoalLeaseModelResults\\_ExecutiveSummary\\_Vulcan\\_FINAL\\_16Feb2016.pdf](http://www.vulcan.com/MediaLibraries/Vulcan/Documents/FedCoalLeaseModelResults_ExecutiveSummary_Vulcan_FINAL_16Feb2016.pdf)

(128) *Id.*

(129) *Id.* at 4.

(130) *Id.* at 4 and 6.

(131) Id. at 6.

(132) Id. at 8.

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Comment Number: 0002449\_Lyon\_20160727\_NWF-22

Organization I: National Wildlife Federation Action Fund

Commenter I: Jim Lyon

Comment Excerpt Text:

Federal coal program must be consistent with federal carbon reduction policy and goals, like the Administration's Climate Action Plan, and properly internalize the costs of carbon pollution to industry. The Obama Administrations has put forth a bold climate initiative aimed to aggressively reduce greenhouse gas emissions to levels that scientists tell us we must by aiming for carbon pollution reductions of between 26-28% by 2025. In December of last year, the U.S. made international commitments to achieving worldwide reductions that will limit warming to below 2 degrees Celsius with an aspirational goal of not exceeding warming of 1.5. degrees Celsius. Two degrees Celsius is the level of warming scientists have told policy makers is the amount of warming the earth can likely occur without triggering the most calamitous impacts of climate change. 1.5 degrees is considered a safer and more prudent level, especially for lower lying areas, but harder to achieve. The federal coal program must be reformed so as to in sync with these goals. The Federal coal program can no longer be divorced from the nation's climate policy. To align the federal coal leasing program with climate goals, BLM and DOI should:

- o Properly account for the carbon pollution impacts from coal mining by looking at the cradle to grave emissions from coal.
- o Manage the federal coal program to strategically reduce the production of coal to help achieve reduction of associated greenhouse gas emissions by 26-28% below 2005 levels by 2025 through five-year leasing plans.

- o Develop quarterly estimates of all greenhouse gas emissions associated with the extraction, transport, and consumption of federal coal to serve as basis for future decisions regarding the federal coal program and report the carbon emissions and impacts for all agency leasing decisions.

- o Fully analyze the true life-cycle impacts of greenhouse gas emissions from federal coal leasing and development. Protocols should be established to consider upstream and downstream impacts for methane and carbon including monetizing the impacts using the EPA's social cost of methane and the Interagency Working Group's social cost of carbon methodologies.

- o Include stipulations in every lease, permit and plan of operations to require mines to capture or offset methane releases.
- o Ending substitution analyses that do not add up.

- o Once the costs of carbon pollution from coal mining have been assessed, incorporate these costs into coal royalty rates so as to internalize the carbon pollution costs to the lessee companies.

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Comment Number: 0002449\_Lyon\_20160727\_NWF-29

Organization I: National Wildlife Federation Action Fund

Commenter I: Jim Lyon

Other Sections: I

Comment Excerpt Text:

Carbon pollution from coal combustion and other sources further presents profound impacts to wildlife. We are already experiencing record-breaking and destructive storms and floods; unprecedented severe droughts; earlier, more frequent and more intense wild fires; decreased snow pack; ocean acidification; and other troubling impacts. (18) This warming is projected to get more intense. (19)

(18) U.S. Global Change Research Program, 2014 National Climate Assessment (2014), available at <http://nca2014.globalchange.gov/report/our-changing-climate/observed-change>.

(19) Id.

With a warming world comes shifting habitats and changes in suitable wildlife ranges. As a result, many wildlife species are finding or will find themselves without a home. Plant and animal species are moving their entire ranges

in search of colder locales, in many cases two-to three times faster than scientists anticipated. (20) If carbon pollution continues at the current rate, scientists predict that higher temperatures will lead to extinctions of 50% of species around the globe. (21)

(20) National Wildlife Federation, *Wildlife in a Warming World* (Jan. 2013), available at [www.nwf.org/climatecrisis](http://www.nwf.org/climatecrisis).

(21) Intergovernmental Panel on Climate Change, *Climate Change 2007: Synthesis Report. Contribution of Working Groups I, II, and III to the Fourth Assessment Report of the IPCC (2007)*, Geneva, Switzerland, available at [http://www.ipcc.ch/pdf/assessment-report/ar4/syr/ar4\\_syr\\_full\\_report.pdf](http://www.ipcc.ch/pdf/assessment-report/ar4/syr/ar4_syr_full_report.pdf).

Comment Number: 0002449\_Lyon\_20160727\_NWF-42

Organization I: National Wildlife Federation Action Fund

Commenter I: Jim Lyon

Other Sections: I

Comment Excerpt Text:

It is virtually undisputed that carbon pollution from the extraction, use and combustion of fossil fuels is causing warming global temperatures leading to accelerating climate change. In 2014, the Intergovernmental Panel on Climate Change (IPCC) released its Fifth Assessment Report, stating that “[w]arming of the climate system is unequivocal,” and that “[h]uman influence on the climate system is clear.” (105) “[M]ore than half of the observed increase in global average surface temperature from 1951 to 2010 was caused by the anthropogenic increase in [greenhouse gas (“GHG”)] concentrations.” (106) Furthermore, between 1970 and 2010, “CO<sub>2</sub> emissions from fossil fuel combustion and industrial processes contributed about 78% to the total GHG emission increase.” (107) As detailed below, the potential impacts from climate change are immense and threaten wildlife and communities globally. Of fossil fuels, coal accounts for the greatest amount of carbon pollution from its extraction and use. In the United States, a significant amount of those coal emissions can be traced to federally leased coal.

(105) Intergovernmental Panel on Climate Change, *Climate Change 2014: Synthesis Report (IPCC Report)* (Nov. 2014) at 2, 4, available at [http://ar5-syr.ipcc.ch/ipcc/resources/pdf/IPCC\\_SynthesisReport.pdf](http://ar5-syr.ipcc.ch/ipcc/resources/pdf/IPCC_SynthesisReport.pdf).

(106) *Id.* at 48.

(107) *Id.* at 4.

The costs of these emissions are immense: increased droughts, floods, forest fires, coastal erosion, threats to water supplies and many other impacts. Currently, these costs are not being accounted for in leasing decisions or being borne by the coal companies responsible for them.

The single greatest cause of increasing global temperatures is emissions resulting from the combustion of fossil fuels such as coal. (108) Coal is one of the dirtiest fossil fuels in terms of contributing to the GHGs that are causing climate change. Scientists estimate that in order for worldwide emissions to stay below a level that will push the earth above 2 degrees Celsius of warming – a threshold world leaders have agreed is too dangerous to cross – 95% of U.S. coal reserves will have to remain undeveloped. (109) In Paris, world leaders agreed to aspire to keep warming below a safer target of 1.5 degrees Celsius. To achieve these needed reductions, the President has made clear that he intends to lower U.S. emissions by up to 28% by 2025. (110) On August 3, 2015, the Environmental Protection Agency finalized a rule – the Clean Power Plan – intended to reduce the emissions of GHGs from the power sector, primarily by demanding reductions in coal consumption. (111) While these rules are being challenged in court, it is almost certain federal policies will continue to move our power sector away from coal.

(108) *Id.* at 39.

(109) Christophe McGlade and Paul Ekins, *The geographical distribution of fossil fuels unused when limiting global warming to 2°C*, *NATURE*, Vol 517 (Jan. 8, 2015) at 189.

(110) White House, *FACT SHEET: U.S. Reports its 2025 Emissions Target to the UNFCCC*, <https://www.whitehouse.gov/the-press-office/2015/03/31/fact-sheet-us-reports-its-2025-emissions-target-unfccc>.

(111) 80 F.R. 64661 (Oct. 23, 2015).

Climate change poses a direct threat to wildlife and communities. With a warming world comes habitat shifts,

and many wildlife species are finding themselves without a home and many species could go extinct. The latest National Climate Assessment report shows that wildlife and communities are already feeling the impacts of climate with rising seas, heavier precipitation, changes in growing seasons, fewer cold snaps, decreased snow pack, increased incidence of pests, devastating wildfires and droughts, and other significant impacts. (112) Plant and animal species are shifting their entire ranges in search of colder locales, in many cases two-to-three times faster than scientists anticipated. (113) Due to irreversible changes, fish like trout are already disappearing from streams, big game populations such as moose are being pushed out of their historic range, and duck and wetland habitats are vanishing. (114)

(112) IPCC Report, Observed Change, <http://nca2014.globalchange.gov/report/our-changing-climate/observed-change>

(113) NWF, Wildlife in a Warming World, supra.

(114) Lisa A. Eby, Olga Helmy, Lisa M. Holsinger and Michael K. Young, Evidence of Climate-Induced Range Contractions in Bull Trout *Salvenius confluentus* in a Rocky Mountain Watershed, U.S.A., PLOS: ONE (June 2014), available at <http://www.plosone.org/article/info%3Adoi%2F10.1371%2Fjournal.pone.0098812>.

See Figure 1: Potential GHG Emissions from U.S. Federal Fossil Fuels (115)

(115) Chart from Ecoshift Consulting et al., The Potential Greenhouse Gas Emissions from U.S. Federal Fossil Fuels (August 2015) at Fig. 1, available at <http://www.ecoshiftconsulting.com/wp-content/uploads/Potential-Greenhouse-Gas-Emissions-U-S-Federal-Fossil-Fuels.pdf>

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Comment Number: 0002449\_Lyon\_20160727\_NWF-43

Organization I: National Wildlife Federation Action Fund

Commenter I: Jim Lyon

Other Sections: I

Comment Excerpt Text:

Climate change is also affecting many areas directly impacted by federally leased coal mining. According to the U.S. National Climate Assessment, climate change impacts the Great Plains region, including the Powder River Basin area, by causing “more frequent and more intense droughts, severe rainfall events, and heat waves.” (116) As acknowledged by a recent Draft Environmental Impact Statement on the proposed and now rejected Tongue River Railroad, Montana has already “experienced a warming trend in the past five decades, and annual average maximum temperatures have increased by 1.4°F.” (117) This trend is expected to continue:

Across Montana, hot summer temperatures (those at the 90th percentile) could rise by 4.8 to 5.0°F in moderate and high GHG concentration scenarios from 2025 to 2050, relative to the 1950 to 2005 period. Cold winter temperatures (those at the 10th percentile) are projected to increase by 3.8 to 4.5°F in moderate and high GHG concentration scenarios over 2025 to 2050, relative to the 1950 to 2005 period. (118)

(116) U.S. National Climate Assessment, Climate Change Impacts in the United States, (May 2014) at 442, available at,

[http://s3.amazonaws.com/nca2014/high/NCA3\\_Climate\\_Change\\_Impacts\\_in\\_the\\_United%20States\\_HighRes.pdf?download=1](http://s3.amazonaws.com/nca2014/high/NCA3_Climate_Change_Impacts_in_the_United%20States_HighRes.pdf?download=1).

(117) Surface Transportation Board, Draft Environmental Impact Statement (DEIS) (April 2015) at 5.3-5, available at

<http://www.stb.dot.gov/decisions/readingroom.nsf/fc695db5bc7e7e2c852572b80040c45f/e7de39d1f6fd4a9a85257e2a0049104d?OpenDocument>.

(118) Id. (citation omitted).

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Comment Number: 0002449\_Lyon\_20160727\_NWF-44

Organization I: National Wildlife Federation Action Fund

Commenter I: Jim Lyon

Other Sections: I

## Comment Excerpt Text:

Energy development on public lands, particularly the coal program, is responsible for as much as 21% of all America's greenhouse gas emissions in 2012 originated from coal, oil and gas extracted from public lands. (124) As the Secretary's order notes, the federal coal program accounts for a substantial share of those emissions – 10% of total US greenhouse gas emissions according to the order.

(124) Ecoshift Consulting et al., *The Potential Greenhouse Gas Emissions from U.S. Federal Fossil Fuels* (August 2015) at 7, available at <http://www.ecoshiftconsulting.com/wp-content/uploads/Potential-Greenhouse-Gas-Emissions-U-S-Federal-Fossil-Fuels.pdf>, citing Stratus Consulting, *Greenhouse Gas Emissions from Fossil Energy Extracted from Federal Lands and Waters* (2014), available at <http://wilderness.org/sites/default/files/FINAL%20STRATUS%20REPORT.pdf>.

BLM has only recently begun to disclose the amount of carbon pollution associated with its coal leasing decisions and take steps toward analyzing the consequences of those emissions. It is important for the American people to have an understanding of how their resources are contributing to climate change and how the managers of those resources, the federal government, are working to reduce the impact on the climate over time.

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Comment Number: 0002461\_breen\_20160728-3

Organization I: The Wilderness Society

Commenter I: Katie Breen

Comment Excerpt Text:

Coal reform is vital to combating climate change. Government-owned coal harvested in one region of the U.S., the Powder River Basin, accounts for 10% of all U.S. greenhouse gas emissions, and 24% of greenhouse gas emissions is from coal. That's a lot! The impacts of climate change will be one of the greatest challenges facing our youth, and accounting for carbon emissions would be a first step in mitigating coal's harmful effects.

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Comment Number: 0002463\_Keagle\_20160728-1

Organization I:

Commenter I: Joshua Keagle

Comment Excerpt Text:

The vast majority of biologists and climatologists agree that climate change is manmade, and the continue burning of coal is a titanic polluter.

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Comment Number: 0002464\_Connelly\_20160728\_WyCoaltLocalGov-5

Organization I: Coalition of Local Governments

Commenter I: Kent

Comment Excerpt Text:

Further, one of the issues to address in the proposed Federal coal program review is climate impacts of Federal coal production, transportation, and combustion; how to mitigate, account for, and address these impacts through the coal program; and ensure that there is no unnecessary and undue degradation of public lands from these impacts. 81 Fed. Reg. at 17725. The BLM has no authority over air quality or the emissions of hazardous air pollutants. The U.S. Environmental Protection Agency (EPA) is the governing agency authorized to establish National Ambient Air Quality Standards to protect public health and public welfare and to regulate emissions of hazardous air pollutants. 42 U.S.C. §7401 et seq. The states are also provided with authority over air quality if they have developed approved state implementation plans (SIP). 42 U.S.C. §7410. The State of Wyoming's regional haze SIP was partially approved by the EPA in 2014, with the EPA promulgating a Federal plan to fill in any missing gaps. 79 Fed. Reg. 5032 (Jan. 30, 2014). The recently adopted Clean Power Plan, 80 Fed. Reg. 64662 (Oct. 23, 2015), also addresses concerns about climate change and reducing carbon pollution from power plants. The EPA and the State of Wyoming have provided sufficient protection over air quality and any further restrictions by BLM is unwarranted and without authority.

Comment Number: 0002467\_Fettus\_20160728-21

Organization I:Natural Resources Defense Council

Commenter I:Geoffrey Fettus

Other Sections: I

Comment Excerpt Text:

Direct Impacts Associated With Climate Change

Finally, the PEIS must examine the impacts from climate change to the ecosystems in which federal coal leasing occurs. Secretarial Order No. 3226 recognizes BLM's responsibility to identify changes that may result from climate change and directs bureaus to "consider and analyze potential climate change impacts" in "long range planning" and/or when making "major decisions affecting DOI resources." (27)

(27) This order was replaced by Secretarial Order No. 3289, Amendment No. 1, Feb. 22, 2010. However, the text of the relevant portion is unchanged and the new order specifically recognizes that that portion of Order No. 3226 remains in effect.

From 2003 to 2007, the 11 western states warmed 70% more than the rest of the world as a whole. Nowhere is this impact felt more than in water supplies — the warming has led to decreases in snowpack, reduced snowfall, shifts in precipitation from snow to rain, earlier snowmelt, increased peak spring flows, and decreased summer flows. These dynamics are also making the West increasingly vulnerable to future wildfires, which are weighing more and more on federal, state and local budgets in mountain communities and towns across the West. For example,

- Climate models based on a 2.4C warming show a 17% reduction in runoff in the Colorado River Basin, which leads to a 40% reduction in basin storage.
- The Sierra Nevada Range in California may experience a 99% loss of its April 1st baseline snowpack, and other western mountain ranges will suffer reduced late-season snowpacks by the end of the century.

See Paying The Costs of Climate Change: How Closing Coal Loopholes Can Supply Western Communities With Much-Needed Revenue To Fight Wildfires, Prepare For Droughts, and Adapt To A Changing Climate (Mountain Pact 2015) at 2.

Climate change can increase the vulnerability of resources and ecosystems, making them more susceptible to environmental damage. For example, a proposed coal lease might require water from a stream that has diminishing quantities of available water because of decreased snow pack in the mountains. The PEIS should evaluate these impacts and provide direction for their consideration in site-specific EISs.

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Comment Number: 0002467\_Fettus\_20160728-33

Organization I:Natural Resources Defense Council

Commenter I:Geoffrey Fettus

Other Sections: I

Comment Excerpt Text:

CEQ has also issued draft Guidance on how agencies should incorporate the impacts of GHG and climate change into their EIS analyses, as well as Guidance on cumulative impact analyses. See CEQ Revised Draft Guidance on the Consideration of Greenhouse Gas Emissions and the Effects of Climate Change in NEPA Reviews (Dec. 2014) (Climate Change Guidance); CEQ Guidance on Cumulative Impacts (1997) (Cumulative Impacts Guidance). As the Climate Change Guidance explains, although "[c]limate change is a particularly complex challenge given its global nature and inherent interrelationships among its sources, causation, mechanisms of action, and impacts," it is a "fundamental environmental issue, and the relation of Federal actions to it falls squarely within NEPA's focus.

Id. at 2 (emphasis added). As the Guidance explains, “analyzing the proposed action’s climate impacts and the effects of climate change relevant to the proposed action’s environmental outcomes can provide useful information to decisionmakers and the public and should be very similar to considering the impacts of other environmental stressors under NEPA.” Id. This is consistent with CEQ’s Cumulative Impacts Guidance, which calls on agencies to consider impacts on the “global atmosphere.” Cumulative Impacts Guidance at 15; see also id. at 13 (describing “release of greenhouse gases” as a cumulative effect to be considered in NEPA analyses).

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Comment Number: 0002467\_Fettus\_20160728-34

Organization I: Natural Resources Defense Council

Commenter I: Geoffrey Fettus

Comment Excerpt Text:

[M]any agency NEPA analyses to date have concluded that GHG emissions from an individual agency action will have small, if any, potential climate change effects. Government action occurs incrementally, program-by-program and step-by-step, and climate impacts are not attributable to any single action, but are exacerbated by a series of smaller decisions, including decisions made by the government. Therefore, the statement that emissions from a government action or approval represent only a small fraction of global emissions is more a statement about the nature of the climate change challenge, and is not an appropriate basis for deciding whether to consider climate impacts under NEPA. Moreover, these comparisons are not an appropriate method for characterizing the potential impacts associated with a proposed action and its alternatives and mitigations. This approach does not reveal anything beyond the nature of the climate change challenge itself: the fact that diverse individual sources of emissions each make relatively small additions to global atmospheric GHG concentrations that collectively have huge impact.

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Comment Number: 0002467\_Fettus\_20160728-37

Organization I: Natural Resources Defense Council

Commenter I: Geoffrey Fettus

Other Sections: I

Comment Excerpt Text:

As much as 21% of all of America’s GHG emissions in 2012 originated from coal, oil and gas extracted from public lands. And the federal coal program accounts for the lion’s share of those emissions – over 57% of emissions from federal fossil fuel production, or 12% of total U.S. GHG emissions. It has been estimated that if all available fossil fuels from public lands were extracted and used, the lifecycle GHG emissions would be almost 500 gigatons (Gt) of CO<sub>2</sub>. (8)

(8) See Dustin Mulvaney et al., Center for Biological Diversity and Friends of the Earth, *The Potential Greenhouse Gas Emissions of U.S. Federal Fossil Fuels* (Aug. 2015).

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Comment Number: 0002467\_Fettus\_20160728-39

Organization I: Natural Resources Defense Council

Commenter I: Geoffrey Fettus

Comment Excerpt Text:

As stated in the Scoping Notice, the PEIS will “examine how best to measure and assess the climate impacts of continued Federal coal production, transportation, and combustion,” as well as “whether and how to mitigate, account for, or otherwise address those impacts through the structure and management of the coal program.” 81 Fed. Reg. 17,725. Among the approaches BLM is already considering to address climate change goals are:

- changing the methodology used to determine which areas and how much coal is available for leasing, such as:
- establishing a coal leasing budget tied to U.S. GHG emission reduction goals

- creating a new regional lease planning process to make affirmative leasing decisions
- developing a land-scape level approach to identify areas for leasing;
- raising royalty rates with an “adder” to incorporate GHG externalities from all stages of the coal process, including the social cost of carbon and methane; and
- requiring mitigation for climate and environmental harms from coal production.

Comment Number: 0002467\_Fettus\_20160728-4

Organization I: Natural Resources Defense Council

Commenter I: Geoffrey Fettus

Other Sections: I

Comment Excerpt Text:

i. Climate Change Impacts

As the Interior Department recognizes in the Secretarial Order and Scoping Notice, federally leased coal’s contribution to anthropogenic climate change is one of the central issues that must be addressed in the PEIS. Federal coal fuels power plants across the country, and increasingly around the world, and coal-fired power plants are a leading emitter of carbon dioxide. Coal mining also accounts for approximately 15% of methane emissions – which at present operators are not required to address. (7) These Greenhouse Gas (GHG) emissions contribute to climate change, the single biggest threat facing our world and nation today.

(7) In 2014, BLM issued an Advanced Notice of Proposed Rulemaking to assess ways its regulations could be amended to allow the capture, use, sale, or destruction of waste mine methane from Federal coal leases. 79 Fed. Reg. 23,923 (Apr. 29, 2014). While this rulemaking was abandoned, the Secretary’s announcement in January 2016 committed to issuing guidance that would facilitate the capture of waste mine methane. We encourage BLM to complete this necessary and appropriate effort to issue guidance outside the PEIS process, but to be sure, emissions of waste mine methane must still be included within the scope of issues to be analyzed in the PEIS.

Comment Number: 0002471\_Reed\_20160728-2

Organization I: High Country Conservation Advocates

Commenter I: Matt Reed

Other Sections: 4.5 7.1

Comment Excerpt Text:

Coal Mining and Climate Change are Impacting Gunnison County’s Public Lands Gunnison County is home to the Gunnison National Forest, Black Canyon of the Gunnison National Park, and biologically diverse BLM-managed lands. Ranging in elevation from less than 6,000 feet to mountains over 14,000 feet, it is a rich and varied landscape. Yet both subtle and obvious impacts from climate change are impacting millions of acres of local public lands and straining federal budgets. Warmer winters and hotter summers, the proliferation of the spruce beetle and subsequent die-off of vast swaths of forest, Sudden Aspen Decline, larger and more intense wildfires, and reduced snowpack are just some of the climate change impacts we’re seeing on our public lands. In 2005, Colorado’s greenhouse emissions were 35 percent higher than they were in 1990. They are projected to grow 81 percent above the 1990 levels by 2020.7 Current and proposed federal coal leasing and development contributes to Colorado’s greenhouse gas emissions and directly impacts public lands and communities. (7) U.S. Dept. of Agriculture, Spruce Beetle Epidemic and Aspen Decline Management Response Final Environmental Impact Statement (February 2016), at 228.

On June 20, President Obama spoke at Yosemite National Park, declaring that climate change is “the biggest challenge we’re going to face in protecting this place and places like it.”<sup>8</sup> He could just have easily been discussing public lands in western Colorado. President Obama condemned those who pay “lip service” to protecting



America's natural areas while making climate change worse:

(8) The White House, Remarks by the President at Sentinel Bridge, Yosemite National Park, Office of the Press Secretary (June 20, 2016), available at <https://www.whitehouse.gov/the-press-office/2016/06/20/remarks-president-sentinel-bridge> (last viewed July 28, 2016).

-Make no mistake, climate change is no longer just a threat, it's already a reality. I was talking to some of the rangers here -- here in Yosemite, meadows are drying out. Bird ranges are shifting farther northward. Alpine mammals like pikas are being forced farther upslope to escape higher temperatures. Yosemite's largest glacier, once a mile wide, is now almost gone. We're also seeing longer, more expensive, more dangerous wildfire seasons -- and fires are raging across the West right now. I was just in New Mexico yesterday, which is dealing with a big wildfire, just like folks here in California and four other states -- all while it's still really early in the season.<sup>9</sup>

(9) Id.

Comment Number: 0002471\_Reed\_20160728-6

Organization I: High Country Conservation Advocates

Commenter I: Matt Reed

Comment Excerpt Text:

Subsidizing coal development on public lands - lands that belong to all Americans - accelerates climate change, land and water pollution, and public health impacts.

Comment Number: 0002471\_Reed\_20160728-9

Organization I: High Country Conservation Advocates

Commenter I: Matt Reed

Other Sections: 17

Comment Excerpt Text:

In the western United States, higher temperatures and lower precipitation are expected to lead to drought conditions that will exacerbate forest stressors, especially fire and insect disturbance. The majority of land in Gunnison County is managed by the U.S. Forest Service as part of the Gunnison National Forest, which is administered jointly with the Grand Mesa and Uncompahgre National Forests. Over the course of only a decade on the Grand Mesa, Uncompahgre and Gunnison (GMUG) National Forests, approximately 223,000 acres of spruce forest have been affected by spruce beetle and 229,000 acres of aspen by Sudden Aspen Decline (SAD).<sup>13</sup> These disturbances are occurring because of and in the context of a changing climate. Higher summer temperatures can foster spruce beetle outbreaks by allowing beetles to reproduce every year rather than every two years. Anticipated more frequent drought conditions make stands more vulnerable to insect and disease. And wildfire behavior in recently dead spruce-fir and areas with heavy fuel loadings can create more unpredictable fire behavior that is more hazardous to manage.<sup>14</sup>

(13) Supra note 7, at 2.

(14) Id. at 6.

Comment Number: 0002477\_Saul\_20160728\_CBD\_UPHE-3

Organization I: Center for Biological Diversity

Commenter I: Michael Saul

Organization 2: Utah Physicians for a Healthy Environment

Other Sections: 5

Comment Excerpt Text:

Effects on air quality: "The evidence concerning adverse air quality impacts provides strong and clear support for

an endangerment finding. Increases in ambient ozone are expected to occur over broad areas of the country, and they are expected to increase serious adverse health effects in large population areas that are and may continue to be in nonattainment. The evaluation of the potential risks associated with increases in ozone in attainment areas also supports such a finding.”<sup>19</sup>

(19) Final Endangerment Finding, 74 Fed. Reg. at 66,497

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Comment Number: 0002477\_Saul\_20160728\_CBD\_UPHE-36

Organization1:Center for Biological Diversity

Commenter1:Michael Saul

Organization2:Utah Physicians for a Healthy Environment

Comment Excerpt Text:

Federal coal already under lease is already exceeds both the quantity that can be burned while maintaining even a 50% change of limiting warming to 2°C, and the anticipated demand for Powder River Basin coal under such a scenario. Facing the realities of physics and international climate commitments requires the BLM to recognize that new federal coal leasing is inconsistent with even the least ambitious climate mitigation targets. The sooner the agency acknowledges this reality, the sooner BLM, other agencies, and coal-producing communities can engage with the necessity of an orderly end to the federal coal program, and a just and sustainable transition for the miners and communities whose labor fueled the twentieth century.

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Comment Number: 0002477\_Saul\_20160728\_CBD\_UPHE-4

Organization1:Center for Biological Diversity

Commenter1:Michael Saul

Organization2:Utah Physicians for a Healthy Environment

Other Sections: 10

Comment Excerpt Text:

Effects on health from increased temperatures: “The impact on mortality and morbidity associated with increases in average temperatures, which increase the likelihood of heat waves, also provides support for a public health endangerment finding.”<sup>20</sup>

(20) Final Endangerment Finding, 74 Fed. Reg. at 66,497

Increased chance of extreme weather events: “The evidence concerning how human induced climate change may alter extreme weather events also clearly supports a finding of endangerment, given the serious adverse impacts that can result from such events and the increase in risk, even if small, of the occurrence and intensity of events such as hurricanes and floods. Additionally, public health is expected to be adversely affected by an increase in the severity of coastal storm events due to rising sea levels.”<sup>21</sup>

(21) Final Endangerment Finding at 66,497-98.

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Comment Number: 0002477\_Saul\_20160728\_CBD\_UPHE-41

Organization1:Center for Biological Diversity

Commenter1:Michael Saul

Other Sections: 1

Comment Excerpt Text:

Numerous authoritative scientific assessments have established that climate change is causing grave harms to human society and natural systems, and these threats are becoming increasingly dangerous. The Intergovernmental Panel on Climate Change, in its 2014 Fifth Assessment Report, stated that: “[w]arming of the climate system is unequivocal, and since the 1950s, many of the observed changes are unprecedented over decades to millennia. The atmosphere and ocean have warmed, the amounts of snow and ice have diminished, sea level has risen, and the concentrations of greenhouse gases have increased” and that “[r]ecent climate changes

have had widespread impacts on human and natural systems.”<sup>12</sup>  
 (12) IPCC AR5 Synthesis Report at 2.

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Comment Number: 0002477\_Saul\_20160728\_CBD\_UPHE-44

Organization 1: Center for Biological Diversity

Commenter 1: Michael Saul

Other Sections: I

Comment Excerpt Text:

Impacts to Public Lands: Climate change is causing and will continue to cause specific impacts to public lands and resources. Although public lands provide a variety of public benefits, one recent Forest Service attempt at quantification estimates the public land ecosystem services at risk from climate change at between \$14.5 and \$36.1 billion annually.<sup>27</sup> In addition to the general loss of public land resources, irreplaceable species and aesthetic and recreational treasures are at risk of permanent destruction. High temperatures are causing loss of glaciers in Glacier National Park; the Park’s glaciers are expected to disappear entirely by 2030, with ensuing warming of stream temperatures and adverse effects to aquatic ecosystems.<sup>28</sup> With effects of warming more pronounced at higher latitudes, tundra ecosystems on Alaska public lands face serious declines, with potentially serious additional climate feedbacks from melting permafrost.<sup>29</sup> In Florida, the Everglades face severe ecosystem disruption from already-occurring saltwater incursion.<sup>30</sup> Sea level rise will further damage freshwater ecosystems and the endangered species that rely on them.

(27) Esposito, Valerie et al., *Climate Change and Ecosystem Services: The Contribution and Impacts on Federal Public*

*Lands in the United States*, USDA Forest Service Proceedings RMRS-P-64 at 155-164 (2011).

(28) U.S. Environmental Protection Agency, *Climate Change and Public Lands: National Parks at Risk* (1999).

(29) See National Climate Assessment at 48; MacDougall, A. H., et al., Significant contribution to climate warming from the permafrost carbon feedback, *5 Nature Geoscience* 719-721 (2012), doi:10.1038/ngeo1573.

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Comment Number: 0002477\_Saul\_20160728\_CBD\_UPHE-45

Organization 1: Center for Biological Diversity

Commenter 1: Michael Saul

Organization 2: Utah Physicians for a Healthy Environment

Other Sections: I 17

Comment Excerpt Text:

Impacts to Biodiversity and Ecosystems: Across the United States ecosystems and biodiversity, including those on public lands, are directly under siege from climate change—leading to the loss of iconic species and landscapes, negative effects on food chains, disrupted migrations, and the degradation of whole ecosystems.<sup>31</sup> Specifically, scientific evidence shows that climate change is already causing changes in distribution, phenology, physiology, genetics, species interactions, ecosystem services, demographic rates, and population viability: many animals and plants are moving poleward and upward in elevation, shifting their timing of breeding and migration, and experiencing population declines and extirpations.<sup>32</sup> Because climate change is occurring at an unprecedented pace with multiple synergistic impacts, climate change is predicted to result in catastrophic species losses during this century. For example, the IPCC concluded that 20% to 30% of plant and animal species will face an increased risk of extinction if global average temperature rise exceeds 1.5°C to 2.5°C relative to 1980-1999, with an increased risk of extinction for up to 70% of species worldwide if global average temperature exceeds 3.5°C relative to 1980-1999.<sup>33</sup>

As greenhouse gas emissions and the resulting harms from climate change grow, the Fish and Wildlife Service and National Marine Fisheries Service are increasingly recognizing climate change as a significant threat to listed species. The Services determined that climate change is a threat (and a listing factor) in the listing rules for the vast majority of species listed as threatened and endangered in recent years. Our analysis of listing rules found

that climate change was determined to be a threat for 96% and 91% of all species listed in 2012 and 2013, respectively.

In recent years, several species have been listed primarily because of climate change threats resulting from continued greenhouse gas emissions, including the polar bear in 2008, the bearded seal and ringed seal in 2012, and 20 coral species in 2014. The best-available science has concluded that the survival and recovery of these climate-vulnerable species depends on a return to lower atmospheric CO<sub>2</sub> concentrations than the present level of 400 ppm. As such, the massive greenhouse gas emissions stemming from the federal coal program are clearly not consistent with the survival and recovery of these species.

from the permafrost carbon feedback, 5 *Nature Geoscience* 719-721 (2012), doi:10.1038/ngeo1573.

(30) See National Climate Assessment at 592; Foti, R., Met al., Signs of critical transition in the Everglades wetlands

in response to climate and anthropogenic changes, 110 *Proceedings of the National Academy of Sciences* 6296-6300, (2013), doi:10.1073/pnas.1302558110.

(31) National Climate Assessment at 13.

(32) See Parmesan, C. and G. Yohe, A globally coherent fingerprint of climate change impacts across natural systems,

421 *Nature* 37 (2003); Root, T. et al., Fingerprints of global warming on wild animals and plants, 421 *Nature* 57 (2003); Chen, I. et al., Rapid range shifts of species associated with high levels of climate warming, 333 *Science* 1024 (2011).

(33) IPCC, *Climate Change 2007: Synthesis Report. Contribution of Working Groups I, II and III to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change* 48 [Core Writing Team, Pachauri, R.K and Reisinger, A.(eds.)] (2007). Other studies have predicted similarly severe losses: 15%-37% of the world's plants and animals committed to extinction by 2050 under a mid-level emissions scenario, see Thomas et al., *Extinction risk from climate change*, 427 *Nature* 145 (2004)); the potential extinction of 10% to 14% of species by 2100 if climate change continues unabated, see Maclean, I. M. D. and R. J. Wilson, *Recent ecological responses to climate change support predictions of high extinction risk*, 108 *Proc. Natl. Acad. Sci.* 12337-12342 (2011); and the loss of more than half of the present climatic range for 58% of plants and 35% of animals by the 2080s under the current emissions pathway, in a sample of 48,786 species, see Warren, R. J. et al., *Increasing Impacts of Climate Change Upon Ecosystems with Increasing Global Mean Temperature Rise*, 106 *Climatic Change* 141 (2011).

Comment Number: 0002477\_Saul\_20160728\_CBD\_UPHE-46

Organization1:Center for Biological Diversity

Commenter1:Michael Saul

Organization2:Utah Physicians for a Healthy Environment

Other Sections: I 17

Comment Excerpt Text:

Corals: For example, NMFS' 2015 Final Recovery Plan for Elkhorn and Staghorn Coral includes a recovery criterion with specific targets for ocean temperature and ocean acidification conditions that must be achieved for these corals to survive and recover. As noted in the Final Recovery Plan, meeting this criterion is consistent with a return to an atmospheric CO<sub>2</sub> concentration of less than 350 ppm, as concluded by numerous scientific studies that have examined coral species viability in response to ocean warming and ocean acidification. Recognizing the responsibility of all federal agencies to promote listed species' conservation, the Final Recovery Plan further includes a recovery criterion calling for the adoption of "adequate domestic and international regulations and agreements" to abate threats from increasing atmospheric CO<sub>2</sub> concentrations. The plan also includes a recovery action to "develop and implement U.S. and international measures to reduce atmospheric CO<sub>2</sub> concentrations to a level appropriate for coral recovery."

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Comment Number: 0002477\_Saul\_20160728\_CBD\_UPHE-47

Organization 1: Center for Biological Diversity

Commenter 1: Michael Saul

Organization 2: Utah Physicians for a Healthy Environment

Other Sections: I 17

Comment Excerpt Text:

Polar Bears: Similarly, the 2015 Draft Polar Bear Conservation Plan acknowledges that the polar bear cannot be recovered without decisive action to mitigate the primary threat to the species—greenhouse gas (“GHG”) emissions driving sea-ice loss:

The single most important step for polar bear conservation is decisive action to address global warming (Amstrup et al. 2010, Atwood et al. 2015), which is driven primarily by increasing atmospheric concentrations of greenhouse gases. Short of actions that effectively addresses the primary cause of diminishing sea ice, it is unlikely that polar bears will be recovered.

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Comment Number: 0002477\_Saul\_20160728\_CBD\_UPHE-48

Organization 1: Center for Biological Diversity

Commenter 1: Michael Saul

Organization 2: Utah Physicians for a Healthy Environment

Other Sections: I 17

Comment Excerpt Text:

Loggerhead sea turtles: Other marine species are also at risk from numerous consequences of GHG emissions and ensuing ocean temperature increase, sea level rise, disruption of ocean currents, and extreme weather events. The 2011 listing rule for the loggerhead sea turtle found climate change and sea level rise to be a significant threat to multiple distinct population segments of the loggerhead sea turtle, including the North and South Pacific populations.<sup>34</sup> The Services found that “Similar to other areas of the world, climate change and sea level rise have the potential to impact loggerheads in the North Pacific Ocean.”<sup>35</sup> This includes beach erosion and loss from rising sea levels, skewed hatchling sex ratios from rising beach incubation temperatures, and abrupt disruption of ocean currents used for natural dispersal during the complex life cycle (Hawkes et al., 2009; Poloczanska et al., 2009). Scientific reviews of the impacts of climate change on sea turtles confirm that climate change poses significant threats to the loggerhead (Fuentes et al. 2009, Hawkes et al. 2009, Witt et al. 2010). Hawkes et al. (2009) concluded that “[o]verall, climate change could supersede current documented threats posed to marine turtle populations” including bycatch, habitat destruction, and pollution (p.146). Fuentes et al. (2010) highlighted that sea turtles will be affected simultaneously by changes in multiple climatic processes which will create amplifying effects, especially in combination with other threats. Furthermore, many researchers have cautioned that sea turtles are especially vulnerable to climate change because they are slow to recover from disturbances due to their life history characteristics. The best available science on the impacts of observed and projected climate change on loggerhead sea turtles, reviewed below, clearly indicates that climate change—including sea level rise, increasing sand temperatures, increasing storm activity, rising ocean temperatures and changes in circulation pattern, and ocean acidification—is a significant threat to the survival of the species. (34) Fish and Wildlife Service, Determination of Nine Distinct Population Segments of Loggerhead Sea Turtles and Endangered or Threatened, 76 Fed. Reg. 58,868, 58,909 (Sept. 22, 2011). (35) Id.

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Comment Number: 0002477\_Saul\_20160728\_CBD\_UPHE-49

Organization 1: Center for Biological Diversity

Commenter 1: Michael Saul

Organization 2: Utah Physicians for a Healthy Environment

Other Sections: I 17

Comment Excerpt Text:

Monarch Butterfly: The Monarch butterfly, due to its narrow thermal requirements and specific microhabitat requirements, is also at exceptional risk due to climate change:<sup>36</sup>

The monarch is threatened by several other factors including global climate change, severe weather events, pesticides, and the spread of invasive species. Unfavorable weather conditions have been identified as a primary factor contributing to the recent drastic declines in monarch populations. Weather that is too hot or too cold at critical times in monarch development can cause massive mortality of caterpillars and adults. A single winter storm event in Mexican overwintering habitat in 2002 killed an estimated 450-500 million monarchs. This high death toll from a single storm event is particularly staggering given that the entire monarch population now numbers only about 35 million butterflies. Because of their narrow thermal tolerance and specific microhabitat requirements, climate change threatens monarchs in their summer and winter ranges. The threat from climate change in the monarch's overwintering habitat in Mexico is so dire that monarchs may no longer occur in the Monarch Butterfly Biosphere Reserve by the end of the century due to climatic changes. The monarch's summer breeding habitat in the United States is also predicted to become too hot in many areas for monarch's to be able to successfully reproduce.<sup>37</sup>

(36) Center for Biological Diversity, PETITION TO PROTECT THE MONARCH BUTTERFLY (DANAUS PLEXIPPUS LEXIPPUS) UNDER THE ENDANGERED SPECIES ACT.

(37) *Id.* at 10-11.

Comment Number: 0002477\_Saul\_20160728\_CBD\_UPHE-5

Organization 1: Center for Biological Diversity

Commenter 1: Michael Saul

Organization 2: Utah Physicians for a Healthy Environment

Other Sections: 16

Comment Excerpt Text:

Impacts to water resources: "Water resources across large areas of the country are at serious risk from climate change, with effects on water supplies, water quality, and adverse effects from extreme events such as floods and droughts. Even areas of the country where an increase in water flow is projected could face water resource problems from the supply and water quality problems associated with temperature increases and precipitation variability, as well as the increased risk of serious adverse effects from extreme events, such as floods and drought. The severity of risks and impacts is likely to increase over time with accumulating greenhouse gas concentrations and associated temperature increases."<sup>22</sup>

Impacts from sea level rise: "The most serious potential adverse effects are the increased risk of storm surge and flooding in coastal areas from sea level rise and more intense storms. Observed sea level rise is already increasing the risk of storm surge and flooding in some coastal areas. The conclusion in the assessment literature that there is the potential for hurricanes to become more intense (and even some evidence that Atlantic hurricanes have already become more intense) reinforces the judgment that coastal communities are now endangered by human-induced climate change, and may face substantially greater risk in the future. Even if there is a low probability of raising the destructive power of hurricanes, this threat is enough to support a finding that coastal communities are endangered by greenhouse gas air pollution. In addition, coastal areas face other adverse impacts from sea level rise such as land loss due to inundation, erosion, wetland submergence, and habitat loss. The increased risk associated with these adverse impacts also endangers public welfare, with an increasing risk of greater adverse impacts in the future."<sup>23</sup>

(22) Final Endangerment Finding at 66,498.

(23) Final Endangerment Finding at 66,498

Comment Number: 0002477\_Saul\_20160728\_CBD\_UPHE-50

Organization 1: Center for Biological Diversity

Commenter1:Michael Saul  
 Organization2:Utah Physicians for a Healthy Environment  
 Other Sections: I 17  
 Comment Excerpt Text:

Colorado River listed fishes (Colorado pikeminnow, bonytail chub, humpback chub, and razorback sucker): Anthropogenic climate change is profoundly impacting the Colorado River in ways that are altering temperature, streamflow, and the hydrologic cycle. As detailed below, changes observed to date include rising temperatures, earlier snowmelt and streamflow, decreasing snowpack, and declining runoff and streamflow. Modeling studies project that these changes will only worsen, including continued declines in streamflow and intensification of drought. Climate change is likely to have significant effects on the endangered fish and the Colorado River ecosystem.<sup>38</sup>

(38) Impacts of Climate Change on the Colorado River Basin, Shaye Wolf, Ph.D., Climate Science Director, Center for Biological Diversity (March 10, 2016).

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Comment Number: 0002477\_Saul\_20160728\_CBD\_UPHE-51

Organization1:Center for Biological Diversity  
 Commenter1:Michael Saul  
 Organization2:Utah Physicians for a Healthy Environment  
 Other Sections: I 17  
 Comment Excerpt Text:

Impacts from Algal Blooms: Toxic algal blooms are a public health menace and they have an obvious and distinct relationship with global warming.<sup>39</sup> Many types of algae release toxic compounds, or harbor other deadly bacteria, that can have a wide range of health consequences, especially neurotoxicity, and can even be fatal if swallowed.<sup>40</sup> The public health threat is enhanced because the toxicity of the blooms is not always proportional to their visibility.<sup>41</sup> In fact, the blooms can be dilute and inconspicuous and still highly toxic to wildlife and human health.<sup>42</sup>

(39) U.S. Environmental Protection Agency, Impacts of Climate Change on the Occurrence of Harmful Algal Blooms, EPA Office of Water 820-S-13-001 (May 2013), found at <https://www.epa.gov/sites/production/files/documents/climatehabs.pdf>.

(40) Anderson, M. Donald et al., Estimated Annual Economic Impacts from Harmful Algal Blooms (HABs) in the United States, Woods Hole Oceanographic Institution (September 2000) pg. 5-6, found at <https://www.whoi.edu/fileserver.do?id=24159&pt=10&p=19132>.

(41) Id.

(42) Id.

Algae feed on nutrients like nitrogen and phosphorus whose presence in water may be the result of reckless agricultural practices, inadequate regulations, and leaky sewage systems.<sup>43</sup> But warmer temperatures ignite the process.<sup>44</sup> In fact, climate change promotes the growth and dominance of harmful algal blooms through a cascade of multiple mechanisms, including: warmer water temperatures, changes in rainfall patterns, increases in the acidity of ocean waters, and sea level rise.<sup>45</sup>

(43) U.S. Environmental Protection Agency, Nutrient Pollution Sources and Solutions, EPA Office of Water (January 2016), found at <https://www.epa.gov/nutrientpollution/sources-and-solutions>.

(44) See generally EPA, Impacts of Climate Change.

(45) See Id.

Algae need carbon dioxide to survive. Higher levels of carbon dioxide in the air and water accelerate algae growth, especially toxic blue-green algae which can float to the water's surface, depriving other marine life of oxygen and sunlight.<sup>46</sup> When global warming unleashes heavy rainfall and flooding more nitrogen/phosphorus

pollution from farms and sewage seeps into waterways, serving up the nutrient banquet for the algae to thrive on.<sup>47</sup> Where global warming leads to drought, the salinity of fresh water bodies is increased.<sup>48</sup> This can cause marine algae to invade freshwater ecosystems. In the southwestern and south central United States, toxic marine algae have been killing fish in freshwater lakes since 2000.<sup>49</sup>

(46) See Id.

(47) See Id.

(48) See Id.

(49) See Anderson, Estimated Annual Economic Impacts, at 24.

Warmer temperatures inhibit mixing of water layers, allowing stagnation of warmer layers near the surface, promoting thicker and faster algae growth.<sup>50</sup> Algal blooms actually increase water surface temperatures by absorbing more sunlight, creating a feed-back spiral of more blooms, absorbing more sunlight, warming the water further, and promoting more blooms.<sup>51</sup>

(50) See generally EPA, Impacts of Climate Change.

(51) See Id.

Warmer temperatures reduce the viscosity of water, increasing the speed at which small aquatic organisms can vertically migrate.<sup>52</sup> This makes it easier for the small, toxic, cyanobacteria to float to the surface to form the dangerous blooms.<sup>53</sup>

(52) See Id.

(53) See Id.

While algal blooms are not new, there has been a worldwide increase in their frequency, severity and geographic distribution, in concert with the rise in global temperatures.<sup>54</sup> Significant outbreaks have occurred in the last few years in Ohio, Florida, New York, and Utah. Last year, a mass of record breaking warm water triggered a bloom that extended from southern California to Alaska, damaging the entire marine food web throughout the West Coast, especially the crab industry.<sup>55</sup> The bloom was 40 miles wide and 650 ft deep in some places.<sup>56</sup> Marine scientists said last year's toxic algal bloom was "unprecedented" and "diagnostic of what we can expect more of in the future."<sup>57</sup> The EPA notes that these blooms are now a serious environmental problem plaguing all 50 states, not just those on the coasts.<sup>58</sup>

(54) See Id.

(55) Mapes, Lynda V., Toxic Algae Creating Deep Trouble on West Coast, The Seattle Times, November 15th, 2015,

<http://www.seattletimes.com/seattle-news/environment/toxic-algae-creating-deep-trouble-on-west-coast/> (last visited

July 28th, 2016).

(56) See Id.

(57) See Id.

(58) See generally U.S. EPA, Nutrient Pollution Sources and Solutions.

The blooms also have a significant economic impact. In 2000, the Woods Hole Oceanographic Institution estimated that the annual economic cost to the US economy at that time was about \$450 million dollars.<sup>59</sup> That figure would be markedly increased today.

(59) See Anderson, Estimated Annual Economic Impacts at 4.

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Comment Number: 0002477\_Saul\_20160728\_CBD\_UPHE-52

Organization 1: Center for Biological Diversity

Commenter 1: Michael Saul

Organization 2: Utah Physicians for a Healthy Environment

Other Sections: I 17



## Comment Excerpt Text:

Impacts to oceans: Oceans have absorbed the vast bulk of warming to date, and will continue to suffer increasingly severe impacts on temperature, acidity, circulation, and marine ecosystems from climate change.<sup>60</sup> A recent survey of science regarding climate change impacts to the world's oceans finds that:

Marine ecosystems are centrally important to the biology of the planet, yet a comprehensive understanding of how anthropogenic climate change is affecting them has been poorly developed. Recent studies indicate that rapidly rising greenhouse gas concentrations are driving ocean systems toward conditions not seen for millions of years, with an associated risk of fundamental and irreversible ecological transformation. The impacts of anthropogenic climate change so far include decreased ocean productivity, altered food web dynamics, reduced abundance of habitat-forming species, shifting species distributions, and a greater incidence of disease. Although there is considerable uncertainty about the spatial and temporal details, climate change is clearly and fundamentally altering ocean ecosystems. Further change will continue to create enormous challenges and costs for societies worldwide, particularly those in developing countries.<sup>61</sup>

(60) See National Climate Assessment at 558-59.

(61) Ove Hoegh-Guldberg et al., *The Impact of Climate Change on the World's Marine Ecosystems*, *Science* 328, 1523 (2010), DOI: 10.1126/science.1189930

Comment Number: 0002477\_Saul\_20160728\_CBD\_UPHE-53

Organization 1: Center for Biological Diversity

Commenter 1: Michael Saul

Organization 2: Utah Physicians for a Healthy Environment

Other Sections: I 17

## Comment Excerpt Text:

The IPCC's Fifth Assessment Report on Climate Change Impacts, Adaptation, and Vulnerability similarly summarizes the state of scientific research on foreseeable impacts to marine systems and reaches the following conclusions:

Due to projected climate change by the mid 21st century and beyond, global marine-species redistribution and marine-biodiversity reduction in sensitive regions will challenge the sustained provision of fisheries productivity and other ecosystem services (high confidence). Spatial shifts of marine species due to projected warming will cause high-latitude invasions and high local-extinction rates in the tropics and semi-enclosed seas (medium confidence). Species richness and fisheries catch potential are projected to increase, on average, at mid and high latitudes (high confidence) and decrease at tropical latitudes (medium confidence). . . . The progressive expansion of oxygen minimum zones and anoxic "dead zones" is projected to further constrain fish habitat. Open-ocean net primary production is projected to redistribute and, by 2100, fall globally under all RCP scenarios. Climate change adds to the threats of over-fishing and other nonclimatic stressors, thus complicating marine management regimes (high confidence).

For medium- to high-emission scenarios (RCP 4.5, 6.0, and 8.5), ocean acidification poses substantial risks to marine ecosystems, especially polar ecosystems and coral reefs, associated with impacts on the physiology, behavior, and population dynamics of individual species from phytoplankton to animals (medium to high confidence). Highly calcified mollusks, echinoderms, and reef-building corals are more sensitive than crustaceans (high confidence) and fishes (low confidence), with potentially detrimental consequences for fisheries and livelihoods. . . . Ocean acidification acts together with other global changes (e.g. warming, decreasing oxygen levels) and with local changes (e.g. pollution, eutrophication) (high confidence). Simultaneous drivers, such as warming and ocean acidification, can lead to interactive, complex, and amplified impacts for species and ecosystems.<sup>62</sup>

(62) IPCC, 2014: Summary for Policymakers 17, in: *Climate Change 2014: Impacts, Adaptation, and Vulnerability. Part A: Global and Sectoral Aspects. Contribution of Working Group II to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change* [Field, C.B., V.R. Barros, D.J. Dokken, K.J. Mach, M.D. Mastrandrea,

T.E. Bilir, M. Chatterjee, K.L. Ebi, Y.O. Estrada, R.C. Genova, B. Girma, E.S. Kissel, A.N. Levy, S. MacCracken, P.R. Mastrandrea, and L.L. White (eds.]. Cambridge University Press, Cambridge, United Kingdom and New York, NY, USA, pp. 1-32.

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Comment Number: 0002477\_Saul\_20160728\_CBD\_UPHE-54

Organization 1: Center for Biological Diversity

Commenter 1: Michael Saul

Organization 2: Utah Physicians for a Healthy Environment

Other Sections: 1

Comment Excerpt Text:

The Third National Climate Assessment likewise has identified five significant ways in which climate change will adversely affect U.S. oceans and marine resources:

1. The rise in ocean temperature over the last century will persist into the future, with continued large impacts on climate, ocean circulation, chemistry, and ecosystems.
2. The ocean currently absorbs about a quarter of human-caused carbon dioxide emissions to the atmosphere, leading to ocean acidification that will alter marine ecosystems in dramatic yet uncertain ways.
3. Significant habitat loss will continue to occur due to climate change for many species and areas, including Arctic and coral reef ecosystems, while habitat in other areas and for other species will expand. These changes will consequently alter the distribution, abundance, and productivity of many marine species.
4. Rising sea surface temperatures have been linked with increasing levels and ranges of diseases in humans and marine life, including corals, abalones, oysters, fishes, and marine mammals.
5. Climate changes that result in conditions substantially different from recent history may significantly increase costs to businesses as well as disrupt public access and enjoyment of ocean areas.<sup>63</sup>  
(63) National Climate Assessment at 558.

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Comment Number: 0002477\_Saul\_20160728\_CBD\_UPHE-55

Organization 1: Center for Biological Diversity

Commenter 1: Michael Saul

Organization 2: Utah Physicians for a Healthy Environment

Other Sections: 1 17

Comment Excerpt Text:

Impacts from Ocean Acidification: The ocean's absorption of anthropogenic CO<sub>2</sub> has already resulted in more than a 30% increase in the acidity of ocean surface waters, at a rate likely faster than anything experienced in the past 300 million years, and ocean acidity could increase by 150% to 200% by the end of the century if CO<sub>2</sub> emissions continue unabated.<sup>64</sup> Ocean acidification negatively affects a wide range of marine species by hindering the ability of calcifying marine creatures to build protective shells and skeletons and by disrupting metabolism and critical biological function.<sup>65</sup> The adverse effects of ocean acidification are already being observed in wild populations, including reduced coral calcification rates,<sup>66</sup> reduced shell weights of foraminifera in the Southern Ocean,<sup>67</sup> and mass die-offs of larval Pacific oysters in the Pacific Northwest.<sup>68</sup>

Coral reef ecosystems, which are estimated to harbor one-third of marine species and which support the livelihoods of a half billion people, are particularly threatened by ocean acidification. Some corals are already experiencing reduced calcification.<sup>69</sup> Due to the synergistic impacts of ocean acidification, mass bleaching, and other stresses, reefs are projected to experience "rapid and terminal" declines worldwide at atmospheric CO<sub>2</sub>

concentrations of 450ppm.<sup>70</sup> Prominent coral scientists have called for reducing atmospheric CO<sub>2</sub> to less than 350 ppm to protect coral reefs from collapse.<sup>71</sup>

Numerous U.S. and international scientific and policy bodies have identified ocean acidification as an urgent threat to ocean ecosystems, food security, and society.<sup>72</sup> The United Nations Environment Program concluded that ocean acidification's impact on marine organisms poses a threat to food security and the billions of people that rely on a marine-based diet.<sup>73</sup> Moreover, a recent study estimated that the damage our oceans will face from emissions-related problems will amount to \$428 billion a year by 2050 and nearly \$2 trillion per year by the century's end.<sup>74</sup>

(64) Orr, J. C., V. J. Fabry, O. Aumont, L. Bopp, S. C. Doney, R. a Feely, A. Gnanadesikan, N. Gruber, A. Ishida, F. Joos, R. M. Key, K. Lindsay, E. Maier-Reimer, R. Matear, P. Monfray, A. Mouchet, R. G. Najjar, G.-K. Plattner, K. B. Rodgers, C. L. Sabine, J. L. Sarmiento, R. Schlitzer, R. D. Slater, I. J. Totterdell, M.-F. Weirig, Y. Yamanaka, and A. Yool. 2005. Anthropogenic ocean acidification over the twenty-first century and its impact on calcifying organisms. *Nature* 437:681–6; . Feely, R., S. Doney, and S. Cooley. 2009. Ocean acidification: Present conditions and future changes in a high CO<sub>2</sub> world. *Oceanography* 22:36–47; Hönlisch, B., A. Ridgwell, D. N. Schmidt, E. Thomas, S. J. Gibbs, A. Sluijs, R. Zeebe, L. Kump, R. C. Martindale, S. E. Greene, W. Kiessling, J. Ries, J. C. Zachos, D. L. Royer, S. Barker, T. M. Marchitto, R. Moyer, C. Pelejero, P. Ziveri, G. L. Foster, and B. Williams. 2012. The geological record of ocean acidification. *Science* 335:1058–63.

(65) Fabry, V., B. Seibel, R. Feely, and J. Orr. 2008. Impacts of ocean acidification on marine fauna and ecosystem processes. *ICES Journal of Marine Science* 65:414–432; Feely et al 2009; Kroeker, K.J, R.L. Kordas, R. Crim, I.E. Hendriks, L. Ramajo, G.S. Singh, C.M. Duarte, and J-P Gattuso. 2013. Impacts of ocean acidification on marine organisms: quantifying sensitivities and interactions with warming. *Global Change Biology* 19: 1884-1896.

(66) De'ath, G., J. M. Lough, and K. E. Fabricius. 2009. Declining coral calcification on the Great Barrier Reef. *Science* 323:116–119.

(67) Moy, A. D., W. R. Howard, S. G. Bray, and T. W. Trull. 2009. Reduced calcification in modern Southern Ocean planktonic foraminifera. *Nature Geoscience* 2: 276-280

(68) Barton, A., B. Hales, G. G. Waldbusser, C. Langdon, and R. A. Feely. 2012. The Pacific oyster, *Crassostrea gigas*, shows negative correlation to naturally elevated carbon dioxide levels: Implications for near-term ocean acidification effects. *Limnology and Oceanography* 57:698–710.

(69) Cooper, T. F., G. De'Ath, K. E. Fabricius, and J. M. Lough. 2008. Declining coral calcification in massive *Porites* in two nearshore regions of the northern Great Barrier Reef. *Global Change Biology* 14:529–538; Gledhill, D. K., R. Wanninkhof, F. J. Millero, and M. Eakin. 2008. Ocean acidification of the greater Caribbean region 1996–2006. *Journal of Geophysical Research* 113:C10031; De'ath et al. 2009; Bates, N., A. Amat, and A. Andersson. 2010.

Feedbacks and responses of coral calcification on the Bermuda reef system to seasonal changes in biological processes and ocean acidification. *Biogeosciences* 7:2509–2530. Human-caused climate change is already causing widespread damage from intensifying global

food and water insecurity, the increasing frequency of heat waves and other extreme weather

(70) Veron, J. E. N., O. Hoegh-Guldberg, T. M. Lenton, J. M. Lough, D. O. Obura, P. Pearce-Kelly, C. R. C. Sheppard, M. Spalding, M. G. Stafford-Smith, and A. D. Rogers. 2009. The coral reef crisis: the critical importance of <350 ppm CO<sub>2</sub>. *Marine Pollution Bulletin* 58:1428–36.

(71) Veron et al. 2009; Frieler, K., M. Meinshausen, A. Golly, M. Mengel, K. Lebek, S.D. Donner, and O. Hoegh-Guldberg. Limiting global warming to 2°C is unlikely to save most coral reefs. *Nature Climate Change*. Published Online. doi: 10.1038/NCLIMATE1674.

(72) NRC. 2010. *Ocean Acidification: A National Strategy to Meet the Challenges of a Changing Ocean*. National Academies Press; UNEP. 2010. *UNEP Emerging Issues: Environmental Consequences of Ocean Acidification: A Threat to Food Security*; Rogers, A. D., and D. d'A. Laffoley. 2011. *International Earth system expert workshop on ocean stresses and impacts Summary Report*. IPSO Oxford.

(73) UNEP 2010.

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(74) Noone, K., R. Sumaila, and R. Diaz. 2012. Valuing the Ocean : Executive Summary, Stockholm Environment Institute. Stockholm Environment Initiative

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Comment Number: 0002477\_Saul\_20160728\_CBD\_UPHE-59

Organization 1: Center for Biological Diversity

Commenter 1: Michael Saul

Organization 2: Utah Physicians for a Healthy Environment

Other Sections: 1

Comment Excerpt Text:

Immediate and aggressive greenhouse gas emissions reductions are necessary to keep warming below a 1.5° or 2°C rise above pre-industrial levels. Put simply, there is only a finite amount of CO<sub>2</sub> that can be released into the atmosphere without rendering the goal of meeting the 1.5°C target virtually impossible. A slightly larger amount could be burned before meeting a 2°C limit became an impossibility. Globally, fossil fuel reserves, if all were extracted and burned, would release enough CO<sub>2</sub> to exceed this limit several times over.<sup>91</sup>

(91) Cmons at 6, 33 n.2.

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Comment Number: 0002477\_Saul\_20160728\_CBD\_UPHE-6

Organization 1: Center for Biological Diversity

Commenter 1: Michael Saul

Organization 2: Utah Physicians for a Healthy Environment

Other Sections: 18

Comment Excerpt Text:

Impacts to energy, infrastructure, and settlements: “Changes in extreme weather events threaten energy, transportation, and water resource infrastructure. Vulnerabilities of industry, infrastructure, and settlements to climate change are generally greater in high-risk locations, particularly coastal and riverine areas, and areas whose economies are closely linked with climate-sensitive resources. Climate change will likely interact with and possibly exacerbate ongoing environmental change and environmental pressures in settlements, particularly in Alaska where indigenous communities are facing major environmental and cultural impacts on their historic lifestyles.”<sup>24</sup>

(24) Final Endangerment Finding at 66,498

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Comment Number: 0002477\_Saul\_20160728\_CBD\_UPHE-60

Organization 1: Center for Biological Diversity

Commenter 1: Michael Saul

Organization 2: Utah Physicians for a Healthy Environment

Other Sections: 1

Comment Excerpt Text:

The science is clear that the vast majority of the world’s fossil fuels must remain in the ground in order to maintain any reasonable hope of limiting global warming to 1.5° or even 2°C above pre-industrial levels. Global fossil fuel reserves and resources far exceed the carbon budgets needed to stay below a 1.5° or 2°C temperature target.<sup>99</sup>

(99) Analyses by the Carbon Tracker Initiative estimated that 80% of proven fossil fuel reserves must be kept in the ground to have a reasonable probability (75-80%) of staying below even 2°C. This estimate includes only the fossil fuel reserves that are considered currently economically recoverable with a high probability of being extracted. See Carbon Tracker Initiative at 2, 6.

Comment Number: 0002477\_Saul\_20160728\_CBD\_UPHE-62

Organization 1: Center for Biological Diversity

Commenter 1: Michael Saul

Organization 2: Utah Physicians for a Healthy Environment

Other Sections: I

Comment Excerpt Text:

Even the lowest of these estimates (2,900 GtCO<sub>2</sub>) is more than three times greater than the most generous carbon budget nominally consistent with a 2°C temperature limit (~900 GtCO<sub>2</sub>), while the largest (50,092 GtCO<sub>2</sub>) is over 160 times greater than the remaining budget for a 66% probability of not exceeding a 1.5°C limit (<300 GtCO<sub>2</sub>).

As stated by one study, “the disparity between what resources and reserves exist and what can be emitted while avoiding a temperature rise greater than the agreed 2C limit is therefore stark.”<sup>105</sup> Another recent report on global carbon reserves found that:

The reserves of coal, oil and natural gas outlined in this report contain enough carbon to rocket the planet far beyond the 2 C limit. Warming from fossil fuels puts other carbon sinks at risk. As permafrost melts and peat bogs dry, they emit enormous quantities of carbon dioxide, furthering a chain reaction where the release of carbon results in a warmer world, which in turn releases more carbon.<sup>106</sup>

The unleased federal coal resource alone is estimated at 212 GtCO<sub>2</sub>e, or almost two-thirds of the remaining global carbon budget for a reasonable probability of limiting warming to 1.5°C.<sup>107</sup>

In the United States, coal is the largest and most carbon dioxide-intensive conventional fossil fuel resource.<sup>108</sup> The Department of Interior’s fossil fuel leasing program contributes about one-quarter of all US fossil fuel emissions, with 14% of US emissions coming from the federal coal program,<sup>109</sup> which comprises approximately 41% of total US coal production.<sup>110</sup> Coal mining, particularly underground mining, also contributes substantial additional methane emissions, with vastly higher radiative forcing potential than carbon dioxide.<sup>111</sup>

Mitigation pathways for holding temperature rise well below 2°C mandate a rapid phase-out of coal emissions.<sup>112</sup> For example, a recent study estimates that 95% of US coal reserves, including both federal and non-federal coal, must remain unburned to preserve a reasonable probability of remaining below 2°C.<sup>113</sup> Coal mining, transport, combustion, disposal, and cleanup also have significant external costs on public health and the environment that must be taken into consideration in the PEIS.<sup>114</sup>

A near-term phase-out of federal coal is also critical because new leasing locks in investment and high-carbon infrastructure for mining, transport, and coal combustion, all of which is inconsistent with the pressing need to end fossil fuel emissions.<sup>115</sup> A rapid end to federal coal extraction would send an important signal internationally and domestically to markets, utilities, investors and other nations that the United States is committed to upholding its climate obligation to limit temperature rise to well below 2°C.

(105) McGlade and Ekins at 188.

(106) Cimons at 6.

(107) Mulvaney et al. at 5. The remaining carbon budget for a 66% probability of limiting warming to 1.5°C and 2°C above pre-industrial is 240 GtCO<sub>2</sub> and 850 GtCO<sub>2</sub>, respectively, from 2015 onward, equivalent to ~334 GtCO<sub>2</sub>e and ~1180 GtCO<sub>2</sub>e (gigatonnes CO<sub>2</sub> equivalent) based on the ratio of 1.39 CO<sub>2</sub>e/CO<sub>2</sub> from Meinshausen et al. (2009). [See Meinshausen, M. et al. 2009. Greenhouse gas emission targets for limiting global warming to 2 degrees Celsius. *Nature* 458: 1158–1162.] 212 GtCO<sub>2</sub>e comprises 63% of a 334 GtCO<sub>2</sub>e budget and 18% of an 1180 GtCO<sub>2</sub>e budget.

(108) See Environmental Protection Agency, Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990-2014 (April 2016) at 3-5.

- (109) See Climate Accountability Institute. 2015. Memorandum from Richard Heede to Friends of The Earth and Center for Biological Diversity, at [http://webiva-downton.s3.amazonaws.com/877/3a/7/5721/Exhibit\\_1-I\\_ONRR\\_ProdEmissions\\_Heede\\_7May15.pdf](http://webiva-downton.s3.amazonaws.com/877/3a/7/5721/Exhibit_1-I_ONRR_ProdEmissions_Heede_7May15.pdf); Stratus Consulting. 2014. Greenhouse Gas Emissions from Fossil Energy Extracted from Federal Lands and Waters: An Update, at 13, <http://wilderness.org/sites/default/files/Stratus-Report.pdf>
- (110) U.S. Energy Information Administration. 2014. Sales of Fossil Fuels Produced from Federal and Indian Lands, FY 2003 through FY 2013, at Table 1, <http://www.eia.gov/analysis/requests/federallands/pdf/eiafederallandsales.pdf>.
- (111) EPA, Inventory of U.S. Greenhouse Gas Emissions and Sinks at ES-6; IPCC AR5 Physical Science Basis Chapter 8 at 714, Table 8.7 & note b (20-year radiative forcing potential of fossil fuel methane is 87 times that of carbon dioxide).
- (112) McGlade, C. and P. Ekins. 2015. The geographic distribution of fossil fuels unused when limiting global warming to 2°C. *Nature* 517: 187-192; Rogelj, J. et al. 2015. Energy system transformations for limiting end-of century warming to below 1.5°C. *Nature Climate Change* 5: 519-528; Raupach, M. et al. 2014. Sharing a quota on cumulative carbon emissions. *Nature Climate Change* 4: 873-879; Stockholm Environment Institute. 2016. How would phasing out U.S. federal leases for fossil fuel extraction affect CO2 emissions and 2°C goals? Peter Erickson and Michael Lazarus, Working Paper No. 2016-02, <https://www.sei-international.org/mediamanager/documents/Publications/Climate/SEI-WP-2016-02-US-fossilfuelleases.pdf>
- (113) McGlade and Elkins (2015) use a global least-cost model for allocating unburnable fossil fuel reserves that does not incorporate global equity considerations; including equity considerations suggests that more US fossil fuel reserves should remain unburned.
- (114) See Epstein, P.R. et al. 2011. Full cost accounting for the life cycle of coal. *Annals of the New York Academy of Sciences* 1219: 73-98.
- (115) Climate Action Tracker. 2015. The Coal Gap: planned coal-fired power plants inconsistent with 2C and threaten achievement of INDCs, [http://climateactiontracker.org/assets/publications/briefing\\_papers/CAT\\_Coal\\_Gap\\_Briefing\\_COP21.pdf](http://climateactiontracker.org/assets/publications/briefing_papers/CAT_Coal_Gap_Briefing_COP21.pdf)

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Comment Number: 0002477\_Saul\_20160728\_CBD\_UPHE-67

Organization 1: Center for Biological Diversity

Commenter 1: Michael Saul

Organization 2: Utah Physicians for a Healthy Environment

Other Sections: 1 10

Comment Excerpt Text:

Climate change health effects

Pollution from the life-cycle of coal is one of the leading causes of climate change.<sup>196</sup> Climate change itself is a significant threat to human health and well-being.<sup>197</sup> The health impacts of climate change include harms from increasing heat stress and other extreme weather events, increases in air pollution, the spread of vector-borne diseases, food insecurity and under-nutrition, changing exposure to toxic chemicals, displacement, and stress to mental health and well-being.<sup>198</sup> Although everyone is vulnerable to health impacts from climate change, certain groups are particularly vulnerable to climate change-related health harms such as children, the elderly, low-income communities, some communities of color, immigrant groups, and persons with disabilities and preexisting medical conditions.<sup>199</sup> The 2015 Lancet Commission on Health and Climate Change highlighted that climate change is causing a global medical emergency, concluding that “the implications of climate change for a global population of 9 billion people threatens to undermine the last half century of gains in development and global health.”<sup>200</sup>

Climate change-driven health impacts are already occurring in the United States, particularly due to morbidity and mortality from extreme weather events which are increasing in frequency and intensity.<sup>201</sup> Heat is already

the leading cause of weather-related deaths in the United States, and extreme heat is projected to lead to increases in future mortality on the order of thousands to tens of thousands of additional premature deaths per year across the United States by the end of this century.<sup>202</sup> Extreme precipitation events have become more common in the United States, contributing to increases in severe flooding events in some regions.<sup>203</sup> Floods are the second deadliest of all weather-related hazards in the United States and can lead to drowning, contaminated drinking water leading to disease outbreaks, and mold-related illnesses.<sup>204</sup>

Air pollution components, specifically ozone, air particulates, and allergens, are expected to increase with climate change. 74 Fed. Reg. 66496 §IV.B.1(b). Climate-driven increases in ozone will cause more premature deaths, hospital visits, lost school days, and acute respiratory symptoms.<sup>205</sup> Projected climate-related increases in ground-level ozone concentrations in 2020 could lead to an average of 2.8 million more occurrences of acute respiratory symptoms, 944,000 more missed school days, and over 5,000 more hospitalizations for respiratory-related problems.<sup>206</sup> In 2020, the continental U.S. could pay an average of \$5.4 billion (2008\$) in health impact costs associated with the climate penalty on ozone, with California experiencing the greatest estimated impacts averaged at \$729 million.<sup>207</sup>

Risks from infectious diseases are also increasing as climate change alters the geographic and seasonal distribution of vector-borne diseases.<sup>208</sup> Climate change favors the spread of some pathogen-carrying vectors. Lyme disease is the most common vector-borne disease in the United States, with 25,000–30,000 cases reported to the CDC per year, with the highest incidence among children between ages 5 and 9.<sup>209</sup> The risk of human exposure to Lyme disease is expected to increase as ticks carrying Lyme disease and other pathogens become active earlier in the season and expand northward in response to warming temperatures.<sup>210</sup> Rising temperatures and changes in rainfall have already contributed to the maintenance of West Nile virus in parts of the United States, and climate change is expected to increase suitable conditions for the mosquitoes that transmit West Nile virus, increasing human exposure risk to the disease.<sup>211</sup>

As highlighted by the Third National Climate Assessment, fighting climate change by reducing greenhouse gas pollution provides critical “opportunities to improve human health and well-being across many sectors,” including a wide array of important health co-benefits.<sup>212</sup>

The impacts of coal combustion can also be described in economic terms, and several papers have attempted to estimate the cost of using coal by assigning value to the environmental and public health damage caused during each stage of coal’s extraction, transportation, combustion, and disposal. One such study estimated that the external costs of coal-fired electricity in the U.S. add an extra 17.8 cents to each kWh of electricity produced; an amount that would triple its cost to consumers.<sup>213</sup> Another U.S. report by Machol et al. estimates 45 cents per kWh as the cost of the health burden and environmental damages from coal combustion.<sup>214</sup> In 2011, the US EPA estimated the benefits and costs of the Clean Air Act, a law which regulates emissions of sulfur dioxide, oxides of nitrogen, carbon monoxide, and particulate matter in the United States. The EPA calculated that the ratio of health care cost savings to compliance costs was 25:1 in 2010.<sup>215</sup> This means that for every dollar spent complying with the Clean Air Act, twenty-five dollars were saved in health care costs due to lower disease burden, including a reduction in premature deaths, and cases of bronchitis, asthma, and myocardial infarction.<sup>216</sup> (196) Intergovernmental Panel on Climate Change Fifth Assessment Report Chapter 7, Energy Systems. pg 554. (197) Luber, G. et al. 2014: Ch. 9: Human Health. Climate Change Impacts in the United States: The Third National Climate Assessment. J. M. Melillo, Terese (T.C.) Richmond, and G. W. Yohe, Eds., U.S. Global Change Research Program, 220-256. doi:10.7930/JOPN93H5. See also Watt, N. et al. 2015. Health and climate change: policy responses to protect public health. *The Lancet* 386: 1861-1914. (198) Sheffield, P. and Landrigan, P.J. 2011. Global Climate Change and Children’s Health: Threats and Strategies for Prevention. *Environmental Health Perspectives* 119: 291-298.. (199) See Id. See also USGCRP [US Global Change Research Program]. 2016. The Impacts of Climate Change on Human Health in the United States: A Scientific Assessment. Crimmins, A., J. Balbus, J.L. Gamble, C.B. Beard, J.E.

- Bell, D. Dodgen, R.J. Eisen, N. Fann, M.D. Hawkins, S.C. Herring, L. Jantarasami, D.M. Mills, S. Saha, M.C. Sarofim, J. Trtanj, and L. Ziska, Eds. U.S. Global Change Research Program, Washington, DC, 312 pp. <http://dx.doi.org/10.7930/J0R49NQX>.
- (200) Watt, N. et al. 2015. Health and climate change: policy responses to protect public health. *The Lancet* 386: 1861-1914.
- (201) See Id. See also Luber, G. et al. 2014: Ch. 9: Human Health. *Climate Change Impacts in the United States: The Third National Climate Assessment*. J. M. Melillo, Terese (T.C.) Richmond, and G. W. Yohe, Eds., U.S. Global Change Research Program, 220-256. doi:10.7930/J0PN93H5; USGCRP [US Global Change Research Program].
2016. *The Impacts of Climate Change on Human Health in the United States: A Scientific Assessment*. Crimmins, A., J. Balbus, J.L. Gamble, C.B. Beard, J.E. Bell, D. Dodgen, R.J. Eisen, N. Fann, M.D. Hawkins, S.C. Herring, L. Jantarasami, D.M. Mills, S. Saha, M.C. Sarofim, J. Trtanj, and L. Ziska, Eds. U.S. Global Change Research Program, Washington, DC, 312 pp. <http://dx.doi.org/10.7930/J0R49NQX>.
- (202) See USGCRP, 2016. *The Impacts of Climate Change on Human Health in the United States*.
- (203) See Luber, G. et al. 2014: Ch. 9: Human Health. *Climate Change Impacts in the United States*.
- (204) See Id.
- (205) See USGCRP, 2016. *The Impacts of Climate Change on Human Health in the United States*.
- (206) UCS [Union of Concerned Scientists]. 2011. *Rising Temperatures and Your Health: Rising Temperatures, Worsening Ozone Pollution*. Available at [http://www.ucsusa.org/sites/default/files/legacy/assets/documents/global\\_warming/climate-change-and-ozonepollution.pdf](http://www.ucsusa.org/sites/default/files/legacy/assets/documents/global_warming/climate-change-and-ozonepollution.pdf).
- (207) See Id.
- (208) See USGCRP, 2016. *The Impacts of Climate Change on Human Health in the United States*
- (209) Bernstein, A.S. and S.S. Myers. 2011. Climate change and children's health. *Current Opinion in Pediatrics* 23: 221–6.
- (210) See USGCRP, 2016. *The Impacts of Climate Change on Human Health in the United States*.
- (211) Harrigan, R.J., H.A. Thomassen, W. Buermann, and T.B. Smith. 2014. A continental risk assessment of West Nile virus under climate change. *Global Change Biology* 20: 2417-2425; Paz, S. 2015. Climate change impacts on West Nile virus transmission in a global context. *Philosophical Transactions of the Royal Society B* 370: 20130561.
- (212) See Luber, G. et al. 2014: Ch. 9: Human Health. *Climate Change Impacts in the United States*.
- (213) P.R. Epstein, et al., *Full Cost Accounting for the Life Cycle of Coal*, *Ann. NY Acad. Sci.* (2011)
- (214) B. Machol & S. Rizk, *Economic Value of U.S. Fossil Fuel Electricity Health Impacts*, 52 *Env. Intl.* 75-80 (2013)
- (215) *The Benefits and Costs of the Clean Air Act: 1990-2020*, U.S. Environmental Protection Agency, Office of Air and Radiation (2010).
- (216) Id.

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Comment Number: 0002477\_Saul\_20160728\_CBD\_UPHE-9

Organization1:Center for Biological Diversity

Commenter1:Michael Saul

Organization2:Utah Physicians for a Healthy Environment

Other Sections: I

Comment Excerpt Text:

The Department of Interior's fossil fuel leasing program contributes about one-quarter of all US fossil fuel emissions, with approximately 14% of US emissions coming from the federal coal program. See *Climate Accountability Institute*. 2015.116 Based on EIA, USGS, and BLM data, the best available estimate of the entire unleased federal coal resource is 212 GtCO<sub>2</sub>e, or almost two-thirds of the entire remaining global carbon budget for maintaining a reasonable probability of limiting warming to 1.5°C.117 The PEIS must not only quantify the contribution of the federal coal leasing program to greenhouse gas emissions and global carbon budgets, but also the foreseeable results of the various alternatives on near- and medium-term national and global emissions. The fact that emissions rates are influenced by multiple factors (including market, policy, and regulatory factors) does



not obscure the fact that a variety of models exist and can be used to evaluate the emissions consequences of leasing policy under a variety of scenarios (including business as usual, implementation of the Clean Power Plan, and predicted coal demand in a scenario that achieves 450 ppm CO<sub>2</sub> climate targets).

As an initial matter, it is important to note that the role of the federal coal program in coal supply, infrastructure, consumption, is larger than its (considerable) share of U.S. coal production. As the Institute for Energy Economics and Financial Analysis has noted;

The availability of cheap coal from the PRB has not only provided the industry with a price advantage that has allowed much deeper market penetration throughout the years—from 5 percent in 1982 to nearly 48 percent today—but it has also had significant implications for the nation’s energy policy. For the past 30 years, the U.S. government has effectively selected coal as its primary energy source to power the nation’s electric grid. In addition to its market penetration, analysts have concluded that coal’s dominance has effectively prevented the development of public-private partnership policies and programs to improve energy diversity in the United States. | 18

In other words, the expectation of a continued policy below-market federal coal leasing, particularly from the Powder River Basin, encourages investment in coal mining, coal export schemes, and, in particular, continued infrastructure investment and lock-in coal transportation, export, and electricity generation, based on the assumption that the BLM’s leasing policies will continue to provide a plentiful supply of cheap, reliable, relatively low-sulfur sub-bituminous coal from the Powder River Basin. As the IEEFA noted, “Given that the United States owns almost all the coal in the [Powder River Basin] region, the U.S. government holds an effective monopoly of western coal. As a result, government policies—or more precisely those of the DOI—are extremely influential and shape annual coal production levels and the market price of coal.”

(116) Memorandum from Richard Heede to Friends of The Earth and Center for Biological Diversity, at [http://webivadownnton.s3.amazonaws.com/877/3a/7/5721/Exhibit\\_1-1\\_ONRR\\_ProdEmissions\\_Heede\\_7May15.pdf](http://webivadownnton.s3.amazonaws.com/877/3a/7/5721/Exhibit_1-1_ONRR_ProdEmissions_Heede_7May15.pdf); Stratus Consulting. 2014. Greenhouse Gas Emissions from Fossil Energy Extracted from Federal Lands and Waters: An Update, at 13, <http://wilderness.org/sites/default/files/Stratus-Report.pdf>

(117) Mulvaney et al. 2015 at 4; see IPCC AR5 Synthesis Report at 63-64 & Table 2.2; Rogelj 2016 at Table 2.

(118) Institute for energy Economics and Financial Analysis, “The Great Giveaway: An analysis of the costly failures of federal coal leasing in the Powder River Basin” (June 2012).

Comment Number: 0002480\_Culver\_20160728\_TWS-24

Organization I: The Wilderness Society

Commenter I: Nada Culver

Comment Excerpt Text:

We also note that while the PEIS is fundamentally directed at the coal leasing and development program, our concerns about climate change relate to all fossil fuels that are produced from the federal mineral estate—oil, natural gas, and coal, as well as oil shale and tar sands. Thus, this Section of our comments applies to climate change issues that are created from fossil fuel extraction on the federal mineral estate, not just coal production. While the immediate opportunity—and indeed the carbon necessity—starts with the climate change impacts of coal, the analysis should not end there and oil, natural gas, oil shale and tar sands should also be included in a Department-wide analysis as soon as possible.

Comment Number: 0002480\_Culver\_20160728\_TWS-25

Organization I: The Wilderness Society

Commenter I: Nada Culver

Other Sections: 7.4

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**Comment Excerpt Text:**

The BLM is clearly required to measure, evaluate and fully consider the GHG emissions and climate change impacts of the federal coal program in the PEIS based on a number of policies of the BLM and other agencies, and even the President. NEPA also requires the BLM to fully consider climate change issues in the PEIS. This must include both upstream and downstream emissions, including those from coal combustion at power plants. This analysis must inform BLM's requirements to avoid, minimize and compensate for these impacts consistent with this country's climate change commitments, specifically the requirement to reduce emissions by 26 to 28 percent below 2005 levels by 2025. This analysis and decision-making should seek to achieve a no more than 2 degrees C temperature increase, which will require the U.S. to reduce emissions an average of 70 to 80 percent below 2000 levels by 2050. The PEIS should put in place requirements to achieve these commitments.

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Comment Number: 0002480\_Culver\_20160728\_TWS-29

Organization I: The Wilderness Society

Commenter I: Nada Culver

**Comment Excerpt Text:**

It is also critical that the BLM assess climate change impacts from a global perspective, not just a local or even national perspective. The PEIS is national in scope—this is a perfect time to look at the overall impacts of GHG emissions and not claim individual impacts are too small.

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Comment Number: 0002480\_Culver\_20160728\_TWS-30

Organization I: The Wilderness Society

Commenter I: Nada Culver

**Comment Excerpt Text:**

Related to the issue of ensuring there is a global and life-cycle analysis of GHG impacts on climate change is the question of “perfect substitution” by other coal from other sources for federal coal that is not mined. Some claim that “perfect substitution” will occur if there is less federal coal mined, and therefore any climate change and other benefits of the reduction in federal coal supply will be nullified. This argument has no basis. Much (85 percent) of the federal coal is mined in the Powder River Basin in Wyoming and Montana. This coal is notable for being low cost and having low sulfur content relative to other sources of coal in the U.S. What this means is that if Powder River Basin coal is not produced, the costs of other coal will make these sources less economically attractive than the Powder River Basin coal. In addition, it will not have the low sulfur (reduced air pollution) benefits of the Powder River Basin coal. That is, there will not be a basis for “perfect substitution.”

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Comment Number: 0002480\_Culver\_20160728\_TWS-32

Organization I: The Wilderness Society

Commenter I: Nada Culver

**Comment Excerpt Text:**

The local benefits of “fuel switching” to things like greater reliance on development of renewable sources of energy in local areas should be fully considered in the PEIS.

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Comment Number: 0002480\_Culver\_20160728\_TWS-33

Organization I: The Wilderness Society

Commenter I: Nada Culver

Other Sections: 7.1

**Comment Excerpt Text:**

The second critical step in analyzing climate change issues in the PEIS after determining the amount of GHG that are emitted is to evaluate the climate change impacts of those emissions. This can be done by utilizing the Social

Cost of Carbon (and companion EPA Social Cost of Methane) protocol. The BLM should use this method for climate change impact assessment in the PEIS. But in addition, due to some shortcomings in the SCC method, the BLM must also evaluate qualitative, non-monetary impacts that are caused by climate change, such as from earlier snowmelts in our western mountains that are changing water supplies. This analysis should be done from a global perspective because as recognized in the CEQ Climate Change NEPA Guidance, “diverse individual sources of emissions each make relatively small additions to global atmospheric GHG concentrations that collectively have huge impact.” That said, local impacts also need to be considered especially since the BLM has traditionally published the local monetary benefits of the coal program in its NEPA analyses. BLM should not assume that federal coal that is not produced will simply be replaced by production from other sources (so-called “perfect substitution”) thus eliminating any climate change benefits —this unfounded myth is not based on empirical evidence or sound economic theory, and it has been rejected in several reports.

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Comment Number: 0002480\_Culver\_20160728\_TWS-76

Organization I: The Wilderness Society

Commenter I: Nada Culver

Comment Excerpt Text:

There are three critical needs relative to BLM decision-making and climate change, including for the federal coal program. First, the agency must provide an accurate and comprehensive assessment of the amount of GHG produced by its fossil fuel program activities. Second, it must ensure a fair and comprehensive assessment of the impacts of these GHG emissions. It is critical that two GHG in particular receive treatment in these analyses: carbon dioxide (CO<sub>2</sub>) and methane (CH<sub>4</sub>), both of which are emitted at significant levels as a result of the federal coal leasing and development program. Third, it must commit to avoiding, minimizing and offsetting impacts through compensatory mitigation.

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Comment Number: 0002480\_Culver\_20160728\_TWS-77

Organization I: The Wilderness Society

Commenter I: Nada Culver

Other Sections: I

Comment Excerpt Text:

Making the case for the need to consider climate change in NEPA documents, the Council on Environmental Quality (CEQ) issued its revised draft Climate Change NEPA Guidance in December, 2014. (20) It provides direction to all agencies on when and how to consider the effects of GHG emissions and climate change in the evaluation of federal actions. The guidance states that, “[i]t is essential . . . that federal agencies not rely on boilerplate text to avoid meaningful analysis, including consideration of alternatives or mitigation.” The CEQ draft guidance provides detailed reasons and instruction on how climate change and GHG NEPA analyses can be effectively accomplished. Any “boilerplate” claims that GHG and climate change analyses are impossible are rejected.

(20) Available at <https://www.whitehouse.gov/administration/eop/ceq/initiatives/nepa/ghg-guidance>.

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Comment Number: 0002480\_Culver\_20160728\_TWS-78

Organization I: The Wilderness Society

Commenter I: Nada Culver

Other Sections: I

Comment Excerpt Text:

S.O. 3330 (Improving Mitigation Policies and Practices of the Department of the Interior) as well as the report to the Secretary of the Interior from the Energy and Climate Change Task Force, (21) and the BLM’s current mitigation guidance (IM No. 2013-142 and Draft Manual Section 1794), all also direct the BLM to incorporate

mitigation strategies into planning and to address climate change. S.O. 3330 notes that a key reason for issuing the new policy is to “focus on mitigation efforts that improve the resilience of our Nation’s resources in the face of climate change.” More recent guidance in the form of the Presidential Memorandum: Mitigating Impacts on Natural Resources from Development and Encouraging Related Private Investment (2015) and the Department of the Interior’s Landscape-Scape Mitigation Manual (2015) also emphasize the importance of mitigation in BLM planning and decision-making and how it can and should apply in the context of addressing impacts from climate change. Again, the BLM must have an accounting for the amount of GHG emissions and climate change impacts from its coal program in order to mitigate for those impacts.

(21) Clement, J.P. et al. 2014. A strategy for improving the mitigation policies and practices of the Department of the Interior. A report to the Secretary of the Interior from the Energy and Climate Change Task Force, Washington, D.C.

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Comment Number: 0002480\_Culver\_20160728\_TWS-81

Organization I: The Wilderness Society

Commenter I: Nada Culver

Other Sections: I

Comment Excerpt Text:

Perfect substitution of other coal for federal coal that is not mined is an unfounded myth and should not be used to avoid evaluating climate change impacts in the PEIS. This theory is not based on empirical evidence and it is not supported by economic theory. In addition, there have been several recent papers that bring into question the perfect substitution theory by the White House Council of Economic Advisors, Vulcan Philanthropy, Stockholm Environment Institute, and the Carbon Tracker Initiative. (30)

(30) CEA. 2016. “The Economics of Coal Leasing on Federal Lands: Ensuring a Fair Return to Taxpayers”. Council of Economic Advisers. May 2016.

Vulcan/ICF. 2016. “Federal Coal Leasing Reform Options: Effects on CO2 Emissions and Energy Markets. Final Report: Summary of Modeling Results.” A Vulcan Philanthropy | Vulcan, Inc. report with analysis supported by ICF International, Fairfax, VA. February 2016.

Erickson, Peter and Lazarus, Michael. “How would phasing out U.S. federal leases for fossil fuel extraction affect CO2 emissions and 2°C goals?” Stockholm Environment Institute, Working Paper 2016-02. May 2016.

Fulton, Mark; Kaplow, Doug; Capalino, Reid; and Grant, Andrew. “Enough Already: Meeting 2°C PRB Coal Demand Without Lifting the Federal Moratorium.” July 2016.

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Comment Number: 0002490\_Emrich\_20160728\_CloudPeakEnergy-40

Organization I: Cloud Peak Energy Inc.

Commenter I: Andrew C. Emrich, P.C.

Other Sections: I

Comment Excerpt Text:

The existing regulatory regime provides ample opportunity for complete and thorough consideration of the environmental impacts, including global climate change, associated with coal leasing and production. The current project-specific analysis allows for a more complete review of environmental impacts, which accounts for localized impacts that would be difficult to assess at a programmatic level. BLM should not engage in a speculative, nation-wide review of global climate change impacts of coal leasing that is divorced from actual leasing decisions.

Instead, to the extent BLM continues to analyze climate change impacts as part of its leasing decisions, that analysis should take place within the context of the existing regulatory and environmental review process. Such a limited and site-specific analysis would best serve the purpose of NEPA, which seeks to promote informed

decision-making by considering reasonably foreseeable impacts within the control of the agency. See *Dep't of Transp. v. Public Citizen*, 541 U.S. 752, 770 (2004).

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Comment Number: 0002490\_Emrich\_20160728\_CloudPeakEnergy-41

Organization I: Cloud Peak Energy Inc.

Commenter I: Andrew C. Emrich, P.C.

Other Sections: I

Comment Excerpt Text:

BLM asserts that the PEIS will “examine the climate change impacts of the coal program in the context of the Nation’s climate objectives . . .” 81 Fed. Reg. at 17725. Nowhere in the MLA does Congress authorize BLM to impose a climate-related fee on the production of federal coal reserves. BLM has expressly rejected any form of “carbon tax” as unlawful. Attachment 5, BLM Petition Denial, at 7 (Jan. 28, 2011).

Further, an increase in royalties or other leasing costs to account for climate impacts would prevent coal from being produced economically. Any climate change fee imposed solely on the coal industry would unfairly disadvantage federal coal as compared to alternative electrical generation fuels, such as natural gas and renewables. These additional costs would prevent BLM from achieving maximum economic recovery of federal coal—a clear statutory mandate under the MLA—while at the same time punishing electricity consumers by artificially suppressing competition between fuel sources.

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Comment Number: 0002491\_Weiskopf\_20160728\_NextGenClimateAmer-10

Organization I: NextGen Climate America

Commenter I: David Weiskopf

Other Sections: I 7.4

Comment Excerpt Text:

The production models analyzed by Carbon Tracker, which inform our recommendations for modernizing the federal coal program, are inherently conservative on the basis of two factors.<sup>8</sup> First, the 2°C target used by the IEA is an uppermost-limit for temperature warming but does not represent a “safe” threshold. For this reason, technical experts to the United Nations Framework Convention on Climate Change (“UNFCCC”) have cautioned keeping temperature warming well below 2°C in order to significantly reduce the risks of climate change, and Parties to the UNFCCC adopted this goal under the Paris Agreement.<sup>9</sup> Second, the IEA 450 Scenario only assigns a 50% probability of successfully staying below the 2°C threshold and assumes a relatively rapid deployment of CCS technology by 2020.<sup>10</sup>

[<sup>8</sup> The calculated balance of the global carbon budget and the implication for fossil fuel use varies across studies. A recent article in the scientific journal *Nature* applies a global carbon budget to identify the fraction of U.S. coal reserves that are unburnable before 2050 under a 2°C scenario, concluding that 95% of U.S. reserves cannot be combusted. The *Nature* analysis models the optimal global use of oil, natural gas and coal with the constraint of a 2°C emissions trajectory. Coal is heavily disfavored in relation to oil and gas, especially in the United States, due both to coal’s carbon intensity and the wide availability of lower-cost, lower-carbon electricity sources. Even with CCS technology widely deployed from 2025 forward, the study concludes that 92% of U.S. coal reserves remain unburnable. See Christopher McGlade & Paul Eakins, *The geographic distribution of fossil fuels unused when limiting global warming to 2 °C*, 215 *Nature* 187 (January 8, 2015) at 189.]

[<sup>9</sup> For a discussion on the relative risks of temperature targets, see: United Nations Framework Convention on Climate Change Secretariat, *Report on the structured expert dialogue on the 2013-2015 review* (2015). Available at <http://unfccc.int/resource/docs/2015/sb/eng/inf01.pdf>. The Paris Agreement on climate change identifies the need for greater temperature ambition. The Agreement aims to hold “the increase in the global average temperature to well below 2°C above pre-industrial levels” with “efforts to limit the temperature increase to

1.5°C above pre-industrial levels” (emphasis added). Paris Agreement, Article 2 (Dec. 13, 2015), in UNFCCC, Report of the Conference of the Parties on its Twenty- First Session, Addendum, at 21, UN Doc. FCCC/CP/2015/10/Add.1 (Jan. 29, 2016) (hereinafter, “Paris Agreement”).]

[10 Forecasting the rapid deployment of carbon capture and storage projects is characterized by uncertainty. CCS projects are not utilized at scale and only 15 large-scale projects currently operate. See Global CCS Institute, “Large Scale CCS Projects,”<https://www.globalccsinstitute.com/projects/large-scale-ccs-projects>.]

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Comment Number: 0002491\_Weiskopf\_20160728\_NextGenClimateAmer-25

Organization I:NextGen Climate America

Commenter I:David Weiskopf

Other Sections: I

Comment Excerpt Text:

In addition to health effects, the federal coal program exacerbates the climate problem, which impairs the public interest. Emissions associated with the program comprise a large share of U.S. greenhouse gas emissions. The collective emissions from existing production under the federal coal program are responsible for 11% of American greenhouse gas emissions,<sup>25</sup> and the United States has already leased more coal than it can afford to burn in a manner that is consistent with meeting climate goals. The climate change impacts of the federal coal program disrupt ecosystems on federal lands, including national parks, monuments, and reserves, through the effects of climate change. A technical climate change report prepared for BLM identified potential climate impacts on BLM lands, which include increased risk of extreme temperatures, water scarcity and drought, and frequency of wildfires.<sup>26</sup> These risks extend beyond publicly-owned lands to encompass all areas of the United States.

[<sup>25</sup> U.S. Environmental Protection Agency, *supra* note 7.  $(0.36) * (0.76) * (0.41) = (0.11)$ ]

[<sup>26</sup> Erica Simmons et al., Potential Climate Change Impacts and the BLM Rio Puerco Field Office's Transportation System: A Technical Report. Available at [ntl.bts.gov/lib/54000/54700/54763/RioPuercoClimateChange.pdf](http://ntl.bts.gov/lib/54000/54700/54763/RioPuercoClimateChange.pdf) at x-xi. ]

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Comment Number: 0002491\_Weiskopf\_20160728\_NextGenClimateAmer-26

Organization I:NextGen Climate America

Commenter I:David Weiskopf

Other Sections: 4.6 I

Comment Excerpt Text:

The National Environmental Policy Act provides a framework for how Interior can interpret its relative contribution to climate change and the corresponding risk to the public interest through cumulative impacts.<sup>27</sup> The Council on Environmental Quality (“CEQ”) draft guidance for greenhouse gas emissions states that agencies should consider the “potential effects of a proposed action on climate change as indicated by its GHG emissions.”<sup>28</sup> The draft guidance also accounts for indirect effects of agency actions, defined as effects that are caused by the action and are “later in time or farther removed in distance, but are still reasonably foreseeable.”<sup>29</sup> Up until now, BLM has inadequately evaluated the climate change impacts of its coal leasing program by failing to address indirect and cumulative impacts. The programmatic review provides an opportunity to correct this shortcoming.

[<sup>27</sup> 40 C.F.R § 1508.8 defining direct, indirect, and cumulative effects.]

[<sup>28</sup> Council on Env'tl. Quality, Exec. Office of the President, Revised Draft Guidance for Federal Departments and Agencies on Consideration of Greenhouse Gas Emissions and the Effects of Climate Change in NEPA reviews, 79 Fed. Reg. 77,802 (Dec. 24, 2014).]

[29 Id.]

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Comment Number: 0002491\_Weiskopf\_20160728\_NextGenClimateAmer-29

Organization I:NextGen Climate America

Commenter I:David Weiskopf

Other Sections: I 7.4

Comment Excerpt Text:

When the President established a climate test for determining whether to approve the Keystone XL pipeline, he examined whether the infrastructure would significantly exacerbate the climate problem.<sup>32</sup> The same test applies to the federal coal program: if any reforms are inconsistent with the global climate budget, then the federal coal leasing program does not pass the climate test.

[32 Remarks by the President on Climate Change, Georgetown University, Washington, D.C., June 25, 2013. Available at [www.whitehouse.gov/the-pressoffice/2013/06/25/remarks-president-climate-change](http://www.whitehouse.gov/the-pressoffice/2013/06/25/remarks-president-climate-change)]

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Comment Number: 0002491\_Weiskopf\_20160728\_NextGenClimateAmer-9

Organization I:NextGen Climate America

Commenter I:David Weiskopf

Other Sections: I

Comment Excerpt Text:

Any eventual decisions to grant new leases should be made with reference to what coal is unburnable under the 2°C energy pathway. Doing so requires reference to production at currently producing mines, planned production from privately owned reserves, and the application of CCS technology, in addition to broader energy market conditions. If a given policy is consistent with the 2°C climate budget it is considered “climate consistent.”<sup>7</sup>

[7 The Intergovernmental Panel on Climate Change Fifth Assessment Report assigns a remaining carbon budget of 1,000 metric GtCO<sub>2</sub> when using a greater than 66% probability of keeping the temperature increase below 2°C. This budget is relaxed to 1,300 GtCO<sub>2</sub> when using a 50% probability of success. The Fifth Assessment Report of the Intergovernmental Panel on Climate Change summarizes the characteristics of this 1,000 GtCO<sub>2</sub> budget. “Multi-model results show that limiting total human-induced warming (account for both CO<sub>2</sub> and other human influences on climate) to less than 2°C relative to the period 1861-1880 with a probability of >66% would require total CO<sub>2</sub> emissions from all anthropogenic sources since 1870 to be limited to about 2900 GtCO<sub>2</sub> when accounting for non-CO<sub>2</sub> forcing... About 1900 [1650 to 2150] GtCO<sub>2</sub> were emitted by 2011, leaving about 1000 GtCO<sub>2</sub> to be consistent with this temperature goal. Estimated total fossil carbon reserves exceed this remaining amount by a factor of 4 to 7, with resources much larger still” (emphasis added). Intergovernmental Panel on Climate Change, *Climate Change 2014: Synthesis Report. Contribution of Working Groups I, II and III to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change* [Core Writing Team, R.K. Pachauri and L.A. Meyer (eds.)]. IPCC, Geneva, Switzerland, 151 at 63.]

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Comment Number: 0002493\_Mead\_20160728\_GovWY-57

Organization I:Office of Governor Matthew H. Mead

Commenter I:MATTHEW H. MEAD

Comment Excerpt Text:

As part of the BLM's development of a PEIS to review the federal coal program, it must adequately and comprehensively evaluate the real and likely negative impacts to local, state, and the U.S. economy if investments

in and deployment of CO<sub>2</sub> emission reduction strategies related to coal mine production and coal consumption are not addressed in a manner similar to that applied to traditional air pollutants. BLM must provide a comprehensive evaluation of the ongoing advancement of clean coal technologies at a global scale if it is to adequately evaluate environmental impacts of federal coal use. The BLM must also evaluate the negative impacts to local, state, and the U.S. economy of stranding the more than \$111 billion made in emission reduction investments to address emissions of particulate matter, sulfur dioxides, nitrogen oxides and other pollutants. See Energy Ventures Analysis, Inc., Capital Investments in Emission Control Retrofits in the U.S. Coal-fired Generating Fleet through the Years- 2016 Update (Jan. 26, 2016); (WY0-03863 to 03869).

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Comment Number: 0002493\_Mead\_20160728\_GovWY-83

Organization I:Office of Governor Matthew H. Mead

Commenter I:MATTHEW H. MEAD

Comment Excerpt Text:

The BLM should also evaluate the influence of various coal market conditions, value propositions, coal market price conditions, and climate policies in those markets. See ICF International 2016, Millennium Bulk Terminals-Longview, SEPA EIS, SEPA Greenhouse Gas Emissions Technical Report, April, Scope of Analysis at § 2.2.2.1; (WY0-01490 to 01498)

Technology is always improving and since coal may not be mined and used until years after the lease has been awarded, there is no way of accurately predicting what those emissions levels may be since the coal may be utilized in a technology that is not commercial today or for something other than energy production. For those reasons, if the BLM factors GHGs into the leasing process, they should only consider those directly tied to the extraction process.

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Comment Number: 0002499\_Nichols20160728-10

Organization I:WildEarth Guardians

Commenter I:Jeremy Nichols

Other Sections: 4.6 I

Comment Excerpt Text:

As BLM and Interior prepare the PEIS, the agencies must analyze and assess the impacts of similar and cumulative action consistent with NEPA. Indeed, in accordance with NEPA, the scope of an EIS must include all “[c]umulative” and “[s]imilar” actions. 40 C.F.R. § 1508.25(a)(2) and (3). Cumulative actions are defined as those that “when viewed with other proposed actions have cumulatively significant impacts and should therefore be discussed in the same statement.” 40 C.F.R. § 1508.25(a)(2). Similar actions are defined as those that “when viewed with other reasonably foreseeable or proposed agency actions, have similarities that provide a basis for evaluating their environmental consequences together, such as common timing or geography.” 40 C.F.R. § 1508.25(a)(3). Pursuant to NEPA regulations, both cumulative and similar actions must be analyzed and assessed together with alternatives and any proposed agency actions in the same EIS.

With regards to cumulative and similar actions, it is imperative that the PEIS, at a minimum, address the following:

i. The impacts of oil and gas development in the western United States

Oil and gas development, particularly the development of federal oil and gas as authorized by the BLM, is not only a cumulative action, but a similar action under NEPA. Oil and gas development, particularly federal oil and gas development, often occurs on or near mines that are producing federal coal. For example, a massive oil and gas project under consideration by the BLM in the Powder River Basin of Wyoming would take place where extensive coal mining is currently occurring. See 80 Fed. Reg. 65,242 (Oct. 26, 2015). At a minimum, oil and gas development occurs extensively throughout the coal producing regions of the western United States, where the vast amount of federal coal is located and mined.

See Attached for Graphic - Federal oil and gas wells in the Uinta Basin of northeastern Utah adjacent to the Bonanza coal-fired power plant. The Bonanza power plant is fueled by the nearby Deserado coal mine in northwestern Colorado, which is comprised almost entirely of federal coal reserves.



Not only does oil and gas development take place in similar geographies and at similar times as coal mining, it poses similar impacts, particularly in terms of air emissions and climate impacts. Indeed, as reports indicate, the onshore and offshore development of federal oil and gas contributes to nearly 10% of all U.S. greenhouse gas emissions. (46) Onshore development of federal oil and gas, which largely occurs in the western United States, often at or near coal mining operations, accounts for nearly 4% of all U.S. greenhouse gas emissions. To this end, climate concerns related to oil and gas development are entirely relevant to addressing the climate impacts of the federal coal program and must be fully analyzed and assessed in the PEIS as similar and/or cumulative actions. The need to address the impacts of oil and gas development in the PEIS together with the impacts of the federal coal program is critical given that there are a number of reasonably foreseeable proposed oil and gas developments currently under consideration by the BLM, including:

- The Continental Divide-Creston oil and gas project in southern Wyoming, approval of which would open the door for 8,950 new oil and gas wells. See 81 Fed. Reg. 22,628 (April 18, 2016).
- The Monument Butte oil and gas project in northeastern Utah, approval of which would open the door for 5,750 new oil and gas wells. See 81 Fed. Reg. 41,331 (June 24, 2016).
- The Converse County oil and gas project in eastern Wyoming, approval of which would open the door for 5,000 new oil and gas wells. See 79 Fed. Reg. 28,538 (May 16, 2014).
- The Greater Crossbow oil and gas project in northeastern Wyoming, approval of which would open the door for 1,500 oil and gas wells. See 80 Fed. Reg. 65,242 (Oct. 26, 2015).
- Extensive oil and gas leasing in Colorado, Montana, New Mexico, Utah, and Wyoming. As the BLM's own statistics show, millions of acres of these states have been leased over the years, opening the door for extensive oil and gas development. In the remainder of 2016, the BLM is proposing lease 87 parcels in August comprising 89,137 acres in Wyoming, 21 parcels in November comprising 30,197 acres in Wyoming, 91 parcels in October comprising 19,790 acres in Montana, 28 parcels in November comprising 12,344 acres in Utah, 36 parcels in September comprising 13,876 acres in New Mexico, and 37 parcels in November comprising 25,298 acres in Colorado. (47) It is reasonable to believe that the BLM is likely to propose, offer for sale, and issue millions more acres of federal oil and gas leases in the near future. The climate consequences of such leasing actions must be addressed in the PEIS.

(47) See BLM, "Notice of Competitive Oil and Gas Lease Sale" (May 4, 2016), available online at <https://eplanning.blm.gov/epl-front-office/projects/nepa/61292/73465/80674/08list.pdf>; BLM, "Environmental Assessment, November 1, 2016 Competitive Oil and Gas Lease Sale Parcels," EA No. DOI-BLM-WY-D040-2016-0138EA (April 2016), available online at <https://eplanning.blm.gov/epl-front-office/projects/nepa/60579/72678/79780/EAv1.pdf>; BLM, "Notice of Competitive Oil and Gas Lease Sale" (July 2016), available online at

[http://www.blm.gov/style/medialib/blm/mt/blm\\_programs/energy/oil\\_and\\_gas/leasing/lease\\_sales/2016/oct16\\_2016.Par.89806.File.dat/10\\_18\\_16%20SaleNotice\\_Map\\_List\\_Stips\\_for%20postin.g.pdf](http://www.blm.gov/style/medialib/blm/mt/blm_programs/energy/oil_and_gas/leasing/lease_sales/2016/oct16_2016.Par.89806.File.dat/10_18_16%20SaleNotice_Map_List_Stips_for%20postin.g.pdf); BLM, "Environmental Assessment, November 2016 Competitive Oil and Gas Lease Sale," EA No. DOI-BLM-UT-G010-2016-033-EA, available online at

[http://www.blm.gov/style/medialib/blm/mt/blm\\_programs/energy/oil\\_and\\_gas/leasing/lease\\_sales/2016/oct16\\_2016.Par.89806.File.dat/10\\_18\\_16%20SaleNotice\\_Map\\_List\\_Stips\\_for%20postin.g.pdf](http://www.blm.gov/style/medialib/blm/mt/blm_programs/energy/oil_and_gas/leasing/lease_sales/2016/oct16_2016.Par.89806.File.dat/10_18_16%20SaleNotice_Map_List_Stips_for%20postin.g.pdf); BLM, "Notice of Competitive Oil and Gas Lease Sale" (April 20, 2016), available online at

[http://www.blm.gov/style/medialib/blm/nm/programs/0/og\\_sale\\_notices\\_and/2016/july\\_2016.Par.97830.File.dat/July%202016%20OG%20Lease%20Sale%20Notice.pdf](http://www.blm.gov/style/medialib/blm/nm/programs/0/og_sale_notices_and/2016/july_2016.Par.97830.File.dat/July%202016%20OG%20Lease%20Sale%20Notice.pdf); BLM, "November 10, 2016 Oil and Gas Lease Sale" website available at

[http://www.blm.gov/co/st/en/BLM\\_Programs/oilandgas/oil\\_and\\_gas\\_lease/2016/november\\_2016.html](http://www.blm.gov/co/st/en/BLM_Programs/oilandgas/oil_and_gas_lease/2016/november_2016.html).

The climate impacts of the federal coal program cannot be analyzed in a piecemeal fashion that overlooks BLM's twin role in managing onshore oil and gas. Particularly given that the scope of the PEIS will necessarily be national in focus, if not broader, the BLM is compelled under NEPA to ensure these similar actions are fully accounted for.

The need to address the reasonably foreseeable climate impacts of oil and gas development is underscored by the greenhouse gas emissions that are likely to result. As reported, if fully developed, unleashed onshore oil and gas

reserves stand to release nearly 30 billion metric tons of carbon. (48) See Table below.  
See Attached for Table - Carbon Emissions (in billion metric tons) Projected from Unleased Federal Onshore Oil and Gas Reserves(48) See Exhibit 5 at 18

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Comment Number: 0002499\_Nichols20160728-24

Organization I:WildEarth Guardians

Commenter I:Jeremy Nichols

Other Sections: 4.6

Comment Excerpt Text:

The climate impacts of all Interior Department fossil fuel management  
Additionally, if Interior and the BLM are to properly analyze and assess the climate impacts of federal coal management, the climate impacts of all Interior Department overseen fossil fuel development must be taken into account. This includes, but is not limited to, the impacts of offshore oil and gas development, oil shale, and tar sands development. As reports indicate, the potential climate impacts of offshore oil and gas, oil shale, and tar sands stand to be tremendous, with more than 222.14 billion metric tons of carbon projected, nearly as much as the total carbon emissions that could be released if all unleased federal coal reserves are developed. (49) See Exhibit 5 at 18

See Attached for Table - Carbon Emissions (in billion metric tons) From Other Interior Department-overseen Fossil Fuel Development

Similar to onshore oil and gas development, the Interior Department and BLM's management of offshore oil and gas, oil shale, and tar sands are both cumulative and similar in nature, and therefore must be a part of the scope of the analysis for the PEIS. Indeed, if the climate impacts of the federal coal program are to be completely understood, they must be analyzed together with the impacts of other fossil fuel management programs that are under the control and authority of the Department of the Interior.

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Comment Number: 0002507\_Nettleton\_20160801-4

Commenter I:Jerry Nettleton

Other Sections: 8.1

Comment Excerpt Text:

Coal Leasing and Climate Considerations - Coal built our country and is a key foundation for our success and prosperity. A rational energy policy should be based on a true, "all of the above" approach. In fact, this approach is essential if we are to meet our projected future energy needs. Much of the current focus is on addressing climate considerations, but this must be balanced with the critical need to maintain reliable energy generation and distribution systems and provide affordable power for our households and businesses. Any impact analysis should include an alternative which takes this critical balance into consideration.

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Comment Number: 0002507\_Nettleton\_20160801-7

Organization I:

Commenter I:Jerry Nettleton

Other Sections: 4.6

Comment Excerpt Text:

Climate Impacts - Due to pressure from environmental interest groups, consideration of potential climate impacts is being mandated at every stage of the process, including coal leasing, mine permit approvals, and required approvals for powerplant construction and operation. This approach results in multiple redundant reviews, does not accurately characterize direct or indirect impacts from those actions preceding combustion of coal in a powerplant, and results in significant unnecessary costs and delays. Under the current BLM leasing process and practices, potential climate impacts are required to be evaluated and analyzed in the NEPA documents prepared for each leasing action. While this requirement is duplicative of subsequent environmental reviews, it adequately

addresses and satisfies the requirement is duplicative of subsequent environmental reviews, it adequately addresses and satisfies the requirement to evaluate these potential impacts. The suggestion that potential climate impacts should be evaluated on a broader scale relative to identification of potential lease offerings creates a situation where the linkage between action and potential impacts is even further removed and speculative, is adding one more layer to an already duplicative and redundant review process, and is therefore inappropriate and unjustified.

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Comment Number: 0002509\_Iverson\_20160728-1

Organization I:

Commenter I: Kathryn Iverson

Comment Excerpt Text:

In reviewing the Federal Coal Leasing Program, the climate cost must be accounted for.

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Comment Number: 0002942\_Harbine-32

Organization I: Earthjustice

Commenter I: Jenny Harbine

Other Sections: I

Comment Excerpt Text:

The PEIS Should Evaluate Climate Change Impacts of the Federal Coal Program We applaud the Secretary of the Interior for ordering BLM to take its first comprehensive look at the climate impacts of leasing and burning federally owned coal. In the PEIS process, the BLM must finally acknowledge – for the first time in its history – that its federal coal program perpetuates and exacerbates climate change. Such an analysis is the only responsible approach to addressing climate impacts of mining and burning hundreds of millions of tons of taxpayer-owned coal every year, and it is the only approach that honors Secretary Jewell’s call for “an honest and open conversation” with the American people about the federal coal program. 21 As the White House Council of Economic Advisors acknowledged, coal combustion and the impacts of coal combustion are indirect impacts of federal coal leasing. 22 Indeed, “[f]ederal coal was used to generate about 14 percent of the Nation’s electricity in 2015.”23 For the past several years, while the much of the Obama Administration has developed significant and forward-thinking policies aimed at curbing greenhouse gas emissions in order to stave off the worst effects of climate change, the Department of Interior and BLM have continued to lease billions of tons of federally owned and managed coal while telling the public and decision-makers that doing so has no impact on the climate. The Department, in particular BLM and OSMRE, have based this idea—that although burning coal may harm the climate, their decisions to approve more coal mining do not—on a discredited assumption that courts have referred to as “perfect substitution.” The idea behind BLM’s perfect substitution theory, which defies even the most basic understanding of the way in which energy markets work, is that if the Department were to reject any particular coal lease, coal from other mines would perfectly substitute for one-hundred percent of that coal in the marketplace—that is, coal-fired power plants would simply buy the same amount of coal at the same price from other mines. Another significant and consistent flaw in BLM NEPA reviews for proposals to mine federal coal is that many of these reviews continue to state that the individual mining proposal would only minimally contribute to state, national, and global carbon dioxide (CO<sub>2</sub>) emissions, even though the White House’s Council on Environmental Quality (CEQ) – which promulgates NEPA regulations that other agencies are required to follow– explicitly advised against this approach in 2014. For example, in June 2016, in evaluating climate impacts of a proposed expansion at Spring Creek Mine, OSMRE quantified direct and indirect GHG emissions from 21 Sec’y Sally Jewell, Speech at the Center for International Strategic Studies (March 17, 2015), available at <https://www.doi.gov/news/pressreleases/secretary-jewell-offers-vision-for-balanced-prosperous-energy-future> (last visited July 20, 2016). 22 See White House Fair Return Report, at 28 (describing environmental externalities of leasing federal coal, including coal combustion impacts). 23 Secretarial Order 3338, at 2. 13 coal production and combustion and compared those to Montana and national emission totals. 24 This, however, is precisely the kind of limited analysis that CEQ specifically directed agencies not to do: [T]he statement that emissions from a

government action or approval represent only a small fraction of global emissions is more a statement about the nature of the climate change challenge, and is not an appropriate basis for deciding whether to consider climate impacts under NEPA. Moreover, these comparisons are not an appropriate method for characterizing the potential impacts associated with a proposed action and its alternatives and mitigations. This approach does not reveal anything beyond the nature of the climate change challenge itself: the fact that diverse individual sources of emissions each make relatively small additions to global atmospheric GHG concentrations that collectively have huge impact.

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Comment Number: 0002942\_Harbine-33

Organization I:Earthjustice

Commenter I:Jenny Harbine

Other Sections: I

Comment Excerpt Text:

BLM must reject, once and for all, this unnecessarily limited approach to understanding the climate impacts of its decisions and the unsupported, incorrect, and damaging assumption of perfect substitution. In order to adequately understand the impacts of the federal coal leasing program as a whole—and to take the hard look at those impacts that NEPA requires—BLM must analyze the extent to which continued expansion and long-term operation of the program affects the mix of resources used to generate electricity and how the concomitant greenhouse gas emissions differ among alternatives. As described below, there are multiple energy market models that would allow BLM to quantify how alternative proposals (such as a “no new leasing” alternative and an alternative that captures externalities of climate damage into royalty rates) would affect demand for coal, natural gas, and renewables used to generate electricity. Once BLM quantifies the different levels of climate pollution associated with various alternatives, it must do more than simply use the volume of greenhouse gas emissions as a proxy for the effect of those BLM emissions. In particular, BLM must analyze whether the continued leasing of federal coal is consistent with our national GHG emission reduction goals and international climate commitments, and BLM must use the social cost of carbon and social cost of methane as tools to understand the severity of climate impacts without merely relying on the volume of GHG emissions as proxy for their effect. 24 Office of Surface Mining Reclamation and Enforcement, Spring Creek Mine EA, 4-17 (June 2, 2016), available at <http://www.wrcc.osmre.gov/initiatives/SpringcreekMineLBAI/documents/EA0616.pdf> (last visited June 26, 2016). 25 Council on Environmental Quality, Revised Draft Guidance on the Consideration of Greenhouse Gas Emissions and the Effects of Climate Change in NEPA Reviews, at 9 (2014), available at: [https://www.whitehouse.gov/sites/default/files/docs/nepa\\_revised\\_draft\\_ghg\\_guidance\\_searchable.pdf](https://www.whitehouse.gov/sites/default/files/docs/nepa_revised_draft_ghg_guidance_searchable.pdf) (last visited July 1, 2016) (hereafter “CEQ Draft Climate Guidance”) (emphasis added). 14

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Comment Number: 0002942\_Harbine-36

Organization I:Earthjustice

Commenter I:Jenny Harbine

Other Sections: I

Comment Excerpt Text:

. BLM Must Acknowledge that the Federal Coal Program Exacerbates Climate Change. Federal agencies that make regulatory decisions that affect the amount of coal that can be produced from public lands have an obligation under NEPA to accurately analyze and disclose the environmental impacts of those decisions. With regard to assessments of climate impacts, agencies must quantify the amount of GHG emissions that will occur as a result of the agency’s action. But that does not mean merely tallying up the direct emissions of carbon dioxide and methane emissions emitted during mining and adding them to the carbon dioxide emissions emitted from burning the coal once it is mined. In order to make an accurate assessment of GHG emissions, agencies must first thoroughly examine coal markets and the extent to which the market will respond to the agency’s decision. The nature and extent of the market’s response to 15 a single regulatory decision can lead to complex questions that require rigorous economic evaluation—agencies may not simply assume a given market response, as BLM has

done repeatedly in the past. We support the Secretary of the Interior's commitment in the Secretarial Order announcing this PEIS process to studying this precise issue, and her recognition that many commentators have noted the tension between producing very large quantities of federal coal while pursuing policies to reduce U.S. GHG emissions. Specifically, the Secretary's order directs the agency to address: [H]ow the administration, availability, and pricing of Federal coal affect regional and national economies (including job impacts), and energy markets in general, including the pricing and viability of other coal resources (both domestic and foreign) and other energy sources. The impact of possible program alternatives on the projected fuel mix and cost of electricity in the United States should also be examined. BLM's March 30, 2016 Notice of Intent repeats the Secretary's direction, with an explicit commitment to study this issue, explaining that the PEIS "will broadly examine" these issues.

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Comment Number: 0002942\_Harbine-49

Organization I: Earthjustice

Commenter I: Jenny Harbine

Other Sections: I

Comment Excerpt Text:

In the PEIS, BLM must disavow perfect substitution both to disclose the cumulative impacts of the federal coal leasing program, and to comport with the legal principle that when agencies change their minds on key issues they explain why the reversal is not arbitrary and capricious. NEPA regulations define a "cumulative impact" as one that "results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time." 40 C.F.R. § 1508.7. As recently articulated by the D.C. Circuit Court, "[o]ne of the core tenets of reasoned decision-making is that 'an agency [when] changing its course . . . is obligated to supply a reasoned analysis for the change.'" *Sierra Club v. Salazar*, No. 10-1513 (RBW), 2016 WL 1436645, at \*22 (D.D.C. Apr. 11, 2016) (quoting *Republic Airline Inc. v. U.S. Dep't of Transp.*, 669 F.3d 296, 299 (D.C. Cir. 2012)). See also *W. Deptford Energy, LLC v. FERC*, 766 F.3d 10, 17 (D.C. Cir. 2014) (noting that agencies "cannot depart from [prior] rulings without provid[ing] a reasoned analysis indicating that prior policies and standards are being deliberately changed, not casually ignored"); *Wis. Valley Improvement v. FERC*, 236 F.3d 738, 748 (D.C. Cir. 2001) (stating that "an agency acts arbitrarily and capriciously when it abruptly departs from a position it previously held without satisfactorily explaining its reason for doing so"). 26 Secretarial Order 3338, Discretionary Programmatic Environmental Impact Statement to Modernize the Federal Coal Program, at 8 (Jan. 15, 2016) (emphasis added). 27 Notice of Intent, 81 Fed. Reg. at 17,226. 16 In disavowing the myth of perfect substitution, BLM has an unfortunate and long history to refute. Although BLM routinely quantifies the amount of carbon dioxide that would result from mining and burning the coal made available by individual BLM leasing decisions, and often provides a general overview of climate change, in nearly every environmental impact statement and environmental assessment this administration has prepared under NEPA evaluating the climate impact of various coal leasing proposals, the Department has dismissed the notion that its decisions opening up more federal coal have any impact on the total amount of coal mined and burned, and thus on the amount of carbon dioxide emitted from the electric sector. As documented below, this assumption can be found in the environmental analyses for the largest surface mine approvals in the history of the program, comparatively tiny mines in Washington, underground mines in Colorado and Montana, and analyses from as early as 2008 and as recent as last month. The following examples are an illustrative, but by no means exhaustive, list of NEPA review documents in which BLM, OSMRE, and/or the U.S. Forest Service, which is part of the Department of Agriculture, have relied on perfect substitution to help justify its decision to authorize new or expanded coal leases. • West Antelope, proposal to lease 400 million tons of coal (2008): "It is not likely that selection of the No Action Alternative would result in a decrease of U.S. CO<sub>2</sub> emissions attributable to coal-burning power plants in the long term. There are multiple other sources of coal that, while not having the cost, environmental, or safety advantages, could supply the demand for coal beyond the time that the Antelope Mine completes recovery of the coal in its existing leases."<sup>28</sup> • Belle Ayr and Caballo, proposal to lease 230 million tons of coal

(2009): “It is not likely that selection of the No Action alternatives would result in a decrease of U.S. CO<sub>2</sub> emissions attributable to coal-burning power plants in the longer term because there are multiple other sources of coal that, while not having the cost, environmental, or safety advantages, could supply the demand for coal beyond the time that the Belle Ayr, Coal Creek Caballo, and Cordero Rojo Mines complete recovery of the coal in their existing leases.”<sup>29</sup> 28 Bureau of Land Management, West Antelope II FEIS, at 4-109, (2008), available at [http://www.blm.gov/wy/st/en/info/NEPA/documents/cfo/West\\_Antelope\\_II.html](http://www.blm.gov/wy/st/en/info/NEPA/documents/cfo/West_Antelope_II.html) (last visited June 26, 2016). 29 Bureau of Land Management, South Gillette Area Coal Lease Applications FEIS, at 4-120-121 (2009), available at <http://www.blm.gov/publish/content/wy/en/info/NEPA/documents/hpd/SouthGillette.html> (last visited June 26, 2016). 17 • Wright Area coal mines, proposal to lease 2 billion tons of coal (2010): “It is not likely that selection of No Action alternatives would result in a decrease of U.S. CO<sub>2</sub> emissions . . . because there are multiple other sources of coal that . . . could supply the demand.”<sup>30</sup> • Colorado Roadless Rule, proposal to open to leasing 347 million tons of coal (2012): “[C]oal is increasingly a global commodity and any reductions in coal production associated with a roadless rule likely would be by coal from another source.”<sup>31</sup> • John Henry Mine, proposal to develop 740,000 tons of coal (2014): “The end users of coal, in particular the cement manufacturing plant located in Richmond, British Columbia, will show no net increase in CO<sub>2</sub> emissions as [the mine’s] coal will displace coal from other sources.”<sup>32</sup> • Bull Mountain Mine, proposal to develop 100 million tons of coal (2015): “The No Action Alternative would not likely result in a decrease of CO<sub>2</sub> emissions attributable to coal-burning power plants in the long term. There are multiple other sources of coal that could supply the demand for coal beyond the time that the Bull Mountains Mine No. 1 completes recovery of all coal proposed for mining. Without continued coal export from the Bull Mountains Mine No. 1 after the remaining 35 million tons is mined, it is reasonable to expect that power plant(s) would obtain coal from alternative sources on the spot market and coal combustion emissions would be comparable to the Proposed Action, depending on the coal quality and associated efficiency. Negligible impacts to climate change are expected under the No Action Alternative.”<sup>33</sup> • Spring Creek Mine, proposal to develop 84 million tons of coal (2016): “In addition, there is no certainty that GHG emissions at power plants would actually be reduced if the federal coal associated with the Proposed Action was not mined, given that the power 30 Bureau of Land Management, Wright Area FEIS, at 4-141 (2010), available at <http://www.blm.gov/wy/st/en/info/NEPA/documents/hpd/Wright-Coal.html> (last visited June 26, 2016). 31 U.S. Forest Service, Colorado Roadless Rule FEIS, at 138-139 (2012), available at <http://www.fs.usda.gov/roadmain/roadless/coloradoroadlessrules/finalruledocuments> (last visited June 26, 2016). 32 Office of Surface Mining Reclamation and Enforcement, John Henry Mine EA, at 23, (2014), available at [http://www.wrcc.osmre.gov/initiatives/johnHenryMine/JHM\\_EA.pdf](http://www.wrcc.osmre.gov/initiatives/johnHenryMine/JHM_EA.pdf) (last visited June 26, 2016). 33 Office of Surface Mining Reclamation and Enforcement, Bull Mountain No. 1 Mine EA, at 4- 24, (Jan. 2015), available at <http://www.wrcc.osmre.gov/initiatives/bullMountainsMine/BullMountainsMineEA.pdf> (last visited June 26, 2016). 18 plants supplied by [Spring Creek Coal Mine] have alternative sources for coal, and the [Mine] also has non-federal coal reserves that could be mined.”<sup>34</sup> In stark contrast to this long-standing practice of BLM and other agencies, the only times that federal courts have ruled on an agency’s use of perfect substitution, they have rejected the theory. In *Mid States Coal. for Progress v. Surface Transp. Bd.*, the Surface Transportation Board approved a new railroad line that would have provided a shorter route to deliver Powder River Basin coal to power plants in the Midwest. 345 F.3d 520, 532, 550 (8th Cir. 2003). The Surface Transportation Board argued that the rail line would not cause an increase in the use of Powder River Basin coal, since the project would merely provide a shorter and straighter route to power plants for coal mines that already served those plants through existing railways. *Id.* at 549. The Eighth Circuit rejected the unsupported notion that demand would remain unaffected in the face of a proposal that increased the availability and decreased the price of approximately 100 million tons of coal per year coal: [T]he proposition that the demand for coal will be unaffected by an increase in availability and a decrease in price . . . is illogical at best. The increased availability of inexpensive coal will at the very least make coal a more attractive option to future entrants into the utilities market when compared with other potential fuel sources, such as nuclear power, solar power, or natural gas. . . . [The railroad] will most certainly affect the nation’s long-term demand for coal. *Id.* (emphasis added). More recently, the U.S. District Court for the District of Colorado rejected the Forest Service’s reliance on perfect substitution when analyzing the impact of making available approximately 347 million tons of coal in Colorado.

High Country Conservation Advocates v. U.S. Forest Serv., 52 F.Supp. 3d 1174, 1197-98 (D.Colo. 2014). The Forest Service argued that “if the coal does not come out of the ground in the North Fork consumers will simply pay to have the same amount of coal pulled out of the ground from somewhere else—overall [greenhouse gas] emissions from combustion will be identical under either scenario.” Id. The High Country court rejected the Forest Service’s conclusion, explaining that the increased supply made possible by the Forest Service’s decision would “impact the demand for coal relative to other fuel sources” and that “[t]his reasonably foreseeable effect must be analyzed.” Id. at 1198. Significantly, every time agencies have actually analyzed the impact of coal-related proposals by modeling the market impacts, they have concluded that proposals to facilitate coal mining on public lands will result in increased carbon dioxide emissions. 34 Office of Surface Mining Reclamation and Enforcement, Spring Creek Mine EA, at 4-17 (June 2, 2016), available at <http://www.wrcc.osmre.gov/initiatives/SpringcreekMineLBA1/documents/EA0616.pdf> (last visited June 26, 2016).

19 Earlier this year, the Washington Department of Ecology analyzed the impacts of the proposed Millennium Bulk coal export terminal. As part of its analysis, Ecology used the ICF Integrated Planning Model to analyze impacts of the proposal. Ecology studied relevant factors, including how changes in supply can affect coal price. Ultimately, Ecology concluded that the proposal could affect the delivered coal price and thus total coal consumption, recognizing that: “[a]s delivered coal prices change, the demand for coal changes in the opposite direction.”<sup>35</sup> Similarly, following the High Country decision, the Forest Service used the ICF Integrated Planning Model to analyze the market and environmental impacts of the proposal to allow access to approximately 170 million tons of coal in otherwise protected areas of Colorado. In November 2015, the Forest Service released its Supplemental DEIS, which concluded that “[c]hanges in gross production and consumption of coal from the North Fork Coal Mining Area are expected to have an effect on production and consumption of other fuel sources, including alternative supplies of coal, natural gas, and other energy supplies such as renewables, especially in later years of the analysis.”<sup>36</sup> The Forest Service explained that opening up approximately 170 million tons of coal would cause “the mixture of fuels [to] shift[,]” including increases in production and consumption of underground coal, and decreases in production and consumption of substitute fuel sources such as surface coal, natural gas, and renewable energy. Moreover, the Forest Service concluded based on its Integrated Planning Model runs that this relatively modest proposal, in terms of volume of coal when compared to the federal coal leasing program, would displace approximately 40,000 gigawatt hours of renewable energy from the U.S. electricity grid.<sup>35</sup> Washington Department of Ecology, Millennium Coal Export Terminal Draft EIS, SEPA Market Assessment Technical Report, at 4-11 (2016). ICF conducted a literature review to identify a specific demand elasticity, and supplied the following studies when asked to identify the documents it relied upon: Office of Air and Radiation, U.S. Environmental Protection Agency, TECHNICAL SUPPORT DOCUMENT FOR EPA’S MULTI-POLLUTANT ANALYSIS ELECTRICITY DEMAND RESPONSE TO CHANGES IN PRICE IN EPA’S POWER SECTOR MODEL (2005), available at <http://www.epa.gov/airmarket/progsregs/cair/docs/DemandResponse.pdf>; James Espey & Molly Espey, Turning on the Lights: A Meta-Analysis of Residential Electricity Demand Elasticities, 36 J. OF AGRIC. & APPLIED ., no. 1, 2004, at 65, available at <https://ideas.repec.org/a/ags/joaec/42897.html>; R. Laffery, et al., Office of Markets, Tariffs and Rates, Federal Energy Regulatory Commission, DEMAND RESPONSIVENESS IN ELECTRICITY MARKETS (2001); Mark Bernstein & James Griffin, The RAND Corporation, REGIONAL DIFFERENCES IN THE PRICE-ELASTICITY OF DEMAND FOR ENERGY (2005), available at [http://www.rand.org/content/dam/rand/pubs/technical\\_reports/2005/RAND\\_TR292.pdf](http://www.rand.org/content/dam/rand/pubs/technical_reports/2005/RAND_TR292.pdf); Nathan Joo, Matt Lee-Ashley, & Michael Madowitz, Center for American Progress, 5 THINGS YOU SHOULD KNOW ABOUT POWDER RIVER BASIN COAL EXPORTS (2014), available at <http://cdn.americanprogress.org/wp-content/uploads/2014/08/PowderRiver-factsheet.pdf> (From The structural break and elasticity of coal demand in China: empirical findings from 1980-2006); U.S. Energy Information Administration, U.S. Department of Energy, FUEL COMPETITION IN POWER GENERATION AND ELASTICITIES OF SUBSTITUTION (2012), available at <http://www.eia.gov/analysis/studies/fuelelasticities/pdf/eia-fuelelasticities.pdf>.<sup>36</sup> U.S. Forest Service, Colorado Roadless Rule SDEIS, at 80 (Nov. 2015) (emphasis added).<sup>20</sup> over the life of the proposal, and result in a net increase of 130 million tons of CO<sub>2</sub> over the life of the proposal.<sup>37</sup> In sum, the PEIS must disclose the volume of

GHGs likely to occur as a result of each alternative, by acknowledging and disclosing the substitution of effects of other energy sources.

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Comment Number: 0003004\_MasterFormD\_TheSierraClub-2

Organization I: The Sierra Club

Comment Excerpt Text:

Thank you for preparing a Programmatic Environmental Impact Statement (PEIS) of the Federal Coal Leasing Program. The program is outdated, out of step with our nation's commitment to act on climate, and fails to account for the damage done to both local communities and the planet. This review is a critical step in ensuring America meets its climate goals and continues to be an international leader on climate and clean energy following the recent signing of the Paris Climate Agreement.

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Comment Number: 0003006\_MasterFormE\_TWS-1

Organization I: The Wilderness Society

Other Sections: 8.7

Comment Excerpt Text:

We already know burning fossil fuels extracted from our public lands account for 21% of all U.S. greenhouse gases. Yet millions of acres of public lands are open to new coal leasing.

To reform the current coal program, the Bureau of Land Management should disclose and reduce the impacts of mining and burning publicly-owned coal on the climate, our shared public lands and communities as well as ensure taxpayers receive a fair return from the sale of federal coal.

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Comment Number: 0003010\_MasterFormI\_PhysiciansSocialRespon-5

Organization I: Physicians for Social Responsibility

Other Sections: 10

Comment Excerpt Text:

Health effects associated with climate change: Because coal-fired power plants account for so much of U.S. carbon dioxide emissions, coal is a major contributor to the health impacts of climate change. Determination of the climate threats needs to be quantified by the PEIS to evaluate the ultimate cumulative impact of additional leasing on federal land. For example, more frequent heat waves will lead to a rise in heat exhaustion and heat stroke, potentially resulting in death, especially among elderly and poor urban dwellers. Rising temperatures are expanding the ranges for disease-carriers like mosquitoes and ticks in some cases causing epidemics of Lyme disease. Drought causes detrimental effects on food supply resulting in crop failure, higher prices and worsening nutrition. The increased frequency of intense precipitation events contributes to flooding, water contamination and the spread of infectious and mosquito-borne diseases. Drought, declining food supplies and rising sea levels increase the migration of affected populations and increase armed conflict and global instability.

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Comment Number: 0003015\_MasterFormN2\_WORC-2

Organization I: Western Organization of Resource Councils

Comment Excerpt Text:

Accounting for the impacts of mining, including climate change, and

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Comment Number: 0003016\_MasterFormO\_EarthJustice-2

Comment Excerpt Text:

Using public lands in a manner consistent with America's climate goals and leadership on clean energy



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Comment Number: 0003035\_Coppin\_J\_06082016-1

Organization I:Keep Electricity Affordable

Commenter I:Robert Coppin

Comment Excerpt Text:

Man caused global warming has not been proven. Glacier shortening in the Alps started in 1750. Carbon dioxide emissions to the atmosphere started to increase in 1900. The effect of increased carbon dioxide concentration in the atmosphere probably started in 1970 because of the lag effect. Increased carbon dioxide concentration after 1900 can not cause glacier shortening in 1750.

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Comment Number: 0003039\_Estey\_J\_06042016-1

Organization I:Keep Electricity Affordable

Commenter I:Wayne Estey

Comment Excerpt Text:

You would have to shut down every power plant in the US and it would effect temperature by only .1 degree in 100 years. There is 50000 power plants world wide and 8000 in US. Coal is slowly going away.

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Comment Number: 0003125\_Gurevich\_07282016-1

Commenter I:Yulia Gurevich

Comment Excerpt Text:

To avoid the worst impacts of climate change, we must keep 80% of existing fossil fuels in the ground - to do so, we must halt new coal mining leases on federal land.

There is no need to put even more of our coal in the hands of big polluters who profit off of the destruction to our land, air, and water and exacerbate climate change.

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Comment Number: 0003128\_Lostetter\_06052016-1

Commenter I:Robin Lostetter

Comment Excerpt Text:

In addition to the many urgent reasons to protect the environment and transition away from coal use, we need to retain forested lands for their capability to cleanse the air of CO2 and provide us with basic oxygen.

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Comment Number: 0020008\_Hoem\_20160712-7

Commenter I:Harold Hoem

Comment Excerpt Text:

Burning coal is the greatest contributor of greenhouse gases and therefore climate change.

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Comment Number: 0020009\_Shurgot\_20160712-1

Commenter I:Michael Shurgot

Comment Excerpt Text:

CO2 pollution is destroying the atmosphere everywhere, as Bill McKibben showed in his book The End of Nature way back in 1989!

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Comment Number: 0020010\_Sims\_20160712-1

Commenter I:Kimberly Sims

Comment Excerpt Text:

Coal needs to be kept in the ground where its carbon is sequestered instead of being released into the atmosphere.

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Comment Number: 0020011\_Perrott\_20160712-1

Commenter I: Pamela Perrott

Comment Excerpt Text:

Global warming is real and it is here. We need to transition off of coal as soon as possible - it's the worst fuel for CO2 pollution and other air pollution.

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Comment Number: 0020013\_Hyndman\_20160712-2

Commenter I: Donald Hyndman

Comment Excerpt Text:

Coal burning anywhere on Earth is by far the largest polluter/CO2 generator of all energy sources - CO2 has been well documented as the leading source of climate change.

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Comment Number: 0020021\_Hoem\_20160712-2

Commenter I: Janice Hoem

Comment Excerpt Text:

Burning coal is the greatest contributor of greenhouse gases and therefore climate change.

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Comment Number: 0020027\_Harris\_20160722-4

Commenter I: Mark Harris

Comment Excerpt Text:

If we are going to stop catastrophic climate change, we must permanently stop new coal mining on public lands.

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Comment Number: 0020034\_Koontz\_TownofHotchkiss\_20160729-6

Organization I: Town of Hotchkiss

Commenter I: Wendell Koontz

Other Sections: I

Comment Excerpt Text:

the Town looks to take a pragmatic and realistic approach to the politics of climate change. Indeed the Bureau of Land Management includes consideration of potential greenhouse gas (GHG) emissions in the production and use of coal when potential lease sales are analyzed under the National Environmental Policy Act (NEPA). The Department of the Interior has successfully defended its analyses of climate impacts in a series of legal challenges brought by coal project opponents.[4]

[4] See:

\* *WildEarth Guardians v Salazar*, 880 F. Supp. 2d 77 (D.D.C. 2012) aff'd 738 F. 3d 298(D.C. Cir. 2013);

\* *WildEarth Guardians v Forest Service*, No. 12-CV-85 (D. Wyo. 2015);

\* *Western Organization of Resource Councils v. Jewell*, No. 14-1993 (D.D.C. 2015)

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Comment Number: 0020037-1

Commenter I: Corey Weathers

Other Sections: I0

Comment Excerpt Text:

We strongly oppose coal leasing in WA state as coal is not only a public health threat but also one of the key contributors to climate change

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Comment Number: 002501\_Ring\_20160728-3

Organization I: Climate911

Commenter I: Wendy Ring

Comment Excerpt Text:

Accelerating climate disaster

US federal coal reserves amount to 25% of the world's carbon budget for 2 C global warming. Keeping this coal in the ground is an essential part of the United States' international climate commitments. Existing federal coal leases will still be in production when the global carbon budget for 2 degrees is exceeded (EcoShift, 2016). New leases will speed up this accumulation of carbon dioxide in the atmosphere and bring us closer to a tipping point to runaway global warming.

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Comment Number: 003067\_Karlsda\_1072016-1

Organization I:

Commenter I: Slyvie Karlsda

Comment Excerpt Text:

Among its deadly consequences, it's attacking the ocean and the ocean life we depend on for food, recreation, and the oxygen we breathe. Coral is dying from a warmer ocean, fish are forced to change their migratory patterns and suffering depletion, toxic algae is proliferating, shellfish are having problems growing shells due to water acidification

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Comment Number: 003073\_Gordon\_1872016-1

Organization I:

Commenter I: Tom Gordon

Comment Excerpt Text:

As coal is burned, CO<sub>2</sub> is released. CO<sub>2</sub> is a gas that disperses all over the globe. As it circulates around, it combines with water or water vapor to create a mild acid. Slowly but inexorably our oceans are becoming more acidic as a result. Ocean acidification is a huge problem for the economy of Washington State. It affects one of our major industries, one that earns an estimated \$270 million a year for the state coffers every year, the shellfish industry. Acidic water affects oysters and, even more important, shell-forming marine plankton which is critical in basic marine food chains. These effects start in the higher latitudes and gradually move toward the equator. The burning of coal in Asia will affect ocean acidification all over the world, especially having an impact on ecosystems such as coral reefs, an important support system for fish stocks

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Comment Number: 3057-1

Organization I:

Commenter I: Jim Steitz

Comment Excerpt Text:

Scientists have shown with overwhelming and ever-increasing evidence that our emissions of carbon dioxide, if pursued for several more decades, will lead to global warming of 4-5 Celsius or more. This level of climate change would devastate the basic life-support functions of Planet Earth, and place in grave jeopardy the persistence of human civilization. The current level of carbon dioxide is over 400 parts per million and increasing. The warming to date, 1 degree C, is more rapid than anything Earth has experienced in several million years, and will accelerate under projected emission scenarios

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Comment Number: 3057-2

Organization I:

Commenter I: Jim Steitz

## Comment Excerpt Text:

To keep climate change within a level tolerable for human civilization requires, as a mathematical certainty, that 80% of known remaining fossil fuel reserves must remain underground, not converted into atmospheric carbon dioxide. This necessarily includes federally owned bodies of coal, oil, and gas on public lands, which account for 40% of domestic coal production, an additional supply that is retarding our urgently needed transition from carbon fuels.

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Comment Number: 000001242\_SANDERSON\_Colorado Mining Association \_2016062-5

Organization I:Colorado Mining Association

Commenter I:Stuart Sanderson

## Comment Excerpt Text:

And it's important to keep in mind that in assessing the minuscule climate related carbon emissions from coal, it's important to keep in mind that these are already being regulated.

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Comment Number: 000001245\_COFIELD\_20160623-3

Organization I:Wagner Equipment Company

Commenter I:Brad Cofield

## Comment Excerpt Text:

Let's consider the climate impacts of the Federal Coal Lease Program. The BLM already includes consideration of potential greenhouse gas emissions in the production and use of coal when potential lease sales are analyzed under the National Environmental Policy Act. The Department of Interior successfully has defended its analysis of climate impacts in a series of legal challenges brought by coal project opponents.

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Comment Number: 000001264\_Breen\_20160623-1

Organization I:State of Colorado Organizations

Commenter I:Katie Breen

## Comment Excerpt Text:

Extracting and burning coal at the rate it has been is harming our climate, causing irreplaceable damage to land, including our air and water. Coal companies are not paying their fair share for the damage they're causing, and our generation is left to foot the bill. That needs to change.

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Comment Number: 000001296\_Gawler\_20160623-2

Organization I:

Commenter I:Maddy Gawler

## Comment Excerpt Text:

Currently, every second, a person is displaced due to climate change and natural disasters. The Intergovernmental Panel on Climate Change predicts that by the end of the century, 50 million to 1 billion individuals will be displaced. The Federal Coal Leasing Program is not -- is contributing to this pollution that is creating climate refugees.

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Comment Number: 000001301\_Permut\_20160623-1

Organization I:Climate Reality Project

Commenter I:Susan Permut

## Comment Excerpt Text:

Also, mining coal and burning coal poisons our air and water and contributes to climate chaos. And for me, that is the crux of the dilemma about coal. Yes, people need good jobs and they need to be able to feed their families

and enjoy the beauty of the landscape here in the West. But, we need to find a different way for all our hardworking miners to make a living. This is something that is bigger than Western Colorado or the U.S. It is a global issue.

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Comment Number: 00001284\_Sager\_20160623-1

Commenter I: Jennifer Sager

Comment Excerpt Text:

Last May, the White House released a report called the National Security Implications of the Changing Climate, which included findings from DHS, DOD, and other Federal agencies. This report makes clear that climate change poses an immediate and far-reaching threat to America's safety and stability. The Pentagon refers to climate change as a threat multiplier because it aggravates existing stressors, such as poverty, poor farming conditions and political instability, which in turn provides environments where terrorist activity thrives. This results in the need for more frequent defense missions. This increased scale and intricacy costs human lives and taxpayer dollars. Domestically the IC and DOD recognizes that climate change poses serious threats to our coastal communities and military bases, two essential aspects of our economy and food security, like agriculture and water; and to our critical national energy and transportation infrastructure.

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Comment Number: 00001292\_Grako\_20160623-3

Organization I: Bowie Resources

Commenter I: Lou Grako

Comment Excerpt Text:

There has been a concern that fossil fuels cause global warming. But, according to the scientific studies, in the last 15 years, there has been little or no change in the earth's temperature.

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Comment Number: 00001303\_Leahy\_20160623-1

Organization I: New Mexico Wildlife Federation

Commenter I: Todd Leahy

Comment Excerpt Text:

First, rely on independent peer review Clients. We strongly believe that the nation cannot continue to lease coal without taking into account that it is the most significant source of greenhouse gas emissions. The current PEIS, under which the Federal coal was leased, was completed in the '80s. Every one of our hottest years on record has occurred in the last 20 years. A scientific consensus was developed around the reality of global warming. And the BLM must grant its new PEIS in this reality.

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Comment Number: 0000728\_noname\_20160628-1

Comment Excerpt Text:

We ask that the BLM address the evident inconsistency between the conclusions of the best available climate science and the agency's continued expansion of the federal coal program

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Comment Number: 0000741\_Perry\_NWF-2

Commenter I: Edward Perry

Comment Excerpt Text:

Climate scientists have firmly established that fossil fuels are causing the planet to heat up, leading to massive wildfires, more intense hurricanes, long-term drought, loss of wildlife and public health problems. The costs generated by these environmental disasters are being borne but by the people who are being harmed instead of the companies who have created the harm. Already, wildlife all across our great country are already being

harmed. Here in Pennsylvania, scientists forecast that we are on the way to losing our state tree, our state fish, and our state bird. Species that have been with us for millions of years will be gone in the next 100 years, and this loss to our biological heritage needs to be considered an external cost that someone should pay for.

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Comment Number: 0000849\_Perry\_20160628-3

Organization I:NWF

Commenter I:Ed Perry

Comment Excerpt Text:

Climate scientists have firmly established that fossil fuels are causing the planet to heat up, lead to massive wildfires, more intense hurricanes, loss of wildlife and public health problems. These costs generated by these environmental disasters are being borne by the people who are being harmed, not by the companies who are creating this harm. Already, wildlife are seeing the effects of climate change all across our great country. And here in Pennsylvania scientists forecast that our state tree, the hemlock, our state fish, the brook trout, and our state bird, the rough grouse, will be gone in the next 90 years unless we take action to reduce carbon pollution. This costs and this loss of our biological heritage needs to be considered and someone should be bearing that cost.

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Comment Number: 0000852\_Burns-I

Commenter I:Laura Burns

Comment Excerpt Text:

We ask that the BLM address the evident inconsistency between the conclusions of the best available climate science and the agency's continued expansion of the Federal Coal Program

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Comment Number: 0000854\_Doyon\_20160628-1

Commenter I:Michelle Doyon

Comment Excerpt Text:

We need climate protection reform. The Federal Coal Program accounts for roughly 40 percent of U.S. coal production linking it to 13 percent of U.S. greenhouse gas emissions. BLM must assess the external cost that mining and burning federal coal imposes on society, disclose to the public and decision makers how BLM's decisions to lease federally owned coal affects the amount of wind and solar generation available in the marketplace. BLM must evaluate an alternative that would phase out federal coal leasing and create a plan transition of the federal government out of the coal leasing business.

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Comment Number: 0000854\_Doyon\_20160628-5

Commenter I:Michelle Doyon

Other Sections: 4.6

Comment Excerpt Text:

We call on BLM to prepare a thorough Environmental Impact Statement under the National Environmental Policy Act that critically evaluates the programs's climate and economic impacts for the very first time. The review must be comprehensive in scope. It must be transparent with public participation, and the review must acknowledge the scientific consensus that the vast majority of fossil fuels must remain in the ground in order to avoid the worst effects of climate disruption.

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Comment Number: 0000870\_erickson\_CitizesCoalCouncil-I

Organization I:Citizens Coal Council

Commenter I:Aimee Erickson

Other Sections: 8.8

Comment Excerpt Text:

Even though the coal industry has seen a significant decline over the last decade, we can't ignore the reality of the United States is the fourth largest source of coal exports in the world. Of those exports, the majority of our coal is headed to Asia. Joby Warrick in a Washington Post article put it most aptly: "Each shipment highlights what critics describe as a hypocrisy, underlining U.S. climate policy: While boasting of pollution cuts at home, the United States is facilitating the sale of large quantities of government-owned coal abroad." To make it abundantly clear, continuing the mining and export of government owned coal is making a statement to the world where our priorities lie and most importantly it goes against President Obama's Climate Action Plan. By the Bureau of Land Management not taking into account the effects of coal exports on global warming, you are undermining global efforts to address climate change. In yesterday's USA Today article on the West Virginia floods, it stated that climate change may have added to this disaster. According to the National Climate Assessment, the part of the U.S. that includes West Virginia has seen a 71 percent increase in extreme precipitation since 1958. We are exporting our pollution and that pollution is not only still contributing to global climate change, but its local effects are impacting poor and vulnerable populations. Now is the time to take a serious stance on climate change and protect the most vulnerable.

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Comment Number: 0000872\_Kraybill-2

Commenter I: Fred Kraybill

Comment Excerpt Text:

I ask the BLM and the Department of the Interior to make addressing climate change your most important priority when considering how to revamp the federal coal leasing program.

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Comment Number: 000857\_Wisenmayer\_20160628-1

Commenter I: Randall Weisenmayer

Comment Excerpt Text:

a significant amount of coal is being extracted from our public lands. This means that a significant amount of carbon dioxide, mercury, lead and other toxic materials are being spewed into the atmosphere at a cost of about \$300 billion estimated. That's far more than the \$68 billion that was shown up there as income generated from the extraction of coal. Today the carbon dioxide levels are 460 parts per million. That's up from 180 parts per million. The ice is melting. Greenland's ice caps, glaciers are melting. Antarctica's glaciers are melting. Alpine's glaciers are melting. And according to James Hanson, the current rate of melting, sea level rise expected to go up or rise by 12 feet by the end of this century. That's 12 feet by the end of this century. It's estimated that 2 billion people are going to be displaced by the sea level rises. That's far more extensive in terms of the losses there than the short term gains by the extraction of fossil fuels. The oceans are dying. The carbon dioxide levels have caused the oceans to warm and acidify. This acidification is ruining our reefs, which are an ecological indicator of the tropical rain forest in terms of its reduction of ecosystems, and at the same time that plankton is being destroyed in the oceans as well. Plankton, by the way, is a source of 70 percent of our oxygen that we breathe. In addition to this, this warming is causing the melting of permafrost and we see methane being released. Methane levels have been recorded at that exceeding 3,000 parts per billion. That's the highest rate of methane that has been recorded. Methane is 80 times more potent than greenhouse gas than carbon dioxide is, according to Michael Mann in his book "Dire Predictions." For the sake of future generations, we must transition from fossil fuels to renewable sources of energy. For the sake of our eternity of Earth's ecosystems that support human life on this planet, we must transition from fossil fuels to renewable energy sources.

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## Issue 4 - Carbon/GHG Emissions

### ISSUE 4.1 - SOCIAL COST OF CARBON, METHANE, ETC.

Total Number of Submissions: 73

Total Number of Comments: 125

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Comment Number: 00000159\_ Kreider\_20160517-2

Commenter I:Kalee Kreider

Comment Excerpt Text:

look at the social cost of carbon. It was a concept that was introduced recently and that the National Academies of Science have looked into and former council of economic adviser Jim Stock just recently put out a paper on this issue, but it is a complex set of issues to try to look at how and in what way we should be looking at the issue of climate change across federal agencies, which includes the Department of Interior and the Bureau of Land Management.

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Comment Number: 00000163\_ MORALES\_20160517-1

Commenter I:Patrick Morales

Other Sections: 1

Comment Excerpt Text:

The current policy and program used to manage the resources on and within our federal lands must be brought up to date with the true cost of the life cycle of coal included in determining the royalty fees are the externalities that are described in a study, which I'm going to leave you a copy of. Came out of Harvard, their medical school, in 2011. It is Epstein, et al. And it shows that the annual -- This is an annual number. This is a quote: "Our comprehensive review finds that the best estimate for the total economically quantifiable cost, based on a conservative weighting of many of the studies' findings, amount to some \$345 billion annual." That is looking at everything from lung damage to (Inaudible) effects, and in some cases not all the health effects, as you will see in the study, but \$345 billion, and it doesn't include the subsidies and such that are received every year amongst the different industries, parks and industry.

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Comment Number: 00000164\_ LEVENSHUS\_20160517-3

Organization I:Sierra Club

Commenter I:Jonathan Levenshus

Comment Excerpt Text:

Incorporate the social cost of carbon into royalty rates so that companies pay for the right to mine taxpayer-owned coal. It will ensure a true cost of calculating the mining and burning of coal and what that cost imposes on society.

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Comment Number: 00000307\_ SONDAK\_20160519-1

Organization I:Town of Alta

Commenter I:Harris Sondak

Comment Excerpt Text:

It is time to consider the environmental and social costs of carbon when evaluating the price of federal coal. Science shows that the mining and burning of coal contributes to climate change. We must internalize those costs by including them in the price of extracting coal from federal land.

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Comment Number: 00000309\_ CAWLEY\_20160519-1

Commenter I:Chris Cawley

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## Comment Excerpt Text:

It's time for the Department of Interior to account for these social environmental costs.

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Comment Number: 0000363 \_HEIN\_20160519-5

Organization I: Institute for Policy Integrity

Commenter I: Jayni Hein

Other Sections: I

## Comment Excerpt Text:

The Interior should also use the social cost of carbon and the social cost of methane to quantify the climate impacts of proposed alternatives. These tools are critical to evaluating the overall return of the Federal Coal Program to all citizens and taxpayers. The Interior should also analyze the optimal term for any new and modified coal leases by assessing the social cost of carbon and social cost of methane and using potential adders to the royalty rate. Both NYU Policy Integrity and Vulcan Group have conducted analysis on increasing royalty rates to account for some of these costs. We found that using an upstream social cost methane adder, which would be equivalent to only a dollar per ton of coal would add up to \$2 billion in royalty revenue over four years in just four western states, Wyoming, Colorado, Montana, and Utah. Vulcan found that using an adder instead of 20 percent for the social cost of carbon would add nearly 3 billion in royalty receipts by 2025, with those benefits extending all the way to 2050. In other words, by increasing royalty rates to recoup some of the social and environmental cost of production, the Interior can increase revenue for states and the Federal Government while also reducing greenhouse gas emissions.

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Comment Number: 0000604-1

Commenter I: Richard Reavey

Other Sections: 4.6

## Comment Excerpt Text:

If the administration wants to impose new taxes on coal mined on federal lands, it must seek legislation authorizing such new taxes from Congress. The Secretary has no statutory authority to impose a "social cost of carbon" via royalty or leasing rates. She cannot impose a climate change tax. If she wishes the federal coal program to "reflect the administration's climate objectives", she must obtain Congress' authorization to do so.

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Comment Number: 0000620-1

Organization I: University of Illinois

Commenter I: Gerald C. Nelson

## Comment Excerpt Text:

As an economist, I strongly favor relying on market based mechanisms to simplify the leasing program and increase its transparency. In particular, the application of the royalty rate to the gross market price, a statistic that is readily and widely available, would make the program much more transparent. However, without further modification, this approach does not take into account the negative effects of additional carbon pollution from coal burning. A simple modification would be to add the social cost of carbon to the gross market price and apply the royalty rate to the combined amounts.

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Comment Number: 0000620-4

Organization I: University of Illinois

Commenter I: Gerald C. Nelson

## Comment Excerpt Text:

The US court system has recognized the harmful effects of carbon pollution and directed the government to take these effects into account. For example, the United States District Court for the District of Colorado in 2014

specifically required the use of the social cost of carbon (SCC) in a cost-benefit analysis underpinning the approval of federal coal leases. This information should become a key part of revisions to the leasing program to address the PEIS focus on fair return, a topic to which I now turn

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Comment Number: 0000769\_Cascade\_Great Old Broads\_20160623-4

Organization I: Great Old Boards for Wilderness

Commenter I: Robyn Cascade

Comment Excerpt Text:

Require NEPA analyses to fully evaluate the social cost of carbon and reflect the impact of leasing coal on our global climate and the future of our communities. For example, firefighters in Colorado have spoken out about the increase in the number, intensity, size, danger, and cost of wildfires due to climate change. We ask that you account for these costs in lives, property, and decimated forests in our state and across the nation.

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Comment Number: 0000812-2

Organization I: National Parks Conservation Association

Commenter I: Cory MacNulty

Comment Excerpt Text:

Coal leasing reforms should systematically consider the true costs and impacts to communities, climate, health and the environment from the full lifecycle of coal.

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Comment Number: 0001105\_BODDIE\_20160621-1

Organization I: Bend

Commenter I: Nathan Boddie

Comment Excerpt Text:

The review of federal coal and its contributions to climate change comes at a pivotal moment and the Department of the Interior must ensure that the environmental consequences of carbon are accurately reflected in the cost of coal.

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Comment Number: 0001161-1

Commenter I: Mark Hennon

Comment Excerpt Text:

There are many reasons to keep coal in the ground, but let's focus on methane pollution, which big coal has done its best to hide. Coal mining dumps millions of tons of climate-destroying methane gas into the air. Most of it goes unmeasured because big coal is not exactly scrupulous about self-reporting the extent of its own sins.

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Comment Number: 0001161-2

Commenter I: Mark Hennon

Comment Excerpt Text:

Methane pollution heats us up far more than carbon dioxide. Methane from just one coal train causes significant global warming. A standard coal train of 120 cars carries 120 tons of coal for each car for a total of 14,400 tons of coal.

Based on the latest science, the methane pollution from that coal is equal to at least 6,400 tons of carbon dioxide. That's 6,400 tons of pollution for every 14,400 tons of coal, 44 percent of the weight of each coal train.

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Comment Number: 0001178-1

Commenter I: Ruby

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**Comment Excerpt Text:**

I want to suggest that you should include as one of the elements in the price calculation the social costs of carbon. When the coal is extracted and burned, it does, of course, release carbon dioxide into the air, and that's what we price.

The social cost of carbon for a given year is an estimate in dollars, but the present discounted value of the damage caused by one metric ton increase in CO<sub>2</sub> emissions into the atmosphere for that year were equivalently the benefits of reducing CO<sub>2</sub> emissions by the same amount in that year.

The social cost of carbon is intended to provide a comprehensive measure of the monetized value of the net damages from global climate change that results from an additional unit of CO<sub>2</sub>, including but not limited to changes in the net agricultural productivity use, energy use, human health effects, property damages from increased blood risk.

Federal agencies use the social cost of carbon to value the CO<sub>2</sub> emission's impacts on various regulations, including emission and fuel economy standards for vehicles, emission standards for industrial manufacturing power plants, solid waste incineration, and appliance energy efficient standards and I believe it should be used in writing this EIS.

The amount of CO<sub>2</sub> released per ton of coal will depend on the actual use of coal and the way it is burned or consumed. This will vary by lease and can be more or less depending, for example, on the efficiency of the power plant. But for the most part, it will be sufficient to assume that it is burned in the national average coal-fired power plant unless there is a dedicated contract for purchase of the coal for the entire lease period.

The U.S. federal government's interagency working group on the social cost of carbon has developed a methodology for estimating the social cost of carbon, and has applied that methodology to produce estimates that government agencies can use in regulatory impact analyses under Executive Order 12866.

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Comment Number: 0001178-2:

Commenter I: Ruby

Other Sections: I

Comment Excerpt Text:

I am recommending that you use these values. I have attached to my comments which I gave you, a page from a recent report in the US National Academy of Sciences. It gives you the values in three different interest rates and two different levels of probability from the Monte Carlo calculation method as used to develop these estimates.

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Comment Number: 0001181-1

Organization I: Green Peace

Commenter I: Britten Cleveland

Comment Excerpt Text:

Our federal agencies must incorporate the social cost of carbon and its valuation of what we deem a fair price for leasing and the taxpayer-owned coal.

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Comment Number: 0002009\_CenterBioDiversity\_20160329-8

Organization I: WildEarth Guardians

Commenter I: Jeremy Nichols

Comment Excerpt Text:

Ensuring that carbon costs (including the costs of methane) are accounted for in each and every leasing and

mining plan approval that may move forward as the programmatic environmental impact statement is completed. As you have acknowledged, the moratorium on new leasing does not affect a number of pending leases and does not affect the Interior Department's review and approval of mining plans authorizing the extraction of leased federal coal. To ensure the Department and the American public are informed of the actual costs and benefits of near-term coal approvals and to comply with the National Environmental Policy Act, interior must, at a minimum, ensure that the social cost of carbon emissions due to coal mining, transportation, and combustion are analyzed and considered. This is already being done in the context of a proposal to open roadless forest to coal leasing in western Colorado

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Comment Number: 0002025\_Grove\_20160131-1

Commenter I: Linda Grove

Other Sections: I

Comment Excerpt Text:

I just found out that a new report was released Monday (January 25th) by three of the world's leading environmental organizations: Greenpeace, Sierra Club, and 350.org.

In the report, titled *Keep it in the Ground* (Pdf), it says that in order to curb escalating greenhouse gas emissions and fend off their disastrous consequences, "the overwhelming majority of the large coal reserves in China, Russia and the United States as well as more than 260 billion barrels of oil reserves and 60% of gas reserves in the Middle East must all remain unused". Arctic resources should also "be off-limit to development", they say.

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Comment Number: 0002027\_Sharon\_20160523-1

Commenter I: Sharon Nolting

Other Sections: I

Comment Excerpt Text:

In January, an article in *Climate Progress* stated that "the combustion of coal from federal lands accounts for more than 57 percent of all emissions from fossil fuel production on federal lands." An even more recent study by Greenpeace found that almost 80% of the coal produced by the 3 leading coal companies is taken from our public lands.

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Comment Number: 0002099\_Notkin\_20160611-1

Organization I: KnowWho Services

Commenter I: Debbie Notkin

Comment Excerpt Text:

I am relying on you to include, at a minimum, this list of topics:

The pros and cons of phasing out coal leasing on publicly-owned lands making companies pay the full cost of carbon, including carbon emissions

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Comment Number: 0002100\_OHair\_20160613-3

Commenter I: Todd O'Hair

Comment Excerpt Text:

Part of the rationale for the PEIS seems to be rooted in the desire to make coal accountable for its carbon cost. Raising the royalty rate in an effort to compensate for carbon cost would be considered a carbon tax. I do not believe the Secretary has the legal authority to raise or create new taxes and any rationalization to increase royalty rates due to "carbon costs" can only be construed as a carbon tax.

---

Comment Number: 0002111\_Ross\_20160623-2

Organization I:

Commenter I: Alexa Ross

Comment Excerpt Text:

If the social cost of carbon were incorporated into the lease price, federal coal should be as high as \$62 per ton. By putting an accurate price that reflects the true economic, environmental and social cost of federal coal, it would become clear that the only place for dirty fossil fuels like coal is to leave them in the ground.

---

Comment Number: 0002111\_Ross\_20160623-3

Commenter I: Alexa Ross

Comment Excerpt Text:

For coal leases already in production, using the social cost of carbon to raise the royalty rate and other fees for federal coal production could help return millions of dollars to state budgets to support coal workers, schools, infrastructure, and other important programs.

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Comment Number: 0002122\_Swanson\_20160623-3

Commenter I: C. David Swanson

Comment Excerpt Text:

We must not allow bad science, radical elites in the federal government, and radical environmentalists to kill jobs and strangle the American economy further! CO2 isn't a pollutant in the first place trees and plants need it for photosynthesis, remember nobody wants to destroy the environment and like everything else which we use and eat, it comes from the ground and, therefore, must be gotten out of the ground harvested

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Comment Number: 0002131\_Zuteck\_20160408-1

Commenter I: Michael Zuteck

Comment Excerpt Text:

Please ensure that reform of the federal coal program accelerates our transition to a clean energy future, both by limiting expanded mining on public land, and by deriving climate cost adjusted revenue from mining in progress.

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Comment Number: 0002137\_Zeigler\_20160607-9

Commenter I: Bob Ziegler

Comment Excerpt Text:

In your presentation you ask: •How can we best measure and assess the climate impacts of continued Federal coal production, transportation, and combustion? June 27, 2014 United States District Judge R. Brooke Jackson ruled that in assessing Climate Impacts BLM and Forest Service should use the social cost of carbon protocol. He states: "Interagency Working Group on Social Cost of Carbon, Technical Support Document (Feb. 2010); see FSLeasing- 0041245 at 0041403, 0041404. The protocol—which is designed to quantify a project's contribution to costs associated with global climate change—was created with the input of several departments, public comments, and technical models. FSLeasing-0041245 at 0041403, 0041404-06. The protocol is provisional and was expressly designed to assist agencies in cost benefit analyses associated with rulemakings, but the EPA has expressed support for its use in other contexts." Why is this not pursued?

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Comment Number: 0002147\_Anderson\_20160621\_BlueGreenAlliance-11

Organization I: BlueGreen Alliance

Commenter I: Kim Glas

Comment Excerpt Text:

transparent carbon accounting by the USGS will provide critical information for the public and the federal government to manage carbon emissions as part of the administration's Climate Action Plan, and to better enable an assessment of the true market value of extracted resources, accounting for all externalized costs.

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Comment Number: 0002151\_Cinnamon\_20160629-3

Organization I: Unacceptable Risk Film

Commenter I: Sophia Cinnamon

Comment Excerpt Text:

Climate change is creating a life safety issue on the fireline due to unprecedented fire behavior. We know carbon pollution is accelerating climate change and the burning of coal is the single largest source of carbon emissions.

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Comment Number: 0002155\_Krupnick\_20160622-1

Organization I: Center for Energy and Climate Economics Resources for the Future

Commenter I: Alan Krupnick

Other Sections: 1

Comment Excerpt Text:

In March of 2015, we released a report examining the legal and economic issues associated with putting a carbon charge on federal coal;(1) A modified version of this report will be a forthcoming article in Environmental Law Reporter. (<http://www.rff.org/files/sharepoint/WorkImages/Download/RFF-DP-15-13.pdf>).

(1) Krupnick et al. 2015. Putting a Carbon Charge on Federal Coal: Legal and Economic Issues. RFF DP 15-13. Washington, DC: Resources for the Future.

Our legal analysis concluded the following:

- BLM appears to have the statutory and regulatory authority to institute such a charge, with the clearest place to do so being through a modification to the royalty rate.
- A carbon charge sufficiently large enough to dramatically curtail federal coal leasing could face legal risk by violating the "dual mandate" to balance environmental goals and federal revenue generation.
- The optimal solution would be an economy-wide carbon charge on all fossil fuels, irrespective of federal, state, or private ownership.

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Comment Number: 0002155\_Krupnick\_20160622-10

Organization I: Center for Energy and Climate Economics Resources for the Future

Commenter I: Alan Krupnick

Organization 2: Resources for the Future

Other Sections: 2

Comment Excerpt Text:

Consideration for partnership with relevant subnational (notably state/regional) and international partners on setting carbon charges on publicly owned fossil fuels, including coal. We note particularly the ongoing North American energy harmonization dialogue with Canada and Mexico as a possible venue for coordinating policies.

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Comment Number: 0002155\_Krupnick\_20160622-3

Organization I: Center for Energy and Climate Economics Resources for the Future

Commenter I: Alan Krupnick

Other Sections: 8.5

Comment Excerpt Text:

The lack of competitiveness in the federal coal leasing market may limit the effectiveness of any carbon charge. Since most leases are granted in bids with only one bidder, bidders may simply reduce their bid by some amount

of the carbon charge. Protections against such actions may be gained through evaluation of BLM's internal fair market valuation processes to ensure that climate costs are considered in those processes.

- The Administration's Interagency Working Group on the Social Cost of Carbon has released estimates for the social cost of carbon for agencies to consider in their programs.

- At the midrange SCC estimate (\$46/ton CO<sub>2</sub>), the corresponding carbon charge would be over \$90/ton of coal, which far exceeds the average mine-mouth price of coal from the Powder River Basin (recently selling at around \$9.35/ton).

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Comment Number: 0002155\_Krupnick\_20160622-9

Organization I: Center for Energy and Climate Economics Resources for the Future

Commenter I: Alan Krupnick

Other Sections: 1

Comment Excerpt Text:

Tracking of the various Administration-wide initiatives on use of the social cost of carbon in federal decisionmaking. The Council on Environmental Quality in December 2014 released new proposed draft guidance for assessing the climate impacts in federal NEPA documents. As of this writing, this draft guidance has not been further finalized, and case law continues to lack definitive guidance. Additionally, the National Academies of Science is currently conducting a study assessing approaches to updating the social cost of carbon for which the Department of Interior is a sponsor along with others.

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Comment Number: 0002157\_Burger\_SabineCenter\_09132016-4

Organization I: Sabine Center for Climate Change Law

Commenter I: Michael Burger

Other Sections: 8.7

Comment Excerpt Text:

Ken Gillingham discussed coal mined from federal lands and the royalties charged for that extraction. He noted that 42% of thermal coal sold in the U.S. is "federal coal" and that such coal had out-competed other sources on price for decades. Gillingham then explained several of the reasons that the Department of Interior is reviewing its coal leasing program and planning to issue a programmatic environmental impact statement to update that program: royalties charged for coal are 1/6th its market price and many times below the Social Cost of Carbon (in contrast to other fossil fuels, for which royalties are closer to what charging the SCC would yield); 90% of auctions have a single bidder because they are generally for continuations rather than new leases; and most bids for those leases are near the (confidential) minimum bid. Gillingham then noted that charging royalties equal to the SCC would effectively keep federal coal in the ground and suggested that charging 20% of the SCC—because royalties are split with states—could provide a revenue stream for programs that ease the pain of a transition away from coal.

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Comment Number: 0002158\_Burger\_SabineCenter\_9132016-1

Organization I: Sabine Center for Climate Change Law

Commenter I: Michael Burger

Other Sections: 2

Comment Excerpt Text:

One alternative would be to impose a carbon price on federal coal. To assess its options, BLM can undertake an environmental review under the National Environmental Policy Act (NEPA) that accounts for greenhouse gas (GHG) emissions under a range of alternative scenarios and that uses the Social Cost of Carbon and Social Cost of Methane, or perhaps some other metrics, to assign a monetary value to associated climate impacts.

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Comment Number: 0002162\_Jones\_20160519-2

Organization I:

Commenter I: Eugene Jones

Comment Excerpt Text:

At a minimum, while the transition to a clean energy grid occurs, these costs that are directly attributable to fossil fuel emissions should be considered on a full absorption basis in determining royalty rates (to the extent possible). Certain human social costs (reduction in life span, pain and suffering, etc.), and costs associated wildlife and wild lands are impossible to fully comprehend in economic terms.

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Comment Number: 0002162\_Jones\_20160519-4

Organization I:

Commenter I: Eugene Jones

Comment Excerpt Text:

Coal burning is the most egregious contributor to carbon dioxide buildup, with other fossil fuels (oil and its derivatives and gases) also significant contributors. As addressed by commentators today the costs to our global economy of these emissions (also including mercury, lead and other toxic elements) and resulting global warming (e.g. increased health care costs, violent storm damage, drought, wild fires, habitat loss, extinction, insect proliferation resulting damage to forests and spread of disease, glacial melting and loss of precious water sources, ocean acidification and warming, higher sea levels, loss of ocean reefs, loss of fishing habitat and stocks, relocation of communities, rising sea levels, measures taken by cities and towns to mitigate impacts, etc.) far exceed the revenues. Also these cost of the impact of these emissions (along with unmet reclamation liabilities) to the US Government eclipse the revenues provided from leases and extraction royalties.

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Comment Number: 0002168\_Kohler\_20160629-2

Commenter I: Bernard Kohler

Comment Excerpt Text:

Coal is a carbon-rich fuel that contributes massively to rising carbon dioxide levels in our atmosphere.

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Comment Number: 0002189\_Jozwik\_20160517-32

Commenter I: Darryl Jozwik

Comment Excerpt Text:

ANY EFFORTS TO IMPOSE NEW CARBON TAXES ON A SOCIAL COST ON CARBON OR TO REFLECT THE ADMINISTRATION'S ENVIRONMENTAL OBJECTIVES, UNDER THIS PROGRAM WOULD BE ILLEGAL.

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Comment Number: 0002190\_Pfeiffer\_20160627-2

Commenter I: Ben Pfeiffer

Other Sections: I

Comment Excerpt Text:

In its comprehensive 2010 study, *Hidden Costs of Energy: Unpriced Consequences of Energy Production and Use*, the National Research Council concluded that the external costs of electricity generated from coal impose non-climate damages of an average of 3.2 cents per kWh. In addition, the Council concluded that the climate damages range from 1 cent to 10 cents per kWh depending on the extent to which you choose to discount mortalities, morbidities, and costs in the medium and long run future. These estimates were expressed in present values in 2007 dollars.



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Comment Number: 0002205\_McPherson\_20160620-1

Organization I:UnitarianUniversalist Voices for Justice

Commenter I:William McPherson

Comment Excerpt Text:

BLM leases sites for destructive openpit mining at rates well below their true cost. When coupled with the pollution effects of coal burning, the prices of coal represent less than half of the cost of combustion (one ton of coal produces almost 3 tons of CO<sub>2</sub> when burned). Estimates of \$70 per ton by EPA are probably too low, but a ton of CO<sub>2</sub> will cost a lot more than the lease price of 18 cents per ton of coal, plus the cost of mining and transport. Coal companies are ruining the atmosphere for a pittance.

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Comment Number: 0002217\_Maxwell\_20160619-1

Commenter I:Gary Maxwell

Comment Excerpt Text:

The science is overwhelming that CO<sub>2</sub> emissions from burning carbon based fuels are causing global warming that poses a serious threat to society.

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Comment Number: 0002226\_Tobe\_20160603-5

Commenter I:Jerry Tobe

Comment Excerpt Text:

The net must be added to or subtracted from the fair market value in order to determine the true value of the mined coal to the American people

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Comment Number: 0002276\_Henderson\_20160715\_350Colorado-11

Organization I:350 Colorado Board of Directors

Commenter I:Gina Hardin

Comment Excerpt Text:

We are particularly concerned that these coalrelated activities emit around 10% of all U.S. releases of methane, a potent GHG with many times greater near-term Global Warming Potential than CO<sub>2</sub>. Coal mining represents the fourth largest source of methane in the U.S., following landfills, natural gas systems, and ruminant animals. The most efficient means of reducing these hazardous emissions is to not mine coal at all.

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Comment Number: 0002276\_Henderson\_20160715\_350Colorado-12

Organization I:350 Colorado Board of Directors

Commenter I:Gina Hardin

Comment Excerpt Text:

We also believe that once coal is correctly priced to reflect its true costs, the market will naturally continue the downward trend in production and use.

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Comment Number: 0002276\_Henderson\_20160715\_350Colorado-8

Organization I:350 Colorado Board of Directors

Commenter I:Gina Hardin

Comment Excerpt Text:

A carbon tax (and dividend) may actually be passed before these regulations are revised again (even though in the present situation it seems unlikely). When passed, coal companies will be hard pressed to make the tax and produce, particularly under their present technologies. We want to emphasize the importance of encouraging/subsidizing innovation by the coal industry to reduce their GHG emissions. A quote from the coal

industry stated that they should be allowed to continue without restrictions because the onus is on renewables to innovate future power sources. Under a carbon tax scenario, coal producers will be increasingly pressed to produce under less profitable scenarios. BLM can encourage industry to face the implications of mining oblivious to the damage and look for innovation before it costs them big time. Potentially, there is something that we have not considered in these comments that can help inspire industry to face forward rather than entrench in the past. We encourage BLM to include those ideas or take them to the local offices for dissemination.

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Comment Number: 0002295\_Stewart\_20160719-2

Commenter I: Dan Stewart

Comment Excerpt Text:

BLM should not impose a social cost of carbon in its new policy

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Comment Number: 0002326\_Moench\_20160724\_UtahPhysicHealthyEnviron-101

Organization I: Utah Physicians for a Healthy Environment

Commenter I: Malin Moench

Comment Excerpt Text:

the BLM's coal leasing program should require that the price of Federally-leased coal cover the Council on Environmental Quality's estimate of the Social Cost of Carbon before it can be leased

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Comment Number: 0002326\_Moench\_20160724\_UtahPhysicHealthyEnviron-44

Organization I: Utah Physicians for a Healthy Environment

Commenter I: Malin Moench

Comment Excerpt Text:

Only by ignoring its enormous health and environmental impacts can coal-fired power be considered a "low-cost" energy source, the use of which promotes economic efficiency and job creation. Failing to reflect all of the cost of a product in the product's sale price misallocates resources. If society, through a tax or a regulation, shifts a dollar of spending away from a product that is less valuable to society to a product that is more valuable to society (on a unit basis) it creates more jobs than it "kills." This principle is taught in Economics 101 in every accredited undergraduate course in the country, and is undisputed. Applied in the context of using fossil fuel to provide electricity, a kilowatt/hour obtained from coal is actually worth from one-half to one-one tenth as much to society as a kilowatt/hour obtained from a non-polluting source, depending on how many of its external costs are accounted for.

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Comment Number: 0002326\_Moench\_20160724\_UtahPhysicHealthyEnviron-55

Organization I: Utah Physicians for a Healthy Environment

Commenter I: Malin Moench

Comment Excerpt Text:

The EPA estimates that the health care costs imposed on society as a whole from burning a ton of coal (which it labels the Social Costs of Carbon) would be \$43 in 2020 (\$36 on a present value basis at 3%).<sup>(32)</sup> An alternative Social Cost of Carbon estimate based on middle-of-the-road assumptions is \$62 in 2020 (\$55 on a present value basis at 2%). (Johnson, L., et al., 2012.) The average price of a short ton of coal delivered to the electric power industry in 2012 was \$45.77. The future value of \$45.77 in 2020 at 2.3% interest is \$52.46. These Social Cost of Carbon estimates indicate that the average price of coal in 2020 would need to increase by from 82% to 105% if it were to cover its social costs. It should be borne in mind that these are only a partial estimate of coal's external costs. They do not include the most economically significant ones, such as the long-term reduction in labor productivity described above

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Comment Number: 0002326\_Moench\_20160724\_UtahPhysicHealthyEnviron-56

Organization I: Utah Physicians for a Healthy Environment

Commenter I: Malin Moench

Comment Excerpt Text:

Over its life cycle, coal generates a waste stream that carries multiple hazards for human health and the environment. These costs are not imposed on the coal industry, but on the rest of society. The Harvard study estimates that the life-cycle effects of coal and the waste stream generated are costing the American public from one-third to over one-half of a trillion dollars annually. The costs of substituting energy efficiency and renewable forms of energy for the output of existing coal-fired power plants are a small fraction of the costs of not doing so, when the life-cycle costs of coal are taken in to account.

The Harvard study monetized costs imposed on the public health system by NO<sub>x</sub>, SO<sub>2</sub>, PM<sub>2.5</sub>, and mercury emissions; fatalities of members of the public due to rail accidents during coal transport; the added public health burden in Appalachia incurred by coal mining; government subsidies; and the lost value of mined land after it has been abandoned. The estimate is conservative in that it does not account for damages outside of Appalachia, nor does it account for unquantifiable costs, such as the cost to a family of losing a wage earner due to black lung disease. It notes that many of these external costs of coal are cumulative. (Epstein, et al, 2011.)

The Harvard study conservatively estimates that if the external costs of coal were accounted for, they would double or triple its price. If electricity produced from burning coal were priced to cover its social costs (which amount to \$345.3 to \$523.3 billion annually), it would add a tax of from 17.7 to 26.9 cents to the current average retail price of electric power (11 cents per kilowatt hour).

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Comment Number: 0002326\_Moench\_20160724\_UtahPhysicHealthyEnviron-57

Organization I: Utah Physicians for a Healthy Environment

Commenter I: Malin Moench

Comment Excerpt Text:

If the current moratorium on new Federal coal leases is not made permanent, the next best option is for the BLM to require that the price of Federally leased coal cover the Social Cost of Carbon before the sale can go forward. Currently, there is no consistent approach that State and local BLM offices follow when they draft Environmental Impact accompanying fossil fuel lease applications. Some offices make reference to carbon pollution and climate disruption and even include some efforts to estimate these externalities. Others offices mention these externalities in the abstract, but argue that the social cost of carbon cannot be objectively determined, or they view the potential climate effects of a particular lease proposal on a global scale and dismiss them as de minimis or unquantifiable as a percentage of the entire globe's warming.

There is a critical need for the Secretary of the Interior to require an organized and consistent approach to the issue of carbon pollution and climate disruption and how it relates to a particular fossil fuel lease, whether a coal, conventional oil, or shale gas lease is involved. The new approach should make it clear that carbon pollution and climate disruption are external costs of burning fossil fuel, that there are objective standards and methods for determining a reasonable range of what those costs are on a per-ton basis, and that the percentage of total global warming that might be caused by a particular proposed lease is not normally a meaningful criterion to apply in an Environmental Impact Statement. Rather, above a certain threshold, estimating a carbon contribution and climate impact of a fossil fuel lease is meaningful when estimated on a per-ton, or per-Btu basis

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Comment Number: 0002326\_Moench\_20160724\_UtahPhysicHealthyEnviron-59

Organization I: Utah Physicians for a Healthy Environment

Commenter I: Malin Moench

Comment Excerpt Text:

The most important reform that the BLM can make to its coal leasing program is to require that Federal leasing of additional coal not proceed unless the minimum price for that coal per ton exceeds the Social Cost of Carbon that reflects the effect of the resulting CO<sub>2</sub> on the earth's climate. To achieve consistency, the Social Cost of

Carbon used should be a standardized measure, or range of measures, approved by the Council of Environmental Quality

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Comment Number: 0002326\_Moench\_20160724\_UtahPhysicHealthyEnviron-66

Organization I: Utah Physicians for a Healthy Environment

Commenter I: Malin Moench

Comment Excerpt Text:

The crippling drought in California is just one example of what economists call the “external cost,” or “social cost,” of continuing to rely on carbon to power our nation. It is a “social cost” because neither the producer nor the consumer of carbon pays it directly—society as a whole pays it. The cost of the intensifying drought that is virtually certain to grip the Southwest and the Central Plains before this century is out is not reflected in the Social Cost of Carbon estimates developed by the EPA or the Harvard Medical School described earlier. This provides another reason for treating those estimates as lower-bound estimates.

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Comment Number: 0002326\_Moench\_20160724\_UtahPhysicHealthyEnviron-8

Organization I: Utah Physicians for a Healthy Environment

Commenter I: Malin Moench

Comment Excerpt Text:

According to the BLM, every ton of PRB coal burned yields 1.7 metric tons of CO<sub>2</sub>. Under the Obama administration’s first seven years, the Bureau of Land Management leased 2.2 billion tons of publicly owned coal, unlocking 3.9 billion metric tons of carbon pollution. This is equivalent to the annual emissions of over 825 million passenger vehicles, and more than the 3.7 billion tons that was emitted in the entire European Union in 2012. Each ton of publicly-owned coal leased during the Obama administration, when burned, will cause economic damage estimated at between \$22 and \$237, using the Department of Environmental Quality’s own estimates of the social cost of carbon. Yet the average price charged by the Federal government per ton for that coal was a mere \$1.03

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Comment Number: 0002326\_Moench\_20160724\_UtahPhysicHealthyEnviron-80

Organization I: Utah Physicians for a Healthy Environment

Commenter I: Malin Moench

Comment Excerpt Text:

The value of avoiding the various forms of harm that burning coal causes to the health of the public is best appreciated by the major efforts to estimate the Social Cost of Carbon. In its Notice of Proposed Rulemaking, the EPA estimated that its Clean Power Plan would reduce CO<sub>2</sub> and other pollutant emissions (SO<sub>2</sub>, NO<sub>x</sub>, PM<sub>2.5</sub>) by 30% with respect to 2005 levels. The EPA estimates that this co-benefit of CO<sub>2</sub> reduction would save from \$48 to \$84 billion in health-related costs (primarily, the economic value of lives saved). The EPA estimated the cost of complying with the Clean Power Plan would be between \$7.3 and \$8.8 billion in the year 2030. This, it estimated, would raise electricity prices by 3%. The EPA estimated that the ratio of benefit to cost for the Clean Power Plan ranges from 7:1 to 12:1.<sup>(15)</sup>

(15) See Notice of Proposed Rulemaking, Carbon Pollution Emission Guidelines for Existing Stationary Sources: Electric Utility Generating Units, June 18, 2014, 79 FR 13726, section X.A.

<sup>16</sup>See <http://www.nrdc.org/air/pollution-standards/>.

These estimates of the effect of the Clean Power Plan on CO<sub>2</sub> and related emissions, however, are much too low because they are based on stale data and because they look at only part of the benefits of carbon reduction. The most recent data relied on by the EPA is for the year 2010. The Natural Resources Defense Council has gathered data for the years since 2010 and updated the EPA estimate. The new data reflects both a sharp drop in the demand for electric power and a sharp drop in the cost of utility-scale wind and solar power. The NRDC has input the new data into the same Integrated Planning Model that the EPA used to generate its initial cost

estimates. The updated model's estimate of reduced CO<sub>2</sub> and related emissions for 2030 is 30% with respect to 2012 levels, not 2005 levels, as was case with the EPA's original estimate.

The updated model's estimate is that complying with the Clean Power Plan will save from \$28 to \$63 billion in health related costs in 2030, due to reduced emissions of ozone precursors and fine particulates. When environmental benefits are added to these health benefits, the savings range from \$64 to \$99 billion in 2030. The NRDC update also estimates that the Clean Power Plan would reduce the annual costs to electric power consumers by between \$6.4 and \$9.4 billion in the year 2030.<sup>16</sup> That translates to an expected reduction in consumer's electric bills of 3% in 2030.

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Comment Number: 0002326\_Moench\_20160724\_UtahPhysicHealthyEnviron-86

Organization I:Utah Physicians for a Healthy Environment

Commenter I:Malin Moench

Comment Excerpt Text:

An alternative estimate of the social cost of carbon is found in a study by the faculty of Harvard Medical School. Published in 2011, it compiled an estimate of the social costs incurred in the United States annually by using coal to generate power. It is more comprehensive than the EPA's Social Cost of Carbon estimate because it considers the costs incurred at each stage of the life cycle of coal—extraction, transport, processing, and combustion. It does not, however, consider future losses in labor productivity.

(32) Technical Support Document, Technical Update of the Social Cost of Carbon for Regulatory Impact Analysis Under Executive Order 12866, available at: <http://www.whitehouse.gov/sites/default/files/omb/assets/inforeg/technical-update-social-cost-of-carbon-for-regulator-impact-analysis.pdf>.

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Comment Number: 0002326\_Moench\_20160724\_UtahPhysicHealthyEnviron-87

Organization I:Utah Physicians for a Healthy Environment

Commenter I:Malin Moench

Comment Excerpt Text:

The CEQ expressly warns agencies that their NEPA duties are not satisfied by recitations in EISs or EAs that emissions resulting from a government action or approval represent only a small fraction of global emissions and therefore require no further analysis. Instead, agencies are to follow a principle of proportionality in which the extent of analysis of GHG emissions is commensurate with the quantity of proposed GHG emissions.

NEPA requires Federal agencies to consider the direct, indirect and cumulative impacts of proposed actions. See, 40 C.F.R. §§ 1508.7, .8. NEPA also requires consideration of “connected actions.” The CEQ defines “connected actions” as those that automatically trigger other actions which may require an EIS, actions that cannot or will not proceed unless other actions are also taken, or actions that are interdependent parts of a larger action. Based on these broad, long-standing definitions CEQ now believes that Federal agencies must discuss climate change and GHG emissions in an EIS or EA if the effects are significant, including a discussion of emissions from other activities that have a reasonably close causal relationship with the proposed action and are either “upstream” or “downstream” from the proposed action.

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Comment Number: 0002326\_Moench\_20160724\_UtahPhysicHealthyEnviron-9

Organization I:Utah Physicians for a Healthy Environment

Commenter I:Malin Moench

Comment Excerpt Text:

The carbon pollution from publicly owned coal leased during the Obama administration will cause damages estimated at between \$52 billion and \$530 billion, using the federal government's own methodology for estimating the social cost of carbon. In contrast, the total amount of Federal revenue generated from those coal leases sales was \$2.3 billion.

Comment Number: 0002329\_Segger\_20160724\_CambellCntyWY-6

Organization I: County and Prosecuting Attorney's Office, Campbell County, Wyoming

Commenter I: Carol Seeger

Comment Excerpt Text:

Campbell County is concerned about potential changes to the federal coal leasing program that will rely on criteria that is simply incapable of measurement and subjective in nature. For example, raising the royalty rate to "reflect the cost of harm to the public from negative externalities from coal development" and "include the social cost of mining imposed by fixed cost non-internalized externalities, such as loss of recreational or other values". (See, Vol. 81, No. 61 Federal Register, pg.17726, March 30, 2016.) A stated goal of a revision, if any, to the federal coal leasing program is to increase transparency. The use of such nebulous, unquantifiable and subjective "costs" and criteria for valuing coal does not contribute to the stated goal of increased transparency.

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Comment Number: 0002337\_Wentz\_20160726\_SabinCntrClimateChange-10

Organization I: Sabin Center for Climate Change Law, Columbia Law School

Commenter I: Jessica Wentz

Other Sections: 1

Comment Excerpt Text:

We recommend that BLM use the federal SCC and other available tools to assign a cost value to both direct and indirect GHG emissions—or a benefit value to avoided GHG emissions—that will occur as a result of existing leases and all future leasing scenarios under consideration (including the downstream emissions described in Section 1 of these comments). (16) This information should be used to evaluate different coal production scenarios.

(16) The SCC is a tool developed by the federal government to estimate the costs of GHG emissions that are either released or avoided as a result of agency rulemakings. It provides a comprehensive estimate of climate change damages, including changes in net agricultural productivity, human health, property damages from increased flood risk, and changes in energy system costs. For more details, see EPA, The Social Cost of Carbon, <https://www3.epa.gov/climatechange/EPAactivities/economics/scc.html>. There is also a peer reviewed methodology that can be used to calculate the social costs of methane and nitrous oxide, which has been used by EPA in prior rulemakings. See Marten et al., Incremental CH<sub>4</sub> and N<sub>2</sub>O Mitigation Benefits Consistent with the US Government's SC-CO<sub>2</sub> estimates, 15 CLIMATE POLICY 272 (2015); EPA, REGULATORY IMPACT ANALYSIS OF THE PROPOSED EMISSION STANDARDS FOR NEW AND MODIFIED SOURCES IN THE OIL AND NATURAL GAS SECTOR, 4-14 (2015); EPA, REGULATORY IMPACT ANALYSIS FOR THE PROPOSED REVISIONS TO THE EMISSION GUIDELINES FOR EXISTING SOURCES AND SUPPLEMENTAL PROPOSED NEW SOURCE PERFORMANCE STANDARDS IN THE MUNICIPAL SOLID WASTE LANDFILLS SECTOR, 4-10-4-14 (2015).

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Comment Number: 0002337\_Wentz\_20160726\_SabinCntrClimateChange-11

Organization I: Sabin Center for Climate Change Law, Columbia Law School

Commenter I: Jessica Wentz

Other Sections: 2 1

Comment Excerpt Text:

We also recommend that BLM use this information to inform its decisions about rental fees and royalty rates. According to Secretarial Order 3338, two of the primary goals of the PEIS are to ensure that the American public receives fair market value (or a "fair return") from the sale of the coal, and to assess whether the program "adequately accounts for externalities related to Federal coal production, including environmental and social impacts." (19) GHG emissions are one of the externalities that should be accounted for when determining whether the American public is receiving fair market value from the sale of the coal. Many other commenters, including the White House and members of Congress, have agreed that climate impacts and other externalities of

the federal coal program should be incorporated into the assessment of the market value of federal coal. (20)

(19) U.S. Dept. of Interior, Secretarial Order No. 3388 (Jan 15, 2016).

(20) See, e.g., Letter from Raul Grijalva and others to Secretary Jewell (June 21, 2016), available at <http://democrats-naturalresources.house.gov/imo/media/doc/Letter%20to%20Jewell%20on%20Coal%20Reforms%20-%20signed%20-%206-21-16.pdf>; Executive Office of the President, The Economics of Coal Leasing on Federal Lands: Ensuring a Fair Return to Taxpayers (June 2016), available at [https://www.whitehouse.gov/sites/default/files/page/files/20160622\\_cea\\_coal\\_leasing.pdf](https://www.whitehouse.gov/sites/default/files/page/files/20160622_cea_coal_leasing.pdf); Alan Krupnick et al., Resources for the Future, Should We Price Carbon from Federal Coal? (2015), available at [http://www.rff.org/files/sharepoint/WorkImages/Download/RFF-Resources-189\\_Featurette-Krupnick.etal.pdf](http://www.rff.org/files/sharepoint/WorkImages/Download/RFF-Resources-189_Featurette-Krupnick.etal.pdf).

Comment Number: 0002337\_Wentz\_20160726\_SabinCntrClimateChange-12

Organization I: Sabin Center for Climate Change Law, Columbia Law School

Commenter I: Jessica Wentz

Other Sections: I

Comment Excerpt Text:

An analysis of a range of price alternatives would be consistent with the purposes of NEPA. In particular, BLM should consider a range of carbon price alternatives that correspond with the different SCC estimates at the 5% average, 3% average, 2.5% average, and 3% 95th percentile average, and evaluate the effect of these different pricing scenarios on coal production, revenue, and environmental impacts (including GHG emissions). This information should be used to frame and assess the range of alternative leasing scenarios that are under consideration, and to compare these to a “no leasing” alternative. One critical question will be how higher rental fees or royalties would affect lifecycle GHG emissions from federal coal.(21)

(21) According to one study, the introduction of higher royalties, phased-in over a ten year period, would reduce overall Co2 emissions, even with the Clean Power Plan in place; ramping down coal production could achieve a similar emissions benefit, but with diminished revenue implications. Spencer Reeder & James Stock, Federal Coal Leasing Reform Options: Effects on CO2 Emissions and Energy Markets (February 2016), available at <http://www.vulcan.com/news/articles/2016/coal-leasing-report>.

Comment Number: 0002337\_Wentz\_20160726\_SabinCntrClimateChange-2

Organization I: Sabin Center for Climate Change Law, Columbia Law School

Commenter I: Jessica Wentz

Comment Excerpt Text:

(2) Social Cost of GHG Emissions: The PEIS should use the federal social cost of carbon (SCC) and other available tools to assign a cost value to the impacts of the inventoried emissions, including non-CO2 GHG emissions, and use this information to evaluate possible carbon price alternatives and their effect on coal production, revenues, and environmental impacts.

Comment Number: 0002339\_Satterfield\_20160726\_IECA-12

Organization I: Industrial Energy Consumers of America (IECA)

Commenter I: Marnie Satterfield

Comment Excerpt Text:

The SCC estimates must be made consistent with OMB Circular A-4. As noted by leading researchers, the IWG SCC value is calculated differently than other measures of social benefits and costs. (11) Among other issues, it uses a lower discount rate than recommended by OMB Circular A-4 and values global benefits rather than solely

U.S. domestic benefits. By introducing an SCC value with a different denomination in both the social cost and social benefit calculation, it muddies the results even more and renders comparison among regulatory options and among regulations even more difficult. (11) Gayer, T. and Viscose, K. Determining the Proper Scope of Climate Change Benefits, June 2014.

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Comment Number: 0002339\_Satterfield\_20160726\_IECA-13  
Organization I: Industrial Energy Consumers of America (IECA)  
Commenter I: Marnie Satterfield  
Comment Excerpt Text:

The addition of the unreasonably high SCC estimates as a cost often shifts the net benefits of a regulatory option from negative to positive. This use of the SCC by regulatory agencies to place a heavy thumb on the scale and tilt the balance of the outcome to a few winners while harming the overall economy, including domestic manufacturers who will pay the higher pipeline costs, is highly inappropriate and this approach must be rejected.

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Comment Number: 0002339\_Satterfield\_20160726\_IECA-5  
Organization I: Industrial Energy Consumers of America (IECA)  
Commenter I: Marnie Satterfield  
Comment Excerpt Text:

Use of the social cost of carbon unfairly imposes “global” climate costs on “domestic” producers of coal which will increase electricity prices for U.S. manufacturing. The Obama Administration has directed agencies to monetize a regulation’s direct or indirect effect of reducing emissions of carbon dioxide (CO<sub>2</sub>). Federal agencies have estimated the potential benefits of rules using the social cost of carbon (SCC) and the social cost of methane (SCM). An important glaring problem with the SCC or the SCM is that it indirectly imposes global carbon costs on coal producers, which will increase electricity costs on domestic manufacturers, which damages the industry’s ability to compete with foreign competitors. No other country in the world imposes global carbon costs onto industry.

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Comment Number: 0002339\_Satterfield\_20160726\_IECA-7  
Organization I: Industrial Energy Consumers of America (IECA)  
Commenter I: Marnie Satterfield  
Other Sections: I  
Comment Excerpt Text:

U.S. Government Accountability Office report highlights severe uncertainties in SCC values. The U.S. Government Accountability Office’s (GAO) report entitled, “Development of Social Cost of Carbon Estimates” (8) highlights that the SCC cost estimates have great economic and scientific uncertainty. (8) U.S. Government Accountability Office, Development of the Social Cost of Carbon Estimates, July, 2014, <http://www.gao.gov/products/GAO-14-663>  
On page 12 it states, “The Technical Support Document (TSD) states that reported domestic effects should be calculated using a range of values from 7 to 23 percent of the global measure of the social cost of carbon, although it cautions that these values are approximate, provisional, and highly speculative due to limited evidence.” The quote illustrates that when applying the SCC on domestic industry, 77-93 percent of the estimated climate benefits will flow to entities outside of the U.S.! In other words, the TSD guarantees that domestic application of the SCC will harm the U.S. economy, to the benefit of others around the world. Taking such action is clearly inconsistent with the purpose of the U.S. government and every federal agency. The TSD inappropriately ignores longstanding guidance from OMB to analyze only domestic cost-benefits. If BLM wishes to apply the SCC, it must revise downward the range of benefits by 77-93 percent.  
On page 14 it states, “The TSD states that the working group decided to calculate estimates for several discount rates (2.5, 3, and 5 percent) because the academic literature shows that the social cost of carbon is highly



sensitive to the discount rate chosen, and because no consensus exists on the appropriate rate.” Clearly this means that the social cost of carbon is not based on reasonable economic analysis to accurately reflect the cost of capital. The TSD inappropriately ignores longstanding guidance from OMB under Circular A-4 to analyze cost benefits using a 7 percent discount rate.

On page 17 it states, “Some of the participating agencies have incorporated discussions of these limitations into regulatory impact analyses using social cost of carbon estimates. For example, in a 2012 rule setting pollution standards for certain power plants, EPA noted that the social cost of carbon estimates are subject to limitations and uncertainties.” (9)

(9) National Emissions Standards for Hazardous Air Pollutants from Coal-and Oil-Fired Electric Utility Steam Generation Units and Standards of Performance for Fossil-Fuel-Fired Electric Utility, Industrial – Commercial – Institutional, and Small Industrial –Commercial-Institutional steam generating Units, 77 Fed. Reg. 9304 (Feb. 16, 2012)

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Comment Number: 0002339\_Satterfield\_20160726\_IECA-8

Organization I: Industrial Energy Consumers of America (IECA)

Commenter I: Marnie Satterfield

Comment Excerpt Text:

4. The social cost of carbon value is unrealistically high.

The SCC for 2016 is \$36 per metric ton (in \$2007), while other carbon trading prices are far lower. Some of those include: RGGI’s auction clearing price at \$4.53 per metric ton (on June 1); California’s cap and trade price at \$12.71 per metric ton (on July 13); and the EU ETS price at \$5.29 per metric ton (on July 14). And, throughout the overwhelming majority of the world, the price is even lower. These stated real-time carbon market prices raise serious questions about the validity and appropriateness of the SCC.

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Comment Number: 0002339\_Satterfield\_20160726\_IECA-9

Organization I: Industrial Energy Consumers of America (IECA)

Commenter I: Marnie Satterfield

Other Sections: I

Comment Excerpt Text:

Before BLM applies any SCC estimate in its programmatic environmental impact statement, BLM must correct the methodological flaws that commenters have raised about the IWG’s SCC estimate. SCC estimates fail to comply with guidance for developing influential policy-relevant information under the Information Quality Act (IQA).

Further, SCC estimates are the product of an opaque process and any pretensions to their supposed accuracy (and therefore usefulness in policymaking) are unsupported. The models and all of their assumptions with inputs used for the SCC estimates and the subsequent analyses were not subject to peer review, as required under OMB Circular A-4. The SCC estimate from integrated assessment modeling is a highly uncertain academic exercise that does not offer a reasonably acceptable range of accuracy for use in policymaking.

According to the Financial Post, equations “that connect CO<sub>2</sub> emissions to temperature change depend on a parameter called equilibrium climate sensitivity (ECS), which is the amount of warming in degrees Celsius from doubling the amount of CO<sub>2</sub> in the air, after the atmosphere and oceans have fully adjusted. The equations that connect temperature change to economic impacts make up what is called the damage function. The IWG made updates to the damage functions that boosted the costs, but it did not change the ECS even though the ECS has dropped in recent years. The higher the ECS, the longer it takes the climate to adjust to higher greenhouse gas levels. Under a high-ECS case the damages occur much farther in the future and need to be discounted more heavily. But the IWG does not take this into account; instead it allows high-ECS and low-ECS scenarios to occur on the same time scales, biasing the SCC upwards.” (10)

(10) “What’s the right price for carbon? Take a guess (everyone else is),” Financial Post,

<http://business.financialpost.com/fp-comment/junk-science-week-whats-the-right-price-for-carbon-take-a-guess-everyone-else-is>

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Comment Number: 0002342\_Etter\_20160726-3

Organization I: Bowie Resources, LLC

Commenter I: Art Etter

Comment Excerpt Text:

•Royalty rates cannot sustain increases. Increasing rates based on carbon created during the combustion process would create a double taxation scenario, especially with the newly formed carbon limits proposed under the EPA's Clean Power Plan. It is evident from the long list of coal companies going out of business the royalty rates are currently too high for companies to be profitable.

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Comment Number: 0002443\_Koontz\_20160727\_BowieResources-12

Organization I: Bowie Resource Partners, LLC

Commenter I: Gene DiClaudio

Comment Excerpt Text:

Bowie recognizes that the Secretary is constrained by Administration policy to use the Federal Social Cost of Carbon ("SCC") in rulemaking proceedings, despite the fact that the SCC is technically unsound, was not developed through notice-and-comment rulemaking, and sharply diverges from OMB guidelines regarding critical elements such as discount rates. Nevertheless, the Secretary does have discretion to set policy for project-level decisions, including leasing decisions, and should categorically reject the SCC in those contexts. Not only was the SCC not developed for project-level decisions, but the SCC cannot provide useful information at the project level. This is because at the project level, the incremental SCC impact of the proposed action in relation to the no-action alternative or other project alternatives will generally be indeterminable. For example, for local effects, e.g., the impact of a lease on a stream, the no action or project alternatives will have identifiable different impacts. But for global impacts of the type attempted to be measured by the SCC, one cannot know the effect of, for example, the no action alternative, without knowing how the various actors will respond. Even if coal lease application A is denied, there will be no effect on net SCC calculations unless there is a coordinated policy to deny other similarly-situated coal leasing, and such broad policy determinations are inherently beyond the scope of project-level analyses.

In addition, as the BLM and OSMRE have recognized in recent project level NEPA analyses, the SCC by itself provides an incomplete and biased accounting of the impacts of a decision. There is presently no corresponding "Social Benefit of Carbon" metric. While short term tax, employment, and economic activity measures account for some of the benefits of coal production, they are by no means a complete accounting in the same manner and at the same horizon and scale as attempted by the SCC. Consequently, the SCC is not useful at the project level and the PEIS and any resulting regulatory or policy changes should make that clear.

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Comment Number: 0002448\_FoleyHein\_20160727-3

Organization I: Institute for Policy Integrity

Commenter I: Jayni Foley Hein

Comment Excerpt Text:

Peter Howard (Economics Director, Institute for Policy Integrity) discussed royalty reform scenarios that would account for upstream methane and transportation costs. Policy Integrity's analysis found that internalizing the upstream methane externally costs, alone, would lead to a \$1 per metric ton charge on federal surface-mined coal in the Powder River Basin (or a shift from a 12.5% royalty rate to an 18.7% royalty rate), and approximately a \$10 per metric ton charge for federal underground coal. Using the 18.7% royalty rate for federal coal produced in the Powder River Basin from 2009 to 2014 would have provided about \$1 billion in additional

revenue, not accounting for the externality benefits. These values were derived using the Social Cost of Methane, and represent lower bound estimates of production externality costs, as some externalities cannot easily be quantified (such as water use and pollution). Transportation of coal accounts for 40 percent of all train traffic in the United States. Howard stated that if Interior accounted for both methane and transportation costs, it would lead to an 82% royalty based on Wyoming mine mouth prices. This work is additive and complementary to the work of Vulcan Philanthropies, discussed below, which focuses on downstream combustion emissions.

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Comment Number: 0002448\_FoleyHein\_20160727-4

Organization I: Institute for Policy Integrity

Commenter I: Jayni Foley Hein

Comment Excerpt Text:

Spencer Reeder (Senior Program Officer, Vulcan Philanthropies) and Professor James Stock (Harold Hitchens Burbank Professor of Political Economy, Faculty of Arts and Sciences, and faculty member, Harvard Kennedy School) discussed modeling several federal coal program reform scenarios with a focus on their interaction with the Clean Power Plan. Their work considered reforms that increased coal royalties, including royalty increases linked to the monetized externality value of the combustion of the coal as estimated by the Social Cost of Carbon. In addition, they discussed reforms that would place quantity caps on coal from federal lands. Reeder discussed the White House Council of Economic Advisers' (CEA) recent report, which discussed fair market value, environmental externalities, and how Interior can maximize royalty revenue (coming up with an estimated value of \$3 billion or more in additional annual payments from royalty reform). Reeder stressed that, despite the coal industry currently having bankruptcy issues, their underlying mine assets are valuable (once the burden of overextended debt is lifted) and now is the time to look at reforming the coal leasing program because there have been market failures. Reeder also stated that an economy-wide carbon price would be a proper solution, but that does not yet exist, nor does the Clean Power Plan because of the current stay by the Supreme Court. Reeder noted that when discussing the appropriate royalty rate for federal coal, calculations are often based on a below-market price, as Haggerty's work has shown. It is better to think of it in absolute terms (and in dollars per ton of coal), as the CEA report does. The Vulcan study looked at the effect of different carbon adder scenarios and their effect on energy sector greenhouse gas emissions, including substitution effects, and revenue. Using a 20% Social Cost of Carbon adder results in a dramatic increase in revenue accompanying a decline in production. The CEA report looked at maximizing revenue, and they came up with an adder equivalent to about 30% of the Social Cost of Carbon. Reeder stressed that the revenues from this adder can be used to address the broader economic transition away from coal, and the affected states have the opportunity to direct their share of the increased funds to affected communities without federal legislation. Reeder also stressed that this is new territory and we are confronting a new problem of how to deal with addressing climate change externality costs, consistent with Hein's remarks.

Professor James Stock discussed the modeling conducted for the Vulcan study, using the ICF Integrated Planning Model (IPM), which is the same model EPA used for the Clean Power Plan regulatory impact analysis. Stock described how the analysis examined scenarios with the Clean Power Plan in place, and without it. For example, without any Clean Power Plan, using a royalty rate equivalent to 100% of the Social Cost of Carbon would provide three-quarters of the emissions reductions that the Clean Power Plan would provide if it were fully implemented as EPA envisions. If the Clean Power Plan is in place, the effect is smaller and it would be double-counting to use a full Social Cost of Carbon adder. In the study, as the royalty rate increases, there is some substitution of federal coal for non-federal eastern coal, but the price for eastern coal also goes up, making natural gas and solar more attractive. So there is a "self-limiting" feature; as the adder approaches about 20% of the Social Cost of Carbon, there is less substitution of eastern coal for federal. Internalizing some of the externality cost of coal through royalty reform takes some of the compliance burden off the Clean Power Plan.

The effect on wholesale electricity prices, in a mass-based Clean Power Plan scenario with royalty reform, actually decreases the price of electricity.

Stock summarized in four points: (1) while good government reforms are important and we should come up with a pricing basis that is fair, accurate, and prevents gaming by companies, that is not enough. Interior must adjust for the externality value of burning the coal mined on federal lands if it wants to govern to protect the interest of future generations; (2) an optimal Social Cost of Carbon adder that avoids double-counting depends on the implementation details of the Clean Power Plan (under a mass-based Clean Power Plan, about 20% of the Social Cost of Carbon may be appropriate; if the Clean Power Plan is weaker, then a larger adder would be appropriate); (3) small increases in the coal royalty rate will yield small climate effects and larger increases will yield greater climate benefits while still increasing revenue; and (4) making changes through royalty rate reform, as opposed to conducting no new leasing indefinitely, will provide revenue to states (and the federal government) that will need assistance transitioning away from coal.

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Comment Number: 0002457\_Johnson\_20160728-4

Organization I:Western Slope Conservation Center

Commenter I:Alex Johnson

Comment Excerpt Text:

- Develop guidelines and rules for methane recapture and flaring to mitigate the impacts of methane exhaust on miners' health and green house gas emissions for active and closed mining operations.

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Comment Number: 0002467\_Fettus\_20160728-50

Organization I:Natural Resources Defense Council

Commenter I:Geoffrey Fettus

Comment Excerpt Text:

BLM should also work to qualitatively monetize the impacts of these GHG emissions using the EPA's social cost of methane and the Interagency Working Group's social cost of carbon methodologies, as well as the USGS carbon database. Relying on these data, BLM should develop quarterly estimates of all GHG emissions associated with the extraction, transport, and consumption of federal coal to serve as basis for informing future decisions regarding the federal coal regulatory scheme, and report the carbon emissions and impacts for all agency leasing decisions.

Finally, fugitive methane is the biggest other contributor to the GHG emissions (after burning of coal for electricity generation), and coal mining accounts for approximately 15% of United States methane emissions. Methane is formed in coal as the coal is created over time from various plant remains, and is retained by the coalbed and surrounding strata as long as it remains under pressure. When coal mining occurs, the trapped methane is released from both the coal seams and surrounding strata.

To address this other potent contributor to climate change. BLM must develop a method to account for the methane emissions associated with mining, and incorporate those emissions into its calculations of the full life-cycle emissions associated with federal coal leasing.

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Comment Number: 0002471\_Reed\_20160728-2

Organization I:High Country Conservation Advocates

Commenter I:Matt Reed

Other Sections: 4.5 6

Comment Excerpt Text:

Coal Mining and Climate Change are Impacting Gunnison County's Public Lands Gunnison County is home to the Gunnison National Forest, Black Canyon of the Gunnison National Park, and biologically diverse BLM-managed

lands. Ranging in elevation from less than 6,000 feet to mountains over 14,000 feet, it is a rich and varied landscape. Yet both subtle and obvious impacts from climate change are impacting millions of acres of local public lands and straining federal budgets. Warmer winters and hotter summers, the proliferation of the spruce beetle and subsequent die-off of vast swaths of forest, Sudden Aspen Decline, larger and more intense wildfires, and reduced snowpack are just some of the climate change impacts we're seeing on our public lands. In 2005, Colorado's greenhouse emissions were 35 percent higher than they were in 1990. They are projected to grow 81 percent above the 1990 levels by 2020.<sup>7</sup> Current and proposed federal coal leasing and development contributes to Colorado's greenhouse gas emissions and directly impacts public lands and communities. (7) U.S. Dept. of Agriculture, Spruce Beetle Epidemic and Aspen Decline Management Response Final Environmental Impact Statement (February 2016), at 228.

On June 20, President Obama spoke at Yosemite National Park, declaring that climate change is "the biggest challenge we're going to face in protecting this place and places like it."<sup>8</sup> He could just have easily been discussing public lands in western Colorado. President Obama condemned those who pay "lip service" to protecting America's natural areas while making climate change worse:

(8) The White House, Remarks by the President at Sentinel Bridge, Yosemite National Park, Office of the Press Secretary (June 20, 2016), available at <https://www.whitehouse.gov/the-press-office/2016/06/20/remarks-president-sentinel-bridge> (last viewed July 28, 2016).

-Make no mistake, climate change is no longer just a threat, it's already a reality. I was talking to some of the rangers here -- here in Yosemite, meadows are drying out. Bird ranges are shifting farther northward. Alpine mammals like pikas are being forced farther upslope to escape higher temperatures. Yosemite's largest glacier, once a mile wide, is now almost gone. We're also seeing longer, more expensive, more dangerous wildfire seasons -- and fires are raging across the West right now. I was just in New Mexico yesterday, which is dealing with a big wildfire, just like folks here in California and four other states -- all while it's still really early in the season.<sup>9</sup>

(9) Id.

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Comment Number: 0002471\_Reed\_20160728-7

Organization I: High Country Conservation Advocates

Commenter I: Matt Reed

Other Sections: I

Comment Excerpt Text:

The West Elk mine is Colorado's worst methane polluter, spewing more methane into the atmosphere than the state's largest oil and gas operator.<sup>5</sup> But a proposed mine expansion deeper into sensitive National Forest lands would push emissions much, much higher, not to mention carve up a biologically rich, forested landscape with roads, wells and other infrastructure.<sup>6</sup> It doesn't make environmental sense, it doesn't make economic sense, and it shouldn't be allowed to occur on public lands. Gunnison County's healthy, intact public lands and the economic opportunities they provide shouldn't be sacrificed to support a failing coal mine that is being heavily subsidized by U.S. taxpayers.

(5) See [http://www.coloradoindependent.com/159131/colorados-worst-methane-polluter-is-an-arch-coal-minewest-](http://www.coloradoindependent.com/159131/colorados-worst-methane-polluter-is-an-arch-coal-minewest-elk-john-hickenlooper)

[elk-john-hickenlooper](http://www.coloradoindependent.com/159131/colorados-worst-methane-polluter-is-an-arch-coal-minewest-elk-john-hickenlooper) (last viewed July 28, 2016).

(6) See U.S. Dept. of Agriculture, Rulemaking for Colorado Roadless Areas, Supplemental Draft Environmental Impact Statement (November 2015).

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Comment Number: 0002477\_Saul\_20160728\_CBD\_UPHE-I

Organization I: Center for Biological Diversity

Commenter I: Michael Saul

Organization2:Utah Physicians for a Healthy Environment

Other Sections: I

Comment Excerpt Text:

Meaningful consideration of greenhouse gas emissions is clearly within the scope of required NEPA review<sup>3</sup>. As the Ninth Circuit has held, in the context of fuel economy standard rules:

The impact of greenhouse gas emissions on climate change is precisely the kind of cumulative impacts analysis that NEPA requires agencies to conduct. Any given rule setting a CAFE standard might have an “individually minor” effect on the environment, but these rules are “collectively significant actions taking place over a period of time” (quoting 40 C.F.R. § 1508.7)<sup>4</sup>.

Whether or not any given lease sale is “individually minor” (a questionable assertion, given that single sales such as the Wright Area sales can implicate 2 billion tons of coal), it is beyond dispute that the federal coal program as a whole implicates a significant chunk of national and global greenhouse gas emissions – at current rates approximately 14% of U.S. fossil fuel emissions,<sup>5</sup> 10% of U.S. total GHG emissions,<sup>6</sup> and 1.6% of total global GHG emissions.<sup>7</sup> The courts have ruled that agency consideration indirect GHG emissions resulting from agency policy, regulatory, and leasing decisions cannot ignore the impact of decisions regarding coal supply.<sup>8</sup>

(3) *Ctr. for Biological Diversity v. Nat'l Highway Traffic Safety Admin.*, 538 F.3d 1172, 1217 (9th Cir. 2008);

(4) *Ctr. for Biological Diversity v. Nat'l Highway Traffic Safety Admin.*, 538 F.3d 1172, 1216 (9th Cir. 2008).

(5) Climate Accountability Institute. 2015. Memorandum from Richard Heede to Friends of The Earth and Center for

Biological Diversity, at [http://webiva-downton.s3.amazonaws.com/877/3a/7/5721/Exhibit\\_1-](http://webiva-downton.s3.amazonaws.com/877/3a/7/5721/Exhibit_1-I_ONRR_ProdEmissions_Heede_7May15.pdf)

[I\\_ONRR\\_ProdEmissions\\_Heede\\_7May15.pdf](http://webiva-downton.s3.amazonaws.com/877/3a/7/5721/Exhibit_1-I_ONRR_ProdEmissions_Heede_7May15.pdf).

(6) Stratus Consulting, *Cutting Greenhouse Gas From Fossil-Fuel Extraction on Federal Lands and Waters* 5 (2015),

citing U.S. Environmental Protection Agency, “National Greenhouse Gas Emissions Data”, available at <http://www.epa.gov/climatechange/ghghemissions/usinventoryreport.html>;

(7) Boden, T.A., Marland, G., and Andres, R.J. (2015). *National CO2 Emissions from Fossil-Fuel Burning, Cement Manufacture, and Gas Flaring: 1751-2011*, Carbon Dioxide Information Analysis Center, Oak Ridge National Laboratory, U.S. Department of Energy, doi 10.3334/CDIAC/00001\_V2015.

(8) See *Mid States Coal. For Progress v. Surface Transp. Bd.*, 345 F.3d 520, 532, 550 (8th Cir. 2003);

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Comment Number: 0002477\_Saul\_20160728\_CBD\_UPHE-61

Organization1:Center for Biological Diversity

Commenter1:Michael Saul

Organization2:Utah Physicians for a Healthy Environment

Other Sections: I

Comment Excerpt Text:

Two recent studies estimated that global oil, gas, and coal resources considered currently economically recoverable contain potential greenhouse gas emissions estimated at 2,900 GtCO<sub>2</sub> (100) and 4196 GtCO<sub>2</sub> (101) respectively. Other sources estimate even greater global fossil fuel reserves at 3,677 to 7,120 GtCO<sub>2</sub>.<sup>102</sup> When considering all fossil fuel resources (defined as those recoverable over all time with both current and future technology irrespective of current economic conditions), potential combustion emissions have been estimated at nearly 11,000 GtCO<sub>2</sub> (103) upwards to 31,353 and 50,092 GtCO<sub>2</sub>.<sup>104</sup>

(100) *McGlade and Ekins* at 187-192.

(101) *Raupach, M. et al., Sharing a quota on cumulative carbon emissions.* 4 *Nature Climate Change* 873-879 (2014) at Figure 2.

(102) IPCC, 2014: *Mitigation of Climate Change. Contribution of Working Group III to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change* at Table 7.2 [Edenhofer, O., R. Pichs-Madruga, Y. Sokona, E. Farahani, S. Kadner, K. Seyboth, A. Adler, I. Baum, S. Brunner, P. Eickemeier, B. Kriemann, J.

Savolainen, S. Schlömer, C. von Stechow, T. Zwickel and J.C. Minx (eds.)]. Cambridge University Press, Cambridge, United Kingdom and New York, NY, USA. (“IPCC AR5 Mitigation of Climate Change”) (103) McGlade and Ekins at 188.  
 (104) IPCC AR5 Mitigation of Climate Change at Table 7.2.

Comment Number: 0002480\_Culver\_20160728\_TWS-26

Organization I: The Wilderness Society

Commenter I: Nada Culver

Other Sections: I

Comment Excerpt Text:

The Social Cost of Carbon (SCC) is a leading tool for quantifying the climate impacts of proposed federal actions. The SCC is an estimate, in dollars, of the long term damage caused by a one ton increase in carbon dioxide (CO<sub>2</sub>) emissions in a given year; or viewed another way, the benefits of reducing CO<sub>2</sub> emissions by that amount in a given year. The SCC is intended to be a comprehensive estimate of climate change damages that includes, among other costs, the changes in net agricultural productivity, risks to human health, and property damages from increased flood risks. The method was initially designed for application in rulemakings, but the courts have recognized its applicability to NEPA analyses. (25)

(25) See *High Country Conservation Advocates v. U.S. Forest Serv.*, 52 F. Supp. 3d 1174 (D. Colo. 2014).

Comment Number: 0002480\_Culver\_20160728\_TWS-27

Organization I: The Wilderness Society

Commenter I: Nada Culver

Other Sections: I

Comment Excerpt Text:

There is at least one court case supporting the use of the SCC protocol. In *High Country Conservation Advocates v. U.S. Forest Serv.*, 52 F. Supp. 3d 1174 (D. Colo. 2014), a case involving coal mining EISs, the court rejected claims that it was too speculative to estimate coal combustion emissions when the SCC method was available to the agency and had been recognized earlier by the agency. This was particularly true because the agency presented the benefits of the project in a monetary form. By refusing to quantify the climate change costs of the project, the agency effectively zeroed out the costs of greenhouse gasses. Presenting only a project’s economic upsides while omitting a projection of the project’s costs was arbitrary and capricious and violated NEPA.

However, the SCC has some limitations. The method is recognized as an underestimate of the total likely damages associated with a proposed action. (28)

(28) EPA concluded, “The models used to develop SC-CO<sub>2</sub> estimates, known as integrated assessment models, do not currently include all of the important physical, ecological, and economic impacts of climate change recognized in the climate change literature because of a lack of precise information on the nature of damages and because the science incorporated into these models naturally lags behind the most recent research. Nonetheless, the SC-CO<sub>2</sub> is a useful measure to assess the benefits of CO<sub>2</sub> reductions.”

<https://www3.epa.gov/climatechange/EPAactivities/economics/scc.html> (emphasis added). Accessed July 25, 2016.

Comment Number: 0002480\_Culver\_20160728\_TWS-28

Organization I: The Wilderness Society

Commenter I: Nada Culver

Other Sections: I

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**Comment Excerpt Text:**

One alternative method identified by the National Academies of Science is an interactive risk management assessment. In a risk management assessment the BLM would consider means to reduce or respond to GHG emissions such as through mitigation, adaptation, geo-engineering, or an improved knowledge base. Many responses are possible for estimating risk reduction potential. Such a method should seek to pursue the most feasible options, pursue options with the lowest costs and good cost effectiveness, put in place options with proven effectiveness, ensure equity and fairness, and be robust to the uncertainties surrounding climate change. The approximate costs would then serve as the basis for determining the risk cost of a proposed action. (29)

(29) See America's Climate Choices, National Academy of Sciences, National Research Council at 46-50 (presenting and discussing these issues).

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Comment Number: 0002480\_Culver\_20160728\_TWS-31

Organization I: The Wilderness Society

Commenter I: Nada Culver

Comment Excerpt Text:

The SCC is well adapted to assessing impacts on a broad, global, level but may not be as well suited to a consideration of local monetary impacts.

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Comment Number: 0002480\_Culver\_20160728\_TWS-33

Organization I: The Wilderness Society

Commenter I: Nada Culver

Other Sections: 6

Comment Excerpt Text:

The second critical step in analyzing climate change issues in the PEIS after determining the amount of GHG that are emitted is to evaluate the climate change impacts of those emissions. This can be done by utilizing the Social Cost of Carbon (and companion EPA Social Cost of Methane) protocol. The BLM should use this method for climate change impact assessment in the PEIS. But in addition, due to some shortcomings in the SCC method, the BLM must also evaluate qualitative, non-monetary impacts that are caused by climate change, such as from earlier snowmelts in our western mountains that are changing water supplies. This analysis should be done from a global perspective because as recognized in the CEQ Climate Change NEPA Guidance, "diverse individual sources of emissions each make relatively small additions to global atmospheric GHG concentrations that collectively have huge impact." That said, local impacts also need to be considered especially since the BLM has traditionally published the local monetary benefits of the coal program in its NEPA analyses. BLM should not assume that federal coal that is not produced will simply be replaced by production from other sources (so-called "perfect substitution") thus eliminating any climate change benefits —this unfounded myth is not based on empirical evidence or sound economic theory, and it has been rejected in several reports.

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Comment Number: 0002480\_Culver\_20160728\_TWS-45

Organization I: The Wilderness Society

Commenter I: Nada Culver

Other Sections: 2 |

Comment Excerpt Text:

Another approach to managing the carbon emissions associated with the Federal Coal Program is by addressing the costs borne by society due to federal coal leasing and production through economic tools designed to ensure that taxpayers receive a fair return. Referred to by some as a carbon adder, such an approach increases the price paid to the federal government for the use of federal coal to reflect some or all of its climate costs (i.e., climate externality). (52) Some have argued that such an adder could be incorporated into the existing bonus bid, rents,



or royalty paid on federal coal sales because it offers the administratively simplest and most efficient strategy, and because of the potential for states and communities impacted by reductions in coal mining to receive a portion revenue generated by the adder even as coal production declines. (53) An adder could be set at a price to address emissions associated with lifecycle emissions of federal coal or just the direct (upstream) emissions of from coal mining. (54) Fully incorporating the lifecycle costs would potentially result in a very large price increase, but could be phased in. (55) Another approach would be for DOI to initially apply an upstream (direct) carbon adder for all fossil production, including coal, as part of the royalty rate. In a forthcoming paper, we will demonstrate in more detail how this approach has myriad benefits, including market flexibility so that least cost options will be made, clearly under the purview of DOI and BLM, more straightforward and transparent than a lifecycle cost, increases taxpayer fairness by beginning to internalize externalities and increasing state and federal revenue, is complimentary to leasing reform. Lastly, “The statutory case for a BLM coal pricing initiative appears to be stronger than the case against it since BLM is required to consider the environment when making multiple use decisions for public land. BLM’s leasing statutes also appear to afford the agency a significant amount of discretion to set the financial terms of coal leases.” (56)

(52) A.J. Krupnick et al., “Putting a Carbon Charge on Federal Coal: Legal and Economic Issues”, Resources for the Future Discussion Paper 15---13, 2015, Washington, DC: RFF. Available at <http://www.rff.org/files/sharepoint/WorkImages/Download/RFF-DP-15-13.pdf>. Last accessed, July 22, 2016.

(53) Krupnick et al.; T. Gerarden, W. Spencer Reeder, and J. Stock, “Federal Coal Program Reform, the Clean Power Plan, and the Interaction of Upstream and Downstream Climate Policies,” April 2016. Available at [http://scholar.harvard.edu/files/stock/files/fedcoal\\_cpp\\_v9.pdf](http://scholar.harvard.edu/files/stock/files/fedcoal_cpp_v9.pdf). Last accessed July 22, 2016. Note that under existing law, the government’s authority to share revenue collected from federal coal leasing and production is limited. See Baldwin, Pamela. 2010. “Fair Market Value for Wind and Solar Development on Public Land.” Whitepaper commissioned by The Wilderness Society and Taxpayers for Common Sense. Pages 21-24. Available at <https://wilderness.org/sites/default/files/Fair-Market-Value-Whitepaper.pdf> (accessed July 26, 2016).

(54) For an in-depth look at the distinction between lifecycle and direct (upstream) emissions, see Burger, Michael and Wentz, Jessica. 2016. “Downstream and Upstream Greenhouse Gas Emissions: The Proper Scope of NEPA Review.” Forthcoming working paper.

(55) Krupnick et al.

(56) Krupnick, et al. p. 3.

Recommendations: BLM should consider adjusting bonus bids, rents, and royalties to address the associated externalities (a so-called “carbon adder”) as a pathway to meeting its goals to reduce climate emissions from the federal coal program consistent with national climate commitments.

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Comment Number: 0002480\_Culver\_20160728\_TWS-80

Organization I: The Wilderness Society

Commenter I: Nada Culver

Other Sections: I

Comment Excerpt Text:

The SCC was developed through a rigorous multi-agency process based on generally accepted research methods and years of peer-reviewed scientific and economic studies. In 2010, an interagency working group was convened by the Council of Economic Advisers and the Office of Management and Budget to design an SCC modeling exercise and develop estimates for use in rulemakings. The interagency group was comprised of scientific and economic experts from the White House and federal agencies, including: Council on Environmental Quality, National Economic Council, Office of Energy and Climate Change, and Office of Science and Technology Policy, EPA, and the Departments of Agriculture, Commerce, Energy, Transportation, and Treasury. The interagency group identified a variety of assumptions, which EPA then used to estimate the SCC using three integrated assessment models, which each combine climate processes, economic growth, and interactions between the two in a single modeling framework.

This method has undergone careful peer review from a number of agencies and has been subject to updates and revisions, and considerable public comment. For example, see the Office of Management and Budget's (OMB) SCC site, which presents the OMB response to the public comments received through its solicitation for comments on use of SCC estimates in Federal regulatory analyses. (26) In this response, OMB announced plans to obtain expert, independent advice from the National Academies of Sciences, Engineering, and Medicine on how to approach future updates to the estimates. This panel is concluding its review but published an interim review generally reaffirming the methods used to develop the SCC for use in evaluating proposed federal actions. (27)

(26) See <https://www.whitehouse.gov/omb/oira/social-cost-of-carbon>. (Accessed July 25, 2016.)

(27) National Academies of Sciences, Engineering, and Medicine. (2016). *Assessment of Approaches to Updating the Social Cost of Carbon: Phase I Report on a Near-Term Update*. Committee on Assessing Approaches to Updating the Social Cost of Carbon, Board on Environmental Change and Society. Washington, DC: The National Academies Press.

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Comment Number: 0002480\_Culver\_20160728\_TWS-84

Organization I: The Wilderness Society

Commenter I: Nada Culver

Other Sections: 2

Comment Excerpt Text:

The carbon budget analysis serves as the basis for setting these targets, and would be used to inform decision making by the agency as part of a carbon management system. It could also be used when evaluating new policies, in NEPA processes or to dictate actual leasing decisions. While a carbon budget should be developed for all energy resources on federal lands, we believe that applying this concept to the coal leasing program is a logical starting point presented by the PEIS. The coal budget (measured in terms of CO<sub>2</sub>e) will provide a target for the agency to stay below when making leasing decisions. The agency could consider how each new lease impacts the budget and, while a more robust system could be used to construct a firm limit or “hard cap” in the future, we recommend the budget be used to develop “soft targets” to guide decisions in the near term. Thus, we envision the coal budget playing an integral role in the agency’s determination of what, where and how much coal will be made available for lease.

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Comment Number: 0002480\_Culver\_20160728\_TWS-85

Organization I: The Wilderness Society

Commenter I: Nada Culver

Other Sections: 2

Comment Excerpt Text:

BLM should develop a carbon budget and carbon management system for fossil fuels on public lands modeled after the analysis done by The Wilderness Society. Using the carbon budget, BLM should create a coal budget that will be used as a soft target and decision making tool. The budgets and carbon management system should play an integral role in the leasing process as proposed in Section IV.H. When considering new leases BLM should measure and manage toward the budget as well as requiring compensatory mitigation for the GHG emissions and climate change impacts new leases would cause.

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Comment Number: 0002486\_Ratledge\_20160728\_Apogee-I

Organization I: Apogee EP

Commenter I: Nathan Ratledge

Other Sections: 7.4

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**Comment Excerpt Text:**

The most straightforward route would be to implement a carbon adder for upstream (or direct) emissions – those occurring during the mining and production phase. Recent research estimates those costs would be roughly \$2 for surface federal coal and \$6 for underground federal coal. Without a more comprehensive carbon pricing program – like a national carbon tax, and given the widely recognized externalities associated with coal use, choosing not to price coal emissions from federal production via an upstream adder (or another similar approach) would represent a glaring misstep in meeting the nation’s climate commitments.

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Comment Number: 0002486\_Ratledge\_20160728\_Apogee-2

Organization I:Apogee EP

Commenter I:Nathan Ratledge

Other Sections: I

**Comment Excerpt Text:**

The Social Cost of Carbon (SCC) is a well---established and frequently utilized approach for capturing the externalities of emissions. A recent paper by Resources for the Future (Krupnick et al 2015) shows that the BLM has the regulatory and statutory authority to implement a price on carbon. Thus, including a carbon price (or ‘adder’) based on the SCC and coal emissions would be a practical step to account for carbon costs.

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Comment Number: 0002490\_Emrich\_20160728\_CloudPeakEnergy-23

Organization I:Cloud Peak Energy Inc.

Commenter I:Andrew C. Emrich, P.C.

Other Sections: I

**Comment Excerpt Text:**

This lack of authority extends to any attempt by the Department of the Interior to utilize the social cost of carbon, or similar analytical tools, to further burden coal leasing on public lands through indirect taxation or mitigation. In other words, BLM has no authority to discourage coal mining at the leasing stage based on downstream effects, such as greenhouse gas emissions from transportation and combustion, using the social cost of carbon or any other similar analytical method. Even BLM has previously recognized that the imposition of climate-related costs “is outside the scope of [the Federal Land Policy and Management Act] and the MLA.” See Attachment 5, BLM Petition Denial (Jan. 28, 2011) (“Carbon and any other fees dedicated to raising monies to fund other initiatives would require legislation allowing that authority to the BLM.”).

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Comment Number: 0002490\_Emrich\_20160728\_CloudPeakEnergy-39

Organization I:Cloud Peak Energy Inc.

Commenter I:Andrew C. Emrich, P.C.

**Comment Excerpt Text:**

The federal coal leasing program is governed by the MLA, which embodies fundamental principles of maximum economic recovery and diligent development of federal coal reserves. In evaluating climate change impacts related to the federal coal program, BLM’s analysis must be informed by the MLA, which indisputably favors mineral development. BLM’s climate change analysis, including the social cost of carbon, cannot be used as a justification to increase costs associated with coal leasing or otherwise attempt to discourage coal leasing and development on public lands. The social cost of carbon is not only an inaccurate and inappropriate tool to measure climate change impacts, but it is also wholly inconsistent with the MLA’s mandate to encourage the development of federal coal reserves.

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Comment Number: 0002491\_Weiskopf\_20160728\_NextGenClimateAmer-59

Organization I:NextGen Climate America

Commenter I: David Weiskopf  
 Other Sections: 2 4.5 8.7 I  
 Comment Excerpt Text:  
 Alternative C and D: Social Cost of Carbon and Royalty Rate Increases

This alternative would internalize the cost of carbon based on federal social cost of carbon estimates reflecting the “worldwide incremental damage from climatic change brought about by an additional metric ton of CO<sub>2</sub> emissions.”<sup>67</sup> This price is sensitive to discount rates. A midrange price for the year 2020 is \$46 per ton of CO<sub>2</sub>.<sup>68</sup> Similarly, BLM may consider royalty rates as a means to reform the federal coal program. Increased royalty rates can also include royalty carbon adders, which “directly incorporates a carbon price into the royalty paid on federal coal sales, reflecting its climate costs.”<sup>69</sup> Interior should analyze these decision alternatives and compare them against the criterion of budget compatibility – whether the reformed alternatives are consistent with federal climate change targets, as illustrated by the 450 Scenario.

[67 *Id.* at 29.]

[68 Alan Krupnick et al., *Putting a Carbon Charge on Federal Coal: Legal and Economic Issues*, Resources for the Future Discussion Paper at 10574; See U.S. GAO, GAO-14-663, *Regulatory Impact Analysis: Development of Social Cost of Carbon Estimates* (July 2014).]

[69 Spencer Reed and James H. Stock., *Federal Coal Leasing Reform Options: Effects on CO<sub>2</sub> Emissions and Energy Markets – Executive Summary*, February 2016 at 2-3.]

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Comment Number: 0002493\_Mead\_20160728\_GovWY-30

Organization I: Office of Governor Matthew H. Mead

Commenter I: MATTHEW H. MEAD

Other Sections: 7.3

Comment Excerpt Text:

1. Current life cycle analysis (LCA) studies are inadequate and do not factor in all variables. Any LCA that the BLM may undertake as a part of this review needs to be a consequential LCA.
2. If the BLM studies the LCA of mined federal coal, it must take into account current and future technological advancements that may reduce emissions. Studies have shown that new technologies can drastically reduce coal's CO<sub>2</sub> emissions.
3. Because of the highly speculative nature of a social cost of carbon analysis, the BLM should avoid conducting one as part of the PEIS.
4. The BLM lacks the statutory authority and technical expertise to implement a carbon taxing program or promulgate other requirements to address CO<sub>2</sub> and other GHG emissions.

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Comment Number: 0002493\_Mead\_20160728\_GovWY-34

Organization I: Office of Governor Matthew H. Mead

Commenter I: MATTHEW H. MEAD

Comment Excerpt Text:

Neither NEPA nor the Council on Environmental Quality regulations specifically requires quantitative consideration of the economic impacts of climate change or use of the SCC. Climate Integrated Assessment Models (IAMs) which are a mechanism for conducting an SCC estimate are imperfect and provide a rough estimation at best - “the actual economic impacts associated with an additional metric ton of GHG emissions are unknown.” Therefore, an SCC based upon IAMs is “largely speculative.” *Id.* at p. 65; (WY0-01785). In reviewing a challenge to the Wright Area FEIS, the Court upheld the agencies' qualitative disclosure rather than quantitative analysis of the effects of GHG emissions. *WildEarth Guardians*, 120 F. Supp. 3d at 1269-1273;

(WY0-01391 to 01396). Distinguishing the coal leases analyzed in the Wright Area FEIS from a coal lease at the mouth of a power plant, the Court recognized that "the mined coal would be entering the free marketplace, thus diminishing the agencies' abilities to foresee the effect of coal combustion." *Id.* at 1272-73 (distinguishing Wright Area FEIS challenge from *High Country Conserv. Advocates v. USFS*, 52 F. Supp. 3d 1174 (D. Colo. 2014)); (WY0-01394 to 01395). It accepted the agencies' rationale that "information regarding the precise impact on global warming was not then available and that 'given the current state of science, it is not yet possible to associate specific actions with the specific climate impacts.'" *WildEarth Guardians*, 120 F. Supp. 3d at 1272; (WY0-01395).

Because of the highly speculative nature of a SCC analysis, the BLM should avoid conducting one as part of the PEIS. If the BLM persists, it must consider that the overall trend in GHG emissions is trending down. See *Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990-2014, Recent Trends in U.S. Greenhouse Gas Emissions and Sinks* at §2.1. (WY0-01792 to 01813). Overall, net emissions in 2014 were 8.6 percent below 2005 levels as shown in Figure 3.4.1 below.

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Comment Number: 0002499\_Nichols20160728-1

Organization: WildEarth Guardians

Commenter: Jeremy Nichols

Other Sections: 1

Comment Excerpt Text:

we want to emphasize that the move to reform the federal coal program comes as a critical moment in our nation's energy history. In the past several years, the federal coal program, which has sought to maximize economic return for the United States of America, has faced the new reality that more coal mining is not yielding the economic benefits intended when the program was first enacted. As our understanding of the costs of climate change have evolved, it is now clear that the federal coal program is not producing an economic return, but rather costing society tremendously.

One vivid illustration of this is with regards to the climate costs of publicly owned coal production. As reports have found, every ton of carbon released into the atmosphere imposes a cost to society in the form of economic damages. The U.S. Environmental Protection Agency ("EPA") has explained this "social cost of carbon" concept as follows:

The [social cost of carbon] SC-CO<sub>2</sub> is an estimate of the economic damages associated with a small increase in carbon dioxide (CO<sub>2</sub>) emissions, conventionally one metric ton, in a given year. This dollar figure also represents the value of damages avoided for a small emission reduction (i.e., the benefit of a CO<sub>2</sub> reduction). (1) EPA, "The Social Cost of Carbon," website available at

<https://www3.epa.gov/climatechange/EPAactivities/economics/scc.html>.

Although a U.S. Interagency Working Group consisting of the White House Council on Environmental Quality, U.S. Department of Agriculture, the EPA, the Department of Energy, and others reports that the current cost of carbon emissions may be as high as \$105 per metric ton of carbon dioxide released, peer-reviewed studies actually indicate the cost is as high as \$220 per metric ton. (2) Agencies have lately been using a mid-range value of \$37 per metric tons of carbon dioxide.

(2) According to the Interagency Working Group, the 2015 cost of carbon based on the 95th percentile value across three models at a 3% discount rate was \$105 per metric ton of carbon dioxide. See Exhibit 1, Interagency Working Group on Social Cost of Carbon, "Technical Support Document: Technical Update of the Social Cost of Carbon for Regulatory Impact Analysis Under Executive Order 12866" (July 2015), available online at <https://www.whitehouse.gov/sites/default/files/omb/inforeg/scc-tsd-final-july-2015.pdf>. However, recent studies have determined that current estimates for the social cost of carbon should be as much as \$220 per ton. See Exhibit 2, Moore, C.F. and B.D. Delvane, "Temperature impacts on economic growth warrant stringent mitigation policy," *Nature Climate Change* (January 12, 2015).

Based on recent reports that federal coal production is responsible for 765,241,950 metric tons of carbon dioxide, this would put the total climate cost of the federal coal program at up to \$168,353,229,000 based on a \$220 per metric ton social cost of carbon value. (3) Even based on a \$105 per metric ton of carbon value, the

costs of the federal coal program would be as much as \$80,350,404,750. These are staggering expense. Especially considering the Department of the Interior has estimated the total economic benefits from all oil, gas, and coal production overseen by the BLM may be as high as only \$64.50 billion, the net costs of the federal coal program alone are obvious and far overshadows any economic benefits. (4)

(3) According to a recent report for The Wilderness Society, total carbon dioxide emissions related to federal coal production are estimated to be 765,241,950 metric tons annually. See Exhibit 3, Stratus Consulting, "Greenhouse Gas Emissions from Fossil Energy Extracted From Federal Lands and Waters: an Update," Final Report Prepared for The Wilderness Society (Dec. 23, 2014) at 10, available online at <http://wilderness.org/sites/default/files/Stratus-Report.pdf>.

(4) In the Department of the Interior's most recent Economic Report for FY 2015, the agency estimates a total economic contribution from all coal, oil, and gas production overseen by the BLM to amount to \$64.5 billion. See U.S. Department of the Interior, "Economic Report, FY 2015" (June 17, 2016) at 22, available online at [https://www.doi.gov/sites/doi.gov/files/uploads/fy2015\\_doi\\_econ\\_report\\_2016-06-17.pdf](https://www.doi.gov/sites/doi.gov/files/uploads/fy2015_doi_econ_report_2016-06-17.pdf). This number is based on the direct economic benefits of all oil, gas, and coal production overseen by the BLM, which are estimated to be \$29.5 billion, and the "value added" benefits, which are vaguely defined and amount to \$36.64 billion. The report does not disaggregate between coal, oil, and gas benefits, but rather presents an aggregate figure for all fossil fuel production overseen by the BLM.

The costs of the federal coal program are underscored by methane emissions associated with federal coal production. As recent reports have found, among federal fossil fuel development, federal coal production is the largest source of methane pollution, releasing 13,080 metric tons annually. (5) According to recent studies, the social cost of methane as of 2015 was as high as \$3,000 per metric ton. (6) This puts the cost of methane emissions associated with federal coal production at \$39,240,000, further highlighting how costly the climate consequences of the federal coal program are to our society.

(5) See Exhibit 3 at 10. Contrast this figure with total methane emissions from onshore natural gas production, which at 12,358 metric tons is the second largest source of methane from federal fossil fuel production.

(6) See Exhibit 4, EPA, "Regulatory Impact Analysis of the Proposed Emission Standards for New and Modified Sources in the Oil and Natural Gas Sector" (Aug. 2015) at 4-14, available online at [https://www3.epa.gov/airquality/oilandgas/pdfs/og\\_prop\\_ria\\_081815.pdf](https://www3.epa.gov/airquality/oilandgas/pdfs/og_prop_ria_081815.pdf).

Put another way, the annual climate costs of just the federal coal program far outweigh the benefits of all fossil fuel production overseen by the BLM. Taking into account all carbon dioxide and methane emissions associated with federal coal production, the costs are 2.5 times greater than all economic benefits. See Attached for Figure I - Benefits of BLM Oil, Gas, and Coal Production and High and Low Carbon Cost Estimates Associated with Federal Coal Production.

Another way to look at this is to assess the climate costs that society stands to bear from future coal production. According to estimates, 231.92 billion metric tons of carbon stands to be unleashed if all remaining leased and unleased federal coal reserves are mined and consumed. (7) Based just on carbon cost estimates for 2015, these emissions stand to produce as much as \$51.03 trillion in damages, more than 17 times the total budget of the United States of America. However, because these emissions are likely to occur later in time, when carbon costs are more pronounced, these estimates represent very conservative amounts. Nevertheless, they remain illustrative of the need for reforms to ensure the United States, and indeed the world, are not forced to shoulder these costs.

(7) See Exhibit 5, Eco-Shift Consulting, "The Potential Greenhouse Gas Emissions from U.S. Federal Fossil Fuels," Report Prepared for Center for Biological Diversity and Friends of the Earth (Aug. 2015), available at <http://www.ecoshiftconsulting.com/wp-content/uploads/Potential-Greenhouse-Gas-Emissions-U-S-Federal-Fossil-Fuels.pdf>. See Attached for Table I - Projected Carbon Emissions and Costs Related from Unleased and Leased Federal Coal Reserves

Even under the more conservative, mid-range value of \$37 per metric ton of carbon dioxide, the total carbon emissions from unleased federal coal reserves stands to be more than \$7.8 trillion. No matter how you slice it, the liabilities of future coal development are nearly unfathomable and certainly cannot be something the BLM and Interior Department should expect future generations to shoulder.

These climate costs are not theoretical. As the Interior Department itself has acknowledged, the cost of climate change to the resources it manages is and stands to be enormous, including:

- More than \$40 billion in National Park resources and infrastructure at risk because of climate change; (8)
- Devastating impacts to western water supplies, including decreased precipitation in the American southwest, decreased runoff, and decreased streamflow; (9)
- Loss of imperiled and iconic American wildlife, including polar bear, caribou, salmon, and moose; (10) and
- Greater difficulty in reclaiming land disturbed by energy and mineral extraction and other human activities on public lands. (11)

(8) See National Park Service, “Interior Department Releases Report Detailing \$40 Billion of National Park Assets at Risk from Sea Level Rise” (June 23, 2015), website available at <https://www.nps.gov/aboutus/news/release.htm?id=1715>.

(9) See Department of the Interior, “Interior Releases Report Highlighting Impacts of Climate Change to Western Water Resources” (April 25, 2011), website available at <https://www.doi.gov/news/pressreleases/Interior-Releases-Report-Highlighting-Impacts-of-Climate-Change-to-Western-Water-Resources>; see also Department of the Interior, “Interior Department Releases Report Underscoring Impacts of Climate Change on Western Water Resources” (March 22, 2016), website available at <https://www.doi.gov/pressreleases/interior-department-releases-report-underscoring-impacts-climate-change-western-water>.

(10) See Department of the Interior, “9 Animals that are Feeling the Impacts of Climate Change” (Nov. 16, 2015), website available at <https://www.doi.gov/blog/9-animals-are-feeling-impacts-climate-change>.

(11) See Exhibit 6, Department of the Interior, “Climate Change Adaptation Plan” (Jan. 2014) at 6, available at [https://www.doi.gov/sites/doi.gov/files/migrated/greening/sustainability\\_plan/upload/2014\\_DOI\\_Climate\\_Change\\_Adaptation\\_Plan.pdf](https://www.doi.gov/sites/doi.gov/files/migrated/greening/sustainability_plan/upload/2014_DOI_Climate_Change_Adaptation_Plan.pdf).

Comment Number: 0002499\_Nichols20160728-4

Organization I: WildEarth Guardians

Commenter I: Jeremy Nichols

Other Sections: 4.5 2 8.1 8.7 8.5 8.9 11

Comment Excerpt Text:

## 2. Just Transition Alternative

The “Just Transition Alternative” is meant to both wind down the federal coal program in order to keep fossil fuels in the ground and to ensure an orderly, effective, and fair transition of workers and communities away from coal to more prosperous and sustainable economies. The “Just Transition Alternative” is defined by the following key components:

1. An end to federal coal leasing: Consistent with authorities and discretion under the Mineral Leasing Act, the Just Transition Alternative imposes a permanent pause on the leasing of federal coal. The primary basis for adopting this permanent pause would be to ensure the protection of the public interest and the interests of the United States. Such justification for an end to leasing is clearly supported by the Mineral Leasing Act.

This pause would apply to all competitive leases (including all leases by application, including emergency leases, as defined by 43 C.F.R. § 3425.1-4) and lease modifications. We further believe there is ample justification for applying a permanent pause to other forms of non-competitive leasing, such as preference right lease applications and lease exchanges. With regards to lease exchanges, the BLM has clear authority to reject exchanges that are not in the “public interest.” 43 C.F.R. § 3435.4(a); see also 43 C.F.R. § 3436.0-2(b) (related to alluvial valley floor exchanges) and 43 C.F.R. § 2200.0-6 (generally related to exchanges). With regards to preference right lease applications, the BLM has the authority to reject such applications where there does not exist “commercial quantities” of coal. 43 C.F.R. § 3430.5-1(a)(1). Given the dismal state of the coal industry and the overwhelming climate costs that coal imposes on society, it would be dubious at best to claim that any commercial quantities of coal exist where there are preference right lease applications. Accordingly, the BLM has the authority to reject such applications. (20)

Furthermore, to ensure an orderly end to federal coal leasing, the BLM and the Department of the Interior

should issue a rule or guidance requiring that as land management planning is undertaken pursuant to 43 C.F.R. § 1610, et seq., that all lands within a resource management area that are not currently leased for coal, be made unavailable for leasing. The authority to impose such direction is set forth at 43 C.F.R. § 3420.1-4(e), which gives the BLM broad discretion to “eliminate additional coal deposits from consideration to protect other resource values.” 43 C.F.R. § 3420.1-4(e)(3).

(20) The only preference right lease applications that exist are in northwestern New Mexico, where Arch Coal, which is currently bankrupt, has the rights to acquire 21,000 acres of leases. Legislation was introduced in the U.S. House of Representatives that would allow the Secretary to retire these preference right lease applications. See HR-1820, available online at <https://www.congress.gov/bill/114th-congress/house-bill/1820/text>. If this legislation is passed, there would be no additional preference right lease applications requiring action. We support this legislation and urge the Secretary of the Interior to encourage its passage in the U.S. Senate and adoption into law.

Putting a permanent pause on leasing will not destroy the U.S. economy or otherwise endanger our energy security. As a recent report looking at leasing in the Powder River Basin found, existing leased reserves in the Powder River Basin are sufficient to meet demand and effectively contribute to limiting temperature increases.

(21) This report is instructive as the Powder River Basin is the largest coal producing region in the United States and imposes the greatest influence on energy supply and demand in the nation. If an end to federal leasing can be justified in the Powder River Basin, it can be justified for federal leasing elsewhere in the U.S.

21 See Exhibit 11, Fulton, M., D. Koplow, R. Capalino, and A. Grant, “Enough Already: Meeting 20C PRB Coal Demand Without Lifting the Federal Moratorium,” Report Prepared for Energy Transition Advisors, Earth Track, and Carbon Tracker Initiative (July 2016), available online at <http://www.carbontracker.org/report/enough-already-2c-powder-river-basin-coal-demand-federal-moratorium/>.

2. Increased royalty rates and rentals: Coal is exacting a tremendous toll on our nation, costing our society billions in climate damages, adverse health impacts from air pollution, and water contamination. Royalty rates from production on existing coal leases and rentals on existing leases must be increased to begin to recoup the costs of these externalities, which are currently shouldered by the public.

Although royalty rates are normally imposed through new leasing, we recommend that the Interior Department and BLM incorporate higher royalty rates into existing leases as existing leases are readjusted pursuant to 43 C.F.R. § 3451.1. To accomplish this, we urge the amendment of 43 C.F.R. § 3473.3-2(a)(1) and (2) to incorporate increased royalty rates for both surface and underground mining. As leases are readjusted, these royalty rates must be applied to existing leases pursuant to 43 C.F.R. § 3451.1(a)(2).

Increasing royalty rates has been recommended by the White House as both a means to generate revenue and address the costs of environmental externalities, including carbon costs. (22)

(22) See Exhibit 12, Executive Office of the President of the United States, “The Economics of Coal Leasing on Federal Lands: Ensuring a Fair Return to Taxpayers” (June 2016), available online at [https://www.whitehouse.gov/sites/default/files/page/files/20160622\\_cea\\_coal\\_leasing.pdf](https://www.whitehouse.gov/sites/default/files/page/files/20160622_cea_coal_leasing.pdf).

Furthermore, royalty rate reductions should not be approved. Currently, royalty rate reductions are routinely granted as companies claim poverty or difficulty in mining with little apparent scrutiny as to whether the reductions are justified. In Colorado, for example, BLM officials have approved royalty rate reductions to facilitate methane venting and most recently proposed to approve a retroactive royalty rate reduction for a mine that was not even producing coal. (23) See Exhibits 13 and 14.

Similarly, we urge Interior and BLM to amend 43 C.F.R. § 3473.3-1(a) to raise rental rates for federal coal leases. Currently, rental rates are set at \$3.00 per acre, a figure that has not been adjusted since 1979, if not earlier. This rental rate not only has failed to be adjusted to account for inflation, but fails to account for the fact that some leases may be of small acreage, yet yield significant amounts of coal. Rentals should reflect the value of the lease, which depends on the amount of coal a lease contains. In accordance with 43 C.F.R. § 3473.3-1(a), any increased rental rate must be applied to any readjusted coal lease.

3. Existing leases that are not producing must be canceled: Where a lease is not meeting continued operation requirements under 43 C.F.R. § 3483.1(a)(2), it is subject to cancellation pursuant to 43 C.F.R. § 3452.2. Where a lease is not meeting continued operation requirements, BLM and the Interior Department should make clear that



cancellation of the lease must be pursued. To this end, discretionary avenues for avoiding cancellation should be prohibited. Thus, lease suspensions under 43 C.F.R. § 3483.3 and payment of advanced royalties in lieu of continued operation under 43 C.F.R. § 3483.4 should be barred.

The justification for imposing such direction is very clear. Currently, BLM regularly grants lease suspensions and allows payment of royalties in lieu of continued operation with no assessment of whether such actions are appropriate or in the public interest. BLM appears to be under the impression that lease suspensions or advanced royalties are somehow mandated, and that the agency has no choice but to approve company requests. An egregious example of this is with regards to Arch Coal's Carbon Basin Lease in southern Wyoming (No. WYW-139975). Arch acquired this lease with the aim of developing a mine to fuel a proposed coal to liquids facility. However, this coal to liquids facility has never materialized or even shown any promise of materializing. Most recently, the Wyoming Department of Environmental Quality terminated the permit for the proposed facility. (24) Nevertheless, since 2010, Arch has failed to meet continued operation requirements. The BLM has allowed Arch to maintain its lease, however, by routinely allowing the company to pay advanced royalties in lieu of continued operation. (25) These decisions appear to be pro forma in nature, and do not reflect any consideration as to whether it is appropriate or remotely in the public interest to accept advance royalties in lieu of continued operation.

(24) See Exhibit 15, Wyoming Department of Environmental Quality, "Permit Termination, Medicine Bow Fuel and Power Coal to Liquid Project" (June 27, 2016).

(25) See Exhibit 16.

Furthermore, where an existing lease is not producing, yet is part of a producing logical mining unit, BLM and the Interior Department should use their discretion to modify the boundaries of logical mining units to eliminate the non-producing lease and facilitate its cancellation. BLM has such discretion under 43 C.F.R. § 3478.1.

Cancelling leases that are not producing will serve the goal of preventing any potential future development of existing leases and contribute to an orderly end to the federal coal program.

4. Accounting for carbon costs in coal management: It should be made clear, whether through new rules or guidance, that carbon costs must be analyzed, assessed and disclosed as federal coal management decisions are made. Such decisions are most likely to include mining plan modifications issued pursuant to the Mineral Leasing Act, 30 U.S.C. § 207(c), and the Surface Mining Control and Reclamation Act ("SMCRA"), 30 C.F.R. § 746, and lease readjustments. It is imperative that the BLM and Interior maintain close accounting of the carbon emissions and costs resulting from its coal management actions, to ensure full transparency around these emissions and costs, and to meaningfully act to address these emissions and costs. Particularly given that, pursuant to authorities under the Mineral Leasing Act and SMCRA, the Secretary of the Interior has full discretion to disapprove mining plans authorizing the development of leased federal coal, it is imperative that carbon emissions and costs factor into and influence such decisionmaking.

5. Reclamation must be guaranteed: To ensure an orderly end to the federal coal program, full and final reclamation must be guaranteed within a reasonable timeframe. We urge two regulatory changes to ensure this occurs.

First, Interior should amend regulations at 30 C.F.R. §§ 816.100 and 817.100 to provide clarification and specificity around contemporaneous reclamation. Current rules are vague and fail to ensure that reclamation proceeds in a manner that is as "contemporaneously as possible" with mining in accordance with 30 U.S.C. § 1202(e). These regulations should be amended to make clear that the success of contemporaneous reclamation must be measured based on a comparison of Phase III bond release acres, as defined under 30 C.F.R. § 800.40(c)(3), with disturbed acres and ensure that reclamation proceeds at a 1:1 rate, in other words for every acre disturbed, one acre should be fully reclaimed to meet Phase III bond release standards.

Second, just as current BLM rules require diligent development of federal coal, these rules should also require diligent reclamation. To this end, Interior and BLM should consider rule changes to ensure that nonproducing coal leases are fully reclaimed within two years of failing to meet continued operation requirements and set deadlines for the full reclamation of federal coal leases that are no later than 2035. This reclamation deadline

should be established by rule and incorporated into lease terms as leases are readjusted.

Finally, Interior should amend self-bonding regulations at 30 C.F.R. § 800.23, and any other regulations, as appropriate, to prohibit self-bonding whenever publicly owned coal is permitted to be mined. This will ensure that, as coal companies continue their decline, that American public resources are fully protected and fully guaranteed to be cleaned up.

6. Prioritizing transition: Above all, the BLM and Interior must make transition away from coal a foremost goal as the federal coal program comes to an end. To do this, the agencies should not only explicitly commit, to the extent possible, their leadership, resources, and expertise to ensure that workers and communities receive the support and assistance they need to transition to more sustainable and prosperous economies. Among the actions that Interior and BLM can and should undertake to ensure transition:

- Work to secure Congressional authorization to direct increased royalty and rental payments toward worker and community support. Under NEPA, agencies are required to rigorously explore and objectively evaluate reasonable alternatives “not within the jurisdiction of the lead agency.” 40 C.F.R. § 1502.14(c). Here, although BLM and Interior may not be able to direct royalties toward transition support, they can recommend that Congress pass legislation that provides such authorization.

- Establishing an Economic Transition Fund, which would be sustained by an increase in reimbursement fees charged by the Interior Department when processing coal-related applications. Under the Federal Land Policy and Management Act (“FLPMA”), Interior has authority to recover reasonable costs associated with its coal management program and to appropriate and spend such monies. Specifically, FLPMA provides the Secretary of the Interior with authority to “require a deposit of any payments intended to reimburse the United States for reasonable costs with respect to applications,” including coal lease application. See 43 U.S.C. § 1734(b). Such payments are “authorized to be appropriated and made available until expended” by FLPMA. Id. Funds from the Economic Transition Fund should be directed toward transition-oriented initiatives.

- Prioritizing support and assistance to help communities transition. In addition to securing funds and making them available, the Department of the Interior can play a key role in helping direct communities to support, steering resources to support conservation and research projects in or near communities, encouraging renewable energy development on public lands. Such leadership could be conveyed through a Secretarial Order that simply makes it an overarching priority of the Interior Department to advance transition

Overall, the Interior Department and BLM must move to keep our publicly owned coal in the ground. However, keeping coal in the ground should not mean that we turn our backs on the workers and communities that have been dependent on coal for so long. Embracing an alternative that ensures “Just Transition,” in other a fair, compassionate, and orderly transition away from coal, is the most effective way to both protect our climate and help our nation effectively move to more sustainable economies and reliable and affordable means of energy production.

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Comment Number: 0002499\_Nichols20160728-6

Organization I: WildEarth Guardians

Commenter I: Jeremy Nichols

Other Sections: I

Comment Excerpt Text:

b. Social Cost of Carbon Must be Analyzed

The PEIS must fully analyze and assess the climate impacts of coal reforms using the social cost of carbon protocol.

The social cost of carbon protocol for assessing climate impacts is a method for “estimat[ing] the economic damages associated with a small increase in carbon dioxide (CO<sub>2</sub>) emissions, conventionally one metric ton, in a given year [and] represents the value of damages avoided for a small emission reduction (i.e. the benefit of a CO<sub>2</sub> reduction).” (27) As explained above, the protocol was developed by a working group consisting of several federal agencies, including the U.S. Department of Agriculture, EPA, CEQ, and others, with the primary aim of implementing Executive Order 12866, which requires that the costs of proposed regulations be taken into

account.

(27) EPA, “Fact Sheet: Social Cost of Carbon” (Nov. 2013) at 1, available online at <http://www.epa.gov/climatechange/Downloads/EPAactivities/scc-fact-sheet.pdf>.

In 2009, an Interagency Working Group was formed to develop the protocol and issued final estimates of carbon costs in 2010. (28) These estimates were then revised in 2013 by the Interagency Working Group, which at the time consisted of 13 agencies. (29) This report and the social cost of carbon estimates were again revised in 2015. (30)

(28) Interagency Working Group on Social Cost of Carbon, “Technical Support Document: Social Cost of Carbon for Regulatory Impact Analysis Under Executive Order 12866” (Feb. 2010), available online at <https://www.whitehouse.gov/sites/default/files/omb/inforeg/for-agencies/Social-Cost-of-Carbon-for-RIA.pdf>.

(29) Interagency Working Group on Social Cost of Carbon, “Technical Support Document: Technical Update of the Social Cost of Carbon for Regulatory Impact Analysis Under Executive Order 12866” (May 2013), available online at [https://www.whitehouse.gov/sites/default/files/omb/inforeg/social\\_cost\\_of\\_carbon\\_for\\_ria\\_2013\\_update.pdf](https://www.whitehouse.gov/sites/default/files/omb/inforeg/social_cost_of_carbon_for_ria_2013_update.pdf).

(30) See Exhibit I.

Depending on the discount rate and the year during which the carbon emissions are produced, the Interagency Working Group estimates the cost of carbon emissions, and therefore the benefits of reducing carbon emissions, to range from \$11 to \$220 per metric ton of carbon dioxide. See Chart Below. In its most recent update to the Social Cost of Carbon Technical Support Document, the White House’s central estimate was reported to be \$36 per metric ton. (31) In July 2014, the U.S. Government Accountability Office (“GAO”) confirmed that the Interagency Working Group’s estimates were based on sound procedures and methodology. (32)

(31) Exhibit 18, White House, “Estimating the Benefits from Carbon Dioxide Emissions Reductions,” website available at <https://www.whitehouse.gov/blog/2015/07/02/estimating-benefits-carbon-dioxide-emissions-reductions>.

(32) Exhibit 19, GAO, “Regulatory Impact Analysis, Development of Social Cost of Carbon Estimates,” GAO-14-663 (July 2014), available online at <http://www.gao.gov/assets/670/665016.pdf>.

See Attached for Table - Revised Social Cost of CO<sub>2</sub>, 2010-2050 (in 2007 dollars per metric ton of CO<sub>2</sub>)

Although it appears that Interior and BLM must analyze and assess carbon costs consistent with Executive Order 12866, agencies within the Interior Department, including the BLM, have already been utilizing the social cost of carbon protocol in the context of analyzing the impacts of fossil fuel development under NEPA.

In recent Environmental Assessments for oil and gas leasing in Montana, the agency estimated “the annual SCC [social cost of carbon] associated with potential development on lease sale parcels.” (33) In conducting its analysis, the BLM used a “3 percent average discount rate and year 2020 values,” presuming social costs of carbon to be \$46 per metric ton. (34) Based on its estimate of greenhouse gas emissions, the agency estimated total carbon costs to be “\$38,499 (in 2011 dollars).” (35) In Idaho, the BLM also utilized the social cost of carbon protocol to analyze and assess the costs of oil and gas leasing. Using a 3% average discount rate and year 2020 values, the agency estimated the cost of carbon to be \$51 per ton of annual CO<sub>2</sub>e increase. (36) Based on this estimate, the agency estimated that the total carbon cost of developing 25 wells on five lease parcels to be \$3,689,442 annually. (37)

(33) Exhibit 20, BLM, “Environmental Assessment for October 21, 2014 Oil and Gas lease Sale,” DOI-BLM-MT-0010-2014-0011-EA (May 19, 2014) at 76, available online at

[http://www.blm.gov/style/medialib/blm/mt/blm\\_programs/energy/oil\\_and\\_gas/leasing/lease\\_sales/2014/oct\\_\\_21\\_2014/july23posting.Par.25990.File.dat/MCFO%20EA%20October%202014%20Sale\\_Post%20with%20Sale%20\(1\).pdf](http://www.blm.gov/style/medialib/blm/mt/blm_programs/energy/oil_and_gas/leasing/lease_sales/2014/oct__21_2014/july23posting.Par.25990.File.dat/MCFO%20EA%20October%202014%20Sale_Post%20with%20Sale%20(1).pdf).

(34) Id.

(35) Id.

(36) Exhibit 21, BLM, “Little Willow Creek Protective Oil and Gas Leasing,” EA No. DOI-BLM-ID-B010-2014-0036-EA (February 10, 2015) at 81, available online at [https://www.blm.gov/epl-front-office/projects/nepa/39064/55133/59825/DOI-BLM-ID-B010-2014-0036-EA\\_UPDATED\\_02272015.pdf](https://www.blm.gov/epl-front-office/projects/nepa/39064/55133/59825/DOI-BLM-ID-B010-2014-0036-EA_UPDATED_02272015.pdf).

(37) Id. at 83.

To be certain, the social cost of carbon protocol presents a conservative estimate of economic damages associated with the environmental impacts climate change. As the EPA has noted, the protocol “does not currently include all important [climate change] damages.” (38) As explained:

(38) EPA, “Fact Sheet: Social Cost of Carbon” (Nov. 2013) at 1, available online at <http://www.epa.gov/climatechange/Downloads/EPAactivities/scc-fact-sheet.pdf>.

The models used to develop [social cost of carbon] estimates do not currently include all of the important physical, ecological, and economic impacts of climate change recognized in the climate change literature because of a lack of precise information on the nature of damages and because the science incorporated into these models naturally lags behind the most recent research. In fact, more recent studies have reported significantly higher carbon costs. For instance, a report published this month found that current estimates for the social cost of carbon should be increased six times for a mid-range value of \$220 per ton. (40) In spite of uncertainty and likely underestimation of carbon costs, nevertheless, “the SCC is a useful measure to assess the benefits of CO<sub>2</sub> reductions,” and thus a useful measure to assess the costs of CO<sub>2</sub> increases. (41)

(41) EPA, “Fact Sheet: Social Cost of Carbon” (Nov. 2013) at 1, available online at <http://www.epa.gov/climatechange/Downloads/EPAactivities/scc-fact-sheet.pdf>.

That the economic impacts of climate change, as reflected by an assessment of social cost of carbon, should be a significant consideration in agency decisionmaking, is emphasized by a recent White House report, which warned that delaying carbon reductions would yield significant economic costs. (42) As the report states:

(42) Exhibit 22, Executive Office of the President of the United States, “The Cost of Delaying Action to Stem Climate Change” (July 2014), available online at

[https://www.whitehouse.gov/sites/default/files/docs/the\\_cost\\_of\\_delaying\\_action\\_to\\_stem\\_climate\\_change.pdf](https://www.whitehouse.gov/sites/default/files/docs/the_cost_of_delaying_action_to_stem_climate_change.pdf).

[D]elaying action to limit the effects of climate change is costly. Because CO<sub>2</sub> accumulates in the atmosphere, delaying action increases CO<sub>2</sub> concentrations. Thus, if a policy delay leads to higher ultimate CO<sub>2</sub> concentrations, that delay produces persistent economic damages that arise from higher temperatures and higher CO<sub>2</sub> concentrations. Alternatively, if a delayed policy still aims to hit a given climate target, such as limiting CO<sub>2</sub> concentration to given level, then that delay means that the policy, when implemented, must be more stringent and thus more costly in subsequent years. In either case, delay is costly. (43) The requirement to analyze the social cost of carbon is supported by the general requirements of NEPA and by federal case law.

To this end, courts have ordered agencies to assess the social cost of carbon pollution, even before a federal protocol for such analysis was adopted. In 2008, the U.S. Court of Appeals for the Ninth Circuit ordered the National Highway Traffic Safety Administration to include a monetized benefit for carbon emissions reductions in an Environmental Assessment prepared under NEPA. *Center for Biological Diversity v. National Highway Traffic Safety Administration*, 538 F.3d 1172, 1203 (9th Cir. 2008). The Highway Traffic Safety Administration had proposed a rule setting corporate average fuel economy standards for light trucks. A number of states and public interest groups challenged the rule for, among other things, failing to monetize the benefits that would accrue from a decision that led to lower carbon dioxide emissions. The Administration had monetized the employment and sales impacts of the proposed action. *Id.* at 1199. The agency argued, however, that valuing the costs of carbon emissions was too uncertain. *Id.* at 1200. The court found this argument to be arbitrary and capricious. *Id.* The court noted that while estimates of the value of carbon emissions reductions occupied a wide range of values, the correct value was certainly not zero. *Id.* It further noted that other benefits, while also uncertain, were monetized by the agency. *Id.* at 1202.

More recently, a federal court has done likewise for a federally approved coal lease. That court began its analysis by recognizing that a monetary cost-benefit analysis is not universally required by NEPA. See *High Country Conservation Advocates v. U.S. Forest Service*, 52 F.Supp.3d 1174 (D. Colo. 2014), citing 40 C.F.R. § 1502.23. However, when an agency prepares a cost-benefit analysis, “it cannot be misleading.” *Id.* at 1182 (citations omitted). In that case, the NEPA analysis included a quantification of benefits of the project. However, the quantification of the social cost of carbon, although included in earlier analyses, was omitted in the final NEPA analysis. *Id.* at 1196. The agencies then relied on the stated benefits of the project to justify project approval. This, the court explained, was arbitrary and capricious. *Id.* Such approval was based on a NEPA analysis with misleading economic assumptions, an approach long disallowed by courts throughout the country. *Id.*

A recent op-ed in the New York Times from Michael Greenstone, the former chief economist for the President's Council of Economic Advisers, confirms that it is appropriate and acceptable to calculate the social cost of carbon when reviewing whether to approve fossil fuel extraction. (44)

(44) Exhibit 23, Greenstone, M., "There's a Formula for Deciding When to Extract Fossil Fuels," New York Times (Dec. 1, 2015), available online at [http://www.nytimes.com/2015/12/02/upshot/theres-a-formula-for-deciding-when-to-extract-fossil-fuels.html?\\_r=0](http://www.nytimes.com/2015/12/02/upshot/theres-a-formula-for-deciding-when-to-extract-fossil-fuels.html?_r=0).

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Comment Number: 0002504\_Lefton\_20160729-1

Organization I: Climate Advisors

Commenter I: Rebecca Lefton

Comment Excerpt Text:

BLM must Ensure that Reforms to the Federal Coal Program Are Consistent With United States' Climate Goals

The historic December 2016 Paris Agreement on climate was achieved in large part because of the strong leadership shown by the United States. The domestic measures to address carbon pollution, such as the Clean Power Plan and passenger-vehicle fuel- efficiency standards, gave the global community confidence that the United States was not only pressing for international action on climate change, but also leading by example at home. The Paris Agreement was not expected to enter into force for several years, but thanks in part to the continued leadership of the United States, it appears the momentum is continuing and the Agreement will enter into force later this year.

To avoid the worst impacts of climate change, including impacts within the United States on federally managed lands, the U.S. government needs to identify additional policy measures to reduce emissions. Recent estimates of U.S. emissions under current policies – including the Clean Power Plan – indicate the United States needs take additional actions to achieve its Paris commitment of reducing emissions in 2025 by 26-28 percent below 2005 levels.[1] It is incumbent upon all federal agencies to assess the impact of major policy decisions on GHG emissions and weigh them in light of the U.S. climate goals and international leadership on climate. The importance of extending these considerations to BLM's review of the federal coal program was reinforced when input at Interior's public listening sessions identified that ensuring consistency of the federal coal program with the United States' (and the world's) climate goals was one of three key areas of concern to address.

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Comment Number: 0002506\_Nichols\_20160729-4

Organization I: Wild Earth Guardians

Commenter I: Jeremy Nichols

Comment Excerpt Text:

Carbon costs must be accounted for and disclosed in coal management: As your Interior Department continues to make coal management decisions, such as approving mining plans or lease readjustments, your Interior Department must account for and disclose the carbon costs of its actions using, at a minimum, social cost of carbon figures. Such analysis and transparency is key to ensuring the American public is effectively apprised of the climate consequences of the federal coal program, even as it winds down and ultimately ends.

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Comment Number: 0002511\_Krieger\_20160727-3

Organization I: Washington Environmental Council

Commenter I: Emily Krieger

Comment Excerpt Text:

The true social price of coal must be examined and reflected in leasing costs. Costs do not currently reflect the cost to our climate and communities, and the leasing practices are harming the most vulnerable members of our population first.

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Comment Number: 0002513\_Lish\_20160707-11

Organization I:

Commenter I: Christopher Lish

Comment Excerpt Text:

Use the social cost of carbon to evaluate the climate impacts of current and potential federal coal leases.

If the social cost of carbon were incorporated into the lease price, federal coal should be as high as \$62 per ton. By putting an accurate price that reflects the true economic, environmental and social cost of federal coal, it would become clear that the only place for dirty fossil fuels like coal is to leave them in the ground. For coal leases already in production, using the social cost of carbon to raise the royalty rate and other fees for federal coal production could help return millions of dollars to state budgets to support coal workers, schools, infrastructure, and other important programs.

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Comment Number: 0002513\_Lish\_20160707-4

Organization I:

Commenter I: Christopher Lish

Comment Excerpt Text:

Accounting for the financial, environmental, health and other costs of climate pollution (the "social cost of carbon") caused by federal coal mining and combustion;

Incorporating the social cost of carbon into the royalty rate that companies pay for the right to mine taxpayer-owned coal in order to reflect the true cost that mining and burning coal imposes on society;

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Comment Number: 0002942\_Harbine-5

Organization I: Earthjustice

Commenter I: Jenny Harbine

Other Sections: I

Comment Excerpt Text:

4. BLM Must Use the Social Cost of Carbon and Social Cost of Methane to Evaluate Climate Impacts of Considered Alternatives in the PEIS. Beyond quantifying the volume of carbon dioxide and methane emissions that result from the federal coal program, and comparing those emissions totals among alternatives, BLM must also use the social cost of carbon and social cost of methane to evaluate the impact, and not just the volume, of carbon pollution. These social-cost tools are based on sound science; have already been used by federal agencies, including BLM, to evaluate the impacts of agency policy 59 U.S. Environmental Protection Agency, Fact Sheet, Overview of the Clean Power Plan, available at <https://www.epa.gov/cleanpowerplan/fact-sheet-overview-clean-power-plan> (last visited July 27, 2016). 60 White House Fact Sheet, U.S.-China Joint Announcement on Climate Change and Clean Energy Cooperation (Nov. 11, 2014), attached as Ex. 71, available at <https://www.whitehouse.gov/the-press-office/2014/11/11/us-china-joint-announcement-climate-change> (last visited July 27, 2016). 61 See White House Fact Sheet, U.S. Reports its 2025 Emissions Target to the UNFCCC (March 31, 2015), available at <https://www.whitehouse.gov/the-press-office/2015/03/31/fact-sheet-us-reports-its-2025-emissions-target-unfccc> (last visited July 28, 2016); United States, UNFCCC submission supra note 11. 62 Doug Vine, Center for Climate and Energy Solutions, Achieving the United States' Intended Nationally Determined Contribution (July 2016), available at <http://www.c2es.org/docUploads/achieving-us-indc-07-2016-update.pdf> (last visited July 27, 2016). 27 proposals; and help put climate impacts into a context that is easily understood by both the public and decision-makers. Federal agencies evaluating climate impacts of their proposals have frequently claimed that science has not developed the tools to analyze climate impacts of individual proposals. This is not

accurate. The social cost of carbon and social cost of methane are two reliable tools that are available and should be utilized by BLM in the PEIS process. Under NEPA's implementing regulations, where "information relevant to reasonably foreseeable significant adverse impacts cannot be obtained because the overall costs of obtaining it are exorbitant or the means to obtain it are not known," NEPA regulations direct agencies to evaluate a project's impacts "based upon theoretical approaches or research methods generally accepted in the scientific community." 40 C.F.R. § 1502.22(b)(4). The social cost of carbon and social cost of methane are based on generally accepted research methods and years of peer-reviewed scientific and economic studies. They are the best tools now available for agencies to use in analyzing the climate impacts of proposed federal actions. a. Background: The Social Cost of Carbon and Social Cost of Methane The social cost of carbon was created by an interagency working group ("IWG") in 2010 that consisted of scientific and economic experts from a dozen federal agencies and offices, including EPA, and the Departments of Agriculture, Commerce, Energy, Transportation, and the Treasury. 63 The working group's primary goal was to help federal agencies engaged in rulemaking to quantify the economic benefit of federal actions that reduce CO<sub>2</sub> emissions. The result of their efforts was the social cost of carbon – a schedule of estimates of the global economic harm caused by each ton of CO<sub>2</sub> emissions in a given year, expressed as \$/ton. 64 These values encompass damages from decreased agricultural productivity as a result of drought, human health effects, and property damage from increased flooding, among other factors. 65 The IWG updated the social cost of carbon in 2013.<sup>66</sup> Like the social cost of carbon, the social cost of methane estimates the global economic cost of adding one additional ton of methane to the atmosphere (the social cost of carbon does 63 Interagency Working Group on Social Cost of Carbon, Technical Support Document: Social Cost of Carbon, at 2-3 (Feb. 10, 2010), available at <http://www.epa.gov/otaq/climate/regulations/scc-tds.pdf> (last visited July 27, 2016). 64 U.S. Environmental Protection Agency, Fact Sheet: Social Cost of Carbon (Nov. 2013), available at <http://www.epa.gov/climatechange/Downloads/EPAactivities/scc-fact-sheet.pdf> (last visited July 27, 2016). 65 Interagency Working Group, Technical Update of the Social Cost of Carbon, at 2 (May 2013), available at [http://www.whitehouse.gov/sites/default/files/omb/inforeg/social\\_cost\\_of\\_carbon\\_for\\_ria\\_2013\\_update.pdf](http://www.whitehouse.gov/sites/default/files/omb/inforeg/social_cost_of_carbon_for_ria_2013_update.pdf) (last visited July 27, 2016). 66 *Id.* 28 the same thing, but for carbon dioxide). In August 2015, EPA used the Marten et al. social cost of methane estimate in the Regulatory Impact Analysis for the proposed New Source Performance Standard for methane from oil and gas production. 67 This study estimates that methane emissions in 2015 result in global economic damages that range from \$490 to \$3,000/ton, depending on the discount rate used. 68 EPA explained why using Marten et al. (2014) is a sound, justifiable methodology. Following the agency's protocol, EPA transparently disclosed the social cost estimates under four different discount rates, just as the IWG does for the social cost of carbon. 69 Although it was initially developed to help agencies craft regulatory impact assessments of proposed rules, the social cost of carbon need not and should not be limited to this application. 70 The social cost of carbon and social cost of methane are particularly useful with regard to coal leasing because it allows decision makers to understand the impact of projects "that have small, or 'marginal,' impacts on cumulative global emissions."<sup>71</sup> As CEQ has confirmed, statements that a particular agency decision will result in only a small fraction of global GHG concentrations should not be used to avoid analyzing the impact of those emissions. 72 Such statements, according to CEQ, reflect the nature of climate change rather than the impact of any particular project. 73 Using the social cost of carbon in NEPA reviews, by contrast, would help agencies move beyond the frequent and problematic boilerplate statements about climate change by providing a scientifically defensible means of quantifying the federal coal leasing program's climate impacts. Understanding the climate impacts of coal mining are particularly useful on a programmatic level, given the cumulative and global nature of climate change. As noted in CEQ's draft NEPA climate guidance, analyzing the climate impact of any one proposal may appear small given the global nature of the problem, whereas a programmatic review of the federal coal program will provide a far more comprehensive understanding of BLM's contribution to the climate problem and the economic damages from climate change that are already being felt in this country. Given that in most years federally-owned coal accounts for approximately 41 percent of all coal burned in the U.S., 81 Fed. Reg. 17,200, 17,221 (Mar. 31, 2016), the social costs of burning that much coal are surely significant. For example, the gross 67 U.S. Environmental Protection Agency, Regulatory Impact Analysis of the Proposed Emission Standards for New and Modified Sources in the Oil and Natural Gas Sector, 4-12 to 4-17 (August 2015), available at

[http://www3.epa.gov/airquality/oilandgas/pdfs/og\\_prop\\_ria\\_081815.pdf](http://www3.epa.gov/airquality/oilandgas/pdfs/og_prop_ria_081815.pdf) (last visited July 27, 2016). 68 Id. at 4-14. 69 Id. 70 In any event, it is possible that the PEIS at issue here will involve proposed changes to BLM regulations, which would trigger the use of the social cost metrics. 71 Interagency Working Group on Social Cost of Carbon, Technical Support Document, at 1. 72 Consideration of Greenhouse Gas Emissions and Climate Change Effects in NEPA Reviews, 79 Fed. Reg. at 77,825. 73 Id. 29 social costs of burning the approximately 400 million tons of coal mined from federal leases each year is approximately \$30 billion per year. 74 That is more than 20 times BLM's annual budget. The gross social costs between now and 2050 of the federal coal program, continued at current levels, would likely exceed \$1 trillion. Despite some uncertainties, the social cost of carbon and social cost of methane nonetheless reflects the best economic and scientific understanding available, and are intended to be updated to reflect the most current thinking on the topic. In July 2014, the Government Accountability Office affirmed the IWG's 2010 and 2013 analyses on the social cost of carbon and praised the group for its transparent process, accurate disclosure of scientific and economic uncertainties, and consensus-based decision making model. 75

Comment Number: 0002942\_Harbine-50

Organization I: Earthjustice

Commenter I: Jenny Harbine

Other Sections: I

Comment Excerpt Text:

BLM must also be aware that the federal social cost of carbon values likely under-count the true social cost of an additional ton of CO<sub>2</sub>, perhaps by multiple orders of magnitude. For instance, researchers at Stanford University published a study showing that the integrated assessment models ("IAMs") that generated the federal social cost of carbon ("SCC") estimates do not properly account for several critical variables, particularly effect of climate change on economic growth rates and resulting disparities between rich and poor regions. This study calculated that adjusting the IAM models to account for these factors would increase the near-term SCC by a factor of close to seven. 78 Other research demonstrates that the SCC discount rates do not adequately represent the level of risk aversion that decisionmakers generally adopt in response to conditions of heightened uncertainty. Adjusting the SCC to include a risk premium in accord with accepted econometric principles would increase the federal values by several orders of magnitude. 79 Another critique of the federal SCC values observes that the IAM models use quadratic damage functions, which greatly underestimate the rate and intensity of economic damage after a certain temperature threshold is crossed. 80 76 Mark Squillace & Alexander Hood, NEPA, Climate Change, and Public Land Decision Making, 42 ENVTL. L. 469, 510, 517 (2012). 77 Moore, F. & Diaz, D., Temperature impacts on economic growth warrant stringent mitigation policy, 5 NATURE CLIMATE CHANGE 127-131 (Jan. 12, 2015), prepublication version attached as Ex. 8. 78 Id. at 128. 79 Howarth, R.B., et al., Risk mitigation and the social cost of carbon, 24 Global Environmental Change 123-131 (Jan. 2014), prepublication version attached as Ex. 9. 80 Weitzmann, M.L., GHG Targets as Insurance Against Catastrophic Climate Damages, National Bureau of Economic Research Working Paper No. 16136 (2010), attached as Ex. 10; see also Sierra Club, Comments on the Interagency Working Group's (IWG) Technical Support Document: Social Cost of Carbon (SCC) for Regulatory Impact Analysis Under Executive Order 12866 (Docket Not.OMB-2013-0007-0083) (Feb. 25, 2014), attached as Ex. 11 (discussing Weitzmann, Howarth, and other research). 31 EPA itself has reached a similar conclusion: [G]iven current modeling and data limitations, [the federal SCC values] do[] not include all important damages. As noted by the IPCC Fourth Assessment Report, it is "very likely that [SCC] underestimates" the damages. The models used to develop SCC estimates, known as integrated assessment models, do not currently include all of the important physical, ecological, and economic impacts of climate change recognized in the climate change literature because of a lack of precise information on the nature of damages and because the science incorporated into these models naturally lags behind the most recent research. 81 BLM should explain this fact in its PEIS and at least acknowledge the body of a research pointing to much higher values for each additional ton of carbon emitted. While we agree that BLM should start with the federal SCC values when analyzing the impacts of the carbon dioxide emissions from the federal coal leasing program and its alternatives, BLM must also directly confront the fact that the true social impacts of the associated carbon



dioxide emissions are probably much greater than the federal SCC values represent. Third, although NEPA does not require agencies to conduct a cost-benefit analysis (i.e., a comparison where a project gets approved only if the benefits outweigh the costs), in every NEPA document, BLM and other agencies routinely calculate a proposed project's economic benefit to the local economy, measuring the dollar value of jobs, royalties, and taxes, among other factors. 82 Agencies often use these quantified economic benefits to justify approving the 81 U.S. Environmental Protection Agency, *The Social Cost of Carbon*, <http://www.epa.gov/climatechange/EPAactivities/economics/scc.html> (last visited July 27, 2016). 82 See, e.g., Office of Surface Mining Reclamation & Enforcement, *Bull Mountains Mine No. 1 Environmental Assessment* (Jan. 2015), <http://www.wrcc.osmre.gov/initiatives/bullMountainsMine/BullMountainsMineEA.pdf>; U.S. Forest Service, *Final Environmental Impact Statement for Pawnee National Grassland* (Dec. 2014), [http://a123.g.akamai.net/7/123/11558/abc123/forestservic.download.akamai.com/11558/www/nepa/95573\\_FSPLT3\\_2393686.pdf](http://a123.g.akamai.net/7/123/11558/abc123/forestservic.download.akamai.com/11558/www/nepa/95573_FSPLT3_2393686.pdf). 32 project, without any attempt to quantify the costs of the agency's decision. 83 Using the social costs of carbon and methane in the PEIS would provide a useful dollars-to-dollars comparison outside the parameters of a strict cost-benefit analysis, allowing the public to understand the scale of climate impacts of the federal coal leasing program and its alternatives. It would further provide BLM with the opportunity to weigh global economic harm caused by the climate impacts of the program against the extent of any economic benefit in terms of jobs, taxes, etc., and thus allow BLM and the Secretary of Interior to make a fully informed decision on the best course forward. By omitting any discussion of the economic harm caused by a project, federal agencies often effectively put a zero on that side of the ledger, making it appear as though there is no quantifiable cost associated with a project. In the context of climate change, this is a demonstrably (and overwhelmingly) untrue assumption—the social costs of carbon and methane allow decision makers and the public to estimate the climate-based costs of a proposed project. The White House estimates that in 2012, climate-related disasters cost the American economy more than \$100 billion<sup>84</sup> and affirmed that “climate change is not a distant threat, we are already seeing impacts in communities across the country.”<sup>85</sup> Moreover, NEPA specifically requires federal agencies to analyze and disclose the environmental effects of their actions, including “ecological . . . economic [and] health” impacts. 40 C.F.R. § 1508.8. By ignoring the social costs of carbon and methane, as most federal agencies do now when evaluating federal coal leases, the agencies perform half of an analysis, quantifying purported economic benefits while ignoring an available and easy-to-use tool for similarly quantifying economic costs of the proposed project—precisely the sort of misleading analysis NEPA is designed to avoid. See *Ctr. for Biological Diversity v. NHTSA*, 538 F.3d 1172, 1217 (9th Cir. 2008). 83 See, e.g., Bureau of Land Management., *Environmental Assessment for the West Elk Coal Lease Applications* (June 2012), available at [http://www.blm.gov/pgdata/etc/medialib/blm/co/information/nepa/uncompahgre\\_field/ufo\\_nepa\\_documents0.Par.96415.File.dat/12-13%20West%20Elk%20Coal%20Lease%20Mod%20EA.pdf](http://www.blm.gov/pgdata/etc/medialib/blm/co/information/nepa/uncompahgre_field/ufo_nepa_documents0.Par.96415.File.dat/12-13%20West%20Elk%20Coal%20Lease%20Mod%20EA.pdf) (last visited July 28, 2016); Bureau of Land Management, *Wright Area FEIS* available at <http://www.blm.gov/wy/st/en/info/NEPA/documents/hpd/Wright-Coal.html> (last visited July 28, 2016); Office of Surface Mining Reclamation & Enforcement, *Bull Mountains Mine No. 1 Environmental Assessment* (Jan. 2015), available at <http://www.wrcc.osmre.gov/initiatives/bullMountainsMine/BullMountainsMineEA.pdf> (last visited July 28, 2016). 84 The White House, *Climate Change and President Obama's Action Plan*, <http://www.whitehouse.gov/climate-change> (last visited July 26, 2016). 85 White House, *Fact Sheet, Administration Announces Actions To Protect Communities From The Impacts Of Climate Change*, (Apr. 7, 2015), <https://www.whitehouse.gov/the-press-office/2015/04/07/fact-sheet-administration-announces-actions-protect-communities-impacts-> (last visited July 28, 2016). 33 As one recent example reveals, BLM has already utilized a social cost metric for determining the potential benefits of a rulemaking proposal to reduce climate emissions. On February 8, 2016, BLM published a proposed rule to reduce waste of natural gas from venting, flaring, and leaks during oil and natural gas production. BLM, *Proposed Rule, Waste Prevention, Production Subject to Royalties, and Resource Conservation*, 81 Fed. Reg. 6616 (Feb. 8, 2016). BLM used the social cost of methane metric developed by EPA experts to evaluate the costs and benefits of the proposed rule, relied on the metric throughout its analysis, and explicitly concluded that the benefits of the proposed natural gas rule outweighed the costs based on the monetized benefits of methane reduction as calculated via the social cost of methane. See *id.* at 6624-25, 6670-72. The Regulatory Impact Analysis (“RIA”) for the rule explains BLM's use of the metric,

stating: [BLM] estimated the social cost of methane using the values presented by Marten et al. (2014) and used by the EPA in its analysis of its Subpart OOOOa proposed regulation . . . and its proposed rule New Source Standards of Performance for Municipal Solid Waste Landfills. . . . [BLM] calculated the global social benefits of methane emissions reductions expected from the proposed NSPS [New Source Performance Standards] using estimates of the social cost of methane (SC-CH<sub>4</sub>), a metric that estimates the monetary value of impacts associated with marginal changes in methane emissions in a given year. It includes a wide range of anticipated climate impacts, such as net changes in agricultural productivity and human health, property damage from increased flood risk, and changes in energy system costs, such as reduced costs for heating and increased costs for air conditioning. 86 Consistent with BLM’s analysis of the draft natural gas waste rule, the PEIS should use social cost metrics, including the 2013 Interagency Working Group’s social cost of carbon, and EPA’s 2014 social cost of methane, and any subsequent updates thereto, in evaluating the climate impacts of each alternative. 87 86 See Bureau of Land Management, Regulatory Impact Analysis for: Revisions to 43 C.F.R. 3100 (Onshore Oil and Gas Leasing) and 43 C.F.R. 3600 (Onshore Oil and Gas Operations) (RIA) (Jan. 14, 2016) at 32-33, attached as 12. 87 We note that the leaders of the U.S., Mexico, and Canada last month issued a joint statement in which stated in part: “Canada, the U.S. and Mexico will align approaches to account for the social cost of carbon and other greenhouse gas emissions when assessing the benefits of emissions-reducing policy measures.” See The White House, Leaders’ Statement on a North American Climate, Clean Energy, and Environment Partnership (June 29, 2016), attached as Ex. 13. A policy measure to reduce federal coal mining is one that would result in emissions reductions, and thus per the partnership agreement should be accounted for using the social cost of carbon.

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Comment Number: 0002942\_Harbine-64

Organization I: Earthjustice

Commenter I: Jenny Harbine

Comment Excerpt Text:

The Social Cost of Carbon and Social Cost of Methane Are Helpful to Decision Makers in the NEPA Process The guiding principle of NEPA is that the public is entitled to a clear understanding of the likely impacts of federal agencies’ decisions. The U.S. Supreme Court has called the disclosure of impacts the “key requirement of NEPA holding that agencies must “consider and disclose the actual environmental effects” of a proposed project in a way that “brings those effects to bear on [an agency’s] decisions.” *Baltimore Gas & Elec. Co. v. Nat. Res. Def. Council, Inc.*, 462 U.S. 87, 96 (1983). The social cost of carbon and social cost of methane provide decision makers and the public with an informative, accessible mechanism for both analyzing and understanding the climate impacts of a proposed decision. First, although agencies such as BLM, the Forest Service, and OSMRE often quantify the amount of carbon dioxide or CO<sub>2</sub>-e (carbon dioxide equivalent) emissions from mining and burning coal from federal leases, these agencies have not yet taken the next step of employing the social cost of carbon to inform the public about the impact of those emissions. An isolated calculation of the amount of carbon emissions that would result from a particular project provides no meaningful insight as to the effect that those emissions will have on our climate. By contrast, the social cost of carbon offers an actual estimate of the damage caused by each incremental ton of carbon emissions. Second, the social cost of carbon and methane protocols describe those damage estimates in monetary terms, which are far easier for decision makers and the public to comprehend and contextualize than tons of CO<sub>2</sub>-e. In doing so, the social cost of carbon provides a concrete assessment of a project’s social and environmental impacts and provides a tangible sense of the 74 Calculated by taking 400 million (tons coal mined per year) \* 2 (tons of CO<sub>2</sub> emitted during combustion per ton of coal mined, at a conservative estimate) \* \$38 (per ton figure for the 2015 SCC at 3% discount rate) = \$30.4 billion. This is the gross, rather than net social cost. Net social cost would account for substitution of other fuels such as coal, natural gas, and renewables, and overall changes in electricity demand. 75 Gov’t Accountability Office, Regulatory Impact Analysis: Development of Social Cost of Carbon Estimates (July 2014), available at <http://www.gao.gov/assets/670/665016.pdf>. 30 scale of damage that both the public and decision makers can readily understand. As explained by one legal commentator, the social cost of carbon “allow[s] agencies to consider those GHG emissions . . . in a meaningful way,” and “assigning a price to carbon emissions – even a

conservative price – makes the cost of those emissions concrete for agency decision makers.”<sup>76</sup> Of course, we do not imply that the impacts of climate change can be fully captured by a dollar figure. Droughts, floods, extreme weather events, rising sea levels, and other phenomena related to climate change present threats to our planet that extend far beyond economic harms. Agencies must analyze not only the quantitative (and monetizable) climate impacts of proposed actions, but the qualitative and non-monetizable impacts as well. Nevertheless, to the extent that a project’s impacts can be quantified, the social cost of carbon and social cost of methane are the best and most rigorous tools currently available for understanding the damages linked to GHG emissions, rather than simply the extent of the emissions themselves.

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Comment Number: 0003004\_MasterFormD\_TheSierraClub-3

Organization I: The Sierra Club

Comment Excerpt Text:

Incorporating the social cost of carbon into the royalty rate that companies pay for right to mine taxpayer-owned coal in order to reflect the true cost that mining and burning coal imposes on society;

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Comment Number: 0003009\_MasterFormH\_FriendsEarth-2

Organization I: Friends of the Earth

Comment Excerpt Text:

Use the social cost of carbon to evaluate the climate impacts of current and potential federal coal leases. If the social cost of carbon were incorporated into the lease price, federal coal should be as high as \$62 per ton. By putting an accurate price that reflects the true economic, environmental and social cost of federal coal, it would become clear that the only place for dirty fossil fuels like coal is to leave them in the ground. For coal leases already in production, using the social cost of carbon to raise the royalty rate and other fees for federal coal production could help return millions of dollars to state budgets to support coal workers, schools, infrastructure, and other important programs.

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Comment Number: 0003016\_MasterFormO\_EarthJustice-3

Comment Excerpt Text:

Accounting for the financial, environmental, health and other costs of climate pollution (the "social cost of carbon") caused by federal coal mining and combustion

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Comment Number: 0020012\_Holmes\_UCARE\_20160712-2

Organization I: Utah Citizens Advocating Renewable Energy

Commenter I: Stanley Holmes

Comment Excerpt Text:

We feel that the coal leasing program does not yield a fair return to Americans, in part because it allows the coal industry to continue shifting societal and environmental costs onto the public.

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Comment Number: 0020012\_Holmes\_UCARE\_20160712-4

Organization I: Utah Citizens Advocating Renewable Energy

Commenter I: Stanley Holmes

Comment Excerpt Text:

First of all, American citizens will not realize a fair return from the sale of federal coal until royalty rates reflect the true costs of coal extraction, transportation, combustion, and waste disposal. The current coal leasing program fails to adequately monetize the societal and environmental damages caused by coal taken from federal lands. In fairness, these expenses -now borne by taxpayers- should be incorporated into what companies must

pay for coal. Royalty rates may need to be raised significantly; and, the practice of royalty rate reductions should probably be eliminated.

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Comment Number: 0020012\_Holmes\_UCARE\_20160712-5

Organization I:Utah Citizens Advocating Renewable Energy

Commenter I:Stanley Holmes

Other Sections: 2

Comment Excerpt Text:

The PEIS now underway presents an opportunity for the federal government to develop a comprehensive, coal-specific "costs test" analysis tool that can be used to not only monetarily assess the full range of societal and environmental damages caused by coal, but also monetize the true "avoided costs" value of renewables when used to replace coal. This new costs-of-coal model should be used to inform fair royalty rates.

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Comment Number: 0020020\_LaPorte\_20160712-3

Commenter I:Mary LaPorte

Comment Excerpt Text:

Look at the social costs of carbon (Health, economics, clean water, clean air...)

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Comment Number: 0020026\_Olinger\_20160712-1

Organization I:Citizens Climate Lobby

Commenter I:Linda Olinger

Other Sections: 2

Comment Excerpt Text:

Citizens Climate Lobby.org believes that a carbon fee on all fossil fuels and other greenhouse gases should be imposed where they first enter the economy. The fee shall be collected by the Treasury Dept. The fee on that date shall be \$15 per ton of CO2 equivalent emissions and result in equal charges for each ton of CO2 equivalent emissions potential in each type of fuel or greenhouse gas. The Dept. of Energy shall propose and promulgate regulations setting forth CO2 equivalent fees for other greenhouse gases including at a minimum methane, nitrous oxide, sulfur hexafluoride, hydrofluorocarbons, perfluorocarbons, and nitrogen trifluoride. The Treasury shall also collect the Fees imposed upon the other greenhouse gases. All fees are to be placed in the Carbon Fees Trust Fund and be rebated 100% to American households. Equal monthly per-person dividend payments shall be made to all American households (1/2 payment per child under 18 yrs old with a limit of 2 children per family) each month. The total value of all monthly dividend payments shall represent 100% of the total carbon fees collected per month.

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Comment Number: 0020031\_Parkins\_20160722-18

Comment Excerpt Text:

If the BLM considers the use of the "Social Cost of Carbon" in their analysis of BLM coal lands, they must also consider the Social Benefits of low cost and reliable energy at the same time.

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Comment Number: 0020056-11

Organization I:Bowie Resource Partners, LLC

Commenter I:Gene DiClaudio

Comment Excerpt Text:

Bowie recognizes that the Secretary is constrained by Administration policy to use the Federal Social Cost of Carbon ( SCC" ) in rulemaking proceedings, despite the fact that the SCC is technically unsound, was not

developed through notice-and-comment rulemaking, and sharply diverges from OMB guidelines regarding critical elements such as discount rates. Nevertheless, the Secretary does have discretion to set policy for project-level decisions, including leasing decisions, and should categorically reject the SCC in those contexts. Not only was the SCC not developed for project-level decisions, but the SCC cannot provide useful information at the project level. This is because at the project level, the incremental SCC impact of the proposed action in relation to the no-action alternative or other project alternatives will generally be indeterminable. For example, for local effects, e.g., the impact of a lease on a stream, the no action or project alternatives will have identifiably different impacts. But for global impacts of the type attempted to be measured by the SCC, one cannot know the effect of, for example, the no action alternative, without knowing how the various actors will respond. Even if coal lease application A is denied, there will be no effect on net SCC calculations unless there is a coordinated policy to deny other similarly-situated coal leasing, and such broad policy determinations are inherently beyond the scope of project-level analyses.

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Comment Number: 0020056-12

Organization I: Bowie Resource Partners, LLC

Commenter I: Gene DiClaudio

Comment Excerpt Text:

In addition, as the BLM and OSMRE have recognized in recent project level NEPA analyses, the SCC by itself provides an incomplete and biased accounting of the impacts of a decision. There is presently no corresponding Social Benefit of Carbon metric. While short term tax, employment, and economic activity measures account for some of the benefits of coal production, they are by no means a complete accounting in the same manner and at the same horizon and scale as attempted by the SCC. Consequently, the SCC is not useful at the project level and the PEIS and any resulting regulatory or policy changes should make that clear.

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Comment Number: 0020056-21

Organization I: Bowie Resource Partners, LLC

Commenter I: Gene DiClaudio

Comment Excerpt Text:

To date the SCC has not undergone notice-and-comment rulemaking, and is deeply problematic at a technical and procedural level. In addition, the discounting and time horizon assumptions in the SCC render the SCC an inter-generational wealth transfer mechanism. This is especially true of any attempt to impose SCC-derived fees or taxes. Finally, the SCC also generates such large value ranges that it is uniquely susceptible to result-driven policy choices, that is, project proponents will always be able to identify values that support approval, and project opponents will always be able to identify values that support denial. Because of these inherent and profound philosophical and policy dimensions, the SCC is poorly suited to the secretive, unilateral Executive processes under which it has been developed to date. Rather, the Secretary (and the Administration generally) should seek express Congressional authorization and guidance to the extent there is a desire to continue to employ the SCC in federal decision-making. Such authorization, if obtained, would place the Executive on a far sounder democratic and constitutional footing than under current and potentially future practices

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Comment Number: WO\_CoalPEIS\_0002437\_Downing\_20160727\_WyMineAssoc-20

Organization I: Wyoming Mining Association

Commenter I: Jonathan Downing

Other Sections: 2

Comment Excerpt Text:

WMA is concerned about possible artificial inflation of FMV through the use of arbitrary “social cost of carbon” standards. Attempts to artificially increase the FMV on these grounds appear political with the intent of making the resource uneconomical to develop in violation of the Mineral Leasing Act. The cost of excessive manipulation

in determining FMV will fall on American consumers. If the agency does choose to pursue this, we would surely recommend the inclusion of a much more empirical “social benefit” standard to include not only the positive economic realities of vital jobs and revenue, schools and infrastructure, but the measurable positive contribution of reliable, low-cost electricity to our country and the world.

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Comment Number: 0000872\_Kraybill-I

Commenter I: Fred Kraybill

Comment Excerpt Text:

But ultimately, the most important consideration to this issue is how much coal can still be burned in our remaining carbon budget. How much must we reduce our carbon emissions to prevent a 2 degree Celsius warming and to try to stay within a 1.5 degree Celsius warming? Most of the people I know will say that we must keep fossil fuels in the ground. The BLM has many competing interests to think about, but at the very least it seems to me that if the BLM continues to lease federal lands for coal, then it must be at a price that accounts for the social cost of carbon and it must be at a price that allows clean, renewable energy to rapidly overtake fossil fuels in the energy marketplace.

#### **ISSUE 4.2 - CARBON CAPTURE**

Total Number of Submissions: 15

Total Number of Comments: 16

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Comment Number: 00000143\_Short\_20160517-2

Organization I:

Commenter I: Robert Short

Comment Excerpt Text:

Greenhouse gas concerns associated with coal can be virtually negated through a flue-stream capture, value-add reuse in the extraction of oil, to name but one methodology

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Comment Number: 0000082\_Marshall\_20160517-4

Organization I: Cloud Peak Energy

Commenter I: Colin Marshall

Comment Excerpt Text:

I believe that what we should be doing is using some of the \$11.3 billion per year that currently subsidizes large-scale wind and solar projects to developing the commercialized carbon capture and storage. This is what the scientists of the IPCC called for in the 2014 Mitigation of Climate Change report. This advice from the IPCC is ignored by most groups who consider our climate. If the U.S. put some effort into this carbon capture, it could lead the world among power producers by reducing emissions massively and allow the world to have affordable electricity.

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Comment Number: 0000095\_Mead\_GovWy\_20160517-2

Organization I: State of Wyoming

Commenter I: Matt Mead

Comment Excerpt Text:

And if there was a serious attempt to address the President's climate change concern, the Obama Administration should be investing, as Wyoming has invested, to make real improvements in carbon capture, sequestration, and utilization technology.

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Comment Number: 0002149\_Hewitt\_20160519\_WyLSO-6

Organization I: Wyoming Legislature's Select Federal Natural Resource Management Committee

Commenter I: Ted Hewitt

Comment Excerpt Text:

Improvements in emissions technology, particularly carbon capture and sequestration, could make new coal-fired power plants viable in our modern regulatory environment.

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Comment Number: 0002157\_Burger\_SabineCenter\_09132016-6

Organization I: Sabine Center for Climate Change Law

Commenter I: Michael Burger

Comment Excerpt Text:

Ali Zaidi of OMB joined the panel to describe the Obama administration's commitment to smoothing the transition for coal industry workers, and to developing carbon capture and sequestration technologies, which DOE currently aims to make viable at a \$40/ton carbon price within 10 years.

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Comment Number: 0002158\_Kasperik\_20160517\_StateRep-6

Organization I: HD 32 Wyoming State Legislature

Commenter I: Norine Kasperik

Comment Excerpt Text:

Fossil fuel opponents regularly dismiss meaningful ways to reduce CO2 emissions, like carbon capture, use and sequestration (CCUS) or high-efficiency boiler technology, which America's ally Japan is funding.

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Comment Number: 0002389\_Schwend\_20160721-4

Organization I: Spring Creek Mine

Commenter I: David Schwend

Comment Excerpt Text:

Why is there not federal aid for the development of carbon capture technology instead of only private industry researching and developing this technology?

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Comment Number: 0002450\_Trainor\_20160727-3

Organization I: Cloud Peak Energy

Commenter I: Michael Trainor

Comment Excerpt Text:

Additionally when considering the impacts of emissions the solution is to improve the technology within our power plants and invest in carbon capture and recycle technologies. Again it does not serve the community, businesses or the environment to keep coal in the ground. Our energy infrastructure will continue to rely on coal for many generations to come and the solution to reducing our environmental footprint is in developing better emission technologies.

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Comment Number: 0002477\_Saul\_20160728\_CBD\_UPHE-I I

Organization I: Center for Biological Diversity

Commenter I: Michael Saul

Organization2: Utah Physicians for a Healthy Environment

Other Sections: 7.4 I

Comment Excerpt Text:

In July 2016, Eco-Shift consulting projected the "production horizons"- the number of years' worth of remaining

production - from currently leased federal fossil fuels using the U.S. Energy Information Administration's (EIA) 2016 "reference case" for fossil fuel production.<sup>132</sup> EcoShift found that, under the EIA reference case (including Clean Power Plan implementation), "Coal under federal lease would last 25 years, through 2041."<sup>133</sup> This production horizon greatly exceeds the dates at which carbon budgets for 1.5°C and 2°C would be exceeded by continued emissions at 2014 rates – 2021 and 2036 respectively.<sup>134</sup> The discrepancy between the production horizon for already-leased coal and carbon budget exceedance dates makes clear that, barring either extraordinarily rapid global emissions declines or rapid, widespread and successful deployment of carbon capture and sequestration technology, there is no scenario where new federal coal leasing at any significant level is consistent with the nation's stated climate aims.

(132) Dustin Mulvaney et al., *Over-Leased: How Production Horizons of Already Leased Federal Fossil Fuels Outlast*

*Global Carbon Budgets I* (July 2016).

(133) *Id.*

(134) *Id.* at Figure 1.

Significantly, both Vulcan and SEI examined the effect of leasing policies in a context where the Clean Power Plan was the only meaningful downstream constraint on U.S. coal consumption. More recently, Energy Transition Advisors, Earth Track, and Carbon Tracker Initiative undertook to examine the role of federal Powder River Basin coal in a (modestly ambitious) climate scenario – the International Energy Agency's "450 scenario" aimed at modeling the energy demands consistent with an atmospheric CO<sub>2</sub> concentration of 450 ppm, and an ensuing 50% probability of keeping warming within 2°C of preindustrial levels.<sup>135</sup> Although the IEA "450 scenario" is less ambitious than Paris goals or the demands of protecting health and biodiversity, it provides an existing model for assessing the role of federal leasing, PRB production, and coal markets in a modestly climate-constrained scenario.<sup>136</sup> The ETA first examined U.S. EIA "reference case" coal production projections under the CPP to conclude that demand for PRB coal tracks reasonably well with US-wide demand for power-sector control under a modestly CO<sub>2</sub>-constrained scenario.<sup>137</sup> It then applies coal trajectories under the IEA "450 Scenario" to the Powder River Basin, to find, under various CCS scenarios, a rapid decline in demand for PRB coal from 2016 through 2030, leveling off somewhat around 2030.<sup>138</sup> Fulton et al. then compared these anticipated demand scenarios with the best available information regarding coal deposits already under lease in the PRB.<sup>139</sup> Their conclusion was that, "[u]nder the 450 Scenario with no CCS, potential production from existing leases is sufficient to meet projected demand in every year through 2040."<sup>140</sup> Moreover, they found that "even without additional efforts to pursue a 2°C scenario beyond those already announced, significant production from new leases is not expected to be needed until 2031."<sup>141</sup>

(135) Mark Fulton et al., *Enough Already: Meeting 2°C PRB Coal Demand Without Lifting the Federal Moratorium*

(July 2016).

(136) The IEA 450 Scenario also makes aggressive assumptions regarding the deployment of CCS technology; Fulton

et al. provides alternative scenarios involving later CCS development. See *id.* at 6 n.10.

(137) *Id.* at 7.

(138) *Id.* at 9 & Figure 1.

(139) *Id.* at 11 & Figure 3.

(140) *Id.* at 12.

(141) *Id.*

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Comment Number: 0002480\_Culver\_20160728\_TWS-82

Organization I: The Wilderness Society

Commenter I: Nada Culver

Comment Excerpt Text:



BLM should take a hard look at the short- and long-term impacts of each alternative on carbon storage. BLM lands can be an important carbon “sink” that functions to store carbon and keep it out of the atmosphere. BLM has a duty under FLPMA to prepare a current and up-to-date inventory of public lands and their new and emerging resource values. 43 USC § 1711. This more local issue should also be considered the PEIS.

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Comment Number: 0002487\_Clarke\_20160728\_UtahGovOffice-4

Organization I: Utah Office of the Governor

Commenter I: Kathleen Clarke

Comment Excerpt Text:

Not only does Utah's coal have environmental advantages, but Utah's coal-fired power plants are among the most efficient in the country, and because they are located in rural Utah they do not contribute to air quality challenges along the Wasatch Front where the majority of Utah's population lives. Rather, because coal keeps electricity prices low, coal supports electric vehicles, electric home appliances, and other electric alternatives that make a difference in improving Wasatch Front air quality. Utah is leading advanced coal technologies including carbon capture, oxy-firing, gasification, and coal to liquids. For example, the University of Utah's Institute for Clean and Secure Energy is one of nation's top coal research institutes that is commanding a five-year, \$16 million grant to conduct supercomputer simulations aimed at developing a prototype low-cost, low-emissions coal power plant to provide new opportunities for coal utilization.

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Comment Number: 0002491\_Weiskopf\_20160728\_NextGenClimateAmer-12

Organization I: NextGen Climate America

Commenter I: David Weiskopf

Other Sections: 7.4

Comment Excerpt Text:

The potential supply from existing leases from 2016 to 2040 is 5,763 million metric tons (Mt), which is 1,252 Mt greater than the supply required under the 450 Scenario (See Figure 1).

The 450 scenario assumes an aggressive build-out of CCS technology, at a pace that outstrips current market trends. In order to better reflect likely real-world conditions, Carbon Tracker also assessed scenarios in which large-scale deployment of CCS does not occur until 2030, and in which this technology never becomes a significant factor in energy supply markets. Because lower levels of CCS deployment reduce the ability to mitigate coal's intrinsic high carbon intensity, production from existing mines is necessarily also sufficient under scenarios where CCS is delayed until 2030 (cumulative supply production of 2985 Mt) and where no CCS is deployed (cumulative supply production of 2773 Mt).<sup>11</sup> In the energy scenario where no CCS is deployed, the projected production from existing leases alone is 2,990 Mt greater than the 2°C scenario carbon budget threshold.<sup>12</sup> As noted above, the 450 Scenario is also a higher risk pathway due to the 50% probability it assigns for achieving 2°C, and thus coal production consistent with a climate safe scenario would be even less when assigning a higher probability of success.

[Figure 1: Cumulative potential production of PRB coal versus projected demand under different scenarios, 2016-2040 (Mt) <sup>13</sup>]

[<sup>11</sup> Carbon Tracker Report, *supra* note 3 at 5.]

[<sup>12</sup> 5763 (potential production from existing leases, in Mt) - 2773 (production with CCS delayed until 2030, Mt) = 2,990 Mt]

[<sup>13</sup> Carbon Tracker Initiative analysis of data from Wood Mackenzie Global Economic Model, IEA, and EIA. *Supra* note 3 at 14.]

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Comment Number: 0002491\_Weiskopf\_20160728\_NextGenClimateAmer-4

Organization I:NextGen Climate America

Commenter I:David Weiskopf

Other Sections: I

Comment Excerpt Text:

Carbon Tracker Initiative's analysis reveals that thermal coal reserves on existing Powder River Basin leases are sufficient to meet projected electric power generation demand in scenarios that align electricity demand profiles with carbon emissions consistent with limiting warming to no more than 2°C. Scenarios examined include demand profiles that anticipate development and deployment of carbon capture and sequestration ("CCS") technology at a level that significantly outpaces current trajectories, as well as scenarios that assume CCS is deployed at lower rates that more closely approximate current market trends.

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Comment Number: 0002493\_Mead\_20160728\_GovWY-84

Organization I:Office of Governor Matthew H. Mead

Commenter I:MATTHEW H. MEAD

Comment Excerpt Text:

An essential focus for CCUS technology R&D efforts around the world is to recycle/reuse energy by utilizing CO<sub>2</sub> emitted from burning biomass or fossil energy natural resources. The production of numerous products being pursued by conversion of CO<sub>2</sub> and described in the Department of Energy (DOE) Carbon Capture Technology Program Plan and the NRG COSIA Carbon XPRIZE would provide increased quality full-time jobs for the American public. See National Energy Technology Laboratory Carbon Capture Program Plan (2013); (WY0-03773 to 03834); National Energy Technology Laboratory Carbon Capture News; (WY0-03836 to 03856). [5, 6] Since CO<sub>2</sub> is a very low density substance, export of CO<sub>2</sub> created in the U.S. for conversion into products by other countries would not be cost-effective nor a sustainable energy and economic consideration. In fact, the CO<sub>2</sub> emitted by the U.S. can now be considered a global competitive advantage as a domestic resource feedstock to bolster U.S. manufacturing sustainability and in turn increase U.S. jobs

In addition, the sourcing of supply chain materials and products domestically would aid wealth creation, contribute to lowering the U.S. balance of trade deficit, and enhance global environmental health by avoiding energy consumption and emissions within existing conventional material and product supply chain long-distance transportation life cycle activities. This provides a framework for the U.S. to advance progress toward greater national energy, resource and financial efficiency akin to the strategic planning and achievements sought through the U.S. Green Building Council's Leadership in Energy Environmental Design [7] certification program and the Energy Productivity [8] strategic goal described in the DOE's 2006 Strategic Plan.

This positive outcome provides the DOI with potential to gain higher value returns to the American public when it displaces import of materials and products from countries that use local resources as geopolitical and economic trade weapons and use the attendant wealth to support terrorist activities against the U.S. and our allies.

Therefore, by utilizing the U.S. CO<sub>2</sub> emissions as a productive resource the American public can actually realize a greater holistic fair return rather than zero return as would result if the DOI followed non-holistic "thought leadership" presented to date by anti-fossil energy advocates.

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Comment Number: 0002503\_Hamman\_20160729-4

Organization I:Lignite Energy Council

Commenter I:Tyler Hamman

Comment Excerpt Text:

The industry is dedicated to tackling the issue of carbon capture, utilization, and storage. Millions have been, and continue to be invested by the industry and State of North Dakota to develop next generation energy solutions that will capture carbon dioxide and put it to beneficial use.

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Comment Number: WO\_CoalPEIS\_0003061\_Post\_N\_20160707-4

Commenter I: Charlie Post

Comment Excerpt Text:

Remember that there may be future technologies that could allow for less damaging use of coal and vow to keep a significant portion of the coal in the ground for future uses,

### **ISSUE 4.3 - LIFE CYCLE EMISSIONS**

Total Number of Submissions: 14

Total Number of Comments: 27

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Comment Number: 00000159\_Kreider\_20160517-1

Commenter I: Kalee Kreider

Comment Excerpt Text:

So, if you could try to look at from cradle to grave the issue of coal, coal pollution from air pollution to climate change, I think that would make this a really successful programmatic environmental impact statement.

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Comment Number: 00000163\_MORALES\_20160517-4

Commenter I: Patrick Morales

Other Sections: I

Comment Excerpt Text:

full life cycle of coal, which is looked at in detail, again, in this study by Epstein, et al.

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Comment Number: 0002147\_Anderson\_20160621\_BlueGreenAlliance-10

Organization I: BlueGreen Alliance

Commenter I: Kim Glas

Comment Excerpt Text:

In order to better understand and manage carbon emissions from public lands, the U.S. Geological Survey (USGS) intends to establish and maintain a public database to account for annual carbon emissions from fossil fuels developed on federal lands. As there is currently no dedicated, official measure of these emissions, the BlueGreen Alliance supports this effort to ensure a transparent process that accounts for costs, which would otherwise be externalized.

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Comment Number: 0002189\_Jozwik\_20160517-16

Commenter I: Darryl Jozwik

Comment Excerpt Text:

GILLETTE IS HOME TO THE ONE OF THE CLEANEST COAL-BURNING PLANTS. THERE'S NO REASON TO BELIEVE THAT WE CAN'T ACHIEVE MORE TECHNOLOGICAL ACHIEVEMENTS IN THE FUTURE.

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Comment Number: 0002337\_Wentz\_20160726\_SabinCntrClimateChange-1

Organization I: Sabin Center for Climate Change Law, Columbia Law School

Commenter I: Jessica Wentz

Comment Excerpt Text:

(1) Scope of Emissions: The PEIS should include an inventory of both direct and indirect greenhouse gas (GHG)

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emissions from federal coal leasing, including all downstream emissions from transportation, processing, and end-use of the coal.

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Comment Number: 0002337\_Wentz\_20160726\_SabinCntrClimateChange-4

Organization I: Sabin Center for Climate Change Law, Columbia Law School

Commenter I: Jessica Wentz

Comment Excerpt Text:

I. BLM Should Prepare Inventories of Direct and Indirect GHG Emissions

We recommend that BLM prepare an inventory of all direct and indirect GHG emissions from federal coal leasing, including downstream emissions from the transportation, processing and end-use of federal coal. The inventory should encompass current and projected emissions under existing leases, and emissions from future leasing scenarios that are under consideration in the PEIS. (1) It should also clearly delineate estimated emissions from different parts of the coal supply chain and different emission sources. Finally, the information should be presented in a way that is clear and accessible to decision-makers and the public – for example, readers should be able to easily determine the proportion of emissions that is attributable to a particular activity or source category, and compare emissions across different leasing scenarios.

(1) If data is available, BLM may also want to account for historical emissions so that it can consider the long-term cumulative impact of the federal coal program on climate when deciding how to proceed with the program.

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Comment Number: 0002337\_Wentz\_20160726\_SabinCntrClimateChange-5

Organization I: Sabin Center for Climate Change Law, Columbia Law School

Commenter I: Jessica Wentz

Comment Excerpt Text:

Including downstream emissions in the inventory is consistent with the requirements of the National Environmental Policy Act (“NEPA”), as they have been interpreted by the Council on Environmental Quality (“CEQ”) and federal courts. NEPA requires agencies to evaluate both direct and indirect environmental effects from projects. Indirect effects are “caused by the action and are later in time or farther removed in distance, but are still reasonably foreseeable.” (2) Such effects include “growth inducing effects related to induced changes in the pattern of land use, population density or growth rate, and related effects on air and water and other natural systems, including ecosystems.” (3)

(2) 40 C.F.R. § 1508.8(b)

(3) Id.

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Comment Number: 0002337\_Wentz\_20160726\_SabinCntrClimateChange-6

Organization I: Sabin Center for Climate Change Law, Columbia Law School

Commenter I: Jessica Wentz

Comment Excerpt Text:

Since 2014, there have been five district court decisions regarding the scope of downstream emissions that must be evaluated in NEPA reviews for proposals involving the extraction of coal. In all of these cases, the reviewing court agreed that GHG emissions from coal combustion was a reasonably foreseeable indirect effect of coal production.

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Comment Number: 0002337\_Wentz\_20160726\_SabinCntrClimateChange-7

Organization I: Sabin Center for Climate Change Law, Columbia Law School

Commenter I: Jessica Wentz

## Comment Excerpt Text:

The courts have not yet had opportunity to define an agency's obligation to evaluate emissions from the transportation or processing of fossil fuels in the context of a proposal that involves fossil fuel production, but the Ninth Circuit held that NEPA required analysis of conventional air pollutants from the transportation and processing of gold ore as indirect effects of a gold mine where there was sufficient information about the transportation route and processing activities to generate a reasonable estimate of those emissions. (8)

(8) *S. Fork Band Council Of W. Shoshone Of Nevada v. U.S. Dep't of Interior*, 588 F.3d 718, 725 (9th Cir. 2009).

Comment Number: 0002337\_Wentz\_20160726\_SabinCntrClimateChange-8

Organization I:Sabin Center for Climate Change Law, Columbia Law School

Commenter I:Jessica Wentz

Other Sections: I

## Comment Excerpt Text:

Demonstrating that such analysis is feasible, many federal agencies (including BLM) have begun to account for downstream emissions in their NEPA reviews. For example, the United States Forest Service ("USFS") conducted a life cycle assessment for an oil and gas leasing decision in 2013, which quantified emissions from transport, refining, and end-use. (9) In 2015, USFS prepared a revised DPEIS for the Colorado Roadless Rule coal mining exemptions that included a much more detailed analysis of GHG emissions from mining, transportation (both within the U.S. and to overseas markets) and combustion. (10) BLM also recently published an EIS in which it acknowledged that "the burning of the coal is an indirect impact that is a reasonable progression of the mining activity" (11) and quantified emissions from combustion. (12)

(9) U.S. FOREST SERV., RECORD OF DECISION AND FINAL ENVIRONMENTAL IMPACT STATEMENT, OIL AND GAS LEASING ANALYSIS, FISHLAKE NATIONAL FOREST 169 (Aug. 2013) (Table 3.12-7: GHG emissions from transportation, offsite refining and end-use are 299,627 MT CO<sub>2</sub>e; total direct and indirect emissions are 365,336 MT CO<sub>2</sub>e). See also *id.*, Appendix E/SIR-2 (more detailed calculations of direct and indirect emissions).

(10) U.S. FOREST SERV., RULEMAKING FOR COLORADO ROADLESS AREAS, SUPPLEMENTAL DRAFT ENVIRONMENTAL IMPACT STATEMENT (Nov. 2015) at 33.

(11) BUREAU OF LAND MGMT., FINAL SUPPLEMENTAL ENVIRONMENTAL IMPACT STATEMENT FOR THE LEASING AND UNDERGROUND MINING OF THE GREENS HOLLOW FEDERAL COAL LEASE TRACT, UTU-84102, 287 (Feb. 2015).

(12) *Id.* at 286.

Comment Number: 0002337\_Wentz\_20160726\_SabinCntrClimateChange-9

Organization I:Sabin Center for Climate Change Law, Columbia Law School

Commenter I:Jessica Wentz

Other Sections: I

## Comment Excerpt Text:

The NEPA documents cited above suggest that the preparation of a downstream emissions inventory is a relatively straightforward task, and that tools and data are available to estimate emissions from each different phase of the coal supply chain. (13) The more challenging task is to determine how these emissions differ from a theoretical "no action" baseline – the idea being to calculate the incremental (or net) impact of agency action on GHG emissions. (This type of analysis has not been required by the courts, but it has been upheld. (14)) To calculate net impact, agencies typically use a model to determine what energy sources would be substituted for the federal resource if it were not produced (e.g., non-federal coal, oil and gas, renewables, energy efficiency, and energy conservation) and then estimate the supply chain emissions for the substitute energy sources.

(13) For example, BLM can estimate emissions from the combustion of coal by multiplying the amount of coal to be produced by the emissions factor for that type of coal. BLM could also adjust its estimates of future emissions to account for the installation of carbon capture and sequestration (CCS) technology at coal-fired power plants. To do so, BLM should use two or more scenarios that reflect varying levels of CCS deployment.

(14) See, e.g., *Mayo Foundation v. Surface Transportation Board*, 472 F.3d 545, 556 (8th Cir. 2006) (finding that, in the downstream emissions analysis for a coal railway, it was appropriate to rely on an assumption that “not all of the... transported coal would represent new combustion, that some would simply be a substitute for existing coal supplies”).

We have two recommendations for BLM in regards to a net impact analysis. First, BLM should disclose gross emissions as well as net emissions and all underlying assumptions in the draft PEIS. This will make it easy for the public to comment on the integrity and accuracy of the analysis. Second, BLM should use a reference case that corresponds with a scenario where the United States meets its GHG reduction targets. This is important because the choice of reference case determines the outcome of the analysis: in a scenario where we exceed the GHG targets, a larger proportion of the foregone federal coal production will be substituted by other coal and fossil fuel resources (as opposed to renewables or energy efficiency), and thus the net GHG impact of federal coal production will appear to be smaller. (15)

(15) To illustrate this point: the Bureau of Ocean Energy Management (BOEM) used the Energy Information Agency (EIA)'s 2015 Reference Case to calculate future demand for oil and gas in the United States when the incremental GHG impacts of the proposed 2017-2022 Outer Continental Shelf (OCS) Leasing Program. The EIA 2015 Reference Case does not account for present and future actions aimed at reducing fossil fuel consumption in the United States, such as the Clean Power Plan, and reflects a scenario in which we would completely fail to meet our domestic and international GHG reduction targets (under the Reference Case, the U.S. will have 445% higher GHG emissions than the level we committed to in our INDC). Because it relied on this Reference Case, BOEM predicted that the demand for oil and gas would remain strong in future years and that it would actually reduce emissions slightly to produce oil and gas closer to home. Thus, “BOEM is dismissing the climate impact of drilling for fossil fuels... because its model assumes we will not act on climate and will accept a catastrophic level of climate change.” See Lorne Stockman, *Government Assumes U.S. Will Fail Climate Goals in Its 5-Year Offshore Drilling Proposal* (2016), <http://priceofoil.org/content/uploads/2016/04/5YearPlan-ClimateTest.pdf>.

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Comment Number: 0002442\_Wolf\_20160727\_CenterBioDiversity-4

Organization I: Center for Biological Diversity

Commenter I: Shay Wolf

Comment Excerpt Text:

A near-term phase-out of federal coal is also critical because new leasing locks in investment and high-carbon infrastructure for mining, transport, and coal combustion, all of which is inconsistent with the pressing need to end fossil fuel emissions.

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Comment Number: 0002467\_Fettus\_20160728-13

Organization I: Natural Resources Defense Council

Commenter I: Geoffrey Fettus

Comment Excerpt Text:

As discussed, see *supra* at 13-14, climate change poses concrete risks to the environment globally, including water availability, ocean acidity, weather, sea-level rise, and the health of ecosystems and the public. To address these concerns, the United States and other countries committed in the Paris Agreement for the United Nations Framework Convention on Climate Change to “Holding the increase in the global average temperature to well below 2°C above pre-industrial levels.” Some reports have estimated that to meet this goal 90% of U.S. coal reserves must remain in the ground. See, e.g. Christophe McGlade & Paul Ekins, “The geographical distribution of

fossil fuels unused when limiting global warming to 2 °C,” *Nature*, Jan. 8, 2015; see also July 27, 2016 Letter from Scientists on the BLM PEIS.

The first order of business is for BLM to develop the appropriate methodologies to calculate the GHG emissions associated with the entire fuel cycle for federally leased coal, including extraction, transportation and refining, and combustion, for only through such an approach can the climate change impacts of coal be properly assessed. Next, the PEIS must explore alternatives that should be considered to mitigate those impacts and insure that federally leased coal does not stand as an obstacle to GHG emission reduction goals.

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Comment Number: 0002467\_Fettus\_20160728-47

Organization I: Natural Resources Defense Council

Commenter I: Geoffrey Fettus

Other Sections: I

Comment Excerpt Text:

A critical threshold change required in BLM’s approach to federal coal leasing, and crucial for a technically defensible NEPA analysis in the PEIS, is to account for all the “links in the chain” stemming from granting coal leases, and consideration of those links comprehensively. This includes emissions associated with coal extraction, transportation, refining, and combustion – i.e., the entire coal fuel cycle.

NEPA requires just such an approach, for, as noted, it calls on agencies to take a hard look at the direct, indirect, and cumulative impacts of federally permitted activities, as well as impacts from related activities. See, e.g. 40 C.F.R. § 1508.8(b) (requiring consideration of “growth inducing effects and other effects related to induced changes in the pattern of land use, population density or growth rate, and related effects on air and water and other natural systems, including ecosystems, as well as “effects on natural resources and the components, structures, and functioning of affected ecosystems,” including “effects on air and water and other natural systems”); see also *Climate Change Guidance* at 11 (requiring consideration of all emissions having “a reasonably close causal relationship to the Federal action, such as those that may occur as a predicate for the agency action (often referred to as upstream emissions) and as a consequence of the agency action (often referred to as downstream emissions) . . .”).

Recognizing this obligation, other agencies have begun to include this kind of analysis in their environmental review documents. For example, the Department of Energy has begun doing lifecycle GHG analyses in considering the impacts associated with Liquid Natural Gas terminals and exports. (13) The Forest Service has also considered CO<sub>2</sub> emissions from coal combustion anticipated to be produced under coal leases, (14) and the State Department included a relatively comprehensive life-cycle GHG analysis in its review of the proposed Keystone XL Pipeline. (15) EPA has also commented on FERC proposals that upstream and downstream emissions should be considered (Burger and Wentz at 27-28). Finally, numerous courts have confirmed that, to comply with NEPA, agencies must consider upstream and/or downstream emissions associated with fossil fuel projects. See Burger and Wentz at 3, 28-57 (citing cases); e.g. *High Country Conservation Advocates v. United States Forest Serv.*, 52 F. Supp. 3d 1174, 1196 (D. Colo. 2014).

(13) See Dept. of Energy, *Life Cycle Greenhouse Gas Perspective on Exporting Liquefied Natural Gas* (May 2014); Dept. of Energy, Office of Fossil Energy, *Freeport LNG Expansion*, Docket no. 10-161-Ing, Final Opinion and Order (Nov. 14, 2014); Dept. of Energy, *Addendum to Environmental Review Documents Concerning Exports of Natural Gas* (Aug. 2014); Dept. of Energy, *Life Cycle Greenhouse Gas Perspective on Exporting LNG* (May 29, 2014) (all cited in Burger and Wentz).

(14) U.S. Forest Serv., *Final EIS, Federal Coal Lease Modifications* (Aug. 2012); see also U.S. Forest Serv., *ROD and EIS, Oil and Gas Leasing Analysis, Fishlake National Forest* (Aug. 2013) (considering downstream emissions for oil and gas leasing) (cited in Burger and Wentz).

(15) U.S. Dept. of State, Final Supplemental EIS For the Keystone XL Project § 4.14.3 Appendix U (Jan. 2014).

Comment Number: 0002467\_Fettus\_20160728-48

Organization I: Natural Resources Defense Council

Commenter I: Geoffrey Fettus

Other Sections: I

Comment Excerpt Text:

BLM itself has also begun to include some consideration of downstream emissions in EISs. (16) Nonetheless, in some prior environmental review documents, BLM – and other agencies – have suggested that the GHG emissions from fossil fuel combustion can ultimately be ignored because the same quantity of coal or other fuel will be used regardless of its source. (17) BLM should reject this “perfect substitute” approach in the PEIS. Rather, BLM must engage in a reasoned energy substitution analysis to estimate the extent to which other coal – or other energy sources – might replace reduced quantities of federal coal in the marketplace. Although BLM should assume implementation of the Clean Power Plan in undertaking this analysis (which would partially, though not completely, resolve emission externalities), it should also consider how the analysis might change in the unlikely event the Plan does not go into effect. See James Stock et al, Federal Coal Program Reform, the Clean Power Plan, and the Interaction of Upstream and Downstream Climate Policies (Harvard Kennedy School April 2016) at 3 (concluding that a royalty adder that addresses the social cost of carbon could reduce emissions by roughly 3/4 of the emissions reduction that the Clean Power Plan is projected to achieve).

In considering this issue, we urge BLM to consider the numerous peer-reviewed studies and government reports that evaluate the life-cycle emissions associated with coal development. (18)

(16) See Bureau of Land Mgmt., Final EIS For the Wright Area Coal Lease Applications, 4-140 (July 2010); Bureau of Land Mgmt., Final Supplemental EIS For the Leasing and Underground Mining Of the Greens Hollow Federal Coal Lease Tract (Feb. 2015) (cited in Burger and Wentz).

(17) See Bureau of Land Mgmt., Final EIS for the Wright Area Coal Lease Applications (July 2010) (determining that the No Action alternative of rejecting six large coal leases to expand Powder River Basin coal mines would not reduce GHG emissions).

(18) A list of these documents are provided in the Appendix to Burger and Wentz, and include the following: Greenhouse Gas Protocol, WRI and WBC on Sustainable Development, <http://www.ghgprotocol.org/> ; Oil and Gas Production Protocol, The Climate Registry, <http://www.theclimateregistry.org/wpcontent/>; U.S. Energy Info. Admin., the National Energy Modeling System: An Overview (2009); New Tool Yields Custom Environmental Data for Lifecycle Analysis, Dep’t of Energy (Sept. 10, 2012), <http://energy.gov/fe/articles/new-tool-yields-custom-environmental-data-lifecycle-analysis>; Greet Model, Argonne Natl. Lab. <https://greet.es.anl.gov/>; OPGEE: The Oil Production Greenhouse Gas Emissions Estimator, Stanford School of Earth, Energy & Envtl. Sciences, <https://pangea.stanford.edu/researchgroups/eao/research/opgee-oil-production-greenhouse-gas-emissions-estimator/>; Natural Gas Models, Deloitte Marketplace LLC, <https://www.deloittemarketpoint.com/industries/natural-gas/world-gas-model/>; EPA Greenhouse Gas Reporting Rule, 40 C.F.R. Pt. 98; Paulina Jaramillo et al., Comparative Life-Cycle Air Emissions of Coal, Domestic Natural Gas, LNG, and SNG for Electricity Generation, 41 Environ. Sci. Technol. 6290 (2007); Andrew Burnham et al., Life-Cycle Greenhouse Gas Emissions of Shale Gas, Natural Gas, Coal, and Petroleum, 46(2) Environ. Sci. Technol. 619 (2012); Richard K. Lattanzio, CRS, Life-Cycle GHG Assessment of Coal and Natural Gas in the Power Sector (June 26, 2015); U.S. Dept. of Energy, National Energy Technology Laboratory, Life Cycle Analysis of Natural Gas Extraction and Power Generation, , May 29, 2014 (although the report focuses on natural gas



LCA, it also includes coal LCA for the purpose of comparison); U.S. Dept. of Energy, National Energy Technology Laboratory, Life Cycle GHG Perspective on Exporting LNG (May 29, 2014) (although the focus is on natural gas, coal is also evaluated for comparison); Leslie S. Abrahams et al., Life Cycle Greenhouse Gas Emissions from U.S. Liquefied Natural Gas Exports: Implications for End Uses, 49 *Envtl Science and Technology* 3237 (2014); Mohan Jiang et al., Life Cycle Greenhouse Gas Emissions of Marcellus Shale Gas, 6(3) *Env. Rsch. Letters* 034014 (2011); James Bradbury, et al., WRI, Clearing the Air: Reducing Upstream GHG Emissions from U.S. Natural Gas Systems (2013); Christopher L. Weber & Christopher Clavin, Life Cycle Carbon Footprint of Shale Gas: Review of Evidence and Implications, 46(11) *Environ. Sci. Technol.* 5688 (2012); Daniel Zavala-Araiza et al., Reconciling Divergent Estimates of Oil and Gas Methane Emissions, *PNAS Early Edition* DOI 10.1073 (Nov. 2015), <http://www.pnas.org/content/early/2015/12/03/1522126112.abstract>; Paul R. Epstein et al., Full Cost Accounting for the Life Cycle of Coal, 1219 *Ecological Econ. Review* 73 (2011); see also Greenpeace, *Leasing Coal, Fueling Climate Change* (2014).

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Comment Number: 0002467\_Fettus\_20160728-49

Organization I: Natural Resources Defense Council

Commenter I: Geoffrey Fettus

Other Sections: I

Comment Excerpt Text:

A full life-cycle analysis must also include the other downstream emissions that come before combustion. This includes emissions tied to the substantial amount of electricity and fossil fuels used to operate mining equipment, as well as those associated with the transportation of coal and other coal related infrastructure. In the United States, coal companies transport 70% of their product by rail, approximately 10% by truck, 10% or more by waterways, and the rest using a variety of means including conveyor belts and slurry pipelines. Jayni Hein and Peter Howard, Institute for Policy Integrity, *Reconsidering Coal's Fair Market Value* (New York Univ. School of Law 2015) at A4. One report estimates that transportation of coal accounts for 1.7% of CO<sub>2</sub> emissions in the life cycle of coal production. See Spath, P. L., Mann, M. K., & Kerr, D. R., *Life Cycle Assessment of Coal-fired Power Production* (National Renewable Energy Lab 1999). Each of these forms of transportation must be factored into determining the entire fuel cycle cost of federally leased coal.

In terms of combustion emissions, we applaud Secretary Jewell's plan to have the U.S. Geological Survey establish and maintain a public database to account for the annual carbon emissions from fossil fuels developed on federal lands. If completed in a timely manner, this quantitative database can certainly contribute to the required analysis. However, even without this database, BLM can – and must – quantify emissions for this PEIS. One straightforward approach to calculate those emissions is to multiply the amount extracted by the CO<sub>2</sub> emissions factor for that fuel (Burger and Wentz at 58). (19)

(19) The U.S. Energy Information Administration (EIA) publishes emission factors (or coefficients) for the amounts of certain gases that are released when fuels are burned, and publishes emission factors for when electricity is generated and used. For example, for subbituminous coal, EIA's emission factor for electricity generation is 97.20 kilograms of CO<sub>2</sub> emitted per million Btu (and a Btu refers to the amount of energy needed to raise the temperature of one pound of water by one degree Fahrenheit). See [https://www.eia.gov/environment/emissions/co2\\_vol\\_mass.cfm](https://www.eia.gov/environment/emissions/co2_vol_mass.cfm).

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Comment Number: 0002477\_Saul\_20160728\_CBD\_UPHE-64

Organization I: Center for Biological Diversity

Commenter I: Michael Saul

Organization 2: Utah Physicians for a Healthy Environment

Other Sections: I

Comment Excerpt Text:

In May 2016, the Stockholm Environment Institute, building on the Vulcan/ICF modeling, undertook a more nuanced analysis of the emissions consequences of federal leasing cessation, taking into account additional factors including (a) a supply and demand model for coal exports; (b) exclusion of metallurgical coal; (c) accounting for non-federal coal that may be constrained due to the highly-intermingled ownership of federal and nonfederal coal in the PRB.<sup>127</sup> Applying this more nuanced model to Vulcan's ICF results, SEI ultimately found:

In our reference case, assuming Clean Power Plan implementation, we find that leasing restrictions would reduce CO<sub>2</sub> emissions in 2030 from coal by about 107 Mt CO<sub>2</sub>, but increased use of gas would increase emissions by about 36 Mt CO<sub>2</sub>, resulting in a net reduction of 71 Mt CO<sub>2</sub>.<sup>128</sup>

SEI notes that this 2030 reduction of 2030 million tons CO<sub>2</sub> would be rivaled, as an emissions reduction policy, only by the EPA CAFÉ standards for light-duty vehicles (approximately 200 Mt) and the Clean Power Plan (up to 610 Mt).<sup>129</sup> Should the Clean Power Plan not be implemented, a coal leasing cessation would reduce emissions by 270 Mt in 2030 – nearly half the savings of the CPP.<sup>130</sup> Ultimately, SEI concludes that ending new leasing (and lease modifications expanding reserves), would;

Send national coal production on a declining pathway, potentially to levels more consistent with a 2°C pathway for U.S. coal extraction. Such an action could leave 4 billion short tons of federal coal in the ground that otherwise would be combusted between now and 2040, equivalent to about 7 Gt of CO<sub>2</sub> emissions.<sup>131</sup> (127) Peter Erickson and Michael Lazarus, How would phasing out U.S. federal leases for fossil fuel extraction affect

CO<sub>2</sub> emissions and 2°C goals? at 18-22 (May 2016), SEI Working Paper 2016-02.

(128) Id. at 22.

(129) Id. at 28 & Figure 7.

It then applies coal trajectories under the IEA

(130) Id.

(131) Id. at 31.

Comment Number: 0002480\_Culver\_20160728\_TWS-75

Organization I: The Wilderness Society

Commenter I: Nada Culver

Other Sections: I

Comment Excerpt Text:

In 2012 as much as 21 percent of the Nation's GHG emissions originated from coal, oil and natural gas extracted from the public lands, with coal contributing over 57 percent of this. Federally produced coal is contributing roughly 10 percent to U.S. GHG emissions. (19)

(19) Claire Moser, Joshua Mantell, Nidhi Thakar, Chase Huntley and Matt Lee-Ashley. Cutting Greenhouse Gas from Fossil-Fuel Extraction on Federal Lands and Waters. March 19, 2015. Policy brief and underlying analysis is available at <http://wilderness.org/blog/blind-spot-plan-reduce-emissions-slowing-progress-fight-against-climate-change> (accessed July 28, 2016).

See Attached for Table 5 - TWS Analysis of Lifecycle Emission from Federal Lands by Fuel Type

Comment Number: 0002493\_Mead\_20160728\_GovWY-30

Organization I: Office of Governor Matthew H. Mead

Commenter I: MATTHEW H. MEAD

Other Sections: 7.1

Comment Excerpt Text:

1. Current life cycle analysis (LCA) studies are inadequate and do not factor in all variables. Any LCA that the BLM may undertake as a part of this review needs to be a consequential LCA.
2. If the BLM studies the LCA of mined federal coal, it must take into account current and future technological advancements that may reduce emissions. Studies have shown that new technologies can drastically reduce coal 's C02 emissions.
3. Because of the highly speculative nature of a social cost of carbon analysis, the BLM should avoid conducting one as part of the PEIS.
4. The BLM lacks the statutory authority and technical expertise to implement a carbon taxing program or promulgate other requirements to address C02 and other GHG emissions.

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Comment Number: 0002493\_Mead\_20160728\_GovWY-31

Organization I:Office of Governor Matthew H. Mead

Commenter I:MATTHEW H. MEAD

Comment Excerpt Text:

Considering the facts discussed above, a project level NEPA process is currently more appropriate for the analysis of GHG lifecycle net impacts and benefits than the programmatic process. See Greenhouse Gas Emissions and Climate Change, Millennium Bulk Terminals-Longview, Draft SEPA EIS, ch. 5 § 5.8 (April2016) (acknowledging that the analysis of GHG emissions from future coal extraction are covered in separate GHG emissions NEPA analyses); (WY0-00933 to 00965); see also, Greenhouse Gases and Climate Change; Life-Cycle Greenhouse Gas Emissions, Tongue River Railroad DEIS, ch. 5, Appx. F (April2015); (WY0-00967 to 01025 and WY0-01027 to 01083); and Cumulative Impacts Analysis, Appendix U at p. U-74, § U.4.3; (WY0-01085 to 01360)

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Comment Number: 0002493\_Mead\_20160728\_GovWY-32

Organization I:Office of Governor Matthew H. Mead

Commenter I:MATTHEW H. MEAD

Comment Excerpt Text:

A GHG lifecycle analysis of coal extraction should limit its focus to extraction. It is too speculative to analyze or address the possible impacts of unknown future projects, especially where there is no information on how the resource will be used or control technologies that will be employed until and well after there is a specific project proposed. However, should the BLM proceed with such a speculative analysis as part of the PEIS, the BLM must limit its analysis to the extraction phase emission profiles of coal and other fuels, and the potential consequential NCCIBs of national and international climate and energy policies, CCUS technology commercialization, national and economic security, laws, and regulations on the demand for and supply of coal and other energy resources and products produced by CCUS technologies.

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Comment Number: 0002493\_Mead\_20160728\_GovWY-33

Organization I:Office of Governor Matthew H. Mead

Commenter I:MATTHEW H. MEAD

Comment Excerpt Text:

Should the BLM proceed with a GHG lifecycle analysis from extraction through consumption/end use, which it should not, the BLM should include worldwide energy intensity measured as energy consumption per unit of gross domestic product. Worldwide energy intensity decreased globally by nearly one-third between 1990 through 2015 (See Figure 3.1.1.).

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Comment Number: 0002513\_Quinlan\_20160707-2

Commenter I:Alby Quinlan

Other Sections: 8.1

## Comment Excerpt Text:

At his time, there is abundant evidence that the burning of coal is hugely detrimental to the accumulation of carbon dioxide in our atmosphere. It is time to stop mining and burning coal completely.

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Comment Number: 0002942\_Harbine-37

Organization I: Earthjustice

Commenter I: Jenny Harbine

Other Sections: I

## Comment Excerpt Text:

BLM Must Use One of the Available Energy Models to Analyze Market Effects of Alternatives in the PEIS. There are multiple models that exist and have already been used for decades by other federal agencies that can assist BLM in quantifying the amount of climate pollution emissions (principally carbon dioxide and methane) that will likely occur as a result of considered alternatives in the PEIS. Understanding the net climate pollution differences is essential information in any review that promises to analyze “[t]he impact of possible program alternatives on the projected fuel mix” in order to understand the comparative differences in the resulting GHG emissions.”<sup>38</sup> NEPA requires agencies to use the tools available to them in order to ascertain essential information or explain why they cannot do so. 40 C.F.R. § 1502.22. Under the applicable NEPA regulations, if an agency intends not to include essential information in its NEPA review, it “shall” explain (1) why such essential information is incomplete or unavailable; (2) its relevance to reasonably foreseeable impacts; (3) a summary of existing science on the topic; and (4) the agency’s evaluation based on any generally accepted theoretical approaches. *Id.* § 1502.22(b). That other agencies have long used energy models to analyze market and climate impacts of their proposals, that information is plainly “available” within the meaning of the regulation, and BLM must utilize these available tools to understand the impacts of various alternatives in this PEIS. In 2015, Power Consulting prepared a thorough investigation of available energy-economy models that the Forest Service could have used in evaluating the market and climate impacts of a proposal to open up federal lands for coal mining in Colorado. <sup>39</sup> That report concluded that the two models best suited to the task, based on the prior use by other agencies and the known characteristics of the models, were the Energy Information Administration’s (“EIA”) National Energy Modeling System (“NEMS”), used by EIA to generate its widely-cited Annual Energy Outlook reports, and, to a lesser degree, ICF International’s Integrated Planning Model (“IPM”), used for years by EPA to evaluate market responses to various policy proposals since at least 2004.<sup>40</sup> EIA’s NEMS model is an energy-economy model that projects future energy prices, supply, and demand and can be used to isolate variables such as changes in coal supply and <sup>37</sup> *Id.* at 97. <sup>38</sup> 81 Fed. Reg. 17,200, 17,226 (Mar. 30, 2016) (emphasis added). <sup>39</sup> Thomas Power, et al., ASSESSING THE ABILITY OF CONTEMPORARY MODELS TO CALCULATE THE GHG IMPLICATIONS OF FEDERAL COAL LEASING DECISIONS AND OTHER FEDERAL ENERGY MANAGEMENT DECISIONS (2015), attached as Ex. 4. <sup>40</sup> *Id.* at v. 21 variations in delivered coal price. NEMS uses input data from all sectors of the energy economy to forecast national energy supply and demand balance for varying sets of regulatory and fuel price scenarios. The model has a high degree of sophistication in its structure, which allows the model to give solutions for many types of problems. As noted by the Surface Transportation Board, which used NEMS to evaluate the market effects of a proposal to build a coal rail line, NEMS “not only forecasts coal supply and demand but also quantifies environmental impacts.” *Mayo Found. v. Surface Transp. Bd.*, 472 F.3d 545, 555 (8th Cir. 2006). According to ICF, its Integrated Planning Model (IPM) uses a linear optimization framework and can be used to evaluate changes in wholesale power dispatch taking into account system reliability, environmental constraints, fuel choice, transmission, and capacity expansion. <sup>41</sup> ICF has been used in recent years to evaluate the market and environmental impacts of several high-profile proposals related to the extraction and transportation of fossil fuels, including the U.S. State Department’s review of the Keystone XL tar sands pipeline, the Surface Transportation Board’s evaluation of the proposed Tongue River Railroad, EPA’s evaluation of the Clean Power Plan, the Forest Service’s supplemental evaluation of a proposed coal mining loophole for the Colorado Roadless Rule, and Washington Department of Ecology’s evaluation of the Millennium Bulk coal export terminal. Earlier year, the Institute for Policy Integrity released a report detailing and evaluating various strengths

and weakness of three available models: the Bureau of Ocean Energy Management's MarketSim model; the U.S. Energy Information Administration's National Energy Modeling System (NEMS); and ICF International's Integrated Planning Model (IPM). 42 That report in particular highlights the tradeoff between model complexity and transparency that BLM will need to address in selecting one or more models to use in its analysis.

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Comment Number: 0020031\_Parkins\_20160722-15

Organization I:

Commenter I:438596

Comment Excerpt Text:

the BLM leasing process is not the appropriate means to address emissions of any kind unless they are occurring at the mining operation. The facility using the coal mined on BLM lands is required to obtain an operating permit or license that will address their emissions and interior facilities to use coal. Any impacts should be addressed at the user level, not at the producer level.

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Comment Number: 0020031\_Parkins\_20160722-17

Organization I:

Comment Excerpt Text:

The BLM leasing process is not the appropriate place to review climate impacts associated with the use of coal. The BLM and a Proponent interested in leasing the BLM coal lands cannot know definitively what the final use will be for the coal mined or how efficiently it will be burned. This is determined by the purchaser of the product. Climate impacts must be considered at the point of use not the point of production. Operations using coal mined on BLM lands are required to obtain air quality permits and other licenses to address their emissions and coal handling facilities. Also they be covered by the EPA's Clean Power Plan when it is implemented. Additional stipulations or regulations by the BLM would only add confusion to a process that already exists to evaluate the impact of emissions, and regulate them. BLM adding climate change impact stipulations to the leasing process effectively is a doubling up on those impacts and will inappropriately apply any unfavorable impacts twice, once at the point of production, and once at the point of sale.

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Comment Number: 0020056-5

Organization I:Bowie Resource Partners, LLC

Commenter I:Gene DiClaudio

Comment Excerpt Text:

As noted in Order 3338, a current area of controversy is the degree to which the BLM should analyze the effect of leasing decisions on coal combustion downstream. Bowie does not object to the consideration of the impact of federal coal leasing in the aggregate on net coal combustion, but any such analysis must consider the interaction of federal coal leasing with other law and market constraints. The most important of these is EPA's Clean Power Plan ( CPP ). Should the CPP survive judicial review, national coal consumption, and derivatively federal coal production, will be capped. As a result, leasing policy will have little effect on aggregate emissions, and extensive analysis of combustion effects will serve no policy purpose.

Moreover, even if the CPP is overturned, leasing policy is only a small driver of net coal combustion. The combined effect of MATS, CSAPR, regional haze, and NAAQS revisions has been to render fuel costs a continually declining share of consumer operating costs, and to complicate any cause-and-effect relationship between federal coal leasing policy and net coal combustion. As a result, whether the CPP is upheld or not, any PEIS must evaluate net coal combustion effects of various leasing policy proposals with appropriate sensitivity to the highly regulated character of the coal consumer market.

**ISSUE 4.4 - NATIONAL CARBON REDUCTION GOALS**

Total Number of Submissions: 55

Total Number of Comments: 109

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Comment Number: 0000363\_HEIN\_20160519-1

Organization I: Institute for Policy Integrity

Commenter I: Jayni Hein

Comment Excerpt Text:

The Department of the Interior's programmatic environmental review has the potential to set federal coal production on a trajectory that will meet current and future energy climate change and economic needs.

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Comment Number: 0000364\_Albury\_20160519-1

Commenter I: Kathryn Albury

Comment Excerpt Text:

Last December, the United States, along with 194 other countries, agreed at the Paris Climate Conference to put the world on track to avoid dangerous climate change by limiting coal warming to well below two degrees centigrade Celsius by 2020. That's only four years from now. People, we are in a state of emergency and it's time that we begin to act that way. Continuing to lease parcels of federal land for burning coal is clearly inconsistent with our commitment to reduce greenhouse gas emissions.

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Comment Number: 0000531-1

Organization I: Climate Reality Group

Commenter I: Arun Jhaveri

Comment Excerpt Text:

Honor the United Nations 2015 Paris Agreement on Global Climate Change and the United States commitment, as a leader, to significantly reducing green house gas (GHG) emissions via keeping the earth's atmospheric temperature rise below 2-degrees centigrade, by 2030.

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Comment Number: 0000559-1

Organization I: Saltwater Unitarian Church

Commenter I: Bill Adams

Comment Excerpt Text:

To comply with Paris Accords of 12/15, you cannot be leasing coal which has been proven to be the largest source of greenhouse gases.

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Comment Number: 0000584-1

Organization I: 350Seattle.org

Commenter I: Lynn Fitzhugh

Comment Excerpt Text:

The US just in Dec. signed an international treaty setting targets to reduce GHG. Scientists say the targets were so insufficient that they would still make life on this planet unlivable within my daughter's lifetime. Immediately after signing of the US turned around and announced this coal leasing program which is an insult to the international community after the signing. We know that the fossil fuel companies already OWN 5x more resources than can be safely extracted and used - why on earth would we give the coal companies at bargain basement prices more resources to burn! This is going in the wrong direction and makes impossible the ability to meet our pledged targets!

Comment Number: 0000782-3

Commenter I: Lawson LeGate

Comment Excerpt Text:

BLM should bear in mind the commitments made by the U.S. to the Paris Climate Agreement. BLM should also take into account the effects of coal mining on wildlife habitat, outdoor recreation and tourism.

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Comment Number: 0000822-2

Commenter I: Nicholas Nielsen

Comment Excerpt Text:

In the Notice from the BLM it is stated a number of times that the program needs to be altered so that it "is consistent with the Nations Goals". How are the nations goals defined? Are these goals considering any of the pro coal opinion or is it all driven by the agenda of the Obama administration?

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Comment Number: 0001131-1

Commenter I: Jill MacIntyre

Comment Excerpt Text:

You're saying that you're going to be making decisions in three years' time and so right now today we need to get back to 350 parts per million. These are facts. With CO2 increased, we have increase of temperature. Physics, chemistry, and temperatures do not lie. We have the global scientific consensus saying we must act now. We have 195 countries, governments that just agreed to taking action and actually a hearing to a 1.5 degree Celsius increase in order to stay alive. That was a last-minute addition to the Paris agreement. We can't go to 2 degrees.

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Comment Number: 0001141-1

Commenter I: Ethan Burger

Comment Excerpt Text:

Plenty of American utilities are working towards using sustainability and turning away from coal power. Our partners in the Paris Climate Agreement continue to do this.

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Comment Number: 0001155-1

Organization I: Unitarian Universalist

Commenter I: Mary Paynter

Comment Excerpt Text:

The PEIS should address the intragovernment conflict which amounts to the mere insanity between the clean power plant and the Paris accords on the one hand and the extraction and burning for export of coal on the other.

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Comment Number: 0001164-1

Organization I: Sierra Club

Commenter I: Benjamin Sibelman

Comment Excerpt Text:

The commitments we made in Paris, as people have noted, give the Obama Administration a clear mandate to phase out this leasing program and put us on track to a bright future of clean energy and climate stability and healthy lives for all people and indeed all living beings on earth.

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Comment Number: 0001182-1

Commenter I: Joelle Robinson

Comment Excerpt Text:

The Paris climate commitment made it very clear that we must keep it in the ground and we must phase out the leasing program and, instead, put our effort, our financial resources, and our courage to rise up and transition together to a just and sustainable clean energy future.

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Comment Number: 0001191-1

Commenter I: A.R. Morris

Comment Excerpt Text:

The BLM coal leasing program is inconsistent with the 2015 Paris Agreement on climate disruption. Coal companies already own enough land privately to increase greenhouse gases to cause U.S. to fail its Paris commitments. Thus, leasing public land for even more creation of greenhouse gases is not -- is not for the public good. It will make us fail our Paris commitment.

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Comment Number: 0002043\_Holm\_20160530-1

Commenter I: Patricia Holm

Comment Excerpt Text:

We insist on a comprehensive scope for the EIS, concentrating on the amount of CO<sub>2</sub> and other greenhouse gases the leasing program will have on the cumulative CO<sub>2</sub> already in the atmosphere, and how the sale of more federal coal will undermine U.S. commitments to reduce greenhouse gases. We cannot continue this policy, we must change, along with the rest of the world, to cleaner fuel.

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Comment Number: 0002137\_Zeigler\_20160607-2

Commenter I: Bob Ziegler

Comment Excerpt Text:

How does this BLM Coal Leasing Program fit with goals of last December's International Climate agreement to keep temperatures to no more than 1.5 degrees Celsius rise? How does it conform even with President Obama's Clean Energy Plan that although a good start is still insufficient to meet the goals of COP 21 Paris Agreement?

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Comment Number: 0002147\_Anderson\_20160621\_BlueGreenAlliance-17

Organization I: BlueGreen Alliance

Commenter I: Kim Glas

Comment Excerpt Text:

With the proper accounting and transparency, the BlueGreen Alliance believes that modernizing the management of public energy resources should and can be in harmony with the need to significantly reduce the nation's climate emissions. Managing these two areas in concert, first and foremost, requires scientific data to understand what the impacts are, and how they should be environmentally and economically accounted for.

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Comment Number: 0002166\_Pasta\_20160629-1

Commenter I: Diane Pasta

Comment Excerpt Text:

The Bureau of Land Management has a coal leasing program that is inconsistent with the 2015 Paris agreement on Climate disruption. I would like for us to honor the world-wide commitment to reduce the climate disruptions our activities cause. Coal has already contributed to the devastating effects of greenhouse gases. Furthermore, coal companies already own or lease enough land on private property it increase greenhouse gases to cause the



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US to fail on its commitments in the Paris agreement (keeping global temperature rise to at or below 1.5 C). Obviously, leasing public land for coal mining and fossil fuel development is not in the public good nor consistent with the International Paris Climate Change agreement.

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Comment Number: 0002179\_Hughey\_20160624-1

Commenter I: Ben Hughey

Comment Excerpt Text:

the BLM coal leasing program is inconsistent with the 2015 Paris agreement on climate.

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Comment Number: 0002189\_Jozwik\_20160517-15

Commenter I: Darryl Jozwik

Comment Excerpt Text:

HOW DOES THE FEDERAL COAL PROGRAM RELATE TO THE NATION'S CLIMATE OBJECTIVES, AS WELL AS ITS ENERGY AND SECURITY NEEDS -- THIS IS NOT PART OF THE ACT AND SHOULD NOT BE TAKEN INTO CONSIDERATION IN THIS PROGRAM. IN REFERENCE TO SECURITY NEEDS, WE NEED TO MINE AS MUCH COAL AS WE CAN, SO WE ARE NOT RELIANT ON OTHER COUNTRIES FOR OUR ENERGY NEEDS.

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Comment Number: 0002199\_Gyncild\_20160626-1

Commenter I: Brie Gyncild

Comment Excerpt Text:

The PEIS must consider, first, the national priority and commitment to the international community to reduce our carbon output and other contributions to global warming. Leasing coal from federal lands increasing the mining of fossil fuels is incompatible with progress towards reduced carbon output and the sustainability of a livable environment.

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Comment Number: 0002268\_Hunter\_20160713-2

Commenter I: Rhonda Hunter

Comment Excerpt Text:

We, as taxpayers, in a nation signed onto the Paris Climate Accord, should not be giving away more coal to be burned for climate destroying carbon pollution.

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Comment Number: 0002284\_Madsen\_20160719-3

Commenter I: Travis Madsen

Other Sections: 2

Comment Excerpt Text:

we should make sure that the coal program is aligned with -- and even more ambitious than-- the Paris Climate Agreement. Not only our national contribution (or INDC) to the global target, but to the full ambition of the agreement itself -- limiting warming to well below 2 degrees celsius, and targeting 1.5 degrees.

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Comment Number: 0002303\_Steitz\_20160705-2

Commenter I: Jim Steitz

Comment Excerpt Text:

To keep climate change under 2 degrees C, as the US committed in the Paris accord, requires that our carbon emissions decline by at least half by 2040, and continue to decline thereafter. To issue leases on federal land that

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extend for decades, supplying subsidized coal that undercuts a true market cost for electricity, renders this mathematically impossible.

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Comment Number: 0002311\_Costello\_20160721-2

Commenter I:Lauri Costello

Comment Excerpt Text:

President Obama's commitment to the values expressed in the Paris climate talks

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Comment Number: 0002326\_Moench\_20160724\_UtahPhysicHealthyEnviron-22

Organization I:Utah Physicians for a Healthy Environment

Commenter I:Malin Moench

Other Sections: 8.8

Comment Excerpt Text:

The PRB mining companies are now laying the groundwork for massive coal exports to Asia to take advantage of the huge subsidy of PRB coal taking place under the current Federal coal leasing program. If DOI does not take steps to eliminate that subsidy, the consequence will be additional CO<sub>2</sub> emissions in Asia that more than offset all the emission reductions that the Obama Clean Power Plan is struggling to achieve domestically. It will not only doom the Obama Administration's climate mitigation goals within the United States to failure, but could undo commitments made by 190 nations at the Paris climate summit last December to mitigate climate change.

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Comment Number: 0002326\_Moench\_20160724\_UtahPhysicHealthyEnviron-32

Organization I:Utah Physicians for a Healthy Environment

Commenter I:Malin Moench

Comment Excerpt Text:

To mitigate that threat, the Obama Administration has devised a Clean Power Plan (CPP) that applies to every part of the country, including the part containing the PRB. The goal of the Clean Power Plan is to enforce the Clean Air Act's mandate to reduce CO<sub>2</sub> emissions, which have been found to endanger public health. To do this, the CPP requires each state or region to reduce the carbon intensity of the electricity that it generates. The CPP's primary strategy for achieving that objective is to shift the nation's electric power industry away from its reliance on coal. By selling massive amounts of coal far below its fair market value, current Federal coal leasing policies pull strongly in the opposite direction

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Comment Number: 0002326\_Moench\_20160724\_UtahPhysicHealthyEnviron-33

Organization I:Utah Physicians for a Healthy Environment

Commenter I:Malin Moench

Comment Excerpt Text:

If the Department of the Interior, for some reason, refuses to recertify PRB as a Coal Production Region, and continues the current leasing system with only the minor tweaks that are currently proposed, the production of PRB coal will continue to be subsidized and the broader effects of these subsidies will continue to be ignored. Continuing such subsidies, for example, will give the electric power industry an artificial incentive to reject clean energy in favor of coal. This will directly conflict with the Administration's efforts to reduce the nation's carbon emissions.

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Comment Number: 0002326\_Moench\_20160724\_UtahPhysicHealthyEnviron-38

Organization I:Utah Physicians for a Healthy Environment

Commenter I:Malin Moench

Other Sections: 8.8

Comment Excerpt Text:

As noted earlier, continuing to subsidize PRB coal has the potential to alter the economics of exporting coal to South Asia. Subsidizing the price of PRB coal will artificially make exporting this coal to China and India profitable where it would not otherwise be. If China and India can count on a long-run supply of underpriced coal from the United States, it will increase their use of coal to generate electric power and raise the odds that they will rely on coal rather than renewable forms of energy as both of these countries race to industrialize. This would undermine the commitment that the Administration secured from China in 2015 to cap its reliance on coal after the year 2020.

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Comment Number: 0002326\_Moench\_20160724\_UtahPhysicHealthyEnviron-4

Organization I:Utah Physicians for a Healthy Environment

Commenter I:Malin Moench

Comment Excerpt Text:

Because Asia's demand for coal is highly elastic, shipping subsidized coal into that market will stimulate the use of coal in that region. This prospect is in direct conflict with the objectives of the Obama Administration's Climate Action Plan, including its Clean Power Plan, its recent agreements with China and India to reduce their reliance on coal for power generation, and its agreement with the 30 OECD countries to phase out their financing of coal-fired power plants in less developed countries

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Comment Number: 0002326\_Moench\_20160724\_UtahPhysicHealthyEnviron-78

Organization I:Utah Physicians for a Healthy Environment

Commenter I:Malin Moench

Comment Excerpt Text:

A key assumption underlying the emission-reduction targets that the EPA has assigned to each State is that they can cut the CO<sub>2</sub> emissions of a coal-fired power plant in half by converting it to a gas-fired plant of equivalent Btu capacity. The presence of massive amounts of cheap PRB coal in our domestic energy markets, however, is a powerful disincentive to do that. By one estimate, the presence of low-priced PRB coal in the domestic energy market (the 800-pound gorilla in the room) reduces domestic demand for natural gas by 27%, and thereby prevents the use of 5.5 trillion cubic feet of natural gas annually in the electric power industry. (Considine, T., 2013.)

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Comment Number: 0002326\_Moench\_20160724\_UtahPhysicHealthyEnviron-99

Organization I:Utah Physicians for a Healthy Environment

Commenter I:Malin Moench

Comment Excerpt Text:

The Federal government's Clean Power Plan proposes state standards for reducing CO<sub>2</sub> emission-rates for existing power plants. This is a modest first step towards meeting America's obligation to keep global warming within the 2°C limit that was committed to in the landmark COP 21 Agreement reached in Paris last December. The Federal coal leasing program currently transfers massive quantities of coal to private hands virtually without charge, thereby incentivizing America's overreliance on coal. If not reformed, it will offset all of the benefits of the Clean Power Plan and increase the risk that the COP 21 agreement to mitigate climate change signed by 190 nations will unravel.

The BLM's subsidies of Federal coal distort U.S. energy markets, incentivize U.S. coal exports by subsidizing transportation costs, put clean sources of energy at a disadvantage, and ultimately undercut the goals of the President's Climate Action Plan. It is essential that the Bureau of Land Management reform its current leasing program by formally certifying the Powder River Basin as a Coal Production Region, thereby invoking the legal

obligation to begin the leasing process with regional planning that takes into account market conditions and the environmental and climate impact of leasing Federal coal.

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Comment Number: 0002337\_Wentz\_20160726\_SabinCntrClimateChange-13

Organization I: Sabin Center for Climate Change Law, Columbia Law School

Commenter I: Jessica Wentz

Comment Excerpt Text:

CEQ's revised draft guidance on NEPA and climate change instructs agencies to provide a frame of reference for decision-makers by disclosing the extent to which a project's GHG emissions are consistent with the goals of Federal, state, and local climate change policies. (23) BLM should therefore consider whether a continuation of federal coal leasing would be consistent with federal and state climate policies, and in particular, our GHG reduction targets.

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Comment Number: 0002337\_Wentz\_20160726\_SabinCntrClimateChange-14

Organization I: Sabin Center for Climate Change Law, Columbia Law School

Commenter I: Jessica Wentz

Other Sections: I

Comment Excerpt Text:

As part of our participation in the Paris Agreement to the United Nations Framework Convention on Climate Change (UNFCCC), we have stated that we intend to reduce our economy-wide GHG emissions by 26-28% below 2005 levels by 2025, which will put us on a trajectory to achieve emission reductions of 80% or more by 2050. (24) To achieve this, we must lower annual emissions to 5,460 – 5,312 MtCO<sub>2</sub>e by 2025 (a reduction of 1,410 – 1,558 MtCO<sub>2</sub>e over 2014 levels). (25) Even with the Clean Power Plan and other existing regulations, the U.S. is not yet on track to achieve these reductions—additional measures will be needed to meet the 2025 target. (26)

(24) UNITED STATES, INTENDED NATIONALLY DETERMINED CONTRIBUTION, SUBMISSION TO THE UNFCCC SECRETARIAT (2015), <http://www4.unfccc.int/submissions/indc/Submission%20Pages/submissions.aspx>.

(25) These figures are based on the EPA GHG inventory estimates for 2005 GHG emissions and 2014 emissions (which were used as a baseline for current emissions, since these are the most recent estimates). EPA, INVENTORY OF U.S. GREENHOUSE GAS EMISSIONS AND SINKS: 1990-2014 (2016).

(26) C2ES, Achieving the United States' Intended Nationally Determined Contribution (June 2015), <http://www.c2es.org/docUploads/achieving-us-indc.pdf>.

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Comment Number: 0002337\_Wentz\_20160726\_SabinCntrClimateChange-15

Organization I: Sabin Center for Climate Change Law, Columbia Law School

Commenter I: Jessica Wentz

Other Sections: I

Comment Excerpt Text:

This short term emissions reduction target is part of a broader commitment on the part of the U.S. and the 177 other signatories of the Paris Agreement to limit global warming to “well below” a 2 °C increase above pre-industrial temperatures, and seek to limit it to 1.5 °C. (27) The only way to achieve this goal is to refrain from extracting and using the majority of the planet's known fossil fuel reserves. According to a recent scientific study, over 80% of global coal reserves and 92% of U.S. coal reserves must remain unused to have even a 50% chance of meeting the 2 °C target. (28) President Obama cited this need to keep fossil fuels in the ground as one of the reasons for rejecting the Keystone Pipeline. (29)

(27) Paris Agreement, Article 2, FCC/CP/2015/L.9 (Dec. 12, 2015).

(28) Christophe McGlade & Paul Ekins, The Geographical Distribution of Fossil Fuels Unused When Limiting Global Warming to 2 °C, 517 NATURE 187 (2015) (regional estimates of unburnable reserves were based on an “economically optimal” distribution).

(29) Statement by the President on the Keystone XL Pipeline (Nov. 6, 2015), <https://www.whitehouse.gov/the-press-office/2015/11/06/statement-president-keystone-xl-pipeline> (“ultimately, if we’re going to prevent large parts of this Earth from becoming not only inhospitable but uninhabitable in our lifetimes, we’re going to have to keep some fossil fuels in the ground rather than burn them and release more dangerous pollution into the sky”).

Comment Number: 0002337\_Wentz\_20160726\_SabinCntrClimateChange-16

Organization I: Sabin Center for Climate Change Law, Columbia Law School

Commenter I: Jessica Wentz

Other Sections: I

Comment Excerpt Text:

BLM should evaluate how coal production under existing federal leases will affect our ability to meet these targets before deciding how to proceed with future leasing decisions. BLM estimates that there are approximately 7.75 billion tons of recoverable coal reserves under existing federal leases, an amount sufficient to continue production for another 20 years at current rates. (30) The combustion of all of this coal would result in the release of approximately 18,000 MtCO<sub>2</sub> (based on an average emissions rate for coal of 4,631.5 lbs CO<sub>2</sub> / ton). (31)

(30) ECOSHIFT CONSULTING, OVER-LEASED: HOW PRODUCTION HORIZONS OF ALREADY LEASED FEDERAL FOSSIL FUELS OUTLAST GLOBAL CARBON BUDGETS (2016).

(31) Carbon Dioxide Coefficients by Fuel. U.S. EIA INDEPENDENT STATISTICS & ANALYSIS, [https://www.eia.gov/environment/emissions/co2\\_vol\\_mass.cfm](https://www.eia.gov/environment/emissions/co2_vol_mass.cfm).

Comment Number: 0002337\_Wentz\_20160726\_SabinCntrClimateChange-17

Organization I: Sabin Center for Climate Change Law, Columbia Law School

Commenter I: Jessica Wentz

Other Sections: I

Comment Excerpt Text:

To understand the magnitude of these emissions, it is helpful to compare them to our “carbon budget” (the total amount of CO<sub>2</sub> or CO<sub>2</sub>e that can be emitted if we are to limit warming to 1.5 °C or 2 °C). One of the most recent studies on the global carbon budget concluded that, in order to have a > 66% chance of meeting the 2 degree C target, we must limit future emissions to 590 – 1,240 GtCO<sub>2</sub> (590,000 – 1,240,000 MtCO<sub>2</sub>). (32) There are various ways to determine the U.S. share of this budget. One approach is to simply divide the budget by our proportion of the global population (~ 4%), in which case the U.S. emissions budget is 23,600 – 49,600 MtCO<sub>2</sub>. Using this as our benchmark, the combustion of all of the recoverable coal under existing federal leases would account for 36 – 76% of the U.S. emissions budget.

(32) Joeri Rogelj et al., Differences Between Carbon Budget Estimates Unravelling, 6 NATURE CLIMATE CHANGE 245 (2015).

Comment Number: 0002337\_Wentz\_20160726\_SabinCntrClimateChange-3

Organization I: Sabin Center for Climate Change Law, Columbia Law School

Commenter I: Jessica Wentz

Comment Excerpt Text:

(3) Effect of Production on our Ability to Meet GHG Targets: The PEIS should consider how coal production under existing federal leases will affect our ability to attain national and international GHG reduction targets, and

whether any new coal production can be allowed on federal lands without undermining our ability to meet those targets.

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Comment Number: 0002339\_Satterfield\_20160726\_IECA-6  
Organization I: Industrial Energy Consumers of America (IECA)  
Commenter I: Marnie Satterfield  
Other Sections: | | |

Comment Excerpt Text:

2. The BLM has failed to include increased global GHG emissions because of industrial GHG leakage. The BLM has not included the cost of industrial GHG leakage in its cost calculations. When coal and coal-fired electricity prices increase, energy-intensive trade-exposed (EITE) industries will shift production to other countries in order to be competitive. (7) When they do, their GHG emissions and jobs move with them and global GHG emissions will not have been achieved.

7) Climate Change Trade Measures: Consideration for U.S. Policymakers, GAO,  
<http://www.gao.gov/products/GAO-09-724R>

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Comment Number: 0002442\_Wolf\_20160727\_CenterBioDiversity-I  
Organization I: Center for Biological Diversity  
Commenter I: Shay Wolf  
Comment Excerpt Text:

Human caused climate change is already causing widespread damage from intensifying global food and water insecurity, the increasing frequency of heat waves and other extreme weather events, inundation of coastal regions by sea level rise and increasing storm surge, the rapid loss of Arctic sea ice, increasing species extinction risk, and the worldwide degradation of coral reefs. Limiting further temperature rise is needed to prevent increasingly dangerous and potentially irreversible impacts. (2) However, current climate policy and emissions reduction pledges in the United States and globally are not sufficient to achieve a 1.5°C or 2°C limit, and stronger action to reduce greenhouse gas emissions is urgently needed. (3)

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Comment Number: 0002448\_FoleyHein\_20160727-6  
Organization I: Institute for Policy Integrity  
Commenter I: Jayni Foley Hein  
Comment Excerpt Text:

Pete Erickson (Senior Scientist, Stockholm Environment Institute) discussed the impact of ramping down federal coal and oil leasing on U.S. carbon dioxide emissions and climate change goals. The Stockholm Environment Institute released a new study on federal coal, oil, and gas leasing, looking specifically at lease phase-out or an extension of the coal moratorium.

For example, under an economically efficient 2 degrees Celsius limit scenario (with the Clean Power Plan in effect), U.S. coal production drops dramatically and immediately. The Institute's analysis finds that in 2030 under a permanent moratorium on new leases, Interior could save about 70 million tons of net CO<sub>2</sub> in 2030 and an additional 30 million tons of CO<sub>2</sub> if this policy were extended to federal oil leases, as well. (This analysis accounts for energy substitution effects.) These greenhouse gas emission reductions are at least as large (if not larger) than those expected from the new EPA fuel economy standards for medium- and heavy- duty vehicles, and approaching the reductions expected from new light-duty vehicle standards. Erickson stressed that there is no single right answer as to how the U.S. could best develop a carbon budget for federal lands that is consistent with the 2 degree Celsius warming limit goal as articulated in the Paris Agreement, but that BLM could develop criteria for which lands (both federal and non-federal) should get preference in meeting such a carbon budget and could then analyze different scenarios as part of the PEIS to determine how each would play out.

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Comment Number: 0002448\_FoleyHein\_20160727-7

Organization I: Institute for Policy Integrity

Commenter I: Jayni Foley Hein

Comment Excerpt Text:

Chase Huntley (Director of the Energy & Climate Program, The Wilderness Society) focused on the policy goals and process for carbon budgeting for federal lands. Huntley pointed to the stark contrast between an Administration that has made more progress on climate than any before it with an Administration that has presided over the two largest coal lease sales in U.S. history. He said that the federal government has not invested in the data systems needed to track the kinds of emissions data that an accurate assessment of climate emissions from public lands needs. An agency cannot accurately manage something that it is not measuring. The Secretarial Order acknowledges this and tasks the United States Geological Survey (USGS) with creating a database of emissions (fossil energy volumes on a production basis) from public lands. Huntley summarized: the United States can set and meet meaningful goals, but first it will need to decide on an appropriate contribution of public lands to total U.S. emissions and the role of coal in that portfolio; that the maximum allowable carbon emissions from all fossil energy under the current climate commitments are about 500 million metric tons of CO<sub>2</sub>e in 2050; and that finally, we want to improve transparency and the performance of Interior as the energy asset manager for the American public.

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Comment Number: 0002457\_Johnson\_20160728-6

Organization I: Western Slope Conservation Center

Commenter I: Alex Johnson

Comment Excerpt Text:

- Bring the federal coal leasing program into the 21st century by operating it within the confines of our nation's climate objectives.

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Comment Number: 0002467\_Fettus\_20160728-36

Organization I: Natural Resources Defense Council

Commenter I: Geoffrey Fettus

Comment Excerpt Text:

As of 1970, the mean level of atmospheric carbon dioxide had been elevated to 325 parts per million (ppm). Since 1970, the concentration of atmospheric carbon dioxide has increased at a rate of about 1.6 ppm per year (1970–2012) to approximately 395 ppm in 2014. It is now well established that rising global atmospheric GHG emission concentrations are significantly affecting the Earth's climate. These conclusions are built upon an incontrovertible scientific record including key contributions from the United States Global Change Research Program, the National Research Council, and the Intergovernmental Panel on Climate Change. Broadly stated, the effects of climate change observed to date and projected to occur in the future include more frequent and intense heat waves, more and/or severe wildfires, degraded air quality, more heavy downpours and flooding, increased drought, greater sea-level rise, more intense storms, harm to water resources, harm to agriculture, and harm to wildlife and ecosystems. For these reasons, and others, the Environmental Protection Agency (EPA) has issued a finding that the changes in our climate caused by increased concentrations of atmospheric GHG emissions endanger public health and welfare.

To address this fundamental threat to our planet and humanity, last year countries around the world committed to the United Nations Framework Convention on Climate Change (Paris Agreement). In the Paris Agreement the United States and other countries committed to a goal of "Holding the increase in the global average temperature to well below 2°C above pre-industrial levels and pursuing efforts to limit the temperature increase to 1.5°C." In addition the United States committed to reduce the GHG emissions from within our borders by 26-28% below 2005 levels by the year 2025.

Comment Number: 0002467\_Fettus\_20160728-38

Organization 1: Natural Resources Defense Council

Commenter 1: Geoffrey Fettus

Other Sections: I

Comment Excerpt Text:

GHG emissions arise from the coal extraction process, from the transportation and refining of coal, and from its combustion – all of which must be comprehensively considered in the PEIS. In short, the PEIS must provide the necessary information for BLM to restructure the coal leasing regulatory framework in order to insure that federal coal leasing does not stand as an obstacle to the United States achieving the GHG reduction goals to which it committed in the Paris Agreement. See, e.g., CEQ Climate Change Guidance at 14 (directing that an EIS address the role of the agency action in meeting climate change goals).

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Comment Number: 0002477\_Saul\_20160728\_CBD\_UPHE-10

Organization 1: Center for Biological Diversity

Commenter 1: Michael Saul

Other Sections: I

Comment Excerpt Text:

In January 2016, Vulcan Philanthropy., employing analytic models supplied by ICF International, “commissioned a forward-looking analysis using ICF International’s (ICF) Integrated Planning Model (IPM®), relying on assumptions and scenarios as specified by Vulcan.”<sup>120</sup> The Vulcan study applied the ICF model of coal prices and consumption to various scenarios including no Clean Power Plan, a Clean Power Plan with mass-based caps on emissions, and a Clean Power Plan with emissions trading under a rate-based rule. The study then assessed the effects of various policy choices, including royalty increases based on the Social Cost of Carbon and (in their policy case 6), a 100% ramp-down of federal coal leasing. The Vulcan application of the ICF model found that a “production limit policy case,” i.e. a cessation of new federal leasing, would have significant impacts on coal production, coal markets and exports, generation capacity and mix, and ultimately CO<sub>2</sub> emissions.<sup>121</sup> Ultimately, Vulcan found that ending new leasing would sharply reduce PRB coal production from 2037 on, with only a partial shift to production in other regions.<sup>122</sup> This would also end Montana coal exports starting in 2040.<sup>123</sup> The net result of Vulcan’s finding is that, for a no new leasing policy, U.S. coal production would decline 348 Mt through 2040 without the Clean Power Plan, and 85 Mt under a mass-based Clean Power Plan.<sup>124</sup> This in turn would result in a shift to more efficient gas-fired generation and, to a lesser extent, renewable energy deployment and efficiency improvement.<sup>125</sup> Vulcan concludes the net effect on CO<sub>2</sub> emissions in 2040 would be nearly 500 Mt/year without the CPP, and a lesser reduction under the CPP.<sup>126</sup>

(120) Vulcan Philanthropy, Federal Coal Leasing Reform Options: Effects on CO<sub>2</sub> Emissions and Energy Markets (Jan. 2016).

(121) See id. at 49-57.

(122) Id. at 46-47.

(123) Id. at 50.

(124) Id. at 47.

(125) Id. at 51-52.

(126) Id. at 56-57, Exhibits 89-90.

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Comment Number: 0002477\_Saul\_20160728\_CBD\_UPHE-11

Organization 1: Center for Biological Diversity

Commenter 1: Michael Saul

Organization 2: Utah Physicians for a Healthy Environment



Other Sections: 7.2 I

Comment Excerpt Text:

In July 2016, Eco-Shift consulting projected the “production horizons”- the number of years’ worth of remaining production - from currently leased federal fossil fuels using the U.S. Energy Information Administration’s (EIA) 2016 “reference case” for fossil fuel production.<sup>132</sup> EcoShift found that, under the EIA reference case (including Clean Power Plan implementation), “Coal under federal lease would last 25 years, through 2041.”<sup>133</sup> This production horizon greatly exceeds the dates at which carbon budgets for 1.5°C and 2°C would be exceeded by continued emissions at 2014 rates – 2021 and 2036 respectively.<sup>134</sup> The discrepancy between the production horizon for already-leased coal and carbon budget exceedance dates makes clear that, barring either extraordinarily rapid global emissions declines or rapid, widespread and successful deployment of carbon capture and sequestration technology, there is no scenario where new federal coal leasing at any significant level is consistent with the nation’s stated climate aims.

(132) Dustin Mulvaney et al., *Over-Leased: How Production Horizons of Already Leased Federal Fossil Fuels Outlast*

*Global Carbon Budgets I* (July 2016).

(133) *Id.*

(134) *Id.* at Figure 1.

Significantly, both Vulcan and SEI examined the effect of leasing policies in a context where the Clean Power Plan was the only meaningful downstream constraint on U.S. coal consumption. More recently, Energy Transition Advisors, Earth Track, and Carbon Tracker Initiative undertook to examine the role of federal Powder River Basin coal in a (modestly ambitious) climate scenario – the International Energy Agency’s “450 scenario” aimed at modeling the energy demands consistent with an atmospheric CO<sub>2</sub> concentration of 450 ppm, and an ensuing 50% probability of keeping warming within 2°C of preindustrial levels.<sup>135</sup> Although the IEA “450 scenario” is less ambitious than Paris goals or the demands of protecting health and biodiversity, it provides an existing model for assessing the role of federal leasing, PRB production, and coal markets in a modestly climate-constrained scenario.<sup>136</sup> The ETA first examined U.S. EIA “reference case” coal production projections under the CPP to conclude that demand for PRB coal tracks reasonably well with US-wide demand for power-sector control under a modestly CO<sub>2</sub>-constrained scenario.<sup>137</sup> It then applies coal trajectories under the IEA “450 Scenario” to the Powder River Basin, to find, under various CCS scenarios, a rapid decline in demand for PRB coal from 2016 through 2030, leveling off somewhat around 2030.<sup>138</sup> Fulton et al. then compared these anticipated demand scenarios with the best available information regarding coal deposits already under lease in the PRB.<sup>139</sup> Their conclusion was that, “[u]nder the 450 Scenario with no CCS, potential production from existing leases is sufficient to meet projected demand in every year through 2040.”<sup>140</sup> Moreover, they found that “even without additional efforts to pursue a 2°C scenario beyond those already announced, significant production from new leases is not expected to be needed until 2031.”<sup>141</sup>

(135) Mark Fulton et al., *Enough Already: Meeting 2°C PRB Coal Demand Without Lifting the Federal Moratorium*

(July 2016).

(136) The IEA 450 Scenario also makes aggressive assumptions regarding the deployment of CCS technology; Fulton

et al. provides alternative scenarios involving later CCS development. See *id.* at 6 n.10.

(137) *Id.* at 7.

(138) *Id.* at 9 & Figure 1.

(139) *Id.* at 11 & Figure 3.

(140) *Id.* at 12.

(141) *Id.*

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Comment Number: 0002477\_Saul\_20160728\_CBD\_UPHE-12

Organization 1: Center for Biological Diversity

Commenter 1: Michael Saul

Organization 2: Utah Physicians for a Healthy Environment

Other Sections: 2

Comment Excerpt Text:

Our analysis suggests that pursuit of a 2°C or less climate commitment obviates the need to award new leases for PRB coal mining through at least 2040. Under the power system that the US must transition to if it is to fulfill its Paris Agreement commitments, the 745 Mt of potential production from new PRB mines is unneeded to meet projected demand through 2040.

In contrast, awarding leases for such mines invites up to \$2.9 billion of investment that is at odds with America's stated climate ambitions and should prove unnecessary as the world moves towards a 2°C outcome. As PRB mines account for the majority of coal produced on federal lands, this suggests that a continued moratorium on all new leases is warranted under a 2°C scenario. Indeed, taking steps to slow production from the PRB would send a strong signal to other parties to the Paris Agreement that the United States is beginning to put its own house in order.

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Comment Number: 0002477\_Saul\_20160728\_CBD\_UPHE-2

Organization 1: Center for Biological Diversity

Commenter 1: Michael Saul

Organization 2: Utah Physicians for a Healthy Environment

Comment Excerpt Text:

Over 65 eminent climate scientists agree: the vast majority of known coal in the United States must stay in the ground if the federal coal program is to be consistent with national climate objectives and be protective of public health, welfare, and biodiversity<sup>9</sup>. As set forth below, the science is clear that (a) climate change is a serious and imminent threat to health, welfare, and biodiversity, (b) mitigating the worst effects of climate change requires rapid implementation of limits not just on rates of greenhouse gas emission, but on total greenhouse gas loads to the atmosphere, and (c) continued federal coal leasing is inconsistent with any reasonable path to mitigating greenhouse gas emissions to the degree necessary to protect health, welfare, and biodiversity.

(9) Ken Caldeira et al., Scientists support ending leasing on public lands to protect the climate, public health, and biodiversity (July 27, 2016),

[http://www.biologicaldiversity.org/programs/public\\_lands/energy/dirty\\_energy\\_development/coal/pdfs/16\\_7\\_26\\_Scientist\\_sign-on\\_letter\\_Coal\\_PEIS.pdf](http://www.biologicaldiversity.org/programs/public_lands/energy/dirty_energy_development/coal/pdfs/16_7_26_Scientist_sign-on_letter_Coal_PEIS.pdf)

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Comment Number: 0002477\_Saul\_20160728\_CBD\_UPHE-40

Organization 1: Center for Biological Diversity

Commenter 1: Michael Saul

Organization 2: Utah Physicians for a Healthy Environment

Comment Excerpt Text:

On December 12, 2015, nearly 200 governments, including the United States, agreed to the commitments enumerated in the Paris Agreement to “strengthen the global response to the threat of climate change”<sup>10</sup> The Paris Agreement codified the international consensus that the climate crisis is an urgent threat to human societies and the planet, with the parties recognizing that:

Climate change represents an urgent and potentially irreversible threat to human societies and the planet and thus requires the widest possible cooperation by all countries, and their participation in an effective and appropriate international response, with a view to accelerating the reduction of global greenhouse gas emissions (emphasis added).<sup>11</sup>

- (10) Paris Agreement, Art. 2(1).  
 (11) Paris Agreement, Decision, Recitals.

Comment Number: 0002477\_Saul\_20160728\_CBD\_UPHE-42

Organization 1: Center for Biological Diversity

Commenter 1: Michael Saul

Organization 2: Utah Physicians for a Healthy Environment

Other Sections: I

Comment Excerpt Text:

The United States' 2014 Third National Climate Assessment, prepared by a panel of nongovernmental experts and reviewed by the National Academy of Sciences and multiple federal agencies similarly stated that “[t]hat the planet has warmed is ‘unequivocal,’ and is corroborated through multiple lines of evidence, as is the conclusion that the causes are very likely human in origin”<sup>13</sup> and “[i]mpacts related to climate change are already evident in many regions and are expected to become increasingly disruptive across the nation throughout this century and beyond.”<sup>14</sup> The United States National Research Council similarly concluded that: “[c]limate change is occurring, is caused largely by human activities, and poses significant risks for—and in many cases is already affecting—a broad range of human and natural systems.”<sup>15</sup>

(13) Melillo, Jerry M., *Climate Change Impacts in the United States: The Third National Climate Assessment*, Terese

(T.C.) Richmond, and Gary W. Yohe, Eds., *U.S. Global Change Research Program*, doi:10.7930/J0Z31WJ2 (2014)

(Third National Climate Assessment) at 61 (quoting IPCC, 2007: *Climate Change 2007: The Physical Science Basis. Contribution of Working Group I to the Fourth Assessment Report of the Intergovernmental Panel on Climate*

Change, S. Solomon, D. Qin, M. Manning, Z. Chen, M. Marquis, K. B. Averyt, M. Tignor, and H. L. Miller, Eds., Cambridge University Press, 1-18.).

(14) Third National Climate Assessment at 10.

(15) National Research Council, *Advancing the Science of Climate Change* (2010), available at [www.nap.edu](http://www.nap.edu). (“Advancing the Science of Climate Change”) at 2.

Comment Number: 0002477\_Saul\_20160728\_CBD\_UPHE-43

Organization 1: Center for Biological Diversity

Commenter 1: Michael Saul

Organization 2: Utah Physicians for a Healthy Environment

Other Sections: I

Comment Excerpt Text:

The IPCC and National Climate Assessment further decisively recognize the dominant role of fossil fuels in driving climate change:

While scientists continue to refine projections of the future, observations unequivocally show that climate is changing and that the warming of the past 50 years is primarily due to human-induced emissions of heat-trapping gases. These emissions come mainly from burning coal, oil, and gas, with additional contributions from forest clearing and some agricultural practices.<sup>16</sup>

CO<sub>2</sub> emissions from fossil fuel combustion and industrial processes contributed about 78% to the total GHG emission increase between 1970 and 2010, with a contribution of similar percentage over the 2000–2010 period (high confidence).<sup>17</sup>

These impacts emanating from the extraction and combustion of fossil fuels are harming the United States in myriad ways, with the impacts certain to worsen over the coming decades absent deep reductions in domestic

and global GHG emissions. EPA recognized these threats in its 2009 Final Endangerment Finding under Clean Air Act Section 202(a), concluding that greenhouse gases from fossil fuel combustion endanger public health and welfare: “the body of scientific evidence compellingly supports [the] finding” that “greenhouse gases in the atmosphere may reasonably be anticipated both to endanger public health and to endanger public welfare.”<sup>18</sup>

(16) Third National Climate Assessment at 2.

(17) IPCC AR5 Synthesis Report at 46.

(18) Final Endangerment Finding, 74 Fed. Reg. at 66,497.

Comment Number: 0002477\_Saul\_20160728\_CBD\_UPHE-56

Organization1:Center for Biological Diversity

Commenter1:Michael Saul

Organization2:Utah Physicians for a Healthy Environment

Other Sections: I

Comment Excerpt Text:

The United States has committed to the climate goal of holding the increase in the global average temperature to “well below 2°C above pre-industrial levels” and pursuing efforts to limit the temperature increase to 1.5°C above pre-industrial levels under the Paris Agreement.<sup>75</sup> Human-caused climate change is already causing widespread damage from intensifying global food and water insecurity, the increasing frequency of heat waves and other extreme weather events, inundation of coastal regions by sea level rise and increasing storm surge, the rapid loss of Arctic sea ice, increasing species extinction risk, and the worldwide degradation of coral reefs. Limiting further temperature rise is needed to prevent increasingly dangerous and potentially irreversible impacts.<sup>76</sup> However, current climate policy and emissions reduction pledges in the United States and globally are not sufficient to achieve a 1.5°C or 2°C limit, and stronger action to reduce greenhouse gas emissions is urgently needed.<sup>77</sup>

(75) The Paris Agreement, which was adopted at the 2015 United Nations Framework Convention on Climate Change Conference of the Parties and signed by the United States in April 2016, commits all signatories to “[h]olding the increase in the global average temperature to well below 2°C above pre-industrial levels and to pursue efforts to limit the temperature increase to 1.5°C above pre-industrial levels, recognizing that this would significantly reduce

the risks and impacts of climate change.” See Paris Agreement at Article 2, Section 1(a),

<https://unfccc.int/resource/docs/2015/cop21/eng/109r01.pdf>

(76) IPCC. 2014. Climate Change 2014: Synthesis Report. Contribution of Working Groups I, II and III to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change, at 65, Box 2.4, Figure 2.5,

[https://www.ipcc.ch/pdf/assessment-report/ar5/syr/SYR\\_AR5\\_FINAL\\_full.pdf](https://www.ipcc.ch/pdf/assessment-report/ar5/syr/SYR_AR5_FINAL_full.pdf); U.N. Framework Convention on Climate Change. 2015. Subsidiary Body for Scientific and Technical Advice. Report on the Structured Expert Dialogue on the 2013-15 Review, No. FCCC/SB/2015/INF.1, at 15-16, 30-32,

<http://unfccc.int/resource/docs/2015/sb/eng/inf01.pdf>; Schleussner, C-F. et al. 2016. Differential climate impacts for policy-relevant limits to global warming: the case of 1.5°C and 2°C. *Earth System Dynamics* 7: 327-351.

(77) Climate Action Tracker ranks the United States INDC (intended nationally determined contribution) submitted to the UNFCCC as “not yet consistent with limiting warming to below 2°C unless other countries make much deeper reductions and comparably greater effort than the USA.” Climate Action Tracker finds that current US climate policy is insufficient to meet the US INDC. See <http://climateactiontracker.org/countries/usa.html> Analyses of the aggregate effect of national climate pledges (INDCs or intended nationally determined contributions) submitted to the UNFCCC under the Paris Agreement estimate a 2.7 to 3.7°C temperature rise above pre-industrial levels. See Rogelj, J. et al. 2016. Paris Agreement climate proposals need a boost to keep warming well below 2°C. *Nature* 534: 631-639; UNEP. 2015. The Emissions Gap Report 2015. United Nations Environment Programme (UNEP),

Nairobi, [http://uneplive.unep.org/media/docs/theme/13/EGR\\_2015\\_301115\\_lores.pdf](http://uneplive.unep.org/media/docs/theme/13/EGR_2015_301115_lores.pdf); Climate Action Tracker.

2015. 2.7°C is not enough – we can get lower, <http://climateactiontracker.org/news/253/Climate-pledges-will-bring-2.7C-of-warming-potential-for-more-action.html>; Climate Interactive. 2015. Climate Scoreboard: UN Climate Pledge Analysis, <https://www.climateinteractive.org/programs/scoreboard/>.

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Comment Number: 0002477\_Saul\_20160728\_CBD\_UPHE-57

Organization 1: Center for Biological Diversity

Commenter 1: Michael Saul

Organization 2: Utah Physicians for a Healthy Environment

Other Sections: I

Comment Excerpt Text:

International consensus and commitments acknowledge the global climate emergency and demand decisive action to limit fossil fuel extraction. On December 12, 2015, 197 nation-state and supra-national organization parties meeting in Paris at the 2015 United Nations Framework Convention on Climate Change Conference of the Parties consented to an agreement (Paris Agreement) committing its parties to take action to avoid dangerous climate change.<sup>78</sup> As the Paris Agreement opens for signature in April 2016<sup>(79)</sup> and the United States is expected to sign the treaty as a legally binding instrument through executive agreement,<sup>80</sup> the Paris Agreement commits the United States to critical goals—both binding and aspirational—that mandate bold action on the United States’ domestic policy to rapidly reduce greenhouse gas emissions.

The United States and other parties to the Paris Agreement recognized “the need for an effective and progressive response to the urgent threat of climate change on the basis of the best available scientific knowledge.”<sup>81</sup> The Paris Agreement articulates the practical steps necessary to obtain its goals: parties including the United States have to “reach global peaking of greenhouse gas emissions as soon as possible . . . and to undertake rapid reductions thereafter in accordance with best available science,”<sup>82</sup> imperatively commanding that developed countries specifically “should continue taking the lead by undertaking economy-wide absolute emission reduction targets”<sup>83</sup> and that such actions reflect the “highest possible ambition.”<sup>84</sup>

The Paris Agreement codifies the international consensus that climate change is an “urgent threat” of global concern,<sup>85</sup> and commits all signatories to achieving a set of global goals. Importantly, the Paris Agreement commits all signatories to an articulated target to hold the long-term global average temperature “to well below 2°C above pre-industrial levels and to pursue efforts to limit the temperature increase to 1.5°C above pre-industrial levels”<sup>86</sup>(emphasis added).

(80) See U.S. Department of State, Background Briefing on the Paris Climate Agreement, (Dec. 12, 2015), <http://www.state.gov/r/pa/prs/ps/2015/12/250592.htm>.

(81) *Id.*, Recitals.

(82) *Id.*, Art. 4(1).

(83) *Id.*, Art. 4(4).

(84) *Id.*, Art. 4(3).

(85) *Id.*, Recitals.

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Comment Number: 0002477\_Saul\_20160728\_CBD\_UPHE-58

Organization 1: Center for Biological Diversity

Commenter 1: Michael Saul

Organization 2: Utah Physicians for a Healthy Environment

Other Sections: I

Comment Excerpt Text:

In light of the severe threats posed by even limited global warming, the Paris Agreement established the international goal of limiting global warming to 1.5°C above pre-industrial levels in order to “prevent dangerous

anthropogenic interference with the climate system,” as set forth in the UNFCCC, a treaty which the United States has ratified and to which it is bound.<sup>87</sup> The Paris consensus on a 1.5°C warming goal reflects the findings of the IPCC and numerous scientific studies that indicate that 2°C warming would exceed thresholds for severe, extremely dangerous, and potentially irreversible impacts.<sup>88</sup> Those impacts include increased global food and water insecurity, the inundation of coastal regions and small island nations by sea level rise and increasing storm surge, complete loss of Arctic summer sea ice, irreversible melting of the Greenland ice sheet, increased extinction risk for at least 20-30% of species on Earth, dieback of the Amazon rainforest, and “rapid and terminal” declines of coral reefs worldwide.<sup>89</sup> As scientists noted, the impacts associated with 2°C temperature rise have been “revised upwards, sufficiently so that 2°C now more appropriately represents the threshold between ‘dangerous’ and ‘extremely dangerous’ climate change.”<sup>90</sup> Consequently, a target of 1.5°C or less temperature rise is now seen as essential to avoid dangerous climate change and has largely supplanted the 2°C target that had been the focus of most climate literature until recently. As demonstrated below, under any formulation, the majority of United States fossil fuels, particularly federal coal, must stay in the ground.

(86) *Id.*, Art. 2.

(87) See U.N. Framework Convention on Climate Change, Cancun Agreement. Available at <http://cancun.unfccc.int/>

(last visited Jan 7, 2015); United Nations Framework Convention on Climate Change, Copenhagen Accord. Available at [http://unfccc.int/meetings/copenhagen\\_dec\\_2009/items/5262.php](http://unfccc.int/meetings/copenhagen_dec_2009/items/5262.php) (last accessed Jan 7, 2015). The United States Senate ratified the UNFCCC on October 7, 1992. See <https://www.congress.gov/treatydocument/102nd-congress/38>.

(88) See Paris Agreement, Art. 2(1)(a); U; U.N. Framework Convention on Climate Change, Subsidiary Body for Scientific and Technical Advice, Report on the structured expert dialogue on the 2013-15 review, No. FCCC/SB/2015/INF.1 at 15-16 (June 2015); IPCC AR5 Synthesis Report at 65 & Box 2.4.

(89) See Jones, C. et al, Committed Terrestrial Ecosystem Changes due to Climate Change, 2 *Nature Geoscience* 484,

484–487 (2009); Smith, J. B. et al., Assessing Dangerous Climate Change Through an Update of the Intergovernmental Panel on Climate Change (IPCC) ‘Reasons for Concern’, 106 *Proceedings of the National Academy of Sciences of the United States of America* 4133, 4133–37 (2009); ; Veron, J. E. N. et al., *The Coral Reef*

*Crisis: The Critical Importance of <350 ppm CO<sub>2</sub>*, 58 *Marine Pollution Bulletin* 1428, 1428–36, (2009); ; Warren, R. J. et al., Increasing Impacts of Climate Change Upon Ecosystems with Increasing Global Mean Temperature Rise, 106 *Climatic Change* 141–77 (2011); Hare, W. W. et al., *Climate Hotspots: Key Vulnerable Regions, Climate*

*Change and Limits to Warming*, 11 *Regional Environmental Change* 1, 1–13 (2011); ; Frieler, K. M. et al., Limiting Global Warming to 2°C is Unlikely to Save Most Coral Reefs, *Nature Climate Change*, Published Online (2013) doi:

10.1038/NCLIMATE1674; ; M. Schaeffer et al., Adequacy and Feasibility of the 1.5°C Long-Term Global Limit, *Climate Analytics* (2013).

(90) Anderson, K. and A. Bows, Beyond ‘Dangerous’ Climate Change: Emission Scenarios for a New World, 369 *Philosophical Transactions, Series A, Mathematical, Physical, and Engineering Sciences* 20, 20–44 (2011).

Comment Number: 0002477\_Saul\_20160728\_CBD\_UPHE-8

Organization 1: Center for Biological Diversity

Commenter 1: Michael Saul

Organization 2: Utah Physicians for a Healthy Environment

Other Sections: I

Comment Excerpt Text:

The question of what amount of fossil fuels can be extracted and burned without negating a realistic chance of meeting a 1.5 or 2°C target is relatively easy to answer, even if the answer is framed in probabilities and ranges. The IPCC Fifth Assessment Report and other expert assessments have established global carbon budgets, or the

total amount of remaining carbon that can be burned while maintain some probability of staying below a given temperature target. According to the IPCC, total cumulative anthropogenic emissions of CO<sub>2</sub> must remain below about 1,000 gigatonnes (GtCO<sub>2</sub>) from 2011 onward for a 66% probability of limiting warming to 2°C above pre-industrial levels.<sup>92</sup> Given more than 100 GtCO<sub>2</sub> have been emitted since 2011,<sup>93</sup> the remaining portion of the budget under this scenario is well below 900 GtCO<sub>2</sub>. To have an 80% probability of staying below the 2°C target, the budget from 2000 is 890 GtCO<sub>2</sub>, with less than 430 GtCO<sub>2</sub> remaining.<sup>94</sup>

To have even a 50% probability of achieving the Paris Agreement goal of limiting warming to 1.5°C above pre-industrial levels equates to a carbon budget of 550-600 GtCO<sub>2</sub> from 2011 onward,<sup>95</sup> of which more than 100 GtCO<sub>2</sub> has already been emitted. To achieve a 66% probability of limiting warming to 1.5°C requires adherence to a more stringent carbon budget of only 400 GtCO<sub>2</sub> from 2011 onward,<sup>96</sup> of which less than 300 GtCO<sub>2</sub> remained at the start of 2015. An 80% probability budget for 1.5°C would have far less than 300 GtCO<sub>2</sub> remaining. Given that global CO<sub>2</sub> emissions in 2014 alone totaled 36 GtCO<sub>2</sub>,<sup>97</sup> humanity is rapidly consuming the remaining burnable carbon budget needed to have even a 50/50 chance of meeting the 1.5°C temperature goal.<sup>98</sup>

(92) IPCC AR5 Physical Science Basis at 27; IPCC AR5 Synthesis Report at 63-64 & Table 2.2.

(93) From 2012-2014, 107 GtCO<sub>2</sub> was emitted (see Annual Global Carbon Emissions at <http://co2now.org/Current-CO2/CO2-Now/global-carbon-emissions.html>).

(94) Carbon Tracker Initiative at 6; Meinshausen et al. 2009 at 1159

(95) IPCC AR5 Synthesis Report at 64 & Table 2.2.

(96) *Id.*

(97) See Global Carbon Emissions, <http://co2now.org/Current-CO2/CO2-Now/global-carbon-emissions.html>

(98) In addition to limits on the amount of fossil fuels that can be utilized, emissions pathways compatible with a 1.5 or 2°C target also have a significant temporal element. Leading studies make clear that to reach a reasonable likelihood of stopping warming at 1.5° or even 2°C, global CO<sub>2</sub> emissions must be phased out by mid-century and likely as early as 2040-2045. See, e.g. Joeri Rogelj et al., Energy system transformations for limiting end-of-century warming to below 1.5°C, 5 *Nature Climate Change* 519, 522 (2015). United States focused studies indicate that we must phase out fossil fuel CO<sub>2</sub> emissions even earlier—between 2025 and 2040—for a reasonable chance of staying below 2°C. See, e.g. Climate Action Tracker, <http://climateactiontracker.org/countries/usa>. Issuing new legal entitlements to explore for and extract federal fossil fuels for decades to come is wholly incompatible with such a transition.

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Comment Number: 0002480\_Culver\_20160728\_TWS-25

Organization I: The Wilderness Society

Commenter I: Nada Culver

Other Sections: 6

Comment Excerpt Text:

The BLM is clearly required to measure, evaluate and fully consider the GHG emissions and climate change impacts of the federal coal program in the PEIS based on a number of policies of the BLM and other agencies, and even the President. NEPA also requires the BLM to fully consider climate change issues in the PEIS. This must include both upstream and downstream emissions, including those from coal combustion at power plants. This analysis must inform BLM's requirements to avoid, minimize and compensate for these impacts consistent with this country's climate change commitments, specifically the requirement to reduce emissions by 26 to 28 percent below 2005 levels by 2025. This analysis and decision-making should seek to achieve a no more than 2 degrees C temperature increase, which will require the U.S. to reduce emissions an average of 70 to 80 percent below 2000 levels by 2050. The PEIS should put in place requirements to achieve these commitments.

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Comment Number: 0002480\_Culver\_20160728\_TWS-34

Organization I: The Wilderness Society

Commenter I: Nada Culver

Comment Excerpt Text:

A “carbon budget” is often defined as the quantity of carbon dioxide that the nations of the world can emit and still limit warming to 2-degree C above pre-industrial levels, although recently it has been applied to determine quantities of fossil energy that could be burned by individual nations consistent with their commitments.

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Comment Number: 0002480\_Culver\_20160728\_TWS-35

Organization I: The Wilderness Society

Commenter I: Nada Culver

Comment Excerpt Text:

In the context of these comments, we use the term “carbon budget” to refer to the estimated annual volumes of CO<sub>2</sub> advisable from federal lands under international goals set by leading climate science and prevailing national climate emissions reduction commitments. To us, these volumes function best as performance targets set as a matter of policy rather than as a hard and fast cap. We believe BLM can create a “carbon budget” to establish a CO<sub>2</sub> emission reduction target that takes into consideration our domestic and international climate commitments and can be used as a policy and decision-making tool when addressing the questions of when and how much fossil fuel development should be permitted on federal land.

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Comment Number: 0002480\_Culver\_20160728\_TWS-36

Organization I: The Wilderness Society

Commenter I: Nada Culver

Other Sections: I

Comment Excerpt Text:

The IPCC’s analytic method was further advanced in January 2015 in a paper published in the scientific journal *Nature* entitled “The geographical distribution of fossil fuels unused when limiting global warming to 2 degrees C.” (35) The study evaluates known fossil fuel reserves to determine, based on current emissions factors and global warming potential, how much should be left in-place to maximize the planet’s chances of remaining below 2 degrees C. Importantly, it quantifies the regional distribution of known fossil-fuel reserves and resources and, through modeling a range of scenarios based on least-cost climate policies, identifies geographically-specific resources that should not be burned between 2010 and 2050 to ensure the world stays within a 2-degree C limit in the most cost-efficient manner. (36) This study demonstrates two important facts: first, one way in which geographically-specific analysis can be undertaken to make comparative judgments about the appropriateness of tapping into different resources and plays, and, second, that policy priorities can be brought into such an analysis—in *McGlade et al* it was cost-efficiency, but priorities like land use intensity, water demand, or impact on sensitive resources could as well. In addition to being the analytic source of ignition for the self-proclaimed “Keep it in the Ground” movement, the paper spawned a number of related inquiries looking at modified scenarios and derivative analysis examining U.S. demand scenarios in the specific context of already-leased federal fossil energy resources. (37) Attachment I provides a fuller discussion of the literature.

(35) *McGlade, Christophe and Paul Ekins, The Geographical Distribution of Fossil Fuels Unused When Limiting Global Warming to 2 °C, 517 Nature (187) (2015).*

(36) See *id.* at 187-90.

(37) *CEA 2016, Vulcan/ICF 2016, Erickson and Lazarus 2016, and Fulton, Kaplow, Capalino, and Grant 2016.*

Reaching international climate commitments, including the Paris Agreement goals, will require the U.S. to adopt measures that reduce the GHG associated with production of fossil fuels on public lands in addition to efforts to reduce GHG from power plants and fuel efficiency for vehicles. (38) Nearly all other significant federal activities



have had GHG reduction targets set for them (see Appendix I)—it is time to put a similar set of performance targets in place for federal fossil energy leasing and production. As described below, it also will require measures that phase down the supply of fossil fuels from federal lands starting with the coal PEIS.

(38) 80 Fed. Reg. 64,662 (Oct. 23, 2015) (existing power plants); 80 Fed. Reg. 64,510 (Oct. 23, 2015) (new power plants); 77 Fed. Reg. 62,624 (Oct. 15, 2012) (light-duty vehicles); 76 Fed. Reg. 57,106 (Sept. 15, 2011) (medium- and heavy-duty vehicles).

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Comment Number: 0002480\_Culver\_20160728\_TWS-38

Organization I: The Wilderness Society

Commenter I: Nada Culver

Comment Excerpt Text:

This analysis and decision-making should seek to achieve a no more than 2 degrees C temperature increase, which will require the U.S. to reduce emissions an average of 70 to 80 percent below 2000 levels by 2050. This will require that a carbon budget be developed that limits carbon emissions from federal energy development to below 500m metric tons CO<sub>2</sub>e by 2050.

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Comment Number: 0002480\_Culver\_20160728\_TWS-40

Organization I: The Wilderness Society

Commenter I: Nada Culver

Other Sections: I

Comment Excerpt Text:

We provide the results from our assessment of a “carbon budget” for federal lands to illustrate that such an exercise can be conducted with available data provided key assumptions are disclosed, and encourage BLM to prepare its own analysis utilizing a similar approach. From there, BLM can create a coal target based on coal’s projected future share of federal fossil energy production and/or CO<sub>2</sub>e emissions. (40) We recommend the agency focus on simple scenarios, rather than complex models, to establish leasing targets based on a “carbon budget” analysis. A scenario-based approach was used by the Carbon Tracker Initiative in determining a critical input (future demand for Powder River Basin coal under a 2-degree scenario) used in their recent report reviewing the necessity of future federal coal leasing. (41) This approach should be closely examined by the agency for potential use in establishing a coal production target under a fossil energy “carbon budget” for the Department. We will explore this and alternative methods more fully in our forthcoming whitepaper.

(40) This determination is based on scenario modeling and therefore will require the agency to be transparent with its methods.

(41) Fulton 2016.

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Comment Number: 0002480\_Culver\_20160728\_TWS-46

Organization I: The Wilderness Society

Commenter I: Nada Culver

Other Sections: 2

Comment Excerpt Text:

BLM also has the authority—and we believe the obligation—to reduce climate emissions from the federal coal program through regulation. The PEIS should examine and advance regulations to reduce the emissions of methane and other greenhouse gases from coal mining operations. BLM has already taken steps in this direction with an advance notice of proposed rulemaking to regulate methane that is released as a direct result of mining operations, known as waste mine methane. BLM should move forward with the Coal Mine Waste rule and, through the PEIS, examine other rules to reduce greenhouse gas emissions from coal mining operations.

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Comment Number: 0002480\_Culver\_20160728\_TWS-48

Organization I: The Wilderness Society

Commenter I: Nada Culver

Other Sections: 8.12 8.10

Comment Excerpt Text:

Recommendations: The BLM should examine and advance regulations to reduce the emissions of methane and other greenhouse gases from coal mining operations, both underground and surface operations. Unless and until those regulations are complete, the BLM should immediately consider other options to offset these emissions or otherwise address the associated climate impacts.

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Comment Number: 0002480\_Culver\_20160728\_TWS-57

Organization I: The Wilderness Society

Commenter I: Nada Culver

Other Sections: I

Comment Excerpt Text:

Attachment I. History of the Origins of the Carbon Budget Concept in the Scientific Literature  
In 2012, the International Energy Agency, an international organization established to “provide authoritative research and analysis on ways to ensure reliable, affordable and clean energy” for its members, (76) concluded there is a limit to the amount of fossil fuels that can be developed if the world is to remain within acceptable warming thresholds. Based on an assessment of global carbon reserves, and given existing pollution controls, the agency concluded that “[n]o more than one-third of proven reserves of fossil fuels can be consumed prior to 2050 if the world is to achieve the 2-degree C goal.” (77)

(76) International Energy Agency, *World Energy Outlook 2012* at 2 (2012), available at [https://www.iea.org/publications/freepublications/publication/WEO2012\\_free.pdf](https://www.iea.org/publications/freepublications/publication/WEO2012_free.pdf).

(77) *Id.* at 25.

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Comment Number: 0002480\_Culver\_20160728\_TWS-79

Organization I: The Wilderness Society

Commenter I: Nada Culver

Other Sections: I

Comment Excerpt Text:

In addition, on June 29, 2016, the leaders of Canada, Mexico, and the United States committed to the North American Climate, Clean Energy, and Environment Partnership. Under this agreement the countries will pursue an historic goal for North America to strive to achieve 50 percent clean power generation by 2025. “Canada, the U.S., and Mexico will work together to implement the historic Paris Agreement, supporting our goal to limit temperature rise this century to well below 2 degrees C, and pursuing efforts to limit the temperature increase to 1.5 degrees C.” (22)

(22) See <https://www.whitehouse.gov/the-press-office/2016/06/29/leaders-statement-north-american-climate-clean-energy-and-environment> (presenting Leaders’ Statement on a North American Climate, Clean Energy, and Environment Partnership).

These commitments are consistent with and required by The President’s Climate Action Plan (June 2013) which calls for many steps to combat climate change such as reductions in CO<sub>2</sub> emissions from power plants, increased use of renewable energy, improved automobile efficiency standards, and reducing methane emissions, among many other things. (23) But to achieve the goals of the Climate Action Plan, which include “steady, responsible

action to cut carbon pollution, [so] we can protect our children’s health and begin to slow the effects of climate change so that we leave behind a cleaner, more stable environment,” it will also be necessary to address issues related to fossil fuel extraction from our public lands. The Coal PEIS and other BLM regulatory actions should look to these commitments as part of decision-making, in order to ensure that steps are taken to meet these commitments.

(23) See also Climate Action Plan Strategy to Reduce Methane Emissions (March 2014) (presenting the President’s methane reduction strategy).

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Comment Number: 0002480\_Culver\_20160728\_TWS-83

Organization I: The Wilderness Society

Commenter I: Nada Culver

Other Sections: I

Comment Excerpt Text:

The concept of a carbon budget builds upon the well-established scientific understanding that the global increase in temperature due to greenhouse gas emissions must be capped at or below 2-degree C to avoid unmanageable climate change consequences. The 2-degree C threshold was first enshrined in the 2009 Copenhagen Accord (32) and reaffirmed in the 2015 Paris Agreement as the limit for “acceptable” warming. (33)

(32) Copenhagen Accord ¶ 1, agreed Dec. 18, 2009, FCCC/CP/2009/11/Add.1, available at <http://unfccc.int/resource/docs/2009/cop15/eng/11a01.pdf> (“recognizing the scientific view that the increase in global temperature should be below 2 degrees Celsius” relative to pre-industrial temperatures to “stabilize greenhouse gas concentration in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system”); id. at ¶ 2 (agreeing that “deep cuts in global emissions are required according to science” to meet this goal).

(33) The United States and other signatory nations committed to reducing greenhouse gas emissions “well below 2 °C above pre-industrial levels and to pursue efforts to limit the temperature increase to 1.5 °C above pre-industrial levels.” Paris Agreement art. 2, ¶ 1(a), adopted Dec. 12, 2015, FCCC/CP/2015/L.9, available at <http://unfccc.int/resource/docs/2015/cop21/eng/l09r01.pdf>. The authority cited in the letter is being provided via [regulations.gov](http://regulations.gov) and it should be included in the administrative record for this decision.

During that time, the international scientific community’s understanding of the interaction between fossil fuel development and temperature thresholds has greatly increased, and today it is widely agreed that development of additional reserves should be considered in the context of warming goals—giving rise to the idea of a carbon budget for the planet. In fact, this notion has been assessed and supported by the IPCC in all assessment reports going back to 1990 and has yielded a methodology routinely employed and updated annually by the Global Carbon Project. (34)

(34) The IPCC has produced and reviewed a carbon budget for the planet in all assessment reports (Ciais et al., 2013; Denman et al., 2007; Prentice et al., 2001; Schimel et al., 1995; Watson et al., 1990), as well as by others (e.g. Ballantyne et al., 2012). These assessments included carbon budget estimates for the decades of the 1980s, 1990s (Denman et al., 2007) and, most recently, the period 2002–2011 (Ciais et al., 2013). The IPCC methodology has been adapted and used by the Global Carbon Project (GCP, [www.globalcarbonproject.org](http://www.globalcarbonproject.org)), which has coordinated a cooperative community effort for the annual publication of global carbon budgets up to the year 2005 (Raupach et al., 2007), 2006 (Canadell et al., 2007), 2007 (published online; GCP, 2007), 2008 (Le Quéré et al., 2009), 2009 (Friedlingstein et al., 2010), 2010 (Peters et al., 2012b), 2012 (Le Quéré et al., 2013; Peters et al., 2013), 2013 (Le Quéré et al., 2014), and most recently 2014 (Friedlingstein et al., 2014; Le Quéré et al., 2015). Each of these papers updated previous estimates with the latest available information for the entire time series. From 2008, these publications projected fossil fuel emissions for one additional year using the

projected world gross domestic product (GDP) and estimated trends in the carbon intensity of the global economy (Rogelj, 2016).

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Comment Number: 0002480\_Culver\_20160728\_TWS-95

Organization I: The Wilderness Society

Commenter I: Nada Culver

Other Sections: I

Comment Excerpt Text:

In the fall of 2014, this analysis was expanded and strengthened by the Intergovernmental Panel on Climate Change (Panel). The Panel published a comprehensive synthesis of the latest worldwide scientific consensus on climate change, called the Climate Change 2014 Synthesis Report. (78) The synthesis describes the recent scientific consensus that there is an overall limit to the amount of carbon dioxide (CO<sub>2</sub>) that can be released into the atmosphere to stay within the 2 degree C warming cap. (79) It calculated that emissions from the year 1870 on would need to be limited to about 2,900 gigatons of CO<sub>2</sub> (GtCO<sub>2</sub>) to have a reasonable chance of staying within the cap. (80) The Panel noted that as of 2011, about 1,900 GtCO<sub>2</sub> had already been emitted. (81) Therefore, the report concluded, to provide better than a 66 percent chance of limiting warming to less than 2 degree C, additional carbon dioxide emissions must be limited to 1,000 GtCO<sub>2</sub>. (82) The Panel also estimated that there are about 3,670 to 7,100 GtCO<sub>2</sub> in proven fossil fuel “reserves” remaining in place, (83) which it describes as quantities of fossil fuels “able to be recovered under existing economic and operating conditions.”(84) As the report notes, this volume of reserves is four to seven times the amount that can be burned to have better than a 66 percent chance of remaining within the 2 degree C warming goal. (85) One of the expert reports feeding into the Panel’s synthesis explained that to meet “[t]he emissions budget for stabilizing climate change at 2 degree C above pre-industrial levels... only a small fraction of reserves can be exploited.” (86)

(78) Intergovernmental Panel on Climate Change (Panel), Climate Change 2014: Synthesis Report (2014), available at <http://www.ipcc.ch/report/ar5/syr/>. In fact, a carbon budget has been assessed by the IPCC in all assessment reports (Ciais et al., 2013; Denman et al., 2007; Prentice et al., 2001; Schimel et al., 1995; Watson et al., 1990), as well as by others (e.g. Ballantyne et al., 2012). These assessments included budget estimates for the decades of the 1980s, 1990s (Denman et al., 2007) and, most recently, the period 2002–2011 (Ciais et al., 2013). The IPCC methodology has been adapted and used by the Global Carbon Project (GCP, [www.globalcarbonproject.org](http://www.globalcarbonproject.org)), which has coordinated a cooperative community effort for the annual publication of global carbon budgets up to the year 2005 (Raupach et al., 2007), 2006 (Canadell et al., 2007), 2007 (published online; GCP, 2007), 2008 (Le Quéré et al., 2009), 2009 (Friedlingstein et al., 2010), 2010 (Peters et al., 2012b), 2012 (Le Quéré et al., 2013; Peters et al., 2013), 2013 (Le Quéré et al., 2014), and most recently 2014 (Friedlingstein et al., 2014; Le Quéré et al., 2015). Each of these papers updated previous estimates with the latest available information for the entire time series. From 2008, these publications projected fossil fuel emissions for one additional year using the projected world gross domestic product (GDP) and estimated trends in the carbon intensity of the global economy (Rogelj, 2016).

(79) *Id.* at 63.

(80) *Id.*

(81) *Id.*

(82) *Id.*

(83) *Id.* at 64 Table 2.2.

(84) *Id.* at Table 2.2 n.f (defining “reserves” and noting that “resources,” by contrast, are quantities of fossil fuels where economic extraction is potentially feasible).

(85) *Id.* at 63.

(86) Blanco, Gabriel et al., Drivers, Trends and Mitigation, in Climate Change 2014: Mitigation of Climate Change, Working Group III Contribution to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change at 251, 380 (2014), available at [http://www.ipcc.ch/pdf/assessment-report/ar5/wg3/ipcc\\_wg3\\_ar5\\_chapter5.pdf](http://www.ipcc.ch/pdf/assessment-report/ar5/wg3/ipcc_wg3_ar5_chapter5.pdf).

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Comment Number: 0002480\_Culver\_20160728\_TWS-96

Organization I:The Wilderness Society

Commenter I:Nada Culver

Other Sections: I

Comment Excerpt Text:

The Panel's synthesis analysis was refined further in January 2015, when the scientific journal Nature published a study entitled "The geographical distribution of fossil fuels unused when limiting global warming to 2 degree C." (87) The study identifies which fossil fuels must remain undeveloped to improve the chances of remaining below the warming cap. It quantifies the regional distribution of fossil-fuel reserves and resources and, through modeling a range of scenarios based on least-cost climate policies, identifies which reserves and resources could not be burned between 2010 and 2050 if the world efficiently complies with the 2 degree C limit. (88) It concludes that "a stark transformation in our understanding of fossil-fuel availability is necessary," because "large portions of the reserve base and an even greater proportion of the resource base should not be produced if the temperature rise is to remain below 2 degree C." (89) Thus, expanding on the prior analyses' conclusion that development of already-existing reserves would far exceed the cap, let alone development of the more speculative category of resources, the study concludes that a commitment to meet the 2 degree C limit would "render unnecessary continued substantial expenditure on fossil-fuel exploration, because any new discoveries could not lead to increased aggregate production." (90)

(87) McGlade, Christophe and Paul Ekins, The Geographical Distribution of Fossil Fuels Unused When Limiting Global Warming to 2 °C, 517 Nature (187) (2015).

(88) See id. at 187-90.

(89) Id. at 190.

(90) Id. at 187.

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Comment Number: 0002486\_Ratledge\_20160728\_Apogee-I

Organization I:Apogee EP

Commenter I:Nathan Ratledge

Other Sections: 7.1

Comment Excerpt Text:

The most straightforward route would be to implement a carbon adder for upstream (or direct) emissions – those occurring during the mining and production phase. Recent research estimates those costs would be roughly \$2 for surface federal coal and \$6 for underground federal coal. Without a more comprehensive carbon pricing program – like a national carbon tax, and given the widely recognized externalities associated with coal use, choosing not to price coal emissions from federal production via an upstream adder (or another similar approach) would represent a glaring misstep in meeting the nation's climate commitments.

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Comment Number: 0002491\_Weiskopf\_20160728\_NextGenClimateAmer-I

Organization I:NextGen Climate America

Commenter I:David Weiskopf

Comment Excerpt Text:

The principle finding that informs our recommendation is that more recoverable coal is currently under lease than can safely be developed under a carbon budget that limits global warming to 2°C. Interior has the legal authority and a strong policy basis to align the federal coal program with U.S. commitments on climate change. Interior should therefore reject any reforms to the coal program that imply a level of coal production that is inconsistent with a scientifically sound carbon budget. Ultimately, the agency must end the practice of issuing new

coal leases and undertake other necessary reforms to conform the program to the United States' policy goals and international commitments to limit global warming to well below 2°C.

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Comment Number: 0002491\_Weiskopf\_20160728\_NextGenClimateAmer-10

Organization I:NextGen Climate America

Commenter I:David Weiskopf

Other Sections: I 6

Comment Excerpt Text:

The production models analyzed by Carbon Tracker, which inform our recommendations for modernizing the federal coal program, are inherently conservative on the basis of two factors.<sup>8</sup> First, the 2°C target used by the IEA is an uppermost-limit for temperature warming but does not represent a “safe” threshold. For this reason, technical experts to the United Nations Framework Convention on Climate Change (“UNFCCC”) have cautioned keeping temperature warming well below 2°C in order to significantly reduce the risks of climate change, and Parties to the UNFCCC adopted this goal under the Paris Agreement.<sup>9</sup> Second, the IEA 450 Scenario only assigns a 50% probability of successfully staying below the 2°C threshold and assumes a relatively rapid deployment of CCS technology by 2020.<sup>10</sup>

[<sup>8</sup> The calculated balance of the global carbon budget and the implication for fossil fuel use varies across studies. A recent article in the scientific journal Nature applies a global carbon budget to identify the fraction of U.S. coal reserves that are unburnable before 2050 under a 2°C scenario, concluding that 95% of U.S. reserves cannot be combusted. The Nature analysis models the optimal global use of oil, natural gas and coal with the constraint of a 2°C emissions trajectory. Coal is heavily disfavored in relation to oil and gas, especially in the United States, due both to coal’s carbon intensity and the wide availability of lower-cost, lower-carbon electricity sources. Even with CCS technology widely deployed from 2025 forward, the study concludes that 92% of U.S. coal reserves remain unburnable. See Christopher McGlade & Paul Eakins, The geographic distribution of fossil fuels unused when limiting global warming to 2 °C, 215 Nature 187 (January 8, 2015) at 189.]

[<sup>9</sup> For a discussion on the relative risks of temperature targets, see: United Nations Framework Convention on Climate Change Secretariat, Report on the structured expert dialogue on the 2013-2015 review (2015). Available at <http://unfccc.int/resource/docs/2015/sb/eng/inf01.pdf>. The Paris Agreement on climate change identifies the need for greater temperature ambition. The Agreement aims to hold “the increase in the global average temperature to well below 2°C above pre-industrial levels” with “efforts to limit the temperature increase to 1.5°C above pre-industrial levels” (emphasis added). Paris Agreement, Article 2 (Dec. 13, 2015), in UNFCCC, Report of the Conference of the Parties on its Twenty- First Session, Addendum, at 21, UN Doc. FCCC/CP/2015/10/Add.1 (Jan. 29, 2016) (hereinafter, “Paris Agreement”).]

[<sup>10</sup> Forecasting the rapid deployment of carbon capture and storage projects is characterized by uncertainty. CCS projects are not utilized at scale and only 15 large-scale projects currently operate. See Global CCS Institute, “Large Scale CCS Projects,”<https://www.globalccsinstitute.com/projects/large-scale-ccs-projects>.]

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Comment Number: 0002491\_Weiskopf\_20160728\_NextGenClimateAmer-12

Organization I:NextGen Climate America

Commenter I:David Weiskopf

Other Sections: 7.2

Comment Excerpt Text:

The potential supply from existing leases from 2016 to 2040 is 5,763 million metric tons (Mt), which is 1,252 Mt greater than the supply required under the 450 Scenario (See Figure 1).

The 450 scenario assumes an aggressive build-out of CCS technology, at a pace that outstrips current market

trends. In order to better reflect likely real-world conditions, Carbon Tracker also assessed scenarios in which large-scale deployment of CCS does not occur until 2030, and in which this technology never becomes a significant factor in energy supply markets. Because lower levels of CCS deployment reduce the ability to mitigate coal's intrinsic high carbon intensity, production from existing mines is necessarily also sufficient under scenarios where CCS is delayed until 2030 (cumulative supply production of 2985 Mt) and where no CCS is deployed (cumulative supply production of 2773 Mt).<sup>11</sup> In the energy scenario where no CCS is deployed, the projected production from existing leases alone is 2,990 Mt greater than the 2°C scenario carbon budget threshold.<sup>12</sup> As noted above, the 450 Scenario is also a higher risk pathway due to the 50% probability it assigns for achieving 2°C, and thus coal production consistent with a climate safe scenario would be even less when assigning a higher probability of success.

[Figure 1: Cumulative potential production of PRB coal versus projected demand under different scenarios, 2016-2040 (Mt) | 3]

[11 Carbon Tracker Report, supra note 3 at 5.]

[12 5763 (potential production from existing leases, in Mt) - 2773 (production with CCS delayed until 2030, Mt) = 2,990 Mt]

[13 Carbon Tracker Initiative analysis of data from Wood Mackenzie Global Economic Model, IEA, and EIA. Supra note 3 at 14.]

Comment Number: 0002491\_Weiskopf\_20160728\_NextGenClimateAmer-29

Organization I: NextGen Climate America

Commenter I: David Weiskopf

Other Sections: 1 6

Comment Excerpt Text:

When the President established a climate test for determining whether to approve the Keystone XL pipeline, he examined whether the infrastructure would significantly exacerbate the climate problem.<sup>32</sup> The same test applies to the federal coal program: if any reforms are inconsistent with the global climate budget, then the federal coal leasing program does not pass the climate test.

[32 Remarks by the President on Climate Change, Georgetown University, Washington, D.C., June 25, 2013. Available at [www.whitehouse.gov/the-pressoffice/2013/06/25/remarks-president-climate-change](http://www.whitehouse.gov/the-pressoffice/2013/06/25/remarks-president-climate-change)]

Comment Number: 0002491\_Weiskopf\_20160728\_NextGenClimateAmer-3

Organization I: NextGen Climate America

Commenter I: David Weiskopf

Other Sections: 2

Comment Excerpt Text:

Interior and BLM should adopt the concept of a global carbon budget as an instructive framework for understanding the climate impact of its coal leasing decisions and the federal coal program more broadly.

Comment Number: 0002491\_Weiskopf\_20160728\_NextGenClimateAmer-37

Organization I: NextGen Climate America

Commenter I: David Weiskopf

Other Sections: 1

Comment Excerpt Text:

The EIA projects that fully implementing the CPP will reduce coal's share of the generation mix to 21% in 2030 (down from 50% in 2005 and 33% in 2015).<sup>40</sup> The Clean Power Plan establishes a clear mandate for states to develop a comprehensive framework for climate action that will cut CO<sub>2</sub> emissions from the electricity sector. The federal coal program is currently inconsistent with the policy vision established by the Clean Power Plan, envisioning a perpetual continuation of coal production from federal lands, and a constant stream of revenues and royalties associated with this mining to fund reclamation and offset other costs associated with coal production and combustion.

[40 U.S. Energy Information Administration, Annual Energy Outlook 2016 Early Release: Annotated Summary of Two Cases, May 2016. Available at [http://www.eia.gov/forecasts/aeo/er/pdf/0383er\(2016\).pdf](http://www.eia.gov/forecasts/aeo/er/pdf/0383er(2016).pdf)]

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Comment Number: 0002491\_Weiskopf\_20160728\_NextGenClimateAmer-41

Organization I:NextGen Climate America

Commenter I:David Weiskopf

Other Sections: I

Comment Excerpt Text:

On March 31, 2015, the U.S. submitted its Intended Nationally Determined Contribution (INDC) to the United Nations Framework Convention on Climate Change. The INDC articulates a national target of reducing greenhouse gas emissions by 26%-28% below the 2005 level in 2025 while making “best efforts” to reduce emissions by the upper-target of 28%.<sup>42</sup> As part of this target, the U.S. INDC explicitly accounts for the land sector, stating that the United States will “include all categories of emissions by sources and removals by sinks, and all pools and gases, as reported in the Inventory of the United States Greenhouse Gas Emissions and Sinks; to account for the land sector using a net-net approach.”<sup>43</sup> This means that the United States commits to accounting for carbon emissions beyond the smokestack and tailpipe. We are committed to accounting for and planning around a comprehensive picture of our carbon profile, including our fuel stocks and our policies that affect how those stocks are deployed – whether they are sold off to be burned at taxpayer expense, or maintained as a permanent reserve stock of sequestered potential carbon pollution.

[42 United States Intended Nationally Determined Contribution, March 31, 2015. Available at [http://www4.unfccc.int/submissions/indc/Submission percent20Pages/submissions.aspx](http://www4.unfccc.int/submissions/indc/Submission%20pages/submissions.aspx)]

[43 Id.]

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Comment Number: 0002491\_Weiskopf\_20160728\_NextGenClimateAmer-43

Organization I:NextGen Climate America

Commenter I:David Weiskopf

Other Sections: I

Comment Excerpt Text:

Article 4.19 of the Paris agreement provides a policy basis for why BLM should account for coal resources in federal lands in alignment with climate objectives, stating that all Parties should “strive to formulate and communicate long-term low greenhouse gas emission development strategies, . . . taking into account their common but differentiated responsibilities and respective capabilities, in the light of different national circumstances.”<sup>44</sup>

[44 Paris Agreement, *supra* note 9.]

Article 4.2 of the Paris Agreement establishes the requirement for countries to contribute domestic mitigation measures. Article 4.2 states that “Parties shall pursue domestic mitigation measures, with the aim of achieving the objectives of such [Nationally Determined Contributions].”<sup>45</sup> The U.S. INDC to the Paris Agreement reflects the



national ambition to address climate change. When combined with the commitments from 187 other countries, the U.S. INDC aims to serve the Paris Agreement objective of limiting the global average temperature to well below 2°C above pre-industrial levels.<sup>46</sup> Interior should reform its coal program in a way that is consistent with our nation’s commitment to the international community. This conclusion is also affirmed by 67 climate scientists who wrote to Interior to express their support for ending coal leasing on public lands, stating, “The science is clear: to satisfy our commitment under the Paris Agreement to hold global temperature increase well below 2°C, the United States must keep the vast majority of its coal in the ground.”<sup>47</sup>

[45 Id.]

[46 Id.]

[47 Ken Caldeira et al., Re: Scientists Support Ending Coal Leasing on Public Lands to Protect the Climate, Public Health, and Biodiversity, July 27. Available at [http://www.biologicaldiversity.org/programs/public\\_lands/energy/dirty\\_energy\\_development/coal/pdfs/16\\_7\\_26\\_Scientist\\_sign-on\\_letter\\_Coal\\_PEIS.pdf](http://www.biologicaldiversity.org/programs/public_lands/energy/dirty_energy_development/coal/pdfs/16_7_26_Scientist_sign-on_letter_Coal_PEIS.pdf)]

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Comment Number: 0002491\_Weiskopf\_20160728\_NextGenClimateAmer-45

Organization I:NextGen Climate America

Commenter I:David Weiskopf

Other Sections: I

Comment Excerpt Text:

The North American Climate Plan establishes a goal of 50% clean electricity generation by 2025 in North America.<sup>48</sup> More broadly the plan also calls for the United States, Mexico, and Canada to advance clean energy development.<sup>49</sup> The credibility of the North American Climate Plan relies on actions from each country to do its share to accomplish the clean electricity generation goal.<sup>50</sup> Decisions made to reform the federal coal program will have lasting impacts on the ability of the three countries to achieve this objective.

[48 White House, North American Leaders Summit, May 2016. Available at <https://www.whitehouse.gov/blog/2016/06/29/president-obama-goes-canada-north-america-leaders-summit>]

[49 White House, North American Climate Clean Energy and Partnership Action, May 2016. Available at <https://www.whitehouse.gov/the-press-office/2016/06/29/north-american-climate-clean-energy-and-environment-partnership-action>]

[50 Id.]

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Comment Number: 0002491\_Weiskopf\_20160728\_NextGenClimateAmer-48

Organization I:NextGen Climate America

Commenter I:David Weiskopf

Other Sections: I

Comment Excerpt Text:

Climate consistency must be a criterion for deciding whether to include – and then ultimately in evaluating whether to support – a decision alternative under the PEIS. Climate consistency is a key criterion because of the significant and cumulative nature of the program’s environmental effects. The CEQ draft guidance provides a framework how Interior should consider the effects of its decisions on climate change.<sup>55</sup> This draft guidance states, “Federal agencies, to remain consistent with NEPA, should consider the extent to which a proposed action and its reasonable alternatives contribute to climate change through GHG emissions.”<sup>56</sup> Agencies that fail to effectively compare decision alternatives are increasingly at risk of facing legal challenge. In a review of NEPA

alternative analysis case law, Michael Smith identifies that the “most common challenge [to alternative analyses] was that federal agencies had not included a full reasonable range of alternatives.”<sup>57</sup>

[55 Revised Draft Guidance for Federal Departments and Agencies on Consideration of Greenhouse Gas Emissions and the Effects of Climate Change in NEPA Reviews, 79 Fed. Reg. 77,802 (Dec. 24, 2014).]

[56 *Id.* at 8.]

[57 Michael D. Smith, A review of recent NEPA alternatives analysis case law, *Environmental Impact Assessment Review* 27.2 (2007): 126-144, at 126 and 134.]

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Comment Number: 0002491\_Weiskopf\_20160728\_NextGenClimateAmer-5

Organization I:NextGen Climate America

Commenter I:David Weiskopf

Other Sections: 2

Comment Excerpt Text:

The carbon budget represents a maximum CO<sub>2</sub> emissions level that is consistent with a 2°C warming scenario. Any eventual decision to grant new leases should be made with reference to what coal is unburnable within this global carbon budget. The level of production that is projected from existing leases already exceeds the production levels that are consistent with meeting U.S. climate goals.

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Comment Number: 0002491\_Weiskopf\_20160728\_NextGenClimateAmer-52

Organization I:NextGen Climate America

Commenter I:David Weiskopf

Other Sections: 4.5 I

Comment Excerpt Text:

Interior should evaluate decision alternatives in a manner that reasonably examines a range of climate-consistent scenarios, and should reject alternatives that assume or result in projected carbon emissions above the level set in the carbon budget. Pursuant to the National Environmental Policy Act, environmental impact statements should “include the environmental impacts of the alternatives including the proposed action, any adverse environmental effects which cannot be avoided should the proposal be implemented . . . and any irreversible or irretrievable commitments of resources which would be involved in the proposal should it be implemented.”<sup>63</sup> Critically, this evaluation of environmental effects includes the question of whether a given action exceeds the limited available carbon budget for the Powder River Basin. Interior should evaluate climate consistency under the three 450 Scenarios discussed in Part I: climate consistency with CCS deployment in 2020, climate consistency with widespread CCS deployment in 2030, and climate consistency with no CCS deployment through 2040, in addition to any other climate-consistent scenarios.

[63 40 C.F.R. § 1502.16 – environmental consequences.]

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Comment Number: 0002491\_Weiskopf\_20160728\_NextGenClimateAmer-6

Organization I:NextGen Climate America

Commenter I:David Weiskopf

Other Sections: I

Comment Excerpt Text:

The remaining available carbon budget for limiting temperature increase to 2°C depends on key physical and mathematical parameters, such as the modeled sensitivity of the atmosphere to carbon pollution, potential

climate feedback effects, and other factors that affect the probability of successfully staying below the chosen temperature target.<sup>2</sup> Across a range of budgets based on a variety of reasonable and conservative inputs, expert analysis collectively identify a constraint imposed on fossil fuel production.<sup>3</sup> Extrapolating from a carbon budget that reflects a maximum level of atmospheric CO<sub>2</sub>, it is possible to assess energy demand scenarios for consistency with that budget based on energy market data and the carbon intensity of various fuels.

[<sup>2</sup> Additional factors that impact the carbon budget include the time period covered, assumptions regarding mitigation of other greenhouse gas emissions, and the scale and success of CCS deployment. See Carbon Tracker Initiative, Things to look out for when using carbon budgets! Available at <http://www.carbontracker.org/wp-content/uploads/2014/08/Carbon-budget-checklist-FINAL-1.pdf>]

[<sup>3</sup> Carbon Tracker Initiative, “Enough Already: Meeting 2°C Powder River Basin Demand Without Lifting the Federal Moratorium.” July 2016. Available at <http://www.carbontracker.org/report/enough-already-2c-powder-river-basin-coal-demand-federal-moratorium/> (hereinafter, “Carbon Tracker report”). This comment incorporates the Carbon Tracker report in its entirety, by reference.]

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Comment Number: 0002491\_Weiskopf\_20160728\_NextGenClimateAmer-7

Organization I: NextGen Climate America

Commenter I: David Weiskopf

Other Sections: I

Comment Excerpt Text:

Enough Already: Meeting 2°C Powder River Basin Coal Demand Without Lifting the Federal Moratorium.<sup>4</sup> Carbon Tracker modifies the “450 Scenario” emissions pathway used by the International Energy Agency, which provides an energy trajectory “consistent with the goal of limiting the global temperature increase to 2°C by limiting concentration of greenhouse gases in the atmosphere to around 450 parts per million of CO<sub>2</sub>.”<sup>5</sup> In particular, Carbon Tracker identifies what level of coal production from existing Powder River Basin federal leases is consistent with stabilizing CO<sub>2</sub> emissions at 450 parts per million based on dynamic market impacts.<sup>6</sup>

[<sup>4</sup> Id.]

[<sup>5</sup> International Energy Agency, World Energy Outlook Overview. Available at <http://www.iea.org/publications/scenariosandprojections/>]

[<sup>6</sup> Carbon Tracker compares its results with the following three studies modeling Powder River Basin leasing changes: Wood Mackenzie, ICF International in cooperation with Vulcan Philanthropy, and Erickson and Lazarus for the Stockholm Environment Institute. In their comparison of other assessments, Carbon Tracker notes “none of the papers reviewed showed results that would alter our core conclusion that reserves on current federal Powder River Basin leases are adequate to meet domestic supply needs with minimal dislocations under most scenarios.” Carbon Tracker, *supra* note 4 at 18.]

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Comment Number: 0002494\_Smyth\_20160728-1

Commenter I: Joe Smyth

Comment Excerpt Text:

This review of the way our federal coal resources are managed should focus on finding ways that the Interior Department can support US national and global climate policy goals. Most critically, reforms of the federal coal program should support the commitments made by President Obama along with the international community in the Paris Climate Agreement (I) aimed at “Holding the increase in the global average temperature to well below 2°C above preindustrial levels and pursuing efforts to limit the temperature increase to 1.5°C above preindustrial levels.”

(1) [http://unfccc.int/files/essential\\_background/convention/application/pdf/english\\_paris\\_agreement.pdf](http://unfccc.int/files/essential_background/convention/application/pdf/english_paris_agreement.pdf)  
Indeed, President Obama emphasized the global climate in his 2016 State of the Union address (2) call for reform of the federal coal program:

(2)

<https://www.whitehouse.gov/thepressoffice/2016/01/12/remarks-president-barack-obama%E2%80%93pepared-deliver-y-state-union-address>

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Comment Number: 0002494\_Smyth\_20160728-3

Commenter I: Joe Smyth

Comment Excerpt Text:

And the Secretarial Order establishing the PEIS (4) notes that during the listening sessions and public comment period in 2015, “Many stakeholders highlighted the tension between producing very large quantities of Federal coal while pursuing policies to reduce U.S. GHG emissions substantially, including from coal combustion.” The Secretarial Order also appropriately directs the PEIS to consider the climate impacts of the federal coal program: (4) [http://www.blm.gov/style/medialib/blm/wo/Communications\\_Directorate/public\\_affairs/news\\_release\\_attachments.Par.4909.File.dat/FINAL%20SO%203338%20Coal.pdf](http://www.blm.gov/style/medialib/blm/wo/Communications_Directorate/public_affairs/news_release_attachments.Par.4909.File.dat/FINAL%20SO%203338%20Coal.pdf)

With respect to the climate impacts of the Federal coal program, the PEIS should examine how best to assess the climate impacts of continued Federal coal production and combustion and how to address those impacts in the management of the program to meet both the Nation's energy needs and its climate goals, as well as how best to protect the public lands from climate change impacts.

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Comment Number: 0002494\_Smyth\_20160728-4

Organization I:

Commenter I: Joe Smyth

Comment Excerpt Text:

To meet US climate commitments, nearly all US coal reserves must remain unburned In order to meet the US and global community's commitments to avoid two degrees of global warming, nearly all US coal reserves must remain unburned. A January 2015 study published in Nature, “The geographical distribution of fossil fuels unused when limiting global warming to 2 °C,” (5) found that between 90% and 95% of US coal reserves must remain unburned (including both federal and nonfederal coal) in order to stay within the two degree carbon budget. (6) (5) <http://www.nature.com/nature/journal/v517/n7533/nature14016/metrics/news>

(6)

<http://www.bloomberg.com/news/articles/2015-10-07/more-than-90-percent-of-us-coal-should-stay-underground-climate-study>

Importantly, the study found that even using optimistic assumptions about the viability and widespread future use of carbon capture and sequestration technologies wouldn't significantly change the need to avoid extraction and burning of nearly all US coal reserves the optimistic CCS scenarios allow the 90% figure, instead of 95% without CCS:

Because of the expense of CCS, its relatively late date of introduction (2025), and the assumed maximum rate at which it can be built, CCS has a relatively modest effect on the overall levels of fossil fuel that can be produced before 2050 in a 2 °C scenario.

A July 2016 study, “Enough Already: Meeting 2°C PRB Coal Demand Without Lifting the Federal Moratorium” (7) looked more specifically at the implications for federal coal of US climate policy commitments, and found that there is more federal coal already under lease than can be burned in scenarios that would avoid two degrees of global warming. That means that in order to support US and global climate change commitments, no new federal coal should be leased, and the moratorium on new federal coal leases should be made permanent. (7)

[http://www.carbontracker.org/wpcontent/uploads/2016/07/FEDERAL\\_LEASING\\_OF\\_PRBCOAL\\_071816\\_CLEAN.pdf](http://www.carbontracker.org/wpcontent/uploads/2016/07/FEDERAL_LEASING_OF_PRBCOAL_071816_CLEAN.pdf)

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Comment Number: 0002494\_Smyth\_20160728-5

Commenter I: Joe Smyth

Comment Excerpt Text:

Some federal coal already under lease should be taken back. Moreover, meeting US climate commitments to avoid two degrees of warming means that a significant amount of federal coal that has already been leased should be taken back from current lease holders. Accordingly, the PEIS scoping process should study which federal coal reserves that have already been leased should be taken back from coal mining companies. That could include lower BTU coal that is uneconomic in the current market. The Institute For Energy Economics and Financial Analysis found that of the roughly 6 billion tons of federal coal under lease to the top four federal coal lease holders (Peabody Energy, Arch Coal, Cloud Peak Energy, and Alpha Natural Resources), “1.957 billion tons — or 32% of the total currently under lease — is low-quality coal and is not economically recoverable.”

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Comment Number: 0002499\_Nichols20160728-3

Organization I: WildEarth Guardians

Commenter I: Jeremy Nichols

Comment Excerpt Text:

The coal industry’s collapse is a clear sign that now is the time for a new path forward for managing publicly owned coal that moves us away from this destructive, carbon-based form of energy. This is underscored by the reality that, to meet our nation’s and our world’s climate objectives, we have to completely transition from burning coal—and unleashing the attendant carbon pollution—as quickly as possible. This means not only transitioning electricity generation from coal to cleaner sources of energy, a shift that is already happening, but also keeping unmined coal reserves in the ground.

How does keeping coal in the ground work to combat climate change and rein in carbon pollution? Aside from the obvious, which is that coal left unmined will never be burned, reports have found myriad reasons for the climate benefits of keeping coal, as well as other fossil fuels, in the ground. Among them:

- Keeping coal in the ground could “widen the cost mitigation curve,’ allowing greater emission reductions at the same (or lower) cost than demand-side policies alone, and can also help address carbon leakage risks;”

- Keeping coal in the ground “can help to reduce carbon lock-in effects, making it easier for lower-carbon alternatives to compete with fossil fuels;”

- Keeping coal in the ground can “bring added pressure to bear on climate change mitigation efforts, and could help make the case for more ambitious global climate action.” (15) Exhibit 7, Lazarus, M., P. Erickson, and K. Tempest, “Supply-side climate policy: the road less taken,” Stockholm Environment Institute, Working Paper No. 2015-13 at 18, available online at [http://sei-us.org/Publications\\_PDF/SEI-WP-2015-13-Supply-side-climate-policy.pdf](http://sei-us.org/Publications_PDF/SEI-WP-2015-13-Supply-side-climate-policy.pdf).

Not surprisingly, scientific reports confirm that keeping coal and other fossil fuels unburned is a critical means of reducing carbon emissions and limiting global warming. As a recent report in the journal *Nature* found to meet international goals of limiting global temperature increases to no more than 2°C, 95% of all U.S. coal reserves, or 245 billion metric tons of coal, must remain unburned. (16) A recent report prepared by the Stockholm Environmental Institute confirmed that the benefits of putting an end to new federal coal leasing and the inevitable mining, effectively avoiding carbon “lock-in effects,” stands to reduce carbon emissions by 238 million metric tons annually. (17)

(16) See Exhibit 8, McGlade, C. and P. Ekins, “The geographical distribution of fossil fuels unused when limiting global warming to 2°C,” *Nature*, Vol. 15 (Jan. 2015).

(17) See Exhibit 9, Erickson, P. and M. Lazarus, “How would phasing out U.S. federal leases for fossil fuel extraction affect CO<sub>2</sub> emissions and 2°C goals,” Stockholm Environmental Institute Working Paper No. 2016-02 (May 2016) at 27, available online at <https://www.sei-international.org/mediamanager/documents/Publications/Climate/SEI-WP-2016-US-fossilfuel-leases-climate.pdf>.

Perhaps it’s not surprising that the President himself recently remarked, “[I]f we’re going to prevent large parts of

this Earth from becoming not only inhospitable but uninhabitable in our lifetimes, we're going to have to keep some fossil fuels in the ground rather than burn them and release more dangerous pollution into the sky.” (18) (18) See Exhibit 10, President of the United States, “Statement by the President on the Keystone XL Pipeline” (Nov. 6, 2015), available online at <https://www.whitehouse.gov/the-press-office/2015/11/06/statement-president-keystone-xl-pipeline>.

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Comment Number: 0002513\_Lish\_20160707-10

Commenter I: Christopher Lish

Comment Excerpt Text:

Burning coal produces a third of global carbon emissions and is one of the largest contributors to climate change. To hold up our end of the deal and prevent the global average temperature from rising above one and a half or two degrees Celsius, the federal coal-leasing program must be reformed and the moratorium on new leases must be made permanent. This PEIS provides the BLM the opportunity to reevaluate how our public lands should be managed for the best interests of people and the environment. To better align the federal coal program with a safe climate future that protects people and the planet, the federal coal PEIS must do two important things:

I. Fully evaluate the climate impacts from future federal coal production in relation to meeting national and international climate commitments.

At least 80 percent of global coal reserves and 90 percent of U.S. coal reserves must remain in the ground to have a 50 percent chance of avoiding catastrophic levels of global warming. Unleased federal coal contains up to 212 billion tons of potential greenhouse gas emissions, which is 43 percent of the potential emissions of all remaining federal fossil fuels, including oil and gas. With more than 57 percent of fossil fuel emissions from federal areas coming from the combustion of federal coal, there is no place for the federal coal program in a carbon-constrained world.

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Comment Number: 0002942\_Harbine-11

Organization I: Earthjustice

Commenter I: Jenny Harbine

Comment Excerpt Text:

Indeed, in order to stay within planetary carbon budgets to avoid worst-case climate change scenarios, additional mining and burning of U.S. federal coal is simply untenable. Future mining and burning of federal coal at current levels would undermine the nation's pledge to reduce climate emissions by 26-28% by 2025 and by 80% by 2050

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Comment Number: 0002942\_Harbine-29

Organization I: Earthjustice

Commenter I: Jenny Harbine

Comment Excerpt Text:

BLM Must Evaluate Whether Continued Federal Coal Leasing is Inconsistent with U.S. GHG Emission Reduction Goals and International Climate Commitments. President Obama has called climate change “a challenge that will define the contours of this century more dramatically than any other.”<sup>43</sup> As aptly summarized in PEIS scoping comments submitted by dozens of renowned climate scientists: “We are scientists writing to urge the Department of the Interior to take meaningful action to fight climate change by ending federal coal leasing, extraction, and burning. The vast majority of known coal in the United States must stay in the ground if the federal coal program is to be consistent with national climate objectives and be protective of public health, welfare, and biodiversity.”<sup>44</sup> Given this strong and clear signal from leading climate scientists, as well as the ever

growing body of research demonstrating the need to keep fossil fuels in the ground in order to avoid the work effects of climate change, it is imperative that BLM analyze whether the continuation of the federal coal leasing program is consistent with our international climate commitments and the need to keep global warming within tolerable levels. In particular, BLM 43 President Obama, Remarks By The President At The Glacier Conference -- Anchorage, AK (SEPT. 1, 2015), available at <https://www.whitehouse.gov/the-press-office/2015/09/01/remarks-president-glacier-conference-anchorage-ak> (last visited July 18, 2016). 44 Letter from Ken Caldeira, et al., to Sec'y Sally Jewell, et al., "Scientists Support Ending Coal Leasing on Public Lands to Protect the Climate, Public Health, and Biodiversity" (July 27, 2016), attached as Ex. 5. 23 should listen to what the Obama administration's climate scientists have said on the importance of taking immediate steps to curb GHG emissions. In December 2015, U.S. EPA climate scientists with more than 25 years of professional experience in climate change, including work on the Intergovernmental Panel on Climate Change ("IPCC") reports, Dr. Christopher Field submitted a declaration in support of the President's Clean Power Plan that included a stark picture of the dire need to take immediate steps to keep fossil fuels in the ground in order to address the worst effects of climate change. Dr. Field states, "[i]f the world is to limit the likelihood of exceeding 2°C over pre-industrial temperatures, the window for cost-effective action is narrow and rapidly closing. A delay of only a few years will increase the likelihood of missing the target as well as the cost and complexity of reaching it."<sup>45</sup> With regard to the available global carbon budget for remaining within 2 degrees Celsius of pre-industrial times, Dr. Field's finding is dramatic: "at 2014 emission rates, we burn through the remaining budget of 900 billion tons of CO<sub>2</sub> in only 24 years. In every passing year without action, CO<sub>2</sub> emissions consume about 4% of the total remaining budget. Against this background, it is apparent why delaying emission reductions by even a few years can make a big difference for our prospects for staying within this budget and limiting the risks of severe consequences."<sup>46</sup> In the PEIS, BLM must address whether issuing new federal coal leases and renewals for existing federal coal leases is in line with the goals of our national climate objectives and international climate commitments, and it must do so in the context of the overwhelming state of science that tell us we must take immediate action to avoid irreversible climate harms. It appears very unlikely, given the state of scientific consensus around climate change, that efforts to meet our international climate commitments are compatible with leasing and burning federally-owned coal well into the future. Simply put, BLM must evaluate whether it is time for the U.S. government to get out of the business of selling taxpayer owned coal based on the urgent need to address GHG emissions and the desire to meet our national and international emission reduction goals. As explained by the Council on Environmental Quality in its 2014 Draft Climate Guidance, federal agencies evaluating the climate impacts of their decisions should "incorporate by reference applicable agency emissions targets such as applicable Federal, state, tribal, or local goals for GHG emission reductions to provide a frame of reference and make it clear whether the emissions being discussed are consistent with such goals."<sup>47</sup> This draft guidance, of course, does not impose any new obligations on agencies. NEPA regulations provide that federal agencies "shall discuss any inconsistency of a proposed action with any approved State or local plan," 40 C.F.R. § 1506.2(d), and further require agencies to disclose "[p]ossible conflicts between the proposed action and the objectives of Federal, regional, State, and local (and in the case of a 45 Declaration of Christopher Field, U.S. Environmental Protection Agency, in *West Virginia v. EPA*, Case No. 15-1363, Document #1586661, (D.C. Cir.) (filed Dec. 3, 2015) at 3, attached as Ex. 6. 46 *Id.* at 9-10. 47 Council on Environmental Quality, "Revised Draft Guidance on the Consideration of Greenhouse Gas Emissions and the Effects of Climate Change in NEPA Reviews," 79 Fed. Reg. 77,802, 77,826 (Dec. 24, 2014) (emphasis added). 24 reservation, Indian tribe) land use plans, policies and controls for the area concerned." 40 C.F.R. § 1502.16(c). The U.S. has established several critical targets calling for the reduction of greenhouse gas emissions. Most prominently, earlier this year the U.S. signed the historic Paris Agreement, which represents an international agreement to limit global temperatures to 1.5-2°C above pre-industrial levels: This Agreement, in enhancing the implementation of the Convention, including its objective, aims to strengthen the global response to the threat of climate change, in the context of sustainable development and efforts to eradicate poverty, including by: (a) Holding the increase in the global average temperature to well below 2 °C above pre-industrial levels and to pursue efforts to limit the temperature increase to 1.5 °C above pre-industrial levels, recognizing that this would significantly reduce the risks and impacts of climate change. 48 To meet this threshold of safety, "deep reductions in global emissions will be required," and "Developed country Parties shall continue taking the

lead by undertaking economy-wide absolute emission reduction targets.”<sup>49</sup> Further, an increasing body of scientific literature indicates that to avoid the worst consequences of climate change, the vast majority of fossil fuel reserves must stay in the ground. President Obama expressed a similar point when rejecting a permit for the Keystone XL pipeline, stating: “if we’re going to prevent large parts of this Earth from becoming not only inhospitable but uninhabitable in our lifetimes, we’re going to have to keep some fossil fuels in the ground rather than burn them and release more dangerous pollution into the sky.”<sup>50</sup> For example, the IPCC has concluded that in order to have better than even odds of keeping global temperatures at tolerable levels, “cumulative CO<sub>2</sub> emissions from all anthropogenic sources [must] stay between ... 0 and 1000 GtC.... An amount of 531 [446 to 616] GtC, was already emitted by 2011.”<sup>51</sup> This means that for the rest of century all nations on the planet can only emit approximately 470 GtC. To meet this limit, “between two-thirds and 48 United Nations, Framework Convention on Climate Change, Paris Agreement, Article 2 ¶ 1(a) (Dec. 11, 2015). <sup>49</sup> Paris Agreement, Adoption of the Paris Agreement, Proposal by the President, Draft decision-/ CP.21, at 1; id. at Article 4 ¶ 4. <sup>50</sup> The White House, Statement by the President on the Keystone XL Pipeline (Nov. 6, 2015), attached as Ex. 2, and available at <https://www.whitehouse.gov/the-press-office/2015/11/06/statement-president-keystone-xl-pipeline> (last visited July 28, 2016). <sup>51</sup> IPCC, Working Group I Contribution to the IPCC Fifth Assessment Report: Climate Change 2013: the Physical Science Basis: Summary for Policy Makers (2013) at 25. 25 four-fifths of the planet’s reserves of coal, oil, and gas” need to stay in the ground. <sup>52</sup> However, if unabated, “[b]urning all fossil fuels would produce a different, virtually uninhabitable, planet.”<sup>53</sup> A recent peer-reviewed article published in the prestigious research journal *Nature* concluded that if we are to keep climate change below dangerous levels – 80 percent of global coal reserves, half of all oil reserves, and a third of oil reserves must stay in the ground through 2050.<sup>54</sup> The United States must leave between 92% and 95% of its coal reserves in the ground. <sup>55</sup> As President Obama affirmed recently, “climate change can no longer be denied – or ignored.”<sup>56</sup> In May 2016, the Stockholm Environment Institute (“SEI”) released a paper analyzing the reductions in greenhouse gas emissions that could be achieved by a policy of rejecting new lease proposals for fossil fuel extraction on federal lands and waters, and not renewing existing leases when their current authorization expires. The study explained the need for meaningful evaluation of strong policy choices in stark terms: “[e]ven with large-scale deployment of bioenergy and carbon capture and storage technologies, scientific assessments show that limiting warming to 2°C, and avoiding dangerous climate tipping points, will require a rapid phase-out of fossil fuels around the world. <sup>57</sup> SEI ultimately concluded that under a choice to phase out the federal coal leasing program in favor of a “no leasing” alternative, “U.S. coal production would steadily decline, moving closer to a pathway consistent with a global 2°C temperature limit. ... Phasing out federal leases for fossil fuel extraction could reduce global CO<sub>2</sub> emissions by 100 million tonnes per year by 2030, and by greater amounts thereafter.” <sup>58</sup> In addition to the Paris Agreement and the IPCC findings, the Clean Power Plan, implementation of which is currently stayed pending litigation, calls for reducing power sector <sup>52</sup> Bill McKibben, *Global Warming’s Terrifying New Math*, ROLLING STONE (Aug. 2, 2012); Bill McKibben, *Obama and Climate Change: The Real Story*, ROLLING STONE (Dec. 17, 2013). <sup>53</sup> Hansen, et al., *Climate Sensitivity, Sea Level and Atmospheric Carbon Dioxide*, 371 PHIL. TRANS. R. SOC’Y (2013); see also Global Carbon Project, *Global Carbon Budget 2014* (Sept. 14, 2014). <sup>54</sup> Christophe McGlade & Paul Ekins, *The Geographical Distribution of Fossil Fuels Unused When Limiting Global Warming to 2 [deg] C*, NATURE Vol. 517, at 187-190 (Jan. 7, 2015) summary available at <http://www.nature.com/nature/journal/v517/n7533/full/nature14016.html> (last visited Jan. 15, 2016), attached as Ex. 3. <sup>55</sup> Id. at 189, Table 1. <sup>56</sup> Barack Obama, President of the United States, Weekly Address (Apr. 18, 2015), available at <https://www.whitehouse.gov/the-press-office/2015/04/17/weekly-address-climate-change-can-no-longer-be-ignored-0> (last visited June 15, 2016). <sup>57</sup> P. Erickson & M. Lazarus, Stockholm Environment Institute, *How would phasing out U.S. federal leases for fossil fuel extraction affect CO<sub>2</sub> emissions and 2°C goals?*, at 9 (May 2016) (citing Rogelj et al. 2011; IPCC 2014; Raupach et al. (2014)), attached as Ex. 7. <sup>58</sup> Id. at 3. 26 greenhouse gas emissions to 30 percent below 2005 levels by 2030.<sup>59</sup> In November 2014 the President announced a joint U.S.-China agreement aimed at reducing climate pollution that calls for even more aggressively cutting net greenhouse gas emissions to 26-28% below 2005 levels by 2025,<sup>60</sup> which mirrors the United States’ Paris agreements. <sup>61</sup> Even assuming the Clean Power Plan is implemented as designed, in combination with other efforts, at least one study has concluded that the U.S. is unlikely to meet the 26%-28% reduction target without



deep additional cuts to GHG emissions, and that leasing additional coal will only make that job more difficult. 62 In order to comply with its NEPA obligations and the draft guidance provided by CEQ, BLM must evaluate whether continued expansion and operation of the federal coal program is consistent with the nation's GHG emission reduction goals and international agreements. BLM must be frank with the public and decisionmakers about the scientific consensus to leave fossil fuels in the ground in order to avert the worst impacts of climate disruption, and BLM must evaluate whether a decision to continue with the federal coal program would undermine our efforts to meet our national and international climate commitments. We are skeptical that business as usual in the federal coal program—or any new leasing at all—is compatible with achieving the interim goals of a 25%-28% reduction in U.S. GHG emissions by 2025, or 80% by 2050, let alone the goal of keeping global temperatures below 1.5- 2.0 degrees Celsius.

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Comment Number: 0002942\_Harbine-34

Organization I: Earthjustice

Commenter I: Jenny Harbine

Other Sections: I

Comment Excerpt Text:

At the outset, BLM should identify the purpose and need for the programmatic EIS that is consistent both with the purposes of the federal coal leasing program and national policies to reduce U.S. greenhouse gas emissions from burning fossil fuels. In particular, the purpose and need of the EIS is to meet the nation's energy needs in a manner that is consistent with our nation's commitments to dramatically reduce domestic greenhouse gas emissions. An EIS must "briefly specify the underlying purpose and need to which the agency is responding in proposing the alternatives including the proposed action." 40 C.F.R. § 1502.13. This requirement is a key component of NEPA. "The EIS's purpose-and-need statement reflects both the agency's immediate objective ... as well as the broader policy goals that the agency considered in deciding among alternative proposals." *Protect Our Communities Found. v. Jewell*, No. 14-55666, 2016 WL 3165630, at \*5 (9th Cir. June 7, 2016) (noting "the agency's duty to consider federal policies" in its NEPA review). Here, those policy goals necessarily include U.S. commitments in connection with the Paris Agreement to the United Nations Framework Convention on Climate Change ("UNFCCC"). To satisfy those commitments, the U.S. must reduce our economy-wide greenhouse gas ("GHG") emissions by 26-28% below 2005 levels by 2025, which will put us on a trajectory to achieve emission reductions of 80% or more by 2050.<sup>15</sup> This goal is part of the broader commitment by the nearly 180 signatories to the Paris Agreement to limit global warming to "well below" a 2°C above pre-industrial temperatures, with a goal of limiting warming to just 1.5°C.<sup>16</sup> One recent analysis concluded that 92% of U.S. coal reserves—including reserves already under lease—must remain unused to have even a 50% chance of remaining below the 2°C threshold.<sup>17</sup> Secretarial Order 3338, which directs BLM to prepare the federal coal program PEIS, states that the purpose of the PEIS is "to undertake a comprehensive review of the [federal coal leasing] program and consider whether and how the program may be improved and modernized to foster the orderly development of BLM administered coal on Federal lands in a manner that gives proper consideration to the impact of that development on important stewardship values, 14 See *infra* § III.A. 15 See United States, UNFCCC submission *supra* note 11. 16 Paris Agreement, Article 2, FCC/CP/2015/L.9 (Dec. 12, 2015). 17 Christophe McGlade & Paul Ekins, *The Geographical Distribution of Fossil Fuels Unused When Limiting Global Warming to 2 °C*, 517 *NATURE* 187 (2015), attached as Ex. 3. 11 while also ensuring a fair return to the American public." 18 We largely agree with this statement.

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Comment Number: 0003005\_MasterFormD2\_TheSierraClub-I

Organization I: The Sierra Club

Comment Excerpt Text:

Thank you for preparing a Programmatic Environmental Impact Statement (PEIS) of the Federal Coal Leasing Program. The program is out of date, out of step with our nation's commitment to act on climate, and fails to account for the damage done to both local communities and the planet. This review is a critical step in ensuring

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America meets its climate goals and continues to be an international leader on climate and clean energy following the recent signing of the Paris Climate Agreement.

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Comment Number: 0003009\_MasterFormH\_FriendsEarth-1

Organization I: Friends of the Earth

Comment Excerpt Text:

Fully evaluate the climate impacts from future federal coal production in relation to meeting national and international climate commitments. At least 80 percent of global coal reserves and 90 percent of U.S. coal reserves must remain in the ground to have a 50 percent chance of avoiding catastrophic levels of global warming. Unleased federal coal contains up to 212 billion tons of potential greenhouse gas emissions, which is 43 percent of the potential emissions of all remaining federal fossil fuels, including oil and gas. With more than 57 percent of fossil fuel emissions from federal areas coming from the combustion of federal coal, there is no place for the federal coal program in a carbon-constrained world.

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Comment Number: 0003127\_Roessler\_20160607-1

Commenter I: Leslie Roessler

Comment Excerpt Text:

With the Paris agreement, the whole world has now signaled its acknowledgement of man-made climate change and the urgency of moving forward together to slow its effects. As a major emitter, the United States must take its role very seriously, both to rein in its own greenhouse gas production but also to be an example for the rest of the world. Coal is among the dirtiest of energy choices and therefore has no place in this newly enlightened world. Please keep in place the President's moratorium, which is the bare minimum step we need to take in order to meet the critical goals of the Paris accord and have any hope of a sustainable energy future.

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Comment Number: 0020006\_Cowden\_20160712-2

Commenter I: Rhonda Cowden

Comment Excerpt Text:

I welcome this review to ensure that by your actions the US will continue to demonstrate international leadership by support of the Paris Climate Agreement

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Comment Number: 0020008\_Hoem\_20160712-6

Commenter I: Harold Hoem

Comment Excerpt Text:

Climate change. It is unreasonable to assume that climate change goals can be met by adding to the amount of land leased to coal companies for extraction, or even with existing leases.

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Comment Number: 0020012\_Holmes\_UCARE\_20160712-13

Organization I: Utah Citizens Advocating Renewable Energy

Commenter I: Stanley Holmes

Comment Excerpt Text:

The global scientific community overwhelmingly concurs that the process of generating electricity from coal emits greenhouse gases (GHGs) that are a major cause of global warming and climate change. If, as the EPA reports,

10% of U.S. GHG emissions come from federal coal alone, it's clear that continued use of this citizen-owned commodity must be weighed against its drag on U.S. efforts to slow climate change. The PEIS should look at the economic and political impacts of a failure to meet national pollution reduction goals by the margin that would have been provided by limiting or curtailing federal coal sales. The purchase cost for federal coal should reflect these impacts and charge for the mitigation of their associated costs.

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Comment Number: 0020012\_Holmes\_UCARE\_20160712-3

Organization I: Utah Citizens Advocating Renewable Energy

Commenter I: Stanley Holmes

Comment Excerpt Text:

We also feel that the system conflicts with federal government attempts to address climate impacts

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Comment Number: 0020013\_Hyndman\_20160712-1

Commenter I: Donald Hyndman

Comment Excerpt Text:

Montana cannot meet any reasonable climate change goals while adding to the amount of land leased to coal companies, nor even with existing leases.

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Comment Number: 0020016\_Willims\_20160712-2

Commenter I: Raymond Willims

Comment Excerpt Text:

BLM should also take into account national climate change goals.

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Comment Number: 0020018\_Risho\_20160712-2

Commenter I: Ray Risho

Comment Excerpt Text:

also insure that the coal leasing program is meeting climate change goals.

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Comment Number: 0020020\_LaPorte\_20160712-2

Commenter I: Mary LaPorte

Comment Excerpt Text:

Examine role of this program in meeting climate change goals.

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Comment Number: 0020021\_Hoem\_20160712-1

Commenter I: Janice Hoem

Comment Excerpt Text:

It is unreasonable to assume that climate change goals can be met by adding to the amount of land leased to coal companies for extraction, or even with existing leases.

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Comment Number: 0020023\_Baer\_20160712-3

Commenter I: Carl Baer

Comment Excerpt Text:

Modifications to the leasing program should be made to be consistent with President Obama's Clean Power Plan and the Paris Climate Accords.

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Comment Number: 000001248\_WOODWARD\_20160623-2

Organization I: Colorado Congress and Citizens for Clean Air

Commenter I: Joan Woodward

Comment Excerpt Text:

coal is responsible for roughly 30 percent of this country's greenhouse gas emissions. The fact that [indiscernible] generates greenhouse gas emissions and China is shrinking its coal plant construction because the pollution is making people sick, is no justification for a country as large and important as the United States to abandon all efforts to contain its emissions.

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Comment Number: 000001256\_Best\_20160623-1

Organization I: Greenpeace

Commenter I: Diana Best

Comment Excerpt Text:

And the reforms, I believe, should be included in this program review is, one, incorporating the social cost of carbon. It absolutely needs to be factored into how we price our Federal taxpayer on coal. The Federal Government already has a working and established price for the social cost of carbon. And I believe that must be applied to the Federal Coal Program immediately. Coal companies have been allowed to privatize the profits while socializing the cost of damages associated with climate. This could be applied as a carbon adder in a royalty rate or through another vehicle. But, coal companies that want to mine Federal coal, must also account for the cost to the climate.

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Comment Number: 000001261\_Beebe\_20160623-1

Organization I: Utah Sierra Club

Commenter I: Lindsay Beebe

Comment Excerpt Text:

Whatever fleeting profits we gain from extracting and burning coal, we will pay a thousand-fold in healthcare cost, in disaster relief, in environmental reclamation, in environmental refugee relocation, and in replacing or repairing eco system services that all of us take for granted. Symptoms of those costs are plainly visible if you have the courage to look.

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Comment Number: 000001294\_Peterson\_20160623-3

Organization I: GCC Energy

Commenter I: Trent Peterson

Comment Excerpt Text:

This is a bid one. Increasing coal royalties to cover the cost of carbon emissions. It's a blatant ideological statement that greenhouse gases produced by coal are somehow different than greenhouse gases produced by any other source. If we must expect someone to pay for carbon emissions, it really has to be done at the demand end, instead -- of the equation, rather than the supply end. So, every one of us here that expects energy can pay our fair share or what we're contributing to the mess.

---

Comment Number: 0000733\_Szybist\_NRDC\_20160628-3

Organization I: natural resources defense council

Commenter I: Mark Szybist

Comment Excerpt Text:

BIM needs to align coal leasing policies with our national climate goals. That means managing federal coal to meet US GHG commitments to reduce emissions 28% below 2005 levels by 2025.

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Comment Number: 0000850\_Mosley\_BluegreenAlliance-3

Organization I:Blue Green Alliance

Commenter I:Khari Mosley

Comment Excerpt Text:

BLM has sought comment as to whether the extraction of fossil resources from federal Lands is consistent with U.S. climate goals. In order to better understand and manage carbon emissions from public lands, the U.S. Geological Survey intends to establish and maintain a public database to account for annual carbon emissions from fossil fuels developed on federal lands. The Blue Green Alliance supports this effort to ensure a transparent process that accounts for costs, which would otherwise be externalized.

---

Comment Number: 0000862\_Martin-I

Commenter I:Robin Martin

Comment Excerpt Text:

I'm requesting the BLM to conduct a thorough review on new coal leases that acknowledges the scientist consensus that a vast majority of unmined coal must remain in the ground to circumvent most devastating effects of climate disruption. Continuing to issue new coal leases would be a direct contradiction to the United States' commitment to climate resolutions made during the Paris Climate Agreement to curb greenhouse gas emissions in order to achieve global temperature rise levels below 2 degrees Celsius, or 1.5 if we are really motivated.

## Issue 5 - Coal Program Topics

### ISSUE 5.1 - GENERAL COMMENT ON COAL

Total Number of Submissions: 212

Total Number of Comments: 278

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Comment Number: 0000010\_Swingle\_20160526\_Oral-I

Organization I:

Commenter I:Rocky Swingle

Comment Excerpt Text:

Phasing out coal leasing entirely on publicly-owned lands.

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Comment Number: 00000103\_Williams\_Arch Coal\_ 20160517-I

Organization I:Arch Coal

Commenter I:Keith Williams

Comment Excerpt Text:

the goal of this project says it should be to keep the federal coal program functioning at a high level and to ensure the coal from public lands maintains its central place in the U.S. energy mix.

---

Comment Number: 00000104\_Lindlief Hal\_National Wildlife Association\_ 20160517-3

Organization I:National Wildlife Federation

Commenter I:Brenda Lindlief Hal

Comment Excerpt Text:

Until sweeping reforms addressing our concerns are in place National Wildlife Federation requests no new coal leases on our federal lands. We respectfully request that the BLM, the OSM, ONRR work in concert and for now that there be no new leases until coal companies are held fully accountable for complete reclamation of federal lands they have mined. No new leases until self-bonding is banned and surety bonds are in place to ensure complete reclamation. No new leases until we are assured of a fair return to taxpayers for the lease of federal coal and that there be transparency in the leasing process and that royalties are commensurate with the true costs of leasing coal.

---

Comment Number: 00000119\_Schilling\_20160517-1

Organization I: Wyoming Business Alliance

Commenter I: Bill Schilling

Comment Excerpt Text:

In the "Federal Register" that talked about this program today, the EIA talked about a five-year cycle 2008 to 2013, where coal production was down by 16 percent nationwide. That's correct. But what that register fails to do and what the BLM and, I'm assuming, EPA and others combining forces in terms of research failed to mention is the cyclical nature of commodity production, and that needs to be accounted for in your research because minerals have a cyclical effect because of supply and demand, generally five- to ten-year cycles.

---

Comment Number: 00000123\_Edwards\_20160517-1

Organization I: House of Representatives

Commenter I: Roy Edwards

Comment Excerpt Text:

Coal is the only way that we will have a base power that would be able to keep the lights on in America 24 hours a day, 7 days a week, 365 or -6 days a year, depending whether we're in a leap year or not. We must have a reliable source of power. Green energy is not that.

---

Comment Number: 00000128\_Schladweiler\_BTS\_Environmenta-2

Organization I: BTS Environmental Associates

Commenter I: Brenda Schladweiler

Comment Excerpt Text:

the natural resource information gained by the citizens of this state [Wyoming] during energy development is a valuable asset. These studies are funded by the energy developers and provide insights into soils, vegetation, wetlands, wildlife, hydrology, archaeology, et cetera, that we otherwise would not have. The knowledge base including the understanding of how these resources interact in our own landscape has been useful in applications and projects other than energy development.

---

Comment Number: 00000133\_Blake\_20160517-2

Organization I:

Commenter I: Laura Blake

Comment Excerpt Text:

Money from federal coal should be allocated to clean coal research to further advance the use of one of the most abundant, lowest cost and most reliable fuels in the world

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Comment Number: 00000155\_Jenkins\_Congressman Griffith\_20160517-1

Organization I: United States Congress

Commenter I: Michelle Jenkins

## Comment Excerpt Text:

"Some of the key power providers in Virginia have made it clear that coal will be a part of their strategy for a long time to come. At a recent conference, Dominion Power indicated that by 2030, they expect 30 percent of their energy production will still be from coal. American Electric Power indicated that they anticipate about 50 percent of theirs will still be from coal."

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Comment Number: 00000164\_ LEVENSHUS\_20160517-2

Organization I:Sierra Club

Commenter I:Jonathan Levenshus

Comment Excerpt Text:

Phase out coal leasing on publically-owned land to better protect our climate and our health.

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Comment Number: 00000171\_ BLANTON\_20160517-4

Organization I:

Commenter I:Teri Blanton

Comment Excerpt Text:

Phasing out at this time issuing new permits is important, but in my state, Kentucky, there are already 9,400,000 tons leased with only 3,284,558 tons already mined. I think it would be in the best interest of our state to re-evaluate these agreements

---

Comment Number: 00000175\_ MORRIS\_20160517-1

Organization I:

Commenter I:R. Noah Morris

Comment Excerpt Text:

I would encourage the BLM and federal government to suspend all further leases on federal land for not just coal, but all energy fossil fuel extract. I would furthermore encourage the BLM to not simply be a -- not simply challenge or review this policy, but strip these leases from companies that are actively negligent.

---

Comment Number: 00000180\_ SCHEFF\_20160517-1

Organization I:Kentucky Heartwood

Commenter I:Jim Scheff

Comment Excerpt Text:

To say that the environmental effects will simply be displaced, but that the economic benefits are additive reveals substantial bias and even dishonesty on the part of the BLM and Forest Service in analyzing and approving federal coal leases in Kentucky. Our experience with the Federal Coal Leasing Program in Kentucky is that the process is deeply biased and it rewards bad actors. The environmental moxie of these leases are essentially a formality with a predetermined outcome. I urge the Department of Interior to engage in the honest accounting of the Federal Coal Leasing Program and to help move our nation beyond coal and toward a renewable energy economy

---

Comment Number: 00000183\_ MCKAY\_20160517-3

Organization I:

Commenter I:Don McKay

Comment Excerpt Text:

Three, insure that in a transition to a new system that the land, water, and people are given priority protection

Comment Number: 00000186\_ GELLERT\_20160517-6

Organization I:

Commenter I:Paul Gellert

Comment Excerpt Text:

And if it is not available, I urge you to make it available, things such as the location and amount over time of all of the leased coal

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Comment Number: 00000193\_ HEPLER\_20160517-1

Organization I:South Appalachian Mountain Stewards

Commenter I:Matthew Helper

Comment Excerpt Text:

end the practice of leasing coal on federal lands

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Comment Number: 00000199\_ BURTON\_20160517-2

Organization I:

Commenter I:James Robert Burton

Comment Excerpt Text:

extensive programmatic environmental impact study looking at the entire life cycle of coal from mines to coal ash landfills

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Comment Number: 00000315\_ SMITH\_20160519-2

Organization I:Canyon Fuel Company

Commenter I:Jacob Smith

Comment Excerpt Text:

consider the potential benefits that could result from providing subsidies to help advance clean coal technology.

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Comment Number: 00000337\_ Bounous\_20160519-1

Organization I:

Commenter I:Ayja Bounous

Comment Excerpt Text:

We don't need any new leases to make sure our economies stay afloat. What we do need is a transitional strategy sensitive to our coal culture.

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Comment Number: 00000365\_ Lund\_20160519-2

Organization I:

Commenter I:Steve Lund

Comment Excerpt Text:

As we talk about our future, we ought to be talking about better ways to develop clean coal technology, not shut down an industry.

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Comment Number: 0000068\_ Smitherman\_20160517-3

Organization I:The Wilderness Society

Commenter I:Dan Smitherman

Other Sections: I I

Comment Excerpt Text:

Right now it's estimated that we have 20 years of federal coal reserves already leased. It is an ideal time to take

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stock of where we are and where we want to go. We need to look to how we can adapt and diversify to ensure that boom and bust cycles don't affect individuals in the way that they have. We need a diverse economy, and that means looking to our public lands for value outside of coal, including renewable energy, recreation, and conservation. With reform of the federal coal program, what we have in front of us is an opportunity to really look at what we want the future to be.

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Comment Number: 0000072\_Tully\_20160517-8

Organization I:Northern Plains Resource Council

Commenter I:Tom Tully

Comment Excerpt Text:

And last, the BLM should be planning for an orderly decline of coal mining in the U.S. and in the West. Much of the federally owned coal under the control of the BLM is interspersed with privately owned coal or coal owned by the State. So how the BLM manages their coal has a tremendous impact on the contiguous coal field.

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Comment Number: 0000077\_Penfold\_20160517-3

Organization I:BLM

Commenter I:Mike Penfold

Comment Excerpt Text:

But I tell you the sense I have is that it would really be important for federal government and state government to start looking at this as a transition. We don't have coal production like we used to have. Let's develop something like the old coal teams that we had before. This would involve state and federal government, the private sector even, and bring all the forces that are to bear on this changing countryside that clearly has an impact on the land, the people, and the communities and our future.

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Comment Number: 0000080\_VonFlatern\_WySenate\_20160517-1

Organization I:Wyoming State Senator

Commenter I:Michael Von Flatern

Comment Excerpt Text:

Gillette is home to one of the cleanest coal-fired power plants ever built. It's called the Dry Fork Station. There's no reason to believe our utilities industry in the nation cannot achieve even more advanced technological achievements in the future. Now we have power reconstruction in an integrated test center at the Dry Fork Power Station. This will prove that our product can be produced from the exhaust of power stations and that once again we will build coal-fired power stations in this country.

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Comment Number: 0000214\_Black\_20160519-1

Organization I:Canyon Fuel Co

Commenter I:Randy Blck

Comment Excerpt Text:

Coal is our cleanest source of energy and the industry is already overregulated by the federal government.

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Comment Number: 0000279\_Nelson\_20160519-2

Organization I:

Commenter I:Laura Nelson

Other Sections: I

Comment Excerpt Text:

Located in the heart of the western energy corridor, Utah has world-class coal resources. Utah's low sulphur,

high energy coal provides significant environmental advantages relative to other domestic and global coal sources. In fact, according to the U.S. Energy Administration's forecast, coal power will continue to play an expanded role in our energy economy as demand will increase globally through 2040 to meet the needs of developing economies, and that need is for affordable, reliable power, and it's important that Utah's superior coal is available to meet these needs.

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Comment Number: 0000279\_Nelson\_20160519-3

Organization I:

Commenter I: Laura Nelson

Other Sections: I

Comment Excerpt Text:

the University of Utah is leading a five-year, \$16 million grant to conduct superconductor simulation aimed at developing a prototype, low-cost, low-emissions coal power plant that would provide new opportunities for coal utilization. Utah's support of coal does not ignore climate change concerns but rather recognizes that Utah's cleaner coal and advanced coal technologies can contribute to the U.S. and the world's energy needs as part of a robust, resilient portfolio of energy options.

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Comment Number: 0000521\_Lummis\_US Rep\_20160517-3

Organization I: United States Congress

Commenter I: Cynthia Lummis

Comment Excerpt Text:

Despite the self-inflicted economic wounds that are the Administration's Clean Power Plan and this coal lease moratorium, coal demand will continue to skyrocket in developing nations. The U.S. leads the world in its environmental protections in mining, and possesses the entrepreneurial spirit necessary to solve our energy problems without harming our economy. America should take a global leadership role on coal, producing American energy and the means to use it cleanly and safely, not pretending that global demand for coal doesn't exist. If we forfeit global leadership towards clean coal, we will hamstring our economy while other nations meet their coal needs elsewhere and without the same level of environmental stewardship.

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Comment Number: 0000530-2

Organization I: Keystone Green Team

Commenter I: Margaret Graham

Comment Excerpt Text:

Coal is gradually being replaced as an energy source by countries such as China. Therefore, it is becoming less economically feasible to mine coal.

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Comment Number: 0000540-1

Commenter I: Colleen Rose

Comment Excerpt Text:

It is time to stop federal coal leasing program given our current information regarding the science of coal mining and burning

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Comment Number: 0000576-1

Organization I: 350 Seattle.org

Commenter I: Deborah Campbell

Comment Excerpt Text:

Failing to account for the extensive externalized costs of coal extraction and transport, or to acknowledge the role that coal extraction and burning play in climate and environmental degradation are unjust, immoral and not legally justifiable

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Comment Number: 0000608-4

Organization I: JE Stoer & Associates

Commenter I: Tamme Bishop

Comment Excerpt Text:

Is there a plan in place to replace the electricity currently being generated by coal that will go offline due to this process?

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Comment Number: 0000611\_Leahy\_NMWF-4

Organization I: New Mexico Wildlife Federation

Commenter I: Todd Leahy

Comment Excerpt Text:

Second, reconsider how to balance multiple uses. The nation has relied on fossil fuel sources extracted from public lands since its founding. The Federal Lands Policy Management Act (FLPMA) requires the BLM to balance extractive uses against other public lands uses. As part of that responsibility, BLM must consider the needs of future generations. What is abundantly clear is that coal mining doesn't simply compete with other uses

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Comment Number: 0000627-1

Organization I: CCA and UCC

Commenter I: Peggy Rawlins

Comment Excerpt Text:

Combining CBM, fuel cell and water desalination can be an economic opportunity for coal producers

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Comment Number: 0000664-1

Organization I: J.E. Stover & Associates

Commenter I: Tonya Hammond

Comment Excerpt Text:

I personally believe that the coal industry has more than enough rules and regulations at the level necessary to keep our air, water, etc. clean for the human, plant, and animal populations. No new regs are required.

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Comment Number: 0000750\_Atwood\_20160623-3

Commenter I: Garrett Atwood

Other Sections: I

Comment Excerpt Text:

Since 1980, the world has increased its use of coal, oil, and natural gas by over 80 percent - because that is the most cost-effective way to produce energy. At the same time, the average life expectancy of our worlds 7 billion people has gone up 7 years - that's 7 years of precious life! Every other metric of human well-being has also improved, from income to access to health care to nourishment to clean water access. The most growth has been among the poorest people in the world. (Source: BP Statistical Review of World Energy, Historical data workbook World Bank, World Development Indicators (WDI)).

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Comment Number: 0000768\_King\_TWS\_20160623-1

Organization I: Wilderness Society

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Commenter I: Warren King

Comment Excerpt Text:

The coal leasing program has not been substantially updated in over 30 years. This has resulted in a number of issues including, a loss of revenue to taxpayers from royalties, a lack of transparency and competition in leasing and market oversupply. As currently structured and implemented, the leasing program has provided the coal industry with all of the advantages a private enterprise needs to flourish.

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Comment Number: 0000769\_Cascade\_Great Old Broads\_20160623-3

Organization I: Great Old Boards for Wilderness

Commenter I: Robyn Cascade

Other Sections: I

Comment Excerpt Text:

See Attached for "Essay I. Nick Mullins A Coal Miner's Goodbye"

See Attached for "What Leaving Fossil Fuels Behind Can Do For Inequality Yessenia Funes"

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Comment Number: 0000792-1

Organization I: Bowie Resources

Commenter I: Terry Fonville

Comment Excerpt Text:

Coal is a reliable resource, it provides a good way of life and contributes to the state and county by paying taxes and employing people who work hard to provide for their families and love the jobs they perform.

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Comment Number: 0000814-1

Commenter I: Amy O'Connor

Comment Excerpt Text:

I hope that the result of your evaluation of our Federal coal program is that the program must be brought to an end as quickly as possible, with declining coal production each year for the next 5-10 years. This should be accomplished in an orderly manner that helps our coal communities transition to new jobs and a clean energy economy! Let's invest in their and our future now! If we do our part in reducing greenhouse gases and reversing the trend of warming our planet, millions of people in the world and innumerable species of animals and plants will benefit.

---

Comment Number: 0000829-2

Organization I: Utah Citizens Advocating Renewable Energy (UCARE)

Commenter I: Stanley Holmes

Comment Excerpt Text:

Are coal lease royalty payments shared with the states used in ways that serve national policy goals or do they undermine those efforts. For example: How did the State of Utah spend the \$44 million in federal coal lease royalties it received in FY2014? The PEIS might consider setting "appropriate use" parameters.

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Comment Number: 0001112\_DRISKILL\_20160621-1

Organization I: Wyoming Senate District I

Commenter I: Odgen Driskill

Comment Excerpt Text:

Did you know that there's not a single coal-fired power plant proposed for construction in the United States right now? Great, great news. But there's 2,000 new ones worldwide. We live in a world economy, folks. There's

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2,000 of them worldwide. 363 in China. 445 in India. Those plants are all going to burn coal that doesn't look like this. It's high sulfur, black, nasty what you think about. Really we ought to be thinking really hard, maybe this coal should be going into those plants that are being built, and maybe this coal should be what fires those plants if you want clean air in the Northwest, because what they burn is coming your way.

---

Comment Number: 0001128-1

Organization I: Social and Environmental Justice Council

Commenter I: Piazzon

Comment Excerpt Text:

There are exciting, healthy, economy-expanding options to burning rocks in the 21st century. We must reject the madness and injustice of this, accept the reality and opportunities and keep coal in the hole.

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Comment Number: 0001174-1

Commenter I: Donna Albert

Other Sections: 1

Comment Excerpt Text:

Order 3338 states that the PEIS should examine the degree to which federal coal should support fulfilling the energy needs of the United States. The answer is that coal has no place in our energy future. Experts like Mark Jacobson of Stanford University have provided practical plans for modernizing our electricity generation and electrifying our transportation system to completely eliminate the use of fossil fuels.

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Comment Number: 0001180-1

Organization I: Alaska Coal Association

Commenter I: Lorali Simon

Comment Excerpt Text:

The EIA states that coal will continue to play a significant role in providing electricity to Americans for decades. The PEIS must evaluate how changes to the Federal Coal Program impact reliability and affordability of the electricity.

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Comment Number: 0001199\_Stiller\_20160621-1

Organization I: Nature's Stewards

Commenter I: Grace Stiller

Other Sections: 19

Comment Excerpt Text:

The federal government should continue investing in clean energy and stop subsidizing private companies to take coal from public lands. Please keep it in the ground.

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Comment Number: 0002001\_Stevens\_20160607-3

Organization I:

Commenter I: Wayne Stevens

Comment Excerpt Text:

Another theme at this meeting was that "coal does not get subsidies from the federal government." This statement is not true. Subsidies are received through mining on public lands where royalties are low. The Coal Industry gets or has gotten, billions of dollars of funding and loans from the US Government. The Coal industry has also gotten tax exempt and Build America bonds from the government for the construction of coal fired power plants. Coal fired power plants received funding for "retrofitting" power plants to comply with the Clean

Air Act. Another subsidy, albeit, hidden and at the end of useful life of a coal mine is the cost to reclaim the mining area.

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Comment Number: 0002009\_CenterBioDiversity\_20160329-1

Organization I: WildEarth Guardians

Commenter I: Jeremy Nichols

Comment Excerpt Text:

We therefore call on you to explicitly acknowledge that the paramount goal of long-term reform is to chart an orderly and effective path toward ending the federal coal program. This path must be paved with common sense policy changes that address our near-term climate challenges, aid coal-dependent communities to help them emerge from transition more sustainable and prosperous, defend taxpayers and the broader American public interest, and protect our legacy of public lands.

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Comment Number: 0002014\_Dalton\_20160429-1

Commenter I: Eric Dalton

Comment Excerpt Text:

I would like to stop leasing coal and other fossil fuel drilling rights on all federal lands as soon as practical. It is completely non-sensical to use public lands to further degrade our atmosphere when it looks like we may already be in a planetary death spiral.

---

Comment Number: 0002029\_Baumann\_20160608-1

Commenter I: Patricia Baumann

Comment Excerpt Text:

I recommend that your agency simplify the coal leasing program, expedite review of coal lease applications and eliminate any additional taxes or royalties on coal.

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Comment Number: 0002034\_Carlson\_20160620-1

Commenter I: j Carlson

Comment Excerpt Text:

If we have to have coal production, the cost should be commensurate to its value and issues surrounding environmental impact

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Comment Number: 0002041\_Hertoghe\_20160622-1

Commenter I: Cal Hertoghe

Comment Excerpt Text:

Please work to maximize coal usage by minimizing the negative impacts. Develop and use technology for clean coal such as liquification and scrubbers to clean emissions from burned coal.

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Comment Number: 0002055\_Pope\_20160621-1

Organization I: Montana State University Billings

Commenter I: Paul Pope

Comment Excerpt Text:

Senator, Specifically, what is the government's plan for life after coal? Is there an intended timeline to transition towards clean energy?

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Comment Number: 0002071\_Young\_20160622-1  
Commenter I: John Young  
Comment Excerpt Text:  
I strongly favor the termination of future coal leases on federal lands

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Comment Number: 0002084\_Kettenring\_20160623-1  
Commenter I: Eric Kettenring  
Comment Excerpt Text:  
There is a real possibility to produce energy through clean coal, which should be our highest priority.

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Comment Number: 0002095\_Mader\_20160428-1  
Commenter I: Thomas Mader  
Comment Excerpt Text:  
I think that all Coal Mining on Public Lands should gradually be terminated over the next decade

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Comment Number: 0002104\_Quam\_20160622-1  
Comment Excerpt Text:  
We need to keep coal as an energy resource. It's cheap, efficient & provides many jobs & can be burned in a clean manner.

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Comment Number: 0002109\_Reading\_20160618-1  
Commenter I: Toniann Reading  
Other Sections: 6  
Comment Excerpt Text:  
I fully support changes to keep carbon based fuels in the ground (and certainly not to use our public lands for private coal company leasing subsidized at ridiculous rates on both ends of the privatization scheme!) and to move toward using our public lands for environmentally sound & taxpayer responsible purposes reflecting current scientific research and climate change modeling.

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Comment Number: 0002111\_Ross\_20160623-4  
Commenter I: Alexa Ross  
Comment Excerpt Text:  
The federal coal program is contrary to U.S. and global efforts to combat climate disruption, safeguard our public lands and waters, and protect the welfare of coal communities.

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Comment Number: 0002112\_Sanderson\_20160624\_CoMineAssoc-7  
Organization I: Colorado Mining Association  
Commenter I: Stuart Sanderson  
Comment Excerpt Text:  
It is time for the war on coal mining jobs and affordable energy to end.

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Comment Number: 0002114\_Savlove\_20160613-2  
Commenter I: John Savlove  
Comment Excerpt Text:  
This Bureau needs to manage our land in terms of real long-term strength. It should be a land and wildlife festival

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of biology, habitat cultivation, and human intelligence through God's gift to us of nature. Please phase out coal at once. I can help you with alternative incentives for the industry if you like.

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Comment Number: 0002115\_Schaefer\_20160623-1

Commenter I: C. Thomas Shaefer

Comment Excerpt Text:

The only sensible course of action is to reduce our dependence on fossil fuels, and especially coal. Consequently, for the U.S. government to continue to allow mining of coal from publicly owned lands is utterly unacceptable. No amount of royalties that might be collected from such activity is sufficient compensation for the irreversible damage inflicted. The Bureau of Land Management must undertake a comprehensive assessment of all external costs that the mining and combustion of coal from federal lands impose on society, and must disclose to the public and decision-makers the results of that assessment. BLM must evaluate strategies to phase out federal coal leasing altogether.

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Comment Number: 0002116\_Sharp\_20160626-3

Commenter I: Margaret Sharp

Comment Excerpt Text:

The BLM must prioritize creating a plan for an alternative that would phase out federal coal leasing

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Comment Number: 0002117\_Solie\_20160622-1

Commenter I: Mark Solie

Comment Excerpt Text:

I like the benefits of COAL, OIL & Natural Gas, Lumber & Mining in General as it has raised the standard of 'living' in the U.S. A. above that of anyone else in the world.... In addition what will replace the Tax \$ these Industries Provide??

---

Comment Number: 0002119\_Stensaas\_20160504-1

Commenter I: Suzanne Stensaas

Comment Excerpt Text:

This is not the time to bulldoze, strip, mine for more coal when there are other sources of energy what are cleaner and produce less influence on the climate.

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Comment Number: 0002122\_Swanson\_20160623-1

Commenter I: C. David Swanson

Comment Excerpt Text:

It is a tremendously important source of fuel and industrial power, essential not only to America, but the world. It cannot now, nor should it ever be declared off limits.

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Comment Number: 0002122\_Swanson\_20160623-2

Commenter I: C. David Swanson

Comment Excerpt Text:

Regarding the move to staunch the mining, use and exporting of coal in and from the U.S., I add my voice in opposition.

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Comment Number: 0002124\_Todd\_20160622-1

Commenter I: David Todd

Other Sections: I I

Comment Excerpt Text:

I support the President's plan to reduce coal extraction and burning and reject the efforts of Steve Daines to block those reductions.

Rather than burn coal to keep US jobs, Daines might better lead an effort to keep US companies from shipping jobs abroad.

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Comment Number: 0002125\_Turnquist\_20160623-3

Commenter I: Debra Turnquist

Comment Excerpt Text:

I believe it is time to do away with coal production.

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Comment Number: 0002126\_VanHelden\_20160622-1

Commenter I: Luke Helden

Comment Excerpt Text:

Though one of my Senators is more concerned with jobs than a sustainable land management policy. I want you to know that we do not want coal extraction in Montana or any other further development of non-renewable resources.

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Comment Number: 0002127\_Walling\_20160624-1

Commenter I: Philip Walling

Comment Excerpt Text:

I'm writing to urge you to put a stop to the Federal Coal Program for good. The environmental and social impacts of mining and burning coal far outweigh the economic gains of these land leases. Federal lands were established for the people. Yet this program will have devastating impacts not only on people in surrounding communities but on future generations who already have human-induced global warming and climate change to contend with. Please do the right thing and ensure that our public lands continue to benefit all of the people by providing the natural undisturbed habitats we so desperately need to provide ecological balance in our shrinking world.

---

Comment Number: 0002130\_Willett\_20160623-1

Commenter I: Kayla Willett

Comment Excerpt Text:

Coal is a more cost effective energy source, readily available in Montana, and relied upon in Montana. If the government were to shut down our coal production, it should have another source to fulfill the vital needs that coal presently meets in our state and throughout our nation. There is no such plan being put into action.

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Comment Number: 0002137\_Zeigler\_20160607-7

Commenter I: Bob Zeigler

Comment Excerpt Text:

Ways to rescind current coal leases and compensate lease owners to keep this coal in the ground.

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Comment Number: 0002143\_Bruce\_20160519-1

Commenter I: Bruce

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## Comment Excerpt Text:

No coal!

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Comment Number: 0002145\_Buchanan\_20160513\_IEEFA-10

Organization I: Institute for Energy Economics and Financial Analysis

Commenter I: Tom Sanzillo

Other Sections: 2

Comment Excerpt Text:

IEEFA proposes an alternative to the current system that incorporates the following major elements:

- Financing would come from a combination of private-sector borrowing and public-sector asset transfers (of coal), revenue and market guarantees (through price setting) and regulatory streamlining. This public-private partnership arrangement would will be faster, more certain and more accountable than the current system (see discussion on planning) below.

- All planning for new coal offerings would be the domain of the Department of Interior (10) in consultation with the Department of Energy (DOE). The first assignment of the DOI/DOE team would be to assess the true level of economically available coal under lease, various coal demand scenarios, (11) and an accurate read of the life cycle of existing mines. This analysis would provide the basis for determining if and when new coal reserves are needed. Based on this information, a system would be established for the federal government to take back leases from coal companies (many such mines will have no value and carry only liabilities). (12) The review should establish the broad parameters for the demand for coal in the U.S. and the role of federal coal in meeting that demand. The Departments, collectively and with the advice and guidance of Congress, would work with the coal industry to implement public policy goals. Coal producers would submit both long-term and short-term mining plans very similar to the planning analysis that currently takes place within each corporation under the current program design.

- Price-setting for the sale of coal would be done by a federal-state coal price commission. The Commission would establish prices that would cover a coal producer's reasonable operational costs (including full funding of pension and environmental liabilities), debt, and profit (reinvestment and dividends). The lower limit of the pricing structure would be driven in large measure by state public service commissions. They would set the lower price levels consistent with their mission to maintain affordable and reliable electricity to residents. The price would be set at the upper limit by establishing a national energy adjusted average for the price of coal sold in the rest of the country (outside the PRB) through traditional market mechanisms. The Commission would be bound by these upper and lower limits and set annual prices according to their own methodology.

- Prices would be established annually to allow for changing market conditions and state variations. Adjustments on a year-to-year basis could be established very much like that used in rate-setting for regulated utilities. A price-setting committee could consist of representatives of the Department of Energy, Department of the Interior, Office of Management and Budget, Securities and Exchange Commission (13) and two members selected by the National Governors Association and two members selected by the National Association of Regulatory Utility Commissions. Staff from the Department of Energy would be responsible for technical monitoring and data inputs necessary to maintain real-time changes. DOI would be required to maintain basic financial and economic data required to ensure market balance and adherence to national policy directives. The Department of Interior would be the lead staff and prepare all documents and studies necessary to set annual prices and keep committee members informed. All of this information should be presumed to be public information for the purpose of stimulating and maintaining a robust environment for external review.

- Coal producer borrowing for any venture outside of mining operations for mines under contract with the federal government would have to receive the approval of the Department of Interior in consultation with the

price-setting Committee. As a matter of national security and to protect against reckless speculation, coal exports would be prohibited. Such prohibition would cover mine acquisitions outside the U.S., mine acquisitions inside the U.S. to be used for exports, and port and rail projects related to exporting coal.

- Consistent with the public-private partnership, the lease program would establish standards for coal producers based upon coal producer competencies in coal mining and production efficiencies, not the gaming of a government program.

- Royalty policy would be amended. The current policy of dividing coal royalty revenue between the federal and state government lacks a rationale. The federal portion of the money goes for general funding purposes at the federal level, and states tend to do much of the same with some targeting money to coal infrastructure and other coal-related programs. The federal portion of the royalty money should instead be set aside to satisfy coal liabilities: 1) to establish a new arrangement where coal producers and the federal government share responsibility for coal reclamation cleanups (bonds should be required of coal producers for their portion, self-bonding should be eliminated, and the federal government should set aside an actuarially-sound portion of federal coal revenues to meet their portion of cleanup costs) and 2) to provide additional set-asides for coal miner employee pensions.

- For the first six years of the Committee's existence, the Inspector Generals from both the Department of Energy and Department of Interior would be required to conduct bi-annual oversight evaluations (14) of price setting and other related program elements to insure: 1) adherence to internal control procedures; 2) proper accounting for coal price setting and underlying valuation mechanisms; 3) proper accounting for the levels of government support of coal production and coal producers; 4) protections against fraud and abuse; 5) assessments of methods used by state public service commissions to establish the price floor, the methods used by the Commission to establish the ceiling and to establish an annual coal price; and 5) assessments of the impact of lobbying and political interference on the program design and model.

- Consistent with the management of an ongoing public-private partnership, the BLM would retrain staff and add new competencies to secure the benefits sought on the government side of the equation. BLM would need to hire at a minimum: 1) expert investment specialists with core competencies in infrastructure development (supported by individuals that possess an understanding of institutional investment asset allocations); 2) mining engineers and mine operators; 3) labor experts; 4) energy planners and 5) negotiators with competency in business, contract and budget negotiations.

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Comment Number: 0002145\_Buchanan\_20160513\_IEEFA-16

Organization I: Institute for Energy Economics and Financial Analysis

Commenter I: Tom Sanzillo

Other Sections: I

Comment Excerpt Text:

IEEFA has commented extensively on the federal coal leasing program in the past, (3) beginning with our Great Giveaway report in 2012, which demonstrated that the coal lease program had not been audited in 30 years, recommended a moratorium, and prompted several federal investigations of the program. IEEFA provided extensive comments on the DOI Inspector General's audit of the program in 2013, commented on proposed royalty reforms in 2015, and testified at Bureau of Land Management (BLM) "listening sessions" in 2015. Our research on the coal industry is informed by continuous monitoring of companies, coal production and pricing trends.

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Comment Number: 0002145\_Buchanan\_20160513\_IEEFA-18

Organization I: Institute for Energy Economics and Financial Analysis

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Commenter I: Tom Sanzillo

Other Sections: I

Comment Excerpt Text:

An example of the industry's failure to grasp new market realities is the outlook that Peabody Energy projects in its bankruptcy filings. Rather than recognizing the shrinking markets and persistent low prices, Peabody's plans for success require increases in natural gas prices and a more robust global market to support the new entity as a going concern. (5) Neither of these trends in the cards for the foreseeable future, yet this is the position of the largest holder of federal coal leases.

(5) See Taylor Kuyendall, Headwinds that pushed coal to bankruptcy potentially changing course, SNL, April 29, 2016.

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Comment Number: 0002145\_Buchanan\_20160513\_IEEFA-21

Organization I: Institute for Energy Economics and Financial Analysis

Commenter I: Tom Sanzillo

Other Sections: I

Comment Excerpt Text:

In 1979, one political commenter, Guy Paul Land, made a salient observation on why the courts are sometimes asked to resolve problems that are more appropriately the domain of legislative and executive action. The political dynamic he describes can clearly be applied to coal policy in the U.S. today:

"Perhaps the most crucial factor shaping the increased resort to the courts—and the one with the most important long-term consequences—is the growing dissatisfaction and disillusionment with the ability of representative assemblies, at whatever level, to reflect accurately, efficiently and effectively the desires of the people whom they presume to represent. Over the past decade, public opinion polls have shown a consistent decline in the American public's belief in the efficacy of Congress to solve major problems or protect private rights ... In the view of many Americans, their representatives are more the voices of large, organized special interests and less the spokesperson for individual constituents. In short, there is a growing feeling among the public that many of its elected officials and their agents cannot or will not adequately serve the individual interests and needs of the members of society."

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Comment Number: 0002145\_Buchanan\_20160513\_IEEFA-27

Organization I: Institute for Energy Economics and Financial Analysis

Commenter I: Tom Sanzillo

Comment Excerpt Text:

Major Changes Are Needed to Respond to the "New Normal" of Coal Mining in the U.S.

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Comment Number: 0002145\_Buchanan\_20160513\_IEEFA-28

Organization I: Institute for Energy Economics and Financial Analysis

Commenter I: Tom Sanzillo

Comment Excerpt Text:

Coal producer business models were predicated historically on a slow, steady increase in coal demand and use, producing modest profits. Recently the industry has distorted the model by perpetuating the idea that global coal markets will offer an opportunity to super-size domestic coal production and profits.

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Comment Number: 0002145\_Buchanan\_20160513\_IEEFA-3

Organization I: Institute for Energy Economics and Financial Analysis

Commenter I: Tom Sanzillo

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**Comment Excerpt Text:**

The PEIS and the moratorium that accompanies it come at a time of energy transition in the U.S. The coal industry's widespread financial distress has now moved from being a principally Central Appalachian phenomenon to the Powder River Basin. Three of the largest holders of coal leases on western land—Peabody Energy, Alpha Natural Resources, and Arch Coal — have declared bankruptcy. Most of the coal producers in the U.S. presume that bankruptcy will allow them to get rid of burdensome debt and liabilities, close some mines, and emerge as new companies, leaner and able to operate as going concerns.

This presumption is false because it assumes there will be an ongoing, stable demand environment for coal (and that demand may even increase) and that coal prices will rise. It ignores the reality that the coal industry is undergoing a structural realignment, caused by shrinking demand for coal in the United States and globally.

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Comment Number: 0002145\_Buchanan\_20160513\_IEEFA-5

Organization I: Institute for Energy Economics and Financial Analysis

Commenter I: Tom Sanzillo

**Comment Excerpt Text:**

As the largest owner of coal reserves in the U.S., the federal government must now revamp federal coal lease policy against a backdrop of decline in demand for coal in the U.S. that is both market and policy driven. It must also do so with a coal industry that seems determined to sell more coal into an oversupplied market using traditional business models.

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Comment Number: 0002145\_Buchanan\_20160513\_IEEFA-7

Organization I: Institute for Energy Economics and Financial Analysis

Commenter I: Tom Sanzillo

**Comment Excerpt Text:**

The federal coal lease program is also built on a cornerstone belief in constant growth, whether it be slow and steady or more aggressive. The federal government expects coal producers to apply for new sites when there is a market for the coal and it always presumes a market for coal, more or less. Prior coal lease moratoria always took place when the industry and the federal government were facing growth and coal market expansion. This is not the case in the current environment.

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Comment Number: 0002147\_Anderson\_20160621\_BlueGreenAlliance-1

Organization I: BlueGreen Alliance

Commenter I: Kim Glas

**Comment Excerpt Text:**

The BlueGreen Alliance believes that the federal coal leasing program is broken and long overdue for an update that ensures fairness to taxpayers and better accounts for environmental impacts.

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Comment Number: 0002147\_Anderson\_20160621\_BlueGreenAlliance-12

Organization I: BlueGreen Alliance

Commenter I: Kim Glas

**Comment Excerpt Text:**

Coal has been an important domestic energy source for decades and that fact will continue in the years ahead. Production of this energy resource has been facilitated by the federal government, as roughly 40 percent of all U.S. coal production occurs on taxpayer-owned federal land.

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Comment Number: 0002147\_Anderson\_20160621\_BlueGreenAlliance-2

Organization I:BlueGreen Alliance

Commenter I:Kim Glas

Other Sections: 2 | 1

Comment Excerpt Text:

The contemplated overhaul of this program is, however, not only an opportunity to fix a broken system, but also an opportunity to take a hard look at how coal-dependent communities, regional economies, and individual workers can transition to new economic models.

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Comment Number: 0002148\_OLaughlin\_20160621\_K2-2

Organization I:K2 Sports

Commenter I:Matt O'Laughlin

Comment Excerpt Text:

While our companies look for ways to improve our own carbon footprint, we also look to decision-makers like you for broad policy action on climate, including keeping fossil fuels like coal in the ground.

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Comment Number: 0002149\_Hewitt\_20160519\_WyLSO-10

Organization I:Wyoming Legislature's Select Federal Natural Resource Management Committee

Commenter I:Ted Hewitt

Comment Excerpt Text:

States that rely on coal-powered electricity generation have consistently enjoyed among the lowest electricity rates in the country. Additionally, coal-fired power plants provide vital base-load for our grid. That reliability ensures that everyone in the country—our families, our businesses, and our military—have access to the electricity they need.

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Comment Number: 0002149\_Hewitt\_20160519\_WyLSO-12

Organization I:Wyoming Legislature's Select Federal Natural Resource Management Committee

Commenter I:Ted Hewitt

Comment Excerpt Text:

widespread adoption of electric vehicles could dramatically increase our nation's demand for electricity. Our country has shown repeatedly that it can make tremendous technological leaps in a short time; the federal government should not preclude coal as an important energy resource for our future.

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Comment Number: 0002149\_Hewitt\_20160519\_WyLSO-2

Organization I:Wyoming Legislature's Select Federal Natural Resource Management Committee

Commenter I:Ted Hewitt

Comment Excerpt Text:

Wyoming coal production provides benefits to our state and country because it allows for affordable electricity, creates energy stability, and promotes our national security, all while minimally impacting the environment.

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Comment Number: 0002150\_Nagle\_20160629-1

Organization I:Carnegie Mellon University

Commenter I:John Nagle

Comment Excerpt Text:

I believe that no more coal should be burned.

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Comment Number: 0002150\_Nagle\_20160629-3

Organization I: Carnegie Mellon University

Commenter I: John Nagle

Comment Excerpt Text:

I believe that coal leasing on public lands should be ended forthwith.

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Comment Number: 0002152\_Bruse\_20160518-10

Commenter I: Debbie Bruse

Other Sections: 4.6

Comment Excerpt Text:

Impacts to water, soils, vegetation and wildlife are short duration in the whole scheme of things and are already managed by state and federal agencies, including:

-Wyoming DEQ – Land Quality Division, Air Quality Division, Water Quality Division, and Solid & Hazardous Waste Division, Industrial Siting

-Wyoming State Engineers Office – groundwater and surface water use permitting

-BATF – explosives use licensing and inspections

-MSHA – safety and health and inspections

-NRC – nuclear sources related to coal analyzers

-ACOE – any and all wetland impacts

-EPA – drinking water, wastes

-BLM – coal leasing, resource recovery and protection, and inspections

-USFWS – migratory birds of high federal interest

Just to name a few, and BLMs review of addressing impacts to water, soil, vegetation and wildlife, during the PEIS review, are absolutely not necessary.

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Comment Number: 0002152\_Bruse\_20160518-20

Commenter I: Debbie Bruse

Comment Excerpt Text:

Coal should be part of the energy mix in America and I believe that it will continue to be for some time.

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Comment Number: 0002155\_Krupnick\_20160622-7

Organization I: Center for Energy and Climate Economics Resources for the Future

Commenter I: Alan Krupnick

Other Sections: 2

Comment Excerpt Text:

Incorporation of ownership status into coal statistics produced by the Energy Information Administration, and other relevant agencies. For example, creating a filter for coal produced from federal and Indian versus other lands in the EIA coal data browser.

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Comment Number: 0002157\_Burger\_SabineCenter\_09132016-10

Organization I: Sabine Center for Climate Change Law

Commenter I: Michael Burger

Comment Excerpt Text:

Finally, Anna Zubets-Anderson provided the perspective of a credit rating company on the current status of coal mining companies. She noted that the credit ratings for coal companies have declined quite sharply in recent years, and that the outlook for the coal industry is negative. She said that companies that recently reorganized

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under Chapter 11 are better situated in many instances than the companies that have not filed for bankruptcy, but this does not change the long-term outlook for these companies. She concluded by saying that, even if gas prices go up, the credit ratings of coal companies will likely remain low due to the regulatory environment.

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Comment Number: 0002157\_Burger\_SabineCenter\_09132016-18

Organization I: Sabine Center for Climate Change Law

Commenter I: Michael Burger

Comment Excerpt Text:

The panelists generally agreed that a build-out of gas pipelines and export facilities would boost natural gas prices, at least regionally and under certain circumstances, by connecting the Marcellus and Utica shale plays to national and international markets, and that the coal industry would benefit from this price increase. However, they also generally agreed that U.S. coal would benefit relatively little over the long term from changes in Asian markets, because of the competition they would face from producers across the Pacific.

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Comment Number: 0002157\_Burger\_SabineCenter\_09132016-2

Organization I: Sabine Center for Climate Change Law

Commenter I: Michael Burger

Comment Excerpt Text:

Colleen Regan noted the recent crescendo in coal-fired power plant closures—14.5GW in 2015—and anticipated that additional closures would follow in the coming years. She said that four key non-regulatory factors account for this: oil and gas prices have fallen to historic lows; renewables are putting downward pressure on electricity prices; steady improvements to energy efficiency are keeping rates of electricity demand flat; and increasing usage of demand side management tools are shaving peaks off of high-demand days and with them higher electricity prices. In addition to these factors, Regan also observed that U.S. coal plants are generally quite old, meaning that they are not good candidates for the addition of emissions control equipment. David Schissel echoed several of Regan's points, illustrating some of them with the example of seven plants in Texas whose financial profiles have been undermined by natural gas and renewables, as well as by compliance requirements related to the newly issued Haze Rule. Schissel also pointed out that an enormous volume of natural gas capacity—16GW in PJM alone—will shortly come online, that wind capacity factors are rising nationwide, and that coal is in many instances no longer providing base load power, but only load-following or peaking service. Clark Williams-Derry supplemented Regan and Schissel's description of domestic electricity sector dynamics with several points about international markets for coal, and metallurgical coal in particular. He described the recent history of the Pacific rim market as featuring two bubbles: the general commodities bubble that ended with the 2009 crash, and a bubble specific to Chinese metallurgical coal demand that burst in 2012. Williams-Derry described how U.S. coal companies engaged in a bidding war for assets and firms in Australia and elsewhere in the run up to the burst of the second bubble, in the hopes of offsetting losses in the U.S. with sales abroad. That resulted in those companies paying top dollar at the height of the 2011 coal price peak and then facing a sharp downturn in coal prices and demand as China reduced its demand for coal and as multiple competing sources of coal came online in Australia, Indonesia, Russia, within China, and elsewhere. The acquisition of these overpriced assets, coupled with a generally unforgiving U.S. market for coal, pushed several firms into bankruptcy. All three panelists agreed that fluctuations in natural gas prices would lead to occasional departures from U.S. coal's secular downward trend, but that the growth of renewables and storage would continue to gnaw away at an accelerating rate at the basic underpinnings of coal's place in the electricity sector.

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Comment Number: 0002157\_Burger\_SabineCenter\_09132016-3

Organization I: Sabine Center for Climate Change Law

Commenter I: Michael Burger



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**Comment Excerpt Text:**

The panelists described different facets of the coal marketplace, but all—implicitly or explicitly—highlighted the relevance of policy to coal’s future. Howard Gruenspecht of the U.S. EIA noted that about 95% of coal consumed in the U.S. is burned to generate electricity, but that EIA’s projections had included no new coal-fired plants since 2012 owing to several factors. That particular projection did not change in a modeled scenario in which the Clean Power Plan never entered into force. However, other EIA projections reflect significant negative effects of the CPP on coal production in the Powder River Basin, and lesser but still notable effects in the Illinois Basin and Appalachia. Gruenspecht also pointed out that EIA does not anticipate that prospective changes in international demand will offset the large secular declines expected in domestic markets. Tony Yuen titled his presentation “a duel between policy and markets,” and summarized the scenario facing coal in this way: the U.S. pie (i.e., the domestic electricity marketplace) is shrinking owing to renewables growth, efficiency gains, and demand side management, but international coal consumption is likely to continue at its current rate, and the coming rise in natural gas prices is likely to slow or stop coal’s recent slide in the near term. In consequence, policy, by putting a thumb on the scales in one direction or another, will matter a great deal to coal’s prospects.

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Comment Number: 0002157\_Burger\_SabineCenter\_09132016-5

Organization I: Sabine Center for Climate Change Law

Commenter I: Michael Burger

**Comment Excerpt Text:**

Ted O’Brien described 2011-2015 as a disastrous window of years for U.S. coal, but also described relatively rosy prospects for coal in the near future. He said that prices have jumped in recent months—and even days—owing to several sources of novel international demand (notably including mandated limits on Chinese coal mine production) and hiccups in several Australian mines. He also said that coal-to-gas switches in the U.S. electricity sector would likely reverse in several instances as natural gas prices rise in the coming year.

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Comment Number: 0002157\_Burger\_SabineCenter\_09132016-7

Organization I: Sabine Center for Climate Change Law

Commenter I: Michael Burger

**Comment Excerpt Text:**

Professor Ed Morrison began the panel with an overview of bankruptcy law and the procedural aspects of bankruptcy proceedings for coal companies. He noted that there has been a significant increase in bankruptcy in the past few years, with nearly 40 filings in 3 years by mid-2015. While 50% of the recent filings are liquidations under Chapter 7 of the Bankruptcy Code, the largest coal companies have filed for bankruptcy under Chapter 11. Under Chapter 11, the debtors can seek to adjust and reorganize debts in order to keep the business alive and pay creditors over time. There are several approaches to Chapter 11 bankruptcy. The first is a traditional bargaining procedure whereby the debtor proposes a plan of reorganization, the creditors vote on it, and if enough creditors support the plan, the debtor can override dissent by showing that the plan complies with certain rule. This process can take years to complete. There are also two faster approaches to bankruptcy which have become increasingly common: the debtor can sell itself to a buyer during bankruptcy, and the cash is distributed in order of priorities to creditors, or the debtor can pre-negotiate a plan with creditors before it enters bankruptcy. Several coal companies, such as Patriot Coal and Arch coal, have opted to sell all or part of the company during their bankruptcy proceedings. Professor Morrison also highlighted several “wrinkles” in the bankruptcy proceedings for coal companies. First, he noted that the automatic stay which occurs during bankruptcy proceedings (which stops nearly all creditors from pursuing action against a debtor) does not stop the government from obtaining an injunction to enforce clean-up of a mine site. Second, he noted that it can be difficult to assign a value to future harms and clean-up costs during the claims valuation process, which means that these financial obligations may be undervalued during the process. Third, he noted that debtors can typically abandon burdensome properties, and that coal mine properties might fall into this category (however, the Supreme Court has held that you cannot abandon

property if it poses an imminent risk of harm to the public). Fourth, he noted that collective bargaining agreements and pension and employee benefits can be terminated in bankruptcy proceedings under § 1113 of the Bankruptcy Code, if termination is necessary to complete reorganization (2nd Cir.) or liquidation (3rd Cir.).

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Comment Number: 0002158\_Burger\_SabineCenter\_9132016-5

Organization I: Sabine Center for Climate Change Law

Commenter I: Michael Burger

Comment Excerpt Text:

Arguably, the single best way for Interior and BLM to account for the climate impacts of the federal coal leasing program, to protect public lands from climate change impacts and to manage the program in such a way as to meet the United States' domestic and international climate goals is to make permanent the temporary moratorium on issuing new leases – to “leave it in the ground.”

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Comment Number: 0002158\_Kasperik\_20160517\_StateRep-2

Organization I: HD 32 Wyoming State Legislature

Commenter I: Norine Kasperik

Comment Excerpt Text:

This proposal would undo the current valuation of coal and replace it with a complex system designed to punish coal producers with higher costs and significant uncertainty. It is not about maximizing revenue for taxpayers; it's about cutting off production of federal coal from Wyoming and other states.

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Comment Number: 0002160\_Kot\_20160629\_SweetwtrCnty-15

Organization I: Sweetwater County

Commenter I: Wally Johnson

Comment Excerpt Text:

Sweetwater County strongly believes that the Coal PEIS and its proposed leasing and regulatory modifications would make it more costly to mine coal, produce electricity and continue the excellent environmental work being implemented by the Jim Bridger and Black Butte Coal Mines and the Jim Bridger Power Plant

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Comment Number: 0002167\_Baumgartner\_20160629-1

Commenter I: Laura Baumgartner

Other Sections: 8.1 | 8.8

Comment Excerpt Text:

I am writing to oppose further development of coal resources in the US, oppose transport of mined coal through western states and especially cities to our ports and oppose export of coal for use in other parts of the world.

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Comment Number: 0002168\_Kohler\_20160629-1

Commenter I: Bernard Kohler

Comment Excerpt Text:

I fully support restrictions and disincentives to limit U.S. coal production.

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Comment Number: 0002169\_Heiblim\_20160624-1

Commenter I: David Heiblim

Comment Excerpt Text:

Let's go in the right direction and drastically limit the amount of unnecessary extraction from the ground.

Comment Number: 0002173\_Quick\_20160622-10

Commenter I: Kendra Quick

Other Sections: 1

Comment Excerpt Text:

Regardless of current market conditions, according to the Energy Information Agency, coal will play a significant role in providing electricity for decades to come. In 2014, coal delivered nearly 40% of our Nation's electricity. There currently is not any other energy source that can replace coal and provide 40% of the Nation's electricity.

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Comment Number: 0002175\_Woodcock\_20160627-5

Organization I: MSU Department of American Studies

Commenter I: Jennifer Woodcock-Medicine Horse

Comment Excerpt Text:

it is time to shut down coal production completely in Montana

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Comment Number: 0002178\_Reum\_20160622-1

Commenter I: Peter Reum

Other Sections: 6

Comment Excerpt Text:

Please keep coal in the ground in Montana. The use of it only prolongs badly needed change to less climate changing energy.

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Comment Number: 0002182\_Jenkins\_20160622-1

Commenter I: Helen Pent Jenkins

Comment Excerpt Text:

I firmly stand and support President Obama's and the EPA's regulations of the coal industry.

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Comment Number: 0002184\_Randolph\_20160619-1

Commenter I: Timothy Randolph

Comment Excerpt Text:

I am writing to express the opinion that the Bureau of Land Management's current program for leasing coal mining rights on public land is outdated, irresponsible and wastefully unfair to the public.

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Comment Number: 0002184\_Randolph\_20160619-4

Commenter I: Timothy Randolph

Comment Excerpt Text:

Most importantly, the BLM needs to stop the damages being done under the current policy: tax-supported strip mining, degraded water and air quality, accelerated climate change and the destruction of profitable recreational land.

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Comment Number: 0002185\_Leidecker\_20160512-1

Commenter I: Jodie Leidecker

Comment Excerpt Text:

Please stop the mining of coal on federal lands.

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Comment Number: 0002189\_Jozwik\_20160517-25

Commenter I: Darryl Jozwik

Comment Excerpt Text:

HOW DOES FEDERAL COAL SUPPORT FULFILLING THE ENERGY NEEDS OF THE UNITED STATES -- CURRENT PROGRAM HANDLES WELL. PROPOSED CHANGES WILL LEAD TO HIGHER ENERGY COST AND LESS RELIABLE.

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Comment Number: 0002189\_Jozwik\_20160517-26

Commenter I: Darryl Jozwik

Comment Excerpt Text:

HOW DOES THE ADMINISTRATION, AVAILABILITY, AND PRICING OF FEDERAL COAL IMPACT ELECTRICITY GENERATION IN THE UNITED STATES, PARTICULARLY IN LIGHT OF OTHER REGULATORY INFLUENCES -- YOU HAVE A WAR ON COAL GOING. IT AFFECTS IT IN A NEGATIVE WAY.

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Comment Number: 0002189\_Jozwik\_20160517-27

Commenter I: Darryl Jozwik

Comment Excerpt Text:

WHAT OTHER SOURCES OF ENERGY SUPPLY (INCLUDING EFFICIENCY) ARE PROJECTED TO BE AVAILABLE -- NOTHING WILL MAKE UP FOR REMOVING COAL FROM THE MIX. AS THERE IS LESS COAL, GAS PRICES WILL GO UP AND SUPPLY MAY NOT BE THERE.  
> WE NEED TO BE ENERGY INDEPENDENT. WHICH MEANS USING COAL.

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Comment Number: 0002189\_Jozwik\_20160517-29

Commenter I: Darryl Jozwik

Comment Excerpt Text:

CURTAILMENT OR ELIMINATION OF FEDERAL COAL WILL SHIFT THE EMPHASIS TO USE PRIVATE COAL AND INCREASE ELECTRICITY COSTS. NO BENEFITS FOR FEDERAL COAL, SINCE NONE IS MINED.

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Comment Number: 0002189\_Jozwik\_20160517-31

Commenter I: Darryl Jozwik

Comment Excerpt Text:

ANY REGULATIONS TO KEEP COAL IN THE GROUND, IN RELATION TO THIS PROGRAM, ARE AGAINST THE LAW.

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Comment Number: 0002191\_Boyd\_20160621-1

Commenter I: Marilyn Boyd

Comment Excerpt Text:

I strongly object to the leasing of our public lands for continuing devastation by coal mining.

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Comment Number: 0002192\_Befus\_20160518-3

Organization I: University of Wyoming Foundation

Commenter I: Brett Befus

Comment Excerpt Text:

Please consider implementing processes that allow for future coal leases in a timely and efficient fashion. Simply put, open markets work.

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Comment Number: 0002198\_Provost\_20160519-2

Commenter I: Dale Provost

Comment Excerpt Text:

I am strongly against helping this industry produce coal which pollutes our air and our water, affecting the health of citizens and the beauty of our National treasures.

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Comment Number: 0002202\_Grady\_20160622-1

Commenter I: Kathryn Grady

Comment Excerpt Text:

I am in support of the EPA regulations and support President Obama's actions; e.g. I'm fervently in favor of whatever Sen. Daines opposes. :) We need clean energy and we need to end our relationship with coal.

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Comment Number: 0002203\_Wilde\_20160622-1

Commenter I: Tomas Wilde

Comment Excerpt Text:

It's time to phase out coal mining

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Comment Number: 0002204\_Trowbridge\_20160602-1

Commenter I: Geoffrey Trowbridge

Comment Excerpt Text:

I believe coal mining is a bad, bad idea, and should ultimately be phased out, in the United States, and in every part of the world. It is clearly one of the worst and most carbon-polluting forms of energy production that exists, and it's already caused irreparable and long-term harm to our planet's health, to our ecosystems in particular areas, and to human health as well, especially in my native region of Southern Appalachia.

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Comment Number: 0002207\_Campbell\_20160622-1

Commenter I: Cate Campbell

Comment Excerpt Text:

I support the phasing out of the federal coal leasing program.

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Comment Number: 0002208\_Manole\_20160622-1

Commenter I: Bogdana Manole

Comment Excerpt Text:

I am writing to oppose the continuation of leasing public lands to fossil fuel mining.

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Comment Number: 0002209\_Williamson\_20160627-2

Commenter I: Kirt Williamson

Comment Excerpt Text:

I support the BLM for putting continued restrictions on the Coal industry and believe that we must leave fossil fuels in the ground.

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Comment Number: 0002210\_Gabbay\_20160621-3

Commenter I: Deirdre Gabbay

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Comment Excerpt Text:

We have a choice right now:

(a) continue subsidies that continue to advantage coal relative to other fuels Or

(b) to reduce any artificial incentives to burn coal – such as government subsidies – immediately.

Please do (b). The quicker we move to a clean energy planet, the less devastating the effects will be in the future for our children and for the planet's living systems.

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Comment Number: 0002211\_Russell\_20160620-1

Commenter I: Holly Russell

Comment Excerpt Text:

I am writing to ask you to NOT increase coal lease payments or to make the leasing process any more burdensome.

---

Comment Number: 0002213\_Tregellas\_20160619-1

Commenter I: Sheryl Tregellas

Comment Excerpt Text:

I support the opinion of Doc Hastings, WA 4th District, House of Reps from 1995--2015, as stated in Seattle Times Sunday June 19. Do not kill the coal program.

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Comment Number: 0002214\_Hopper\_20160622-1

Commenter I: Carolyn Hooper

Comment Excerpt Text:

I am writing in opposition to Senator Daines beliefs - It is Not absurd that the Obama administration recognizes the long term effects of burning coal on the health of the planet , its people and all living beings with which we share the planet. While it is true that we will need to burn coal for the foreseeable future, it is NOT true that we must live with the unhealthy effects of coal for many generations.

Therefore I stand WITH the President of the United States in his recognition of what we have done to the our (at this point in time) only home. The regulations are not job killing. Coal miners and operators of plants can learn new jobs in the industries that are better for all of us.

---

Comment Number: 0002216\_Bard\_20160619-1

Commenter I: Eric Bard

Comment Excerpt Text:

Even without considering climate change, strip mining, developing, and burning of coal has a high cost to our environment, creates air pollution, and is a detriment to our economy in terms of limiting recreation and tourism potential on and around our public lands. We also know that coal use is driving increased global warming/climate change as a major contributor of greenhouse gases to our atmosphere.

---

Comment Number: 0002216\_Bard\_20160619-2

Commenter I: Eric Bard

Comment Excerpt Text:

I urge you to put a full stop to selling of federal coal leases.

---

Comment Number: 0002217\_Maxwell\_20160619-2

Commenter I: Gary Maxwell

Comment Excerpt Text:

The simple fact is that we have to stop burning carbon based fuels and leave natural resources such as coal deposits in the ground.

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Comment Number: 0002220\_Andersen\_20160601-1

Commenter I: Nicole Andersen

Comment Excerpt Text:

I support leaving coal in the ground. No new mines.

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Comment Number: 0002220\_Andersen\_20160601-2

Commenter I: Nicole Andersen

Comment Excerpt Text:

Leave the coal in the ground, no new leases.

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Comment Number: 0002221\_Anderson\_20160524-1

Organization I: University of Utah

Commenter I: Samuel Anderson

Comment Excerpt Text:

Given this threat, I believe that the BLM should address the environmental impacts of leasing coal mines first. The fossil fuel industry isn't sustainable and tightening environmental regulations on coal leasing would help toward the transition to cleaner, renewable energy sources. I'm not saying that we should stop coal leasing entirely, but that the BLM should seriously consider the environmental impacts both at the source and where the coal is being used.

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Comment Number: 0002225\_Wheeler\_20160519-7

Commenter I: Ray Wheeler

Comment Excerpt Text:

I support a total and immediate end to any new coal leases and the fastest possible complete termination of existing leases.

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Comment Number: 0002227\_Hyche\_20160630-1

Commenter I: Kenneth Hyche

Comment Excerpt Text:

This program needs to end and not be restarted.

---

Comment Number: 0002230\_Ginn\_20160627-1

Commenter I: Darren Ginn

Comment Excerpt Text:

We must reinvent and realign the fossil fuel industry putting the health of our planet first.

---

Comment Number: 0002232\_Mungai\_20160619-1

Commenter I: Joseph Mungai

Comment Excerpt Text:

Keep fossil fuels in the ground.

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Comment Number: 0002234\_DeWitt\_20160622-1

Commenter I: Ward DeWitt

Comment Excerpt Text:

in the short-term we need energy and coal can supply that energy. We have the time to further develop alternate sources, but we need coal now, not only for the benefit of the energy supplied, but for the jobs provided.

---

Comment Number: 0002236\_Semple\_20160622-1

Commenter I: Toni Semple

Comment Excerpt Text:

I am writing to support the federal administration's plan to levy a carbon tax and to begin phasing out coal production in the U.S., particularly in Montana.

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Comment Number: 0002236\_Semple\_20160622-2

Commenter I: Toni Semple

Comment Excerpt Text:

Please do not permit coal extraction on public lands in ANY state, but particularly Montana

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Comment Number: 0002237\_Hilden\_20160622-1

Commenter I: Alan Hilden

Comment Excerpt Text:

I whole heartedly support President Obama's coal initiatives.

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Comment Number: 0002237\_Hilden\_20160622-4

Commenter I: Alan Hilden

Comment Excerpt Text:

We need to focus more on environmentally safe and clean ways of producing power as well as conservation to reduce energy demand.

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Comment Number: 0002239\_Baierlein\_20160621-8

Organization I: Conservation Northwest

Commenter I: Jeff Baierlein

Comment Excerpt Text:

And so we call on the BLM to modernize the Federal coal program to take powerful and effective measures to protect the lands and waters upon which all life depends, to provide taxpayer equity, to support economic diversification in coal communities, and to lead a transition to a clean energy economy, which will provide a brighter and better future for us all.

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Comment Number: 0002241\_Hodgin\_20160701-1

Commenter I: Jeri Hodgin

Comment Excerpt Text:



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The continued use of coal cannot be condoned in light of the devastating environmental effects of our ongoing use of fossil fuels. This is especially true when the advances made in alternative clean forms of energy are so great.

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Comment Number: 0002241\_Hodgin\_20160701-2

Commenter I: Jeri Hodgin

Comment Excerpt Text:

I do not want our public lands to be leased to any entity that will further the negative effects of climate change.

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Comment Number: 0002253\_Fribley\_20160719-1

Commenter I: Stephen Fribley

Comment Excerpt Text:

I am writing to express my full support for the revamping of our federal coal leasing policy.

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Comment Number: 0002254\_Simmons\_20160707-2

Commenter I: Patricia Simmons

Comment Excerpt Text:

Programmatic EIS on federal coal leasing is critical and needs an overhaul.

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Comment Number: 0002258\_Smith\_20160705-1

Commenter I: Douglas Smith

Comment Excerpt Text:

Let's keep all that unburned fossil fuel in the ground, where it belongs, and devote our energies (pardon the pun) to going solar.

---

Comment Number: 0002262\_Merrill\_20160709-1

Commenter I: Laura Merrill

Comment Excerpt Text:

We ask for a permanent, total end to all new coal on public lands, for a full and just transition to clean energy now, for good jobs for all coal workers, and for a way forward that will be lifegiving for all Americans and for everyone on the planet.

---

Comment Number: 0002266\_Simonson\_20160711-4

Commenter I: David Simonson

Comment Excerpt Text:

I oppose the leasing moratorium and new taxes on our electricity and the attack on these high value high quality jobs provided by the Powder River Basin mines.

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Comment Number: 0002267\_Duncan\_20160713\_WyBusinessAlliance-2

Organization I: Wyoming Business Alliance

Commenter I: Bill Schilling

Comment Excerpt Text:

When it comes to coal and the leasing program, it appears that the Administration in Washington believes that moving away from a carbon economy will be beneficial to the nation. The Wyoming Business Alliance disagrees, believing that economic prosperity, and progress, for our nation depend on affordable and reliable energy.

Comment Number: 0002268\_Hunter\_20160713-1

Commenter I: Rhonda Hunter

Comment Excerpt Text:

I am asking for the "no action alternative" to new coal leases on federal lands in the Federal Coal Program.

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Comment Number: 0002268\_Hunter\_20160713-3

Commenter I: Rhonda Hunter

Comment Excerpt Text:

Keep it in the Ground!

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Comment Number: 0002270\_Gerst\_20160715-1

Commenter I: Gery Gerst

Comment Excerpt Text:

I support a "no action alternative" to new coal leases on federal lands.

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Comment Number: 0002271\_Dafoe\_20160714\_WAITC-3

Organization I: Wyoming Agriculture in the Classroom

Commenter I: Jessie Dafoe

Comment Excerpt Text:

Approximately 35% of electricity generation nationwide comes from coal, and Wyoming provides about 40% of that coal.

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Comment Number: 0002272\_BURNHAM\_20160707-2

Commenter I: Bruce Burnham

Comment Excerpt Text:

I am writing to urge you and the BLM to honor the U.S. commitment to fight climate change by phasing out the federal coal leasing program and keeping public coal in the ground, unburned.

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Comment Number: 0002273\_Blagg\_20160714-1

Commenter I: Merna Blagg

Comment Excerpt Text:

This fossil fuel should now stay in the ground and with our highly technical possibilities for using renewable resources there is no excuse except the greed.

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Comment Number: 0002276\_Henderson\_20160715\_350Colorado-9

Organization I: 350 Colorado Board of Directors

Comment Excerpt Text:

We applaud the review of the federal coal program and guidelines governing coal mining on public lands. Many important elements, guidelines, and standards are substantially outdated and need major reform to reflect current conditions and policies and to align with evolving climate-related policies.

Our foremost desire is for the coal to stay in the ground.

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Comment Number: 0002277\_Thatcher\_20160716-1

Commenter I: Joan Thatcher

Comment Excerpt Text:

Let's put coal to rest. It needs to die for the sake of our planet and humanity.

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Comment Number: 0002281\_Woodcock\_20160717-1

Commenter I: William Woodcock

Comment Excerpt Text:

The sale of coal leases for outrageously low prices that fail to include the cost of reclamation and the failure of the coal companies to develop serious reclamation plans are reason enough to undertake a rigorous reevaluation and reform of the US government coal program. We must have a new energy plan for the nation that terminates public coal subsidies, is based on public transparency, and acknowledges the actual effects of coal mining, including climate change, and holding mining companies to reclaim mined land before receiving any more public coal.

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Comment Number: 0002283\_Gorzalski\_20160719\_GOB-1

Organization I: Great Old Broads for Wilderness

Commenter I: Chris Gorzalski

Comment Excerpt Text:

In light of the overwhelming evidence that climate change is occurring at a dramatic pace, we believe leasing land for coal mining is not ethically responsible. Our public lands can be part of the solution to global warming but not if they are used for coal extraction.

President Obama has recognized the need to reassess our policies regarding new coal leases when he placed the moratorium currently in effect. The coal industry is in a state of decline, with bankruptcies occurring. We need to place our economic resources with the development of clean technologies and the training of coal workers in the same.

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Comment Number: 0002300\_Csenge\_20160710-3

Commenter I: Rich Csenge

Comment Excerpt Text:

halt all further leasing of coal on Federal lands

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Comment Number: 0002303\_Steitz\_20160705-4

Commenter I: Jim Steitz

Comment Excerpt Text:

Only a full termination of federal coal leasing will reflect the understanding that no cost--benefit calculation exists, by which the Department of Interior may conclude that the sale of these fossil fuels is in the public interest, or represents a rational or reasonable allocation of the natural resources under Interior Department management

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Comment Number: 0002315\_Stewart\_UnitedChurchChirst\_20160722-1

Organization I: Creation Justice Ministries

Commenter I: Shantha Alonso

Comment Excerpt Text:

Already, we know that coal extracted from public lands is an important source of energy and revenue for the United States.

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Comment Number: 0002318\_Gordon\_20160722-5

Commenter I: Diana L. Gordon

Other Sections: 6

Comment Excerpt Text:

Climate change is amply demonstrated by the number of super storms we are now experiencing. Burning coal causes illness, scars our landscape, ties up our railroads, and threatens our way of life.

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Comment Number: 0002318\_Gordon\_20160722-6

Commenter I: Diana L. Gordon

Comment Excerpt Text:

Please cut back and eventually phase out this program.

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Comment Number: 0002318\_Gordon\_20160722-7

Commenter I: Diana L. Gordon

Comment Excerpt Text:

By far the best approach for all concerned is to curtail this leasing program severely.

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Comment Number: 0002322\_Gordon\_20160722-1

Commenter I: Thomas Gordon

Comment Excerpt Text:

Please severely limit or stop coal leases on federal lands.

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Comment Number: 0002324\_Dubbert\_20160722\_BME-4

Organization I: Blue Mountain Energy

Commenter I: Jeffrey C Dubbert

Comment Excerpt Text:

The coal leasing program works well as currently administered. BME believes the system is as competitive as allowed by the free market.

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Comment Number: 0002324\_Dubbert\_20160722\_BME-7

Organization I: Blue Mountain Energy

Commenter I: Jeffrey C Dubbert

Comment Excerpt Text:

According to the U.S. Energy Information Administration (EIA) projections, by the year 2040 the world will increase its energy consumption by 48%. While coal is projected to be a slow growth energy source, the EIA is still projecting the demand for coal in 2040 will exceed usage in 2016. Coal and other fossil fuels are part of the future. It is BME's and the Interior Department's responsibility to future generations to prudently ensure that power is available to maintain economic vibrance and a high quality standard of living.

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Comment Number: 0002324\_Dubbert\_20160722\_BME-8

Organization I: Blue Mountain Energy

Commenter I: Jeffrey C Dubbert

Comment Excerpt Text:

In closing, BME believes the leasing program currently in place meets the needs of the coal companies extracting the coal, the government and people that expect a return on its resource and the end user who depends upon the power to be available.

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Comment Number: 0002326\_Moench\_20160724\_UtahPhysicHealthyEnviron-37

Organization I:Utah Physicians for a Healthy Environment

Commenter I:Malin Moench

Comment Excerpt Text:

it will weaken the nation's energy security by providing artificial incentives to sell the nation's lowest-cost, most easily accessed coal overseas

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Comment Number: 0002326\_Moench\_20160724\_UtahPhysicHealthyEnviron-6

Organization I:Utah Physicians for a Healthy Environment

Commenter I:Malin Moench

Comment Excerpt Text:

Finally, the Powder River Basin must be formally recertified as a Coal Production Region so that market demand (particularly the demand from the export market) and the social and environmental impacts of the Federal coal leasing program are properly taken into account in decisions to lease this critically important public resource

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Comment Number: 0002326\_Moench\_20160724\_UtahPhysicHealthyEnviron-77

Organization I:Utah Physicians for a Healthy Environment

Commenter I:Malin Moench

Comment Excerpt Text:

The PRB has grown to become the country's largest coal producing region, and the mining industry is trying to build five new deep-water terminals in the Pacific Northwest to export PRB coal to the burgeoning market. No one can say with a straight face that the PRB isn't "producing" coal. This undeniable reality, by itself, requires recertifying it as a Coal Production Region

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Comment Number: 0002327\_Everdean\_20160724-4

Commenter I:Jo Everdean

Comment Excerpt Text:

mountaintop removal as a method of coal mining mechanizes a process that used to provide many jobs. It not only has this negative socioeconomic impact but also has a devastating impact on the environment. This method of coal mining should be banned from public lands.

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Comment Number: 0002328\_Paddock\_20160724-18

Commenter I:Brian Paddock

Comment Excerpt Text:

I have not analyzed the exist coal leasing program law and regulation to see what steps must be taken to cease all further leasing, to terminate existing extraction contracts, consistent with law and due process. An analysis of how to end extraction of coal from federal lands should be offered in the draft PEIS and subject to public analysis and comment. This is a minimum first step along the path to ending coal extraction from federal lands.

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Comment Number: 0002328\_Paddock\_20160724-19

Commenter I:Brian Paddock

Comment Excerpt Text:

Recognizing and starting the process for ending coal extraction is wholly consistent with the climate change response policies of the Department.

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Comment Number: 0002328\_Paddock\_20160724-21

Commenter I: Brian Paddock

Comment Excerpt Text:

The PEIS must recognize that ending the federal coal leasing program is mandatory for our survival as one of a multitude of actions we must take to avoid the worst. I ask you to take this step as one well supported by science and necessity.

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Comment Number: 0002328\_Paddock\_20160724-3

Commenter I: Brian Paddock

Other Sections: I

Comment Excerpt Text:

We must end the Federal Coal Leasing Program to increase U.S. moral authority while advocating for the U.K.'s return to a science based effort to reduce its GHG releases.

<https://www.theguardian.com/environment/2016/jul/15/decc-abolition-major-setback-for-uk-climate-change-efforts>

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Comment Number: 0002332\_Ariowitsch\_20160725-1

Commenter I: Monica Ariowitsch

Comment Excerpt Text:

I am writing to urge you to NOT lease out our public lands to any coal interests. Environmental, health concerns need to be our priority

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Comment Number: 0002335\_Webber\_20160725\_HealthActionNM-3

Organization I: Health Action New Mexico

Commenter I: Barbara Webber

Other Sections: I

Comment Excerpt Text:

According to New Mexico's Energy, Minerals, and Natural Resources Department (1), over 23 million tons of coal were produced from New Mexico coal mines in 2010. As of 2012, four of the nine permitted mines in New Mexico were producing and much of that coal is publicly owned and managed by the federal government.

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Comment Number: 0002339\_Satterfield\_20160726\_IECA-3

Organization I: Industrial Energy Consumers of America (IECA)

Commenter I: Marnie Satterfield

Comment Excerpt Text:

In their notice of intent, BLM states that worldwide demand for coal has decreased and will continue to do so. They continue, "declining natural gas prices and other factors made coal less competitive as a fuel for generating electricity." (5) Those "other factors" include the continued overregulation of an already struggling coal industry by the BLM and other agencies within this Administration.

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Comment Number: 0002339\_Satterfield\_20160726\_IECA-4

Organization I: Industrial Energy Consumers of America (IECA)

Commenter I: Marnie Satterfield

Other Sections: I

Comment Excerpt Text:

Since 2009, over 100 environmental-related rules were published in the Federal Register. Many of these rules

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were directed towards the coal industry. These rules have economic impacts that measure in the billions of dollars in new compliance costs. (6) BLM correctly states that “a number of mines in the U.S. have idled production, companies have asked the BLM to hold off on processing certain lease tracts for sale, several major coal companies have entered Chapter 11 bankruptcy, many coal miners have been laid off, and coal-dependent communities have suffered.”

6) Hearing on “A Review of EPA’s Regulatory Activity During the Obama Administration: Energy and Industrial Sectors,” U.S. House of Representatives Committee on Energy and Commerce, <http://docs.house.gov/meetings/IF/IF03/20160706/105153/HHRG-114-IF03-20160706-SD002.pdf>.

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Comment Number: 0002342\_Etter\_20160726-4

Organization I: Bowie Resources, LLC

Commenter I: Art Etter

Comment Excerpt Text:

The percentage of our nation’s power generated by both coal and natural gas has changed little over the last ten years. In 2006, both coal and gas shared 69% of total generation, with coal at 49% and gas at 20%. In 2015, both coal and gas shared 66% of the total, with both coal and gas sharing an even split of 33%, and wind and solar sharing 5.3% of the market.

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Comment Number: 0002342\_Etter\_20160726-7

Organization I: Bowie Resources, LLC

Commenter I: Art Etter

Comment Excerpt Text:

I ask that the Department of Interior resist making more restrictive change to the federal coal leasing process. The list of perceived environmental issues describing in the Department’s public scoping document are impossible to understand by people who have a close relationship with the industry.

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Comment Number: 0002390\_Pfister\_20160721-12

Organization I: Northern Plains Resource Council

Commenter I: Ellen Pfister

Comment Excerpt Text:

In the years since the BLM leasing process was last looked at under Reagan, certain changes have taken place in the way it has evolved, and I believe that it is now time to do so again

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Comment Number: 0002390\_Pfister\_20160721-2

Organization I: Northern Plains Resource Council

Commenter I: Ellen Pfister

Comment Excerpt Text:

Now is a good time for BLM to stop and take an assessment of its procedures. The coal industry is in a great state of flux now, and a re-examination of BLM’s procedures to determine how it wants its federal coal reserves handled for future use can help the coal industry determine its future.

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Comment Number: 0002391-6

Commenter I: Tom Tully

Comment Excerpt Text:

The BLM should plan for the orderly decline of coal mining in the U.S. and in the West. Much of the federally

owned coal under control of the BLM is interspersed with privately owned coal, or coal owned by the states, so how the BLM manages their coal has a tremendous impact on a contiguous coal field.

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Comment Number: 0002449\_Lyon\_20160727\_NWF-23

Organization I: National Wildlife Federation Action Fund

Commenter I: Jim Lyon

Comment Excerpt Text:

This coal leasing reform process comes at a critical time. The coal industry is rapidly changing, coal use is declining, our energy sector is transforming towards cleaner sources of generation, and coal companies are facing increasing financial difficulties making ends meet and delivering on required environmental obligations. Between 2008 and 2013, U.S. coal production fell by 16% and worldwide exports are dropping too, with a 21% decline from 2014 to 2015. (1) Secretary of Interior, Order No. 3338 (Jan 15, 2016) at 5.

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Comment Number: 0002449\_Lyon\_20160727\_NWF-25

Organization I: National Wildlife Federation Action Fund

Commenter I: Jim Lyon

Comment Excerpt Text:

The scope of federal coal program is substantial and has wide-ranging impacts. The production of federally managed coal accounts for about 41% of all coal produced in the nation and BLM is responsible for coal leasing on approximately 570 million acres. (4) According to the Secretary's Order, federal coal generated about 14% of the country's electricity in 2015 and accounts for about 10% of total U.S. GHG emissions. (5) Federal coal is leased from Appalachia to Alaska, but most of the federal coal production (85%) occurs in the arid region of Wyoming and Montana known as the Powder River Basin (6).

(4) Id.

(5) Id. at 2 and 4.

(6) Id at 2.

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Comment Number: 0002449\_Lyon\_20160727\_NWF-30

Organization I: National Wildlife Federation Action Fund

Commenter I: Jim Lyon

Other Sections: I

Comment Excerpt Text:

It is also important to detail the rapidly changing coal market. Coal use in the United States has been in a steady decline since 2005 and is approaching historic lows. (22) While coal use has risen and fallen over the last 60 years, shifting market forces such as a burgeoning renewable energy industries like wind and solar, cheaper gas along with an evolving regulatory and political landscape that better patrols the harmful effects of coal combustion have made it uneconomical to build new coal plants and have worked to take many existing plants off-line.

(22) U.S. Energy Information Administration, Monthly Energy Review (June 2016) at Tbl. I Primary Energy Consumption by Source, available at [http://www.eia.gov/totalenergy/data/monthly/pdf/sec1\\_7.pdf](http://www.eia.gov/totalenergy/data/monthly/pdf/sec1_7.pdf).

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Comment Number: 0002449\_Lyon\_20160727\_NWF-31

Organization I: National Wildlife Federation Action Fund

Commenter I: Jim Lyon

Comment Excerpt Text:

As stated above, coal mining on federal public land accounts for 41% of all coal produced in the United States, 85% of which originates in the Powder River Basin of Wyoming and Montana. Three companies in particular



dominate federal coal production: Peabody Energy, Arch Coal, and Cloud Peak Energy. Two of these companies, Arch Coal and Peabody Energy, have recently declared bankruptcy. Federal coal accounted for 88% of Cloud Peak Energy's total coal production, 83% of Arch Coal's, and 68% of Peabody Energy's total 2014 US coal production. (70)

(70) Greenpeace, Corporate Welfare for Coal: The biggest coal mining companies depend on subsidized federal coal, even as they attack federal climate and clean air policies (March 2016) at 3, available at <http://www.greenpeace.org/usa/wp-content/uploads/2016/03/corporate-welfare-for-coal.pdf?f3025c>.

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Comment Number: 0002449\_Lyon\_20160727\_NWF-35

Organization I: National Wildlife Federation Action Fund

Commenter I: Jim Lyon

Other Sections: I

Comment Excerpt Text:

The coal industry is in a period of rapid transition as the United States and world energy markets shift speedily away from coal due to changing fuel prices, concerns of over carbon pollution, and the development of cleaner, often cheaper, fuel and energy sources. Unlike other periods in coal's history, these changes appear to be long term and signal the end of the dominance of coal as a source of electric and power generation. It is important DOI and BLM's reform of the coal program account for this seismic shift in the coal and energy sector.

Until recently, coal had been by a significant number the primary source of electricity generation at over or about 40% of all generation, but production and use are falling fast. (78) The numbers paint a clear picture. In 2016, coal production is on pace to fall 16.7%, a 25% decrease in coal production since 2014. The largest production cuts to come from the Appalachian and western regions, at 15% and 20%, respectively. (79) This falling production comes in the face of falling demand. According to the U.S. Energy Information Administration, domestic coal-fired generators burned an average of 948 million tons annually from 1997 through 2015 compared to a projected 682 million tons for 2016. (80) Last month, the government projected coal would account for roughly 31% of the nation's electricity needs to natural gas' 33.9% in 2016, but the latest projections have coal providing roughly 30.5% of generation to natural gas' 34%. (81)

(78) U.S. Energy Information Administration, Annual Energy Review 2011 at 185-218 (Sept. 2012), available at <http://www.eia.gov/totalenergy/data/annual/pdf/aer.pdf>.

(79) Institute for Energy Economics and Financial Analysis, EIA: 2016 Will Mark Biggest U.S. Coal Production Decline on Record (May 11, 2016), available at <http://ieefa.org/eia-2016-will-mark-biggest-u-s-coal-production-decline-record/>.

(80) Id.

(81) Id.

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Comment Number: 0002461\_breen\_20160728-2

Organization I: The Wilderness Society

Commenter I: Katie Breen

Comment Excerpt Text:

Reforming our federal coal program represents a solution to coal's decline on the energy market. Its contribution to overall electricity dropped to its smallest ever, 29%, in January 2016 and to mine for remaining coal in hard-to-reach places is getting more expensive. As alternative forms of energy grow, coal phases out. If the coal program is not reformed, then the coal program will continue as a faulty, outdated system.

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Comment Number: 0002462\_Compton\_20160728\_UtahMineAssoc-I I

Organization I: Utah Mining Association

Commenter I: Mark Compton

Comment Excerpt Text:

With respect to the PEIS, UMA believes DOI should elect to continue the current federal coal program without any modifications, or better yet, lower the federal royalty rate and improve the efficiency of the program.

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Comment Number: 0002462\_Compton\_20160728\_UtahMineAssoc-6

Organization I:Utah Mining Associaton

Commenter I:Mark Compton

Comment Excerpt Text:

Coal is a Critical Energy Resource for Utah and the World

Most of the coal produced in Utah stays in Utah, and almost all of that goes to generate electricity. In fact, coal provides roughly 75% of the electricity in the state. It's no coincidence that states like Utah with high levels of coal generation of electricity offer the lowest electricity costs in the country.

That low cost of electricity is good for Utah families and businesses. Energy costs are rising, in part due to short-sighted regulations that make coal-fired electricity generation costly if not impossible. Families are paying a higher and higher percentage of their monthly income towards energy, forcing them to forego other expenses and in some cases making it difficult just to pay rent.

Utah is well-known nationally as a business friendly state, with a low burden of regulation and low cost of doing business. One of Utah's advantages to attracting businesses, manufacturing and high-tech jobs is our low cost of electricity. Affordable coal-generated power makes Utah more competitive and a great place to do business and raise a family.

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Comment Number: 0002465\_Burnham\_20160728\_BurnhamCoal-1

Organization I:Burnham Coal, LLC

Commenter I:Bob Burnham

Comment Excerpt Text:

The federal coal leasing program isn't broken and there is no need to "fix" it.

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Comment Number: 0002471\_Reed\_20160728-8

Organization I:High Country Conservation Advocates

Commenter I:Matt Reed

Other Sections: 1

Comment Excerpt Text:

Gunnison County is home to historic and active coal mining. The northern area of the county includes part of the Somerset coal field, where production totals averaged approximately 11.2 million tons per year for the five years ending in June 2014.<sup>1</sup> Production for the year ending in June 2015 was 8.009 million tons.<sup>2</sup> The BLM currently manages several active and proposed federal coal leases at the West Elk mine in Gunnison County. The West Elk is an actively producing long-wall, underground coal mine, producing approximately 5.2 million tons of coal in 2015.<sup>3</sup> It is owned by St. Louis-based Arch Coal Company, which filed for bankruptcy in January.<sup>4</sup>

(1) Bureau of Land Management, Uncompahgre Field Office Draft Resource Management Plan and Environmental Impact Statement, Volume I (May 2016), at 3-126.

(2) Id.

(3) See Colorado Division of Reclamation, Mining and Safety, Monthly Coal Summary Report, Period 1/2015 through 12/2015 (Feb. 16, 2016), available at <http://mining.state.co.us/SiteCollectionDocuments/12Summary15.pdf> (last viewed July 28, 2016).

(4) See <http://www.wsj.com/articles/arch-coal-files-for-bankruptcy-1452500976> (last viewed July 28, 2016).

Comment Number: 0002478\_Haggerty\_20160728\_HeadwaterEcon-17

Organization I:Headwaters Economics

Commenter I:Mark Haggerty

Other Sections: I

Comment Excerpt Text:

Federal coal is a large share of total U.S. coal production. In 2015, 409 million tons of coal was extracted from federal coal leases, 13 more than 43 percent of total coal production nationally (943 million tons).<sup>14</sup>

Federal coal extraction is located predominantly in the West. In 2014, Wyoming hosted 80 percent of total federal coal extraction, and combined with Colorado, Utah, New Mexico, and Montana, the West hosts over 98 percent of all federal coal extraction.<sup>15</sup>

Coal extraction is highly concentrated geographically. Nationally, the BLM administers 306 coal leases.<sup>16</sup> As of February 2015, active BLM coal leases were located in 47 individual mines located in 28 counties, including seven counties in Colorado, five counties in Wyoming, and four counties in Montana.<sup>17</sup>

(13) "Federal Reported Sales Volume, Sales Value, and Royalty Revenue, Fiscal Years 2003 to 2015 by Sales Year," Office of Natural Resources Revenue, Washington, D.C., <http://statistics.onrr.gov/>.

(14) U.S. Department of Labor, Mine Safety and Health Administration. "Employment/Production Data Set (Quarterly)," U.S. Department of Labor, Mine Safety and Health Administration, Washington, D.C., <http://arlweb.msha.gov/OpenGovernmentData/OGIMSHA.asp>.

(15) "Federal Reported Sales Volume, Sales Value, and Royalty Revenue, Fiscal Years 2003 to 2015 by Sales Year," Office of Natural Resources Revenue, Washington, D.C., <http://statistics.onrr.gov/>.

(16) "Programmatic Environmental Impact Statement on Federal Coal Program," U.S. Department of Interior, Bureau of Land Management, [http://www.blm.gov/wo/st/en/prog/energy/coal\\_and\\_nonenergy/details\\_on\\_coal\\_peis.html](http://www.blm.gov/wo/st/en/prog/energy/coal_and_nonenergy/details_on_coal_peis.html).

<sup>17</sup> U.S. Bureau of Land Management, "Cross Reference of BLM Coal Lease Serial Numbers and MSHA Identification Numbers, February 3, 2015." 1278-FOIA (860), FOIA# 2015-00462.

[See Figure 1: Federal Coal Production and Production Value by State in 2014]

Comment Number: 0002478\_Haggerty\_20160728\_HeadwaterEcon-18

Organization I:Headwaters Economics

Commenter I:Mark Haggerty

Other Sections: I

Comment Excerpt Text:

Federal coal production has grown significantly in the last 40 years. Federal coal increased from 130 million tons in 1982 (15% of total U.S. production) to a high of 507 million tons in 2002 (46% of total U.S. production).<sup>24</sup>

Productivity advantages and declining rail shipment costs in the Powder River Basin led to a shift in coal extraction from the East to the West.<sup>25</sup>

[See Figure 2: Coal Production in the West versus the Non-Western States, 1983-2014]

(24) "Federal Reported Sales Volume, Sales Value, and Royalty Revenue, Fiscal Years 2003 to 2015 by Sales Year," Office of Natural Resources Revenue,

<http://statistics.onrr.gov/>; "Employment/Production Data Set (Quarterly)," U.S. Department of Labor, Mine Safety and Health Administration, Washington, D.C., <http://arlweb.msha.gov/OpenGovernmentData/OGIMSHA.asp>.

(25) Shelby Gerking and Stephen F. Hamilton, "What explains the increased utilization of Powder River Basin coal in electric power generation?" *American Journal of Agricultural Economics* 90, no. 4 (2008): 933-950.

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Comment Number: 0002478\_Haggerty\_20160728\_HeadwaterEcon-19

Organization I:Headwaters Economics

Commenter I:Mark Haggerty

Other Sections: 1

Comment Excerpt Text:

Less coal will be produced in the future. More recently, federal coal production is down from a high of 482 million tons in 2015.

Production is expected to remain at lower levels for several reasons:

-Hundreds of coal-fired power plants have retired since 2010. Retirements tended to be older and smaller plants and account for only a small share of total coal generating capacity. Coal-fired retirements in 2015 totaled 4.6 percent of total coal-fired generating capacity.<sup>26</sup>

-New capacity is being added in natural gas and renewable energy.

-Competition with natural gas has resulted in decreased utilization of existing coal-fired power generation capacity. The average capacity factor (the rate at which coal-fired power plants are operated) for coal plants declined from nearly 70 percent in 2010 to 55 percent in 2015.<sup>27</sup> The reduction in utilization reflects increased competition with natural gas which is displacing coal generation.

(26) "Today in Energy: Coal made up more than 80% of retired electricity generating capacity in 2015," March 18, 2016, U.S. Energy Information Administration, <http://www.eia.gov/todayinenergy/detail.cfm?id=25272>.

(27) "Today in Energy: Average utilization for natural gas combined-cycle plants exceeded coal plants in 2015," April 4, 2016, U.S. Energy Information Administration. <http://www.eia.gov/todayinenergy/detail.cfm?id=25652>.

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Comment Number: 0002480\_Culver\_20160728\_TWS-3

Organization I:The Wilderness Society

Commenter I:Nada Culver

Other Sections: 2

Comment Excerpt Text:

Principal Recommendations.

While we include specific recommendations with each section of these comments, we wanted to highlight some of the key recommendations for the preparation of the PEIS and reform of the federal coal program, which include:

- The coal program must be designed and implemented in the "public interest" and must provide a fair return to taxpayers.
- The process for determining lands "acceptable for further consideration for leasing" must be fully complied with at the land use planning and leasing stage, including applying and updating the unsuitability criteria, considering effects on other multiple uses and developing a reasonably foreseeable development scenario
- The BLM should "take control" of the federal coal leasing program and develop a multi-year leasing program that replaces the current, industry-driven lease by application process, and can incorporate applicable elements from the Solar PEIS and oil and gas Master Leasing Plans.
- BLM must put in place a regional mitigation strategy based on landscape scale analyses to support coal leasing decisions, and coal leasing must proceed only if it is shown there will be a "net benefit" to society resulting from leasing and development.
- BLM must address climate change impacts and commitments by tracking emissions, analyzing impacts,

developing a carbon budget and applying compensatory mitigation where impacts cannot be avoided or sufficiently minimized.

· The PEIS should include planning for a future with declining coal production, addressing socio-economic impacts and considering tools to assist coal-dependent communities.

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Comment Number: 0002480\_Culver\_20160728\_TWS-58

Organization I: The Wilderness Society

Commenter I: Nada Culver

Other Sections: 2

Comment Excerpt Text:

Due especially to the time since the last programmatic review, many of the central, underlying elements of the federal coal program need to be reviewed and updated in the PEIS. These include the definition of “public interest,” fair market value, royalties, rental rates, bonus bids, bonding standards and qualifications to hold a federal coal lease. Ensuring these elements are defined and updated in a manner that fulfills the BLM’s commitments and obligations as steward of our public lands is a vital part of ensuring the federal coal program is operated responsibly.

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Comment Number: 0002482\_Jones\_20160728\_NAM-1

Organization I: National Association of Manufacturers

Commenter I: Ross Eisenburg

Comment Excerpt Text:

Coal is a vital component of the nation’s “all of the above” energy strategy that is fueling a manufacturing comeback. The NAM supports policies that promote the leasing, exploration and development of the nation’s coal resources in an environmentally sound manner.

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Comment Number: 0002488\_Sanderson\_20160728-21

Organization I: Colorado Mining Association

Commenter I: Stuart Sanderson

Comment Excerpt Text:

BLM must consider the cost to the coal industry of making it impossible to develop coal resources, without incurring costs that will cripple the industry. The cumulative activities across various Federal agencies and departments ranging from this government action, to Planning 2.0, to the ONNR rules, to the OSM rules, must be considered before moving forward with the PEIS, because in many cases the concerns raised here have already been addressed, or are currently being addressed. These tiered actions not only create redundant compliance issues, but will increase timing of permitting instead of simplifying the process.

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Comment Number: 0002490\_Emrich\_20160728\_CloudPeakEnergy-38

Organization I: Cloud Peak Energy Inc.

Commenter I: Andrew C. Emrich, P.C.

Other Sections: 1

Comment Excerpt Text:

Throughout the public listening sessions on changes to the federal coal program, BLM and Department of the Interior officials were bombarded with claims about “loopholes” in the royalty valuation system and underpayment of royalties by coal producers. These allegations were almost always based on two so-called “Headwaters Studies.”<sup>7</sup> Headwaters Economics (“Headwaters”) is an environmental advocacy group that falsely claims to be independent and non-partisan. Cloud Peak Energy incorporates by reference its comments on BLM’s coal listening sessions and the attached peer review on the

Headwaters Studies that refute its claims to be “an independent, non-partisan organization.” See Attachment 8, Energy Ventures Analysis, “A Peer Review of Previous Studies by Headwaters Economics” (Sept. 16, 2015).

(7) The Headwaters Studies are available at <http://headwaterseconomics.org/wphw/wp-content/uploads/Report-Coal-Royalty-Reform-Impacts.pdf>.

In two advocacy pieces (January 2015 and May 2015), Headwaters claimed to show that a “loophole” existed in current ONRR royalty valuation of non-arms’ length transactions and that coal producers evaded full royalty payment even in arms’ length transactions. Despite the fact that ONRR receives the sale contracts and details for every sale of federal coal and could readily contradict these unfounded allegations by Headwaters, ONRR has chosen not to do so. Cloud Peak Energy therefore contracted Energy Ventures Analysis (“EVA”) to undertake a peer review of the Headwaters Studies to determine if their data and methodologies were sound. The EVA peer review report categorically demonstrates that Headwaters used faulty data to draw unsupported conclusions and that the allegations of “loophole” exploitation to evade full royalty payment, as well as claims of underpayment of royalties on arms’ length transactions, are patently false. The EVA peer review arrived at the following conclusions:

- There is no basis for Headwaters’ conclusion that a calculated netback mine price is higher than the FOB mine price that producers report to ONRR.
- Headwaters made significant errors in its estimation of federal coal production, which distorted its results.
- The “data” relied upon by Headwaters—prepared by a third party service—on coal sales prices FOB mine do not constitute data. The information relied upon by Headwaters was merely an estimate, with large errors that distorted the analysis.
- The proposed changes to the methodology for valuing federal coal for royalty purposes suggested by Headwaters are neither “transparent” nor “efficient.”
- Headwaters has no basis to speculate that there is a large “loophole” exploited by affiliates and unnamed “brokers” to avoid royalty payments.
- The current valuation system is already “transparent” to the only entity that matters – ONRR.

As the peer review conducted by EVA will be filed electronically and made part of the public record, Cloud Peak Energy requests that any responses by BLM to stakeholders based upon mention of the Headwaters Studies be directed to the EVA peer review so that the public can better understand how they were manipulated by this organization. Furthermore, as part of its review of the federal coal program, BLM should reject the Headwaters Studies as unsupported and unreliable.

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Comment Number: 0002490\_Emrich\_20160728\_CloudPeakEnergy-46

Organization I: Cloud Peak Energy Inc.

Commenter I: Andrew C. Emrich, P.C.

Other Sections: I

Comment Excerpt Text:

The federal coal program plays a critical role in meeting America’s domestic energy needs. According to the U.S. Department of Energy, coal is the largest domestically-produced source of energy in the United States.<sup>8</sup> Over the last few years, approximately 41% of America’s coal production has occurred on federal lands. 81 Fed. Reg. 17721. In 2015, federal coal generated an estimated 14% of the electricity in the United States. Id. And when combined with state and private generation, coal accounted for 33% of the domestic energy portfolio. See Attachment 11, U.S. EIA, “What is U.S. electricity generation by energy source?” (Apr. 1, 2016). The generation of federal coal provides electricity and heat for millions of Americans every year. The significant contribution of federal coal to the energy sector and the American public is made possible through BLM’s administration of 306 federal coal leases, which contain approximately 7.75 billion tons of recoverable coal. 81 Fed. Reg. at 17721.

(8) The Department of Energy’s discussion on domestic coal is available at <http://energy.gov/coal>.

Federal coal contributes to the domestic energy economy in several significant respects. First, coal provides a reliable, abundant, and cost-effective source of electricity compared to other energy sources. Historically, states that utilize coal-fired electricity have enjoyed lower electricity costs and less price fluctuation than those with little or no coal-fired electricity. Not only has the price of coal generally been more stable than alternative energy sources, but coal has also historically benefitted electricity consumers by creating a competitive market with natural gas, nuclear, and other electricity fuel sources.

Second, coal strengthens the domestic energy market by creating independence from foreign energy sources. Foreign energy independence protects the United States and the American people from disruptions in global energy supply and corresponding price fluctuations. Third, federal coal supports both local and national economies by providing an important source of jobs for coal miners and other professionals in industries related to coal production, transportation, and combustion. (For a general discussion of the economic benefits of federal coal, see Attachment 12, the comprehensive report by University of Wyoming Professor Timothy J. Considine, “Powder River Basin Coal: Powering America” (2013)). In short, the shift away from federal coal in America’s energy portfolio would have deleterious consequences to the American public by substantially and unnecessarily increasing domestic energy costs and increasing price volatility for American electricity consumers.

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Comment Number: 0002490\_Emrich\_20160728\_CloudPeakEnergy-47

Organization I: Cloud Peak Energy Inc.

Commenter I: Andrew C. Emrich, P.C.

Other Sections: 4.5

Comment Excerpt Text:

BLM should consider the following facts and specific recommendations during its PEIS review:

- The current administration has targeted America’s coal industry through a series of unlawful regulatory and administrative actions. Given the administration’s unwillingness to conduct a fair and objective review of the federal coal program, BLM should lift the federal coal leasing moratorium pending its completion of the PEIS. Cloud Peak Energy also requests that BLM disavow the biased White House Coal Report.
- Although the Secretary has directed BLM to undertake a review of the federal coal program through the PEIS, BLM and federal courts have recently and consistently rejected the notion that a significant overhaul of the federal coal leasing program is legally warranted.
- In determining the FMV of federal coal, BLM should consider federal coal lessees’ significant financial contributions to the American people, which we believe are unparalleled across any industry in the United States and clearly represent more than a “fair share.”
- BLM should retain the current royalty rate and other leasing costs in order to ensure the continued leasing and production of federal coal in accordance with the MLA. Any increase in coal leasing costs would discourage federal coal development, while also reducing federal and state revenues from future coal lease payments.
- BLM should carefully and thoroughly evaluate the impacts of federal coal program reform on state and local communities through meaningful collaboration with coal-producing states concerning socioeconomic impacts related to federal coal mining.
- BLM should implement the recommendations in the IG Report and GAO Report and evaluate their effectiveness prior to undertaking an unnecessary overhaul of the entire federal coal program. In addition, BLM should reconvene the Royalty Policy Committee to undertake a detailed review of the complex royalty and revenue changes contemplated by BLM in its review of the federal coal program.
- BLM should retain the existing LBA framework, while considering ways to streamline the permitting process and reduce the economic burdens on federal coal lessees.
- BLM should not raise the royalty rate on federal coal production. Any increase in the royalty rate would result in the decreased FMV for federal coal leases and decreased lease bonus payments to federal and state governments.

- BLM should acknowledge, as it did in 2011, that it may not legally impose climate change fees or other climate-related fees under the MLA or any other federal statute. Any increase in coal leasing or production costs to advance the administration's political climate objectives would be unlawful.
- BLM should consider the adverse socio-economic impacts that would result from increased costs on federal coal production. Any increase in coal leasing costs would discourage the production of federal coal and thereby diminish the significant benefits to state and local communities dependent on federal coal production.
- BLM should consider the important role of federal coal in meeting America's domestic energy needs, including the benefits of low-cost, reliable electricity, independence from foreign energy sources, and jobs for workers in coal and coal-related industries.

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Comment Number: 0002491\_Weiskopf\_20160728\_NextGenClimateAmer-30

Organization I:NextGen Climate America

Commenter I:David Weiskopf

Other Sections: I

Comment Excerpt Text:

BLM manages federal lands under the Federal Land Policy and Management Act ("FLPMA") of 1976. This Act requires federal lands to be managed on the basis of multiple use in a combination "that will best meet the present and future needs of the American people."<sup>33</sup> The multiple use definition also articulates that BLM should manage federal lands to account for "the long-term needs of future generations for renewable and non-renewable resources, including, but not limited to, recreation . . . natural scenic, scientific, and historical values."<sup>34</sup> BLM's interpretation of the multiple-use mandate through the federal coal program has historically been narrowly tailored around maximizing coal recovery through lease by application, which nominally aligns with the multiple use mandate because other federal lands are set aside for other uses such as recreation or conservation.

[33 43 U.S.C. § 1702]

[34 Id.]

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Comment Number: 0002491\_Weiskopf\_20160728\_NextGenClimateAmer-39

Organization I:NextGen Climate America

Commenter I:David Weiskopf

Other Sections: I

Comment Excerpt Text:

Leasing programs should recognize the permanent downward trend in the coal market and the likelihood that coal's share will continue to shrink as the U.S. and the rest of the world pursue climate goals. This decline may outpace the reductions envisioned in the Clean Power Plan as domestic and international climate action accelerates, and as the costs of renewable energy continue to decline. Ultimately, coal production must virtually come to an end altogether if we are to have any hope of maintaining a relatively stable climate.<sup>41</sup> The date for the eventual end of the coal program is within sight, potentially within 20 years, and almost certainly by no later than 2050. This necessary phase-down should be a prominent consideration as Interior undertakes this programmatic review, in order to ensure both climate consistency and an orderly transition to a post-coal economy nationally and in areas currently dependent on coal mining for vital revenue streams.

[41 In 2015, the United States added more wind (8.6GW) and solar (7.3GW) capacity than natural gas (6GW). Already competitive with fossil fuel generation, additional cost declines in renewable energy demonstrate why these technologies are a more effective tool for carbon pollution mitigation. Bloomberg New Energy Finance, "Sustainable Energy in America: Factbook." February 2016. Available at [www.bcse.org/wp-content/uploads/BCSE-2016-Sustainable-Energy-in-America-Factbook\\_Executive-Summary.pdf](http://www.bcse.org/wp-content/uploads/BCSE-2016-Sustainable-Energy-in-America-Factbook_Executive-Summary.pdf)]



Comment Number: 0002493\_Mead\_20160728\_GovWY-78

Organization I:Office of Governor Matthew H. Mead

Commenter I:MATTHEW H. MEAD

Comment Excerpt Text:

In addition to examining the degree to which federal coal supports, or should support, fulfilling the energy needs of the U.S., the DOI should also examine the ways in which federal coal supports, or could support, the overall economic health of the U.S. and in turn socio-economic wellbeing of the American public. In addition, the DOI should not solely focus on the role of federal coal for energy, but should also examine the role of federal coal for non-energy uses such as manufacture of numerous materials and products.

Comment Number: 0002493\_Mead\_20160728\_GovWY-85

Organization I:Office of Governor Matthew H. Mead

Commenter I:MATTHEW H. MEAD

Comment Excerpt Text:

The inter-relationships between net national environmental, economic, security and social impact and benefit factors linked within a comprehensive and accurate fair market analysis are numerous, complex and continually evolving, including competing energy resources, and hard to forecast externality factors such as geopolitical changes and large influential events. See University of Wyoming Center for Energy Economics and Public Policy- May 2015- The Impact of the Coal Economy on Wyoming, (WY0-00922 to 00931). For example, the Oil Embargo and Energy Crisis of the 1970s contributed to adverse economic conditions in the U.S. for approximately a decade and motivated use of domestic coal to strengthen energy and economic security and social wellbeing of American citizens. Therefore, an effective federal coal program must be designed to be highly agile to be continually competitive within global market and geopolitical dynamics and to thereby provide the best possible fair return to the American public over multiple decades.

Comment Number: 0002499\_Nichols20160728-4

Organization I:WildEarth Guardians

Commenter I:Jeremy Nichols

Other Sections: 4.5 2 8.7 8.5 7.1 8.9 11

Comment Excerpt Text:

## 2. Just Transition Alternative

The “Just Transition Alternative” is meant to both wind down the federal coal program in order to keep fossil fuels in the ground and to ensure an orderly, effective, and fair transition of workers and communities away from coal to more prosperous and sustainable economies. The “Just Transition Alternative” is defined by the following key components:

1. An end to federal coal leasing: Consistent with authorities and discretion under the Mineral Leasing Act, the Just Transition Alternative imposes a permanent pause on the leasing of federal coal. The primary basis for adopting this permanent pause would be to ensure the protection of the public interest and the interests of the United States. Such justification for an end to leasing is clearly supported by the Mineral Leasing Act. This pause would apply to all competitive leases (including all leases by application, including emergency leases, as defined by 43 C.F.R. § 3425.1-4) and lease modifications. We further believe there is ample justification for applying a permanent pause to other forms of non-competitive leasing, such as preference right lease applications and lease exchanges. With regards to lease exchanges, the BLM has clear authority to reject exchanges that are not in the “public interest.” 43 C.F.R. § 3435.4(a); see also 43 C.F.R. § 3436.0-2(b) (related to alluvial valley floor exchanges) and 43 C.F.R. § 2200.0-6 (generally related to exchanges). With regards to preference right lease applications, the BLM has the authority to reject such applications where there does not exist “commercial quantities” of coal. 43 C.F.R. § 3430.5-1(a)(1). Given the dismal state of the coal industry and the overwhelming

climate costs that coal imposes on society, it would be dubious at best to claim that any commercial quantities of coal exist where there are preference right lease applications. Accordingly, the BLM has the authority to reject such applications. (20)

Furthermore, to ensure an orderly end to federal coal leasing, the BLM and the Department of the Interior should issue a rule or guidance requiring that as land management planning is undertaken pursuant to 43 C.F.R. § 1610, et seq., that all lands within a resource management area that are not currently leased for coal, be made unavailable for leasing. The authority to impose such direction is set forth at 43 C.F.R. § 3420.1-4(e), which gives the BLM broad discretion to “eliminate additional coal deposits from consideration to protect other resource values.” 43 C.F.R. § 3420.1-4(e)(3).

(20) The only preference right lease applications that exist are in northwestern New Mexico, where Arch Coal, which is currently bankrupt, has the rights to acquire 21,000 acres of leases. Legislation was introduced in the U.S. House of Representatives that would allow the Secretary to retire these preference right lease applications. See HR-1820, available online at <https://www.congress.gov/bill/114th-congress/house-bill/1820/text>. If this legislation is passed, there would be no additional preference right lease applications requiring action. We support this legislation and urge the Secretary of the Interior to encourage its passage in the U.S. Senate and adoption into law.

Putting a permanent pause on leasing will not destroy the U.S. economy or otherwise endanger our energy security. As a recent report looking at leasing in the Powder River Basin found, existing leased reserves in the Powder River Basin are sufficient to meet demand and effectively contribute to limiting temperature increases.

(21) This report is instructive as the Powder River Basin is the largest coal producing region in the United States and imposes the greatest influence on energy supply and demand in the nation. If an end to federal leasing can be justified in the Powder River Basin, it can be justified for federal leasing elsewhere in the U.S.

21 See Exhibit 11, Fulton, M., D. Koplow, R. Capalino, and A. Grant, “Enough Already: Meeting 20C PRB Coal Demand Without Lifting the Federal Moratorium,” Report Prepared for Energy Transition Advisors, Earth Track, and Carbon Tracker Initiative (July 2016), available online at <http://www.carbontracker.org/report/enough-already-2c-powder-river-basin-coal-demand-federal-moratorium/>.

2. Increased royalty rates and rentals: Coal is exacting a tremendous toll on our nation, costing our society billions in climate damages, adverse health impacts from air pollution, and water contamination. Royalty rates from production on existing coal leases and rentals on existing leases must be increased to begin to recoup the costs of these externalities, which are currently shouldered by the public.

Although royalty rates are normally imposed through new leasing, we recommend that the Interior Department and BLM incorporate higher royalty rates into existing leases as existing leases are readjusted pursuant to 43 C.F.R. § 3451.1. To accomplish this, we urge the amendment of 43 C.F.R. § 3473.3-2(a)(1) and (2) to incorporate increased royalty rates for both surface and underground mining. As leases are readjusted, these royalty rates must be applied to existing leases pursuant to 43 C.F.R. § 3451.1(a)(2).

Increasing royalty rates has been recommended by the White House as both a means to generate revenue and address the costs of environmental externalities, including carbon costs. (22)

(22) See Exhibit 12, Executive Office of the President of the United States, “The Economics of Coal Leasing on Federal Lands: Ensuring a Fair Return to Taxpayers” (June 2016), available online at [https://www.whitehouse.gov/sites/default/files/page/files/20160622\\_cea\\_coal\\_leasing.pdf](https://www.whitehouse.gov/sites/default/files/page/files/20160622_cea_coal_leasing.pdf).

Furthermore, royalty rate reductions should not be approved. Currently, royalty rate reductions are routinely granted as companies claim poverty or difficulty in mining with little apparent scrutiny as to whether the reductions are justified. In Colorado, for example, BLM officials have approved royalty rate reductions to facilitate methane venting and most recently proposed to approve a retroactive royalty rate reduction for a mine that was not even producing coal. (23) See Exhibits 13 and 14.

Similarly, we urge Interior and BLM to amend 43 C.F.R. § 3473.3-1(a) to raise rental rates for federal coal leases. Currently, rental rates are set at \$3.00 per acre, a figure that has not been adjusted since 1979, if not earlier. This rental rate not only has failed to be adjusted to account for inflation, but fails to account for the fact that some leases may be of small acreage, yet yield significant amounts of coal. Rentals should reflect the value of the lease, which depends on the amount of coal a lease contains. In accordance with 43 C.F.R. § 3473.3-1(a), any increased

rental rate must be applied to any readjusted coal lease.

3. Existing leases that are not producing must be canceled: Where a lease is not meeting continued operation requirements under 43 C.F.R. § 3483.1(a)(2), it is subject to cancellation pursuant to 43 C.F.R. § 3452.2. Where a lease is not meeting continued operation requirements, BLM and the Interior Department should make clear that cancellation of the lease must be pursued. To this end, discretionary avenues for avoiding cancellation should be prohibited. Thus, lease suspensions under 43 C.F.R. § 3483.3 and payment of advanced royalties in lieu of continued operation under 43 C.F.R. § 3483.4 should be barred.

The justification for imposing such direction is very clear. Currently, BLM regularly grants lease suspensions and allows payment of royalties in lieu of continued operation with no assessment of whether such actions are appropriate or in the public interest. BLM appears to be under the impression that lease suspensions or advanced royalties are somehow mandated, and that the agency has no choice but to approve company requests. An egregious example of this is with regards to Arch Coal's Carbon Basin Lease in southern Wyoming (No. WYW-139975). Arch acquired this lease with the aim of developing a mine to fuel a proposed coal to liquids facility. However, this coal to liquids facility has never materialized or even shown any promise of materializing. Most recently, the Wyoming Department of Environmental Quality terminated the permit for the proposed facility. (24) Nevertheless, since 2010, Arch has failed to meet continued operation requirements. The BLM has allowed Arch to maintain its lease, however, by routinely allowing the company to pay advanced royalties in lieu of continued operation. (25) These decisions appear to be pro forma in nature, and do not reflect any consideration as to whether it is appropriate or remotely in the public interest to accept advance royalties in lieu of continued operation.

(24) See Exhibit 15, Wyoming Department of Environmental Quality, "Permit Termination, Medicine Bow Fuel and Power Coal to Liquid Project" (June 27, 2016).

(25) See Exhibit 16.

Furthermore, where an existing lease is not producing, yet is part of a producing logical mining unit, BLM and the Interior Department should use their discretion to modify the boundaries of logical mining units to eliminate the non-producing lease and facilitate its cancellation. BLM has such discretion under 43 C.F.R. § 3478.1.

Cancelling leases that are not producing will serve the goal of preventing any potential future development of existing leases and contribute to an orderly end to the federal coal program.

4. Accounting for carbon costs in coal management: It should be made clear, whether through new rules or guidance, that carbon costs must be analyzed, assessed and disclosed as federal coal management decisions are made. Such decisions are most likely to include mining plan modifications issued pursuant to the Mineral Leasing Act, 30 U.S.C. § 207(c), and the Surface Mining Control and Reclamation Act ("SMCRA"), 30 C.F.R. § 746, and lease readjustments. It is imperative that the BLM and Interior maintain close accounting of the carbon emissions and costs resulting from its coal management actions, to ensure full transparency around these emissions and costs, and to meaningfully act to address these emissions and costs. Particularly given that, pursuant to authorities under the Mineral Leasing Act and SMCRA, the Secretary of the Interior has full discretion to disapprove mining plans authorizing the development of leased federal coal, it is imperative that carbon emissions and costs factor into and influence such decisionmaking.

5. Reclamation must be guaranteed: To ensure an orderly end to the federal coal program, full and final reclamation must be guaranteed within a reasonable timeframe. We urge two regulatory changes to ensure this occurs.

First, Interior should amend regulations at 30 C.F.R. §§ 816.100 and 817.100 to provide clarification and specificity around contemporaneous reclamation. Current rules are vague and fail to ensure that reclamation proceeds in a manner that is as "contemporaneously as possible" with mining in accordance with 30 U.S.C. § 1202(e). These regulations should be amended to make clear that the success of contemporaneous reclamation must be measured based on a comparison of Phase III bond release acres, as defined under 30 C.F.R. § 800.40(c)(3), with disturbed acres and ensure that reclamation proceeds at a 1:1 rate, in other words for every acre disturbed, one acre should be fully reclaimed to meet Phase III bond release standards.

Second, just as current BLM rules require diligent development of federal coal, these rules should also require diligent reclamation. To this end, Interior and BLM should consider rule changes to ensure that nonproducing coal leases are fully reclaimed within two years of failing to meet continued operation requirements and set deadlines for the full reclamation of federal coal leases that are no later than 2035. This reclamation deadline should be established by rule and incorporated into lease terms as leases are readjusted.

Finally, Interior should amend self-bonding regulations at 30 C.F.R. § 800.23, and any other regulations, as appropriate, to prohibit self-bonding whenever publicly owned coal is permitted to be mined. This will ensure that, as coal companies continue their decline, that American public resources are fully protected and fully guaranteed to be cleaned up.

6. Prioritizing transition: Above all, the BLM and Interior must make transition away from coal a foremost goal as the federal coal program comes to an end. To do this, the agencies should not only explicitly commit, to the extent possible, their leadership, resources, and expertise to ensure that workers and communities receive the support and assistance they need to transition to more sustainable and prosperous economies. Among the actions that Interior and BLM can and should undertake to ensure transition:

- Work to secure Congressional authorization to direct increased royalty and rental payments toward worker and community support. Under NEPA, agencies are required to rigorously explore and objectively evaluate reasonable alternatives “not within the jurisdiction of the lead agency.” 40 C.F.R. § 1502.14(c). Here, although BLM and Interior may not be able to direct royalties toward transition support, they can recommend that Congress pass legislation that provides such authorization.

- Establishing an Economic Transition Fund, which would be sustained by an increase in reimbursement fees charged by the Interior Department when processing coal-related applications. Under the Federal Land Policy and Management Act (“FLPMA”), Interior has authority to recover reasonable costs associated with its coal management program and to appropriate and spend such monies. Specifically, FLPMA provides the Secretary of the Interior with authority to “require a deposit of any payments intended to reimburse the United States for reasonable costs with respect to applications,” including coal lease application. See 43 U.S.C. § 1734(b). Such payments are “authorized to be appropriated and made available until expended” by FLPMA. Id. Funds from the Economic Transition Fund should be directed toward transition-oriented initiatives.

- Prioritizing support and assistance to help communities transition. In addition to securing funds and making them available, the Department of the Interior can play a key role in helping direct communities to support, steering resources to support conservation and research projects in or near communities, encouraging renewable energy development on public lands. Such leadership could be conveyed through a Secretarial Order that simply makes it an overarching priority of the Interior Department to advance transition

Overall, the Interior Department and BLM must move to keep our publicly owned coal in the ground. However, keeping coal in the ground should not mean that we turn our backs on the workers and communities that have been dependent on coal for so long. Embracing an alternative that ensures “Just Transition,” in other a fair, compassionate, and orderly transition away from coal, is the most effective way to both protect our climate and help our nation effectively move to more sustainable economies and reliable and affordable means of energy production.

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Comment Number: 0002499\_Nichols20160728-7

Organization I: WildEarth Guardians

Commenter I: Jeremy Nichols

Other Sections: I

Comment Excerpt Text:

c. The PEIS Must Thoroughly Analyze and Assess All Reasonably Foreseeable Impacts

As the PEIS is drafted, BLM and Interior must ensure that all reasonably foreseeable impacts associated with any action alternatives, including the No Action alternative, are fully analyzed and assessed. To this end, we request the agency ensure that, as a minimum, the following reasonably foreseeable impacts are addressed in the PEIS:

i. Impacts of coal mining

The PEIS must obviously analyze and assess the impacts that any proposed alternative will have on the mining of

federal and the impacts that will flow from that mining. Similar to other EISs prepared by the BLM for coal leasing, we expect the PEIS to fully analyze and assess the program-wide impacts to public lands, air quality, water quality, and fish and wildlife (in particular threatened and endangered species listed under the Endangered Species Act, 16 U.S.C. § 1531, et seq.). (45) Such an analysis must address total greenhouse gas emissions, including methane emissions, associated with mining operations.

(45) An example of an EIS where the BLM fully analyzed and assessed the impacts of mining to myriad resources is the Wright Area coal leasing FEIS, which is available on the BLM's website here, <http://www.blm.gov/wy/st/en/info/NEPA/documents/hpd/Wright-Coal.html>. Although we disagree that this FEIS was fully compliant with NEPA, it nevertheless addressed many important reasonably foreseeable impacts and stands for the proposition that federal coal management decisions can have far-reaching consequences that warrant detailed review under NEPA.

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Comment Number: 0002503\_Hamman\_20160729-3

Organization I:Lignite Energy Council

Commenter I:Tyler Hamman

Comment Excerpt Text:

2) "Reflect its impacts on the environment"

The inability to lease federal coal tracts is not accounted for in North Dakota coal companies' contractual obligation to supply fuel for power generation and gasification. If a federal coal tract is bypassed, mining companies will have to pursue additional coal resources to make up for lost federal coal. As a result, there will be more disturbance, less efficiency, more fuel expended, etc. simply to provide the same amount of coal while increasing production costs that are ultimately borne by the consumer. Further, since mining companies hold the surface rights over federal coal tracts, the area will likely be disturbed to support mining activities regardless of whether the federal coal is retrieved or not. Finally, the rest of the world, particularly developing nations, is turning to coal to provide affordable and reliable electricity. A policy decision to restrict development of our coal resources will have no bearing on the decision of other nations to strive for the same standard of living coal has brought to the U.S., and as a result will have no meaningful impact on global emissions.

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Comment Number: 0002503\_Hamman\_20160729-5

Organization I:Lignite Energy Council

Commenter I:Tyler Hamman

Comment Excerpt Text:

Each source of energy has its advantages and disadvantages. Coal is a strategic resource that provides long-term cost certainty and availability for affordable power generation while being environmentally responsible. It must be the continued policy of the federal government to incentivize the use of coal to help meet our energy needs.

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Comment Number: 0002505\_Brooke\_20160729-6

Organization I:Black Warrior River Keeper

Commenter I:Nelson Brooke

Other Sections: 2

Comment Excerpt Text:

Please discontinue the Federal Coal Leasing Program, which operates at a loss for the American taxpayer, our collective health, and our natural heritage – which we would rather pass on to future generations intact.

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Comment Number: 0002506\_Nichols\_20160729-1

Organization I:Wild Earth Guardians

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Commenter I:Jeremy Nichols

Other Sections: 2

Comment Excerpt Text:

The federal coal program must end: It is undeniable that we cannot continue to burn coal and have any chance of combating climate change. Your Interior Department must be upfront with the American public that there are no fixes to the federal coal program except to end it. We do not suggest that all publicly owned coal mining must stop immediately. There must be an orderly, yet expeditious, end to the program. With estimates indicating the mining and burning of publicly owned coal stands to saddle society with more than \$7 trillion in climate damages, we cannot delay action.

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Comment Number: 0002506\_Nichols\_20160729-2

Organization I:Wild Earth Guardians

Commenter I:Jeremy Nichols

Other Sections: 2

Comment Excerpt Text:

Leasing must stop: The temporary pause on coal leasing must be made permanent as a means to ensure the federal coal program ends and that future carbon emissions are appropriately limited. Reports indicate current leased reserves are more than sufficient to meet any near-term needs that may exist. More leasing only incentivizes more production and ore consumption. Your Interior Department must be upfront with the nation that future coal sales are off the table for good.

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Comment Number: 0002507\_Nettleton\_20160801-3

Commenter I:Jerry Nettleton

Comment Excerpt Text:

Market Conditions - Excessive regulation, discriminatory government policies, artificially low natural gas prices resulting from over-supply, and export barriers have resulted in very weak coal markets. Decreases in coal production, extensive layoffs, coal company bankruptcies, and significant adverse economic and social impacts on affected communities and regions have been the direct consequence of these conditions. These are very real and immediate impacts of the current policies and proposed changes which deserve to, and should be considered in any objective analysis. The current coal program includes provisions (royalty rate reduction) which can be used to reflect and adjust for adverse geologic, mining, and other conditions. The potential exists to also include market conditions as an adjustment factor.

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Comment Number: 0002507\_Nettleton\_20160801-4

Commenter I:Jerry Nettleton

Other Sections: 6

Comment Excerpt Text:

Coal Leasing and Climate Considerations - Coal built our country and is a key foundation for our success and prosperity. A rational energy policy should be based on a true, "all of the above" approach. In fact, this approach is essential if we are to meet our projected future energy needs. Much of the current focus is on addressing climate considerations, but this must be balanced with the critical need to maintain reliable energy generation and distribution systems and provide affordable power for our households and businesses. Any impact analysis should include an alternative which takes this critical balance into consideration.

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Comment Number: 0002511\_Krieger\_20160727-2

Organization I:Washington Environmental Council

Commenter I:Emily Krieger

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**Comment Excerpt Text:**

The phasing out of coal leasing on federal land should be explored. This must be done in a just way, but with coal stocks dropping, coal companies declaring bankruptcy, and our climate and communities suffering, we must prepare for the inevitable.

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Comment Number: 0002513\_Lish\_20160707-1

Commenter I: Christopher Lish

**Comment Excerpt Text:**

Selling many leases to mine coal at below-market rates artificially lowers prices, thereby encouraging more consumption of a fuel that is the nation's top source of carbon pollution. That's precisely the opposite of what we should be doing at a time when the future of our environment and our climate is threatened.

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Comment Number: 0002513\_Quinlan\_20160707-2

Commenter I: Alby Quinlan

Other Sections: 7.3

**Comment Excerpt Text:**

At his time, there is abundant evidence that the burning of coal is hugely detrimental to the accumulation of carbon dioxide in our atmosphere. It is time to stop mining and burning coal completely.

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Comment Number: 0002942\_Harbine-12

Organization I: Earthjustice

Commenter I: Jenny Harbine

**Comment Excerpt Text:**

BLM must comprehensively evaluate the direct, indirect, and cumulative impacts of federal coal leasing, including impacts from coal production, transportation, and combustion. These include climate disruption spurred by coal burning; impacts to public lands, water, and wildlife; impacts on communities beyond the coal fields; economic consequences, including the harmful effects of boom and bust natural resource extraction; impairment to land from unfulfilled reclamation obligations backed by unsecured promises from bankrupt coal companies; impacts of transporting and exporting coal for energy production abroad; and the failure of coal producers to pay American taxpayers a fair return for exploiting a public resource, including the environmental and costs of climate disruption perpetuated and enhanced by burning fossil fuels.

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Comment Number: 0002942\_Harbine-43

Organization I: Earthjustice

Commenter I: Jenny Harbine

Other Sections: I 10

**Comment Excerpt Text:**

The PEIS Should Examine Significant Non-climate Impacts Associated With Coal Mining, Transport, and Combustion. BLM's scoping notice acknowledges that "[t]he Federal coal program has other potential impacts on public health and the environment, beyond climate impacts, that will also be assessed in the Programmatic EIS." 170 However, the notice states that the EIS's analysis will "include the effects of coal production" without explicitly addressing the impacts of coal transport and combustion. 171 The scoping notice also commits to a broad analysis of the federal coal program's socioeconomic impacts. 172 Because NEPA requires agencies to evaluate the direct, indirect and cumulative impacts of a proposed action, and coal combustion is a foreseeable result 169 Comments of Phyllis Fox, Environmental Health and Safety Impacts of the Proposed Oakland Bulk and

Oversized Terminal, September 21, 2015, at 19. 170 81 Fed. Reg. at 17,725-26. 171 Id. at 17,726 (emphasis added) 172 Id. 50 of coal mining on federal lands, the PEIS must disclose the non-carbon environmental and socio-economic impacts of coal combustion. 173 It is particularly crucial that the PEIS address these impacts because they are likely significant. The that mining, transportation, and especially combustion of federally owned coal causes to life expectancy and health may be much larger than the current estimates and are tied to greenhouse gas emissions. In June 2016, a White House Council of Economic Advisors report on the economic impacts of the federal coal leasing program explicitly recognized that significant health-based costs are associated with the continued mining and burning of federal coal. 174 Specifically: On the production side, coal mining involves emissions of methane, which is a potent greenhouse gas. Coal extraction and processing also may lead to external costs from water pollution and land degradation. Transportation of coal is often energy and emissions intensive. Coal combustion releases carbon dioxide, mercury, and other harmful air pollutants. Impoundments and coal combustion waste can also lead to severe water . 175 All of these social and environmental costs must be disclosed in the PEIS. Numerous environmental reviews from the past several years support the White House Report findings concerning harms from the non-carbon emissions of coal-fired electric generators: sulfur and nitrogen oxides, particulate matter, volatile organic compounds, ammonia, and mercury. These environmental reviews reveal damage from coal burning to health, 173 In addition, this letter speaks at length about the need to analyze the impacts of the federal coal program's climate-related impacts. The program drives the continued production of coal and reliance on coal for energy generation, frustrating state, national, and international climate goals. In addition the federal coal program perpetuates and increases exposure by downstream communities to climate disruption. While this section focuses on non-climate impacts, the downstream climate impacts due to the federal coal program also should be analyzed in the PEIS. 174 White House Fair Return Report, at 28 175 Id. 51 longevity, quality of life, and property. 176 As discussed below, these are all environmental and health impacts that NEPA mandates that the PEIS address

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Comment Number: 0003004\_MasterFormD\_TheSierraClub-I

Organization I:The Sierra Club

Comment Excerpt Text:

BLM's review of the federal coal leasing program must at least evaluate the following:

- Phasing out coal leasing on publicly-owned lands to better protect our climate and public health

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Comment Number: 0003007\_MasterFormF\_WEG-I

Organization I:WildEarth Guardians

Other Sections: 2

Comment Excerpt Text:

Keeping coal in the ground: The ultimate goal of reforms needs to be to prevent remaining coal reserves in the United States from being mined and burned. This is necessary if we have any hope of avoiding the devastating and costly impacts of global warming. Reforms must ensure an end to new leasing of publicly owned coal and an end to future permitting of mining operations.

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Comment Number: 0003007\_MasterFormF\_WEG-4

Organization I:WildEarth Guardians

Comment Excerpt Text:

Rather than let the coal industry collapse and cause even more damage, it's time to embrace transition and steer it in the most effective direction possible.

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Comment Number: 0003012\_MasterFormK-3

Comment Excerpt Text:



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Coal companies across the country have demonstrated excellent environmental stewardship, responsibly utilizing public resources while simultaneously protecting and improving our beautiful country for future generations.

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Comment Number: 0003013\_MasterFormL-1

Organization I:Center for Biological Diversity

Other Sections: 2

Comment Excerpt Text:

And the PEIS should consider alternatives -- including the rapid phase-out of federal coal leasing, extraction and burning -- that advance U.S. climate policy objectives while protecting public health, welfare and biodiversity. Specifically, I urge the BLM to consider and adopt an alternative that ends new coal leasing in order to keep unburnable coal in the ground and signal U.S. commitment to clean energy.

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Comment Number: 0003013\_MasterFormL-3

Organization I:Center for Biological Diversity

Comment Excerpt Text:

Given that federal coal makes up approximately 40 percent of the entire domestic coal supply, the PEIS must give rigorous and systematic consideration to the consequences of coal leasing policy on coal markets and prices, energy infrastructure and supply, and greenhouse gas emissions

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Comment Number: 0003014\_MasterFormN2\_NorthernPlains-1

Comment Excerpt Text:

The program is due for major reforms. I urge you to include the following changes to modernize the program and move forward on a new energy plan for the nation by ending public coal subsidies, creating more public transparency, accounting for all of the effects of coal mining, including climate change, and holding mining companies to reclaim mined land before receiving any more public coal

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Comment Number: 0003015\_MasterFormN2\_WORC-1

Organization I:Western Organization of Resource Councils

Comment Excerpt Text:

I urge you to include the following reforms that will bring the program into the present day and position us to move forward in the rapidly changing landscape for energy in the United States:

\* Ending subsidies for public coal,

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Comment Number: 0003016\_MasterFormO\_EarthJustice-1

Other Sections: 2

Comment Excerpt Text:

The Bureau of Land Management's review of the federal coal leasing program must at least evaluate the following actions:

\* Promptly phasing out coal leasing on public lands to better protect our climate, environment and public health

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Comment Number: 0003017\_MasterFormP-1

Comment Excerpt Text:

Thank you for temporarily halting new coal mining leases on federal lands while the Department of Interior considers reforms to the federal coal program. It's time to make this permanent.

There is no need to put even more of our coal in the hands of big polluters who profit off of the destruction to

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our land, our air and our water. That's why we demand an orderly phase out of this program and a just transition for coal communities and workers.

Our nation must transition to a clean energy economy that is prosperous for all Americans and protects our climate. We can't do this unless we put a stop to coal mining on federal lands once and for all, starting with making the lease moratorium permanent.

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Comment Number: 0003029\_Arrington\_J\_06032016-2

Organization I:Keep Electricity Affordable

Commenter I:Patrick Arrington

Comment Excerpt Text:

Changes in the federal coal program could threaten the reliability and affordability of electricity.

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Comment Number: 0003031\_Benett\_J\_06042016-1

Organization I:Keep Electricity Affordable

Commenter I:Mark Benett

Comment Excerpt Text:

The Government has been able to attack coal relentlessly for the past 7 years only because power plants have been able to convert to cheap natural gas which is available because of fracking. If Saudi Arabia is successful in severely reducing American oil production, this alternate cheap source of fuel is going to dry up and we will be facing a desperate energy crisis reminiscent of the 1970s. This is a dangerous game to play. Solar and wind cannot come close to meeting our electric needs.

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Comment Number: 0003063\_Clawsey\_G\_06132016-1

Organization I:

Commenter I:Mary Clawsey

Comment Excerpt Text:

The danger to the miners themselves, to the environment even before coal is burned, and to threatened wildlife should be reason enough, and the damage to the environment from coal burning intensifies the case against it

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Comment Number: 0003065\_selvaggio\_G\_06132016-1

Commenter I:Diane Selvaggio

Comment Excerpt Text:

There are things more important than short-term gains for a few. there are things more important than taking our coal, which we may need some day, and exporting it overseas. there are things more important than supporting fossil fuels at a time when our national interests are best served by investing in renewable, sustainable energy sources.

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Comment Number: 0020003\_Zepeda\_20160712-1

Organization I:Citizens for Overt Action

Commenter I:Barbara Zepeda

Comment Excerpt Text:

Coal is a necessary part of the steel manufacturing process. Its totally wasteful to burn it for fuel or mine it in the destructive way it is being done now in the USA. High quality steel is needed to repair our infrastructure.

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Comment Number: 0020008\_Hoem\_20160712-1

Commenter I:Harold Hoem

## Comment Excerpt Text:

Far from being an important domestic energy source in the years ahead, coal is now seen as a liability and major CO<sub>2</sub> pollution source. Domestically, coal's role in energy is rapidly diminishing as natural gas, increased efficiencies and renewables are winning in the energy marketplace.

Comment Number: 0020009\_Shurgot\_20160712-2

Commenter I: Michael Shurgot

## Comment Excerpt Text:

The issue here today is not how much money the federal government should demand for extracting coal on federal lands, but whether the feds should allow any coal to be mined anywhere on federal land. And the answer is NO! We must move away from the mining and burning of fossil fuels, and ending federal coal leases on public land now would be an excellent step toward that mandatory environmental goal.

Comment Number: 0020012\_Holmes\_UCARE\_20160712-11

Organization I: Utah Citizens Advocating Renewable Energy

Commenter I: Stanley Holmes

## Comment Excerpt Text:

The PEIS should examine whether federal coal lease royalty payments shared with the various states are used in ways that either serve national energy policy goals or undermine those efforts.

Comment Number: 0020034\_Koontz\_TownofHotchkiss\_20160729-3

Organization I: Town of Hotchkiss

Commenter I: Wendell Koontz

Other Sections: I

## Comment Excerpt Text:

The United States Energy Information Administration projects coal will continue to be utilized as a primary fuel accounting for 34% of US electricity generation through 2040.[1] World energy consumption is projected to grow by 56% between 2010 and 2040 with fossil fuels, including coal, providing 80% of that energy, again according the United States Energy Information Administration.[2]

[1] U.S. EIA; Annual Energy Outlook 2015 with Projections to 2040; pg. 24; DOE/EIA-0383(2015)

[2] <http://www.cia.gov/todayinenergy/detail.cfm?id=12251>

Comment Number: 0020052-1

Organization I: Tri-State Generation and Transmission Association, Inc.

Commenter I: Barbara A. Walz

## Comment Excerpt Text:

As BLM notes in the NOI, "On average, over the last few years, about 41 percent of the Nation's annual coal production came from Federal land." Nearly all federal coal production is done in rural areas across the West. Production plays a vital role in supporting rural communities and their ability to maintain key governmental services. Additionally, the coal produced on federal land is used to generate reliable and affordable electricity, which is important to both rural and urban areas. Lastly, the development and production of federal coal must comply with strict environmental regulations and is historically more regulated than other sources of coal.

Given the many benefits of the federal coal program, the BLM should be looking at ways to increase- not decrease - production levels. Any proposal to increase federal royalty payments will increase the cost of doing business, resulting in a decrease in production and the benefits noted above.

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Comment Number: 0020052-3

Organization I: Tri-State Generation and Transmission Association, Inc.

Commenter I: Barbara A. Walz

Comment Excerpt Text:

The federal coal leasing program is appropriately accounting for the potential impacts it may be having on the environment and society as a whole.

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Comment Number: 002501\_Ring\_20160728-1

Organization I: Climate911

Commenter I: Wendy Ring

Other Sections: 4.5

Comment Excerpt Text:

From our perspective as guardians of the nation's health, the glaring deficit in the BLM's proposal is the failure to consider ending coal leasing on public lands as a legitimate alternative. Greenhouse gas emissions from coal combustion undermine US climate commitments and threaten the world's ability to stay within a 2C carbon budget. There is no reason to subject public lands and the US population to further risk when we have enough coal through existing leases to meet our needs as we transition to clean sources of energy.

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Comment Number: 003063\_Wingard\_1072016 -1

Commenter I: Greg Wingard

Comment Excerpt Text:

Though there have been some technological improvements, coal is still the dirtiest of the fossil fuels. It is also no longer cost effective in comparison with natural gas, or more importantly with increasingly cost effective green energy sources such as solar, wind and geothermal. There is also little danger in the transition of losing generation capacity due to increases in efficiency, which can be rapidly implemented, and increases in storage capacity which can be used to make intermittent sources more closely mimic, and even be an improvement over dependence on base load capacity

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Comment Number: 003064\_Merrill\_1772016-1

Commenter I: Benjamin

Comment Excerpt Text:

The amounts of monies collected for these leases is dwarfed by the major amounts of liability and losses incurred through environmental degradation, negative medical impacts, and the opportunity costs lost by the use of this land for a destructive industry. Even good mine land reclamation cannot stop the impacts to economies and environments by an unsustainable economic force such as mining. Public Land Leases to extractive industries have been a major destructive habit in the US economy costing generations of all Americans and the US environment an ever increasing fortune. Our government's bad business habits and lack of foresight have made our economy sick.

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Comment Number: WO\_CoalPEIS\_00000201\_REILLY\_20160517-1

Commenter I: Katie Reilly

Other Sections: 11

Comment Excerpt Text:

I ask that BLM take full advantage of this review process to protect coal impacted communities, our public lands, and our climate for generations to come, not just for the next few years. This PEIS must look at stopping coal production on taxpayer land, incorporating the cost of carbon into royalty rates, evaluating how federal coal

impacts production of clean energy, re-evaluating self-bonding, which unfairly places a burden of reclamation on taxpayers, evaluating BLM's authority to ensure a just transition for coal-impacted communities.

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Comment Number: WO\_CoalPEIS\_0002437\_Downing\_20160727\_WyMineAssoc-17

Organization I: Wyoming Mining Association

Commenter I: Jonathan Downing

Comment Excerpt Text:

Leasing does not disturb the ground, does not remove the coal, does not transport the coal and most certainly does not burn the coal. The Department of Interior spends a lot of time evaluating the impacts of all of these activities, and very little time evaluating the cost of the leasing process. This is the opportunity to evaluate the process by asking some of the following questions. During the five to seven years of leasing, how many employees with BLM get involved, and at what cost, on a per ton basis? What are the secondary and tertiary costs of the program? For example, what other Department of Interior employees, lawyers and multitudes of people in administrative and management positions become involved in the program. The American taxpayer pays for them either directly in the form of taxes or indirectly in the form of user fees passed onto the consumer.

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Comment Number: 000001241\_HATCH\_Rio Blanch County Commisioners\_20160623-1

Organization I: County Commissioners of Rio Blanco County

Commenter I: Lisa Hatch

Comment Excerpt Text:

Pretty obvious coal does affect our economies and that, you know, we want to keep coal going.

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Comment Number: 000001241\_HATCH\_Rio Blanch County Commisioners\_20160623-3

Organization I: County Commissioners of Rio Blanco County

Commenter I: Lisa Hatch

Comment Excerpt Text:

coal could be used for a variety of high-tech uses. The group successfully created a simple electrical heating device with potential applications in window defrosting, which could be used to defrost wings of an airplane. Their research is focused on four different film of coal. Grossman told MIT News that when the group decided to explore coal as a material, rather than just something that could be burned, the chemical properties of the material were surprising quite rich and that coal -- I lost my place. This discovery sparked an interesting question. Could the unique chemical properties of coal be used to make electronic devices with useful functionality? Despite coal being widely used for centuries, it had optical and also electronic-type properties that could be used for other things. So, may electronic devices are made from chip-grade silicone or grapheme, both of which are very costly when it comes to the purification materials to create them. But, powdered coal could not only prove to be a cheap substitute, but could also offer chemical property advantages. Plus there's this high conductivity in its thermal [indiscernible]. As this report continued, it talks about using it in solar panels and all types of electronic devices with more sustainable success than some of the things we use today for those things. So, my testimony today is that coal is not something we should be keeping in the ground. It is something we should be putting money forward and exploring what else can we use coal for? It has some very unique properties that could be used in medical devices. They talk even a little bit about they're doing some research at Stanford on how we can stimulate dead muscles on people that have been paralyzed. And maybe we can use it [indiscernible].

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Comment Number: 000001242\_SANDERSON\_Colorado Mining Association\_2016062-3

Organization I: Colorado Mining Association

Commenter I: Stuart Sanderson

Comment Excerpt Text:

Government agencies, including the Inspector General's Office within Interior, and the Government Accountability Office, have already found that there are not major fixes needed in the Federal Coal Leasing Program.

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Comment Number: 000001249\_WILSON\_20160623-1

Commenter I: Ryan Wilson

Comment Excerpt Text:

I encourage the BLM to stop following political motives, and instead take this opportunity to step back, review the regulations already in place

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Comment Number: 000001262\_Eaton\_20160623-3

Organization I: The Wilderness Society

Commenter I: Pam Eaton

Comment Excerpt Text:

I have a 17-year-old son, who's born and raised here in Colorado. And I use his years to mark time. And over his young life, we have seen Colorado's coal production peak and, and decline.

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Comment Number: 000001297\_Slabakov\_20160623-1

Organization I: Climate Reality Project

Commenter I: Yana Slabakov

Comment Excerpt Text:

That being said, the coal industry faces a bleak and inevitable future. The energy sector is slowly, but surly, making the transition from carbon intensive extractions to cleaner energy, which is, in turn, becoming less expensive to produce and implement. In January burning coal for electricity hit an all-time low, counting for only 27 percent of U.S. electricity production. Many regions have begun responding to the impacts of the declining opportunities in the coal industry.

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Comment Number: 00001268\_Ortiz\_20160623-1

Organization I: Western Slope Conservation Center

Commenter I: Karen Ortiz

Comment Excerpt Text:

I believe it's imperative that the Federal Government updates the coal leasing system to address the impacts that coalmining activities have on local communities and mitigate the challenges our communities face in indiscernible] cycles of mining. This includes requiring the highest degree of reclamation standards, [indiscernible] bonding for future reclamation activity, conducting a thorough analysis of all impacts to air, water, and wildlife, prior to issuing new leases and ensuring a fair return from coal leasing.

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Comment Number: 00001272\_Armstrong\_20160623-3

Commenter I: Jeremiah Armstrong

Comment Excerpt Text:

according to the Energy Information Agency, coal will play a significant role in providing electricity for decades to come. In 2014, coal delivered nearly 40 percent of our nation's electricity. It makes no sense to sit here and complain that the taxpayers are not getting a fair share -- a fair return on Federal leasing of coal. But, the Government can then take the taxpayers' money and waste billions and billions of dollars on intermittent energy sources, such as solar farms and wind farms, that are not reliable, not efficient, and very expensive. How about

we spend some of the government's money, or the taxpayer's money, on the already clean, cheap, and reliable coal industry to help make it better?

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Comment Number: 00001274\_Chower\_20160623-1

Commenter I: Carole Chower

Comment Excerpt Text:

So, we need to be prepared because coal is not the answer for the long term. It's on the wane. The market forces are driving it out. And please, please consider first of all, health.

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Comment Number: 00001275\_Earl\_20160623-3

Commenter I: Taylor Earl

Comment Excerpt Text:

If they actually cared about the environment, they would see that coal has come further than any other energy producer in the America at reducing its CO emissions -- CO2 emissions. According to the EIA, the total U.S. CO2 emissions went down 504 million metric tons from 2006 to 2014. Clean coal technologies alone account for 86 percent of that reduction. A pretty impressive number considering coal- powered energy is only credited for 30 percent of our country's CO2 emissions. So, to say that again, coal powered energy accounts for only 30 percent of the country's CO2 emissions. [indiscernible] 86 percent of the [indiscernible] reduction.

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Comment Number: 00001275\_Earl\_20160623-4

Commenter I: Taylor Earl

Comment Excerpt Text:

Every major advancement that our country has had in the last two decades has on thing in common. It took electricity. In this day and age electricity is the lifeblood of our country. It affects every part of life as we know it, whether directly or indirectly. And it will never go away. We are passing the point of being able to decrease our energy consumption. In fact, worldwide energy consumption is projected by the EPA to grow 48 percent by 2040. Solar, wind and other renewable sources will not keep up with that growth. Energy prices will skyrocket. And energy availability will plummet without coal as a large player in our energy production

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Comment Number: 00001279\_Phillips\_20160623-1

Commenter I: Tom Phillips

Comment Excerpt Text:

Coal can no longer compete with natural gas, wind, and solar. The era, the era of coal is coming to a close. This is happening, not just in the U.S., but also around the world. It is a global movement. Both India and China are moving away from coal. This means they're not only is the domestic market shrinking, but also the export market. The economics of coal are further threatened by probable carbon taxes around the world. Here in the U.S.A., massive amounts of natural gas will result in the long term, low prices for natural gas, making coal permanently uneconomical. Pure, nonpartisan economics dictate the end of the coal era. Unsubsidized gas, wind, and solar are now – or soon will be cheaper than coal-fired power generation. Wind and solar will continue to fall in price over time, putting even more pressure on coal

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Comment Number: 00001284\_Sager\_20160623-2

Commenter I: Jennifer Sager

Comment Excerpt Text:

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From my perspective, we need to transition away from fossil fuels. And I believe that reforming our coal leases is a good step in that direction

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Comment Number: 00001285\_Abshire\_20160623-3

Commenter I: Jim Abshire

Comment Excerpt Text:

Fossil fuel energy production has been and needs to remain at the forefront of our energy's -- energy portfolio

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Comment Number: 0001266\_Reed\_20160623-1

Organization I: High County Conservation Advocates

Commenter I: Matt Reed

Comment Excerpt Text:

Under the current Federal Coal Leasing Program, Gunnison County taxpayers are being shortchanged to line the pockets of coal executives. This exemplifies the need for Federal coal leasing reform to address and correct abuses of the system.

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Comment Number: 0003063\_Clawsey\_G\_06132016-1

Commenter I: Mary Clawsey

Comment Excerpt Text:

The danger to the miners themselves, to the environment even before coal is burned, and to threatened wildlife should be reason enough, and the damage to the environment from coal burning intensifies the case against it

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Comment Number: 0003065\_selvaggio\_G\_06132016-1

Commenter I: Diane Selvaggio

Comment Excerpt Text:

There are things more important than short-term gains for a few. there are things more important than taking our coal, which we may need some day, and exporting it overseas. there are things more important than supporting fossil fuels at a time when our national interests are best served by investing in renewable, sustainable energy sources.

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Comment Number: 0000730\_Rothfus\_USRep\_20160628-3

Commenter I: Keith Ross

Comment Excerpt Text:

Though Pennsylvania's 12th district does not contain large federal land tracts, it is home to many miners, equipment suppliers, and other firms that depend on a healthy coal industry for their livelihoods. Accordingly, we are concerned about any additional regulations from federal agencies that seem designed to keep coal in the ground

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Comment Number: 0000737\_noname\_20160628-1

Comment Excerpt Text:

We must harness this opportunity to assist coal communities in moving forward. Funds currently used by the U.S. government to manage the federal coal leasing program could be used to enhance this transition or to restore legacy mine sites. The federal coal leasing program should be ended in order to save taxpayers money, protect public lands, and begin a meaningful transition for coal communities here in Appalachia and beyond. Please end taxpayer-funded coal extraction on public lands, and instead

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invest in helping coalfield communities make an important and historic transition toward a clean energy economy.

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Comment Number: 0000741\_Perry\_NWF-1

Commenter I:Edward Perry

Comment Excerpt Text:

The monetary benefits of coal are well known, but what I hope you evaluate is the considerable cost to human health, our economy, and our Nation's wildlife by our government's support for coal mining on public lands and the substantial break in royalty payments coal companies receive.

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Comment Number: 0000843\_Seltweiger\_PennFuture-2

Organization I:Penn Future

Commenter I:Larry Seltweiger

Comment Excerpt Text:

Reforms of the leasing and production of coal on our national public lands and tribal lands are long overdue. They have not been updated for 30 years and they reflect an urgent priority for any carbon emissions

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Comment Number: 0000845\_Lyon\_NWF-1

Organization I:Naitonal Wildlife Federation

Commenter I:Jim Lyon

Comment Excerpt Text:

The Federal Coal Program is broken from soup to nuts, and we encourage you as you approach this to look at it comprehensively and cohesively. Please look at the program from cradle to grave; lease site, bid applications, royalty, mine plan adequacy, reclamation bonding, reclamation integrity, post mining productivity, bond release and of course carbon reduction.

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Comment Number: 0000865\_Wasser-2

Commenter I:Justin Wasser

Comment Excerpt Text:

I think it is time that the BLM review the scientific consensus on the effects of mining and burning what's extracted out of federal lands, and those externalities far into the future of the time, energy and finances we are going to have to put in to clean up the mess from today

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Comment Number: 0000866\_Leers-1

Commenter I:Ben Leers

Comment Excerpt Text:

it is necessary that federal land leases for coal needs to be stopped, but not only that but begin to impose recommendations to phase out the federal leasing of land for coal all together.

### **ISSUE 5.2 - COAL LAND USE PLANNING DECISIONS (E.G., UNSUITABILITY CRITERIA)**

Total Number of Submissions: 18

Total Number of Comments: 33

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Comment Number: 00000355 \_ Thomas \_20160519-3

Commenter I: Ann Thomas

Comment Excerpt Text:

Intact wildland are a unique resource in and of themselves and should continue to be for generations to come. As the BLM considers how to move forward with coal leasing on public lands, I urge them to take into account the value of these lands beyond only the monetary.

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Comment Number: 0000582-1

Commenter I: Robert Meyer

Comment Excerpt Text:

Public lands have better long-term use for wildlife protection, tourism, and outdoor recreation than being damaged by strip mining for coal.

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Comment Number: 0001191-2

Commenter I: A.R. Morris

Comment Excerpt Text:

The BLM leasing program needs to be transformed into a clean energy program. BLM land can be the site of solar farms, wind farms, and updating the grid. BLM must use its taxpayer money it could get money from -- I know it has other programs besides coal leasing -- and then it could get new revenue from renewable energy and then they could use that money to fast track even more renewable energy programs that meet the needs of the 21st century planet.

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Comment Number: 0002189 \_Jozwik\_20160517-6

Commenter I: Darryl Jozwik

Comment Excerpt Text:

DO THE BLM'S UNSUITABILITY SCREENING CRITERIA ADEQUATELY ADDRESS THE QUESTIONS OF WHERE AND/OR WHERE NOT TO LEASE – YES, UNDER THE CURRENT SCREENING CRITERIA.

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Comment Number: 0002296 \_Regan\_20160720-1

Commenter I: David Regan

Comment Excerpt Text:

Environmental considerations should also play a greater role in what land gets leases or not.

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Comment Number: 0002449 \_Lyon\_20160727\_NWF-32

Organization I: National Wildlife Federation Action Fund

Commenter I: Jim Lyon

Comment Excerpt Text:

Even though RMPs show millions of acres of federal coal available for leasing, the vast majority of lease applications BLM receives are proposed by coal companies adjacent to companies' existing coal mines, allowing current mining operations to continue. Despite having "suitability" criteria that should guide whether BLM actually makes lands available for coal leasing and a broad multiple use mandate that requires the agency to consider how to protect other uses and values, BLM has failed to take lands off the table – neither finding lands "unsuitable" nor determining other resources should be protected.

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Comment Number: 0002449 \_Lyon\_20160727\_NWF-49

Organization I: National Wildlife Federation Action Fund

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Commenter I: Jim Lyon

Comment Excerpt Text:

Mining should not occur in unsuitable lands or environmentally sensitive lands. BLM should work with sister agencies to more appropriately determine areas that are unsuitable for mining and prohibit leases for mining in unsuitable areas, particularly those that cannot be reclaimed and those that are especially environmentally sensitive or have special habitat value. This includes areas where the hydrological balance cannot be restored to pre-mining conditions. BLM should also identify areas where coal development should be avoided due to high conflicts with wildlife and fisheries, water, air and protected lands, and amend resource management plans to exclude them from future leasing.

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Comment Number: 0002467\_Fettus\_20160728-30

Organization I: Natural Resources Defense Council

Commenter I: Geoffrey Fettus

Other Sections: 1

Comment Excerpt Text:

While, in theory, Land Use Plans, such as RMPs, provide BLM with an opportunity to evaluate suitable areas with mining potential, in practice they have not provided a framework for BLM to make affirmative and informed decisions about where, and on what terms, coal leasing may be appropriate as BLM defers all coal leasing screens to the time of a LBA. The Buffalo (WY) Field Office, for example, did not apply any leasing screens limiting where coal could be leased when revising its Resource Management Plan in 2015. BLM, Proposed Resource Management Plan and Final Environmental Impact Statement for the Buffalo Field Office Planning Area (May 2015) at 29 (“[N]o coal leasing allocation decisions are being made through the RMP revision process. . . . Prior to offering a coal tract for sale, the unsuitability criteria will be reviewed, a tract specific National Environmental Policy Act (NEPA) analysis will be completed, and there will be opportunity for public comment”). See also, Miles City Field Office Proposed Resource Management Plan and Final Environmental Impact Statement (June 2015) at 2-10 (“At the time an application for a new coal lease or lease modification is submitted to the BLM, the BLM will determine whether the lease application area is “unsuitable” for all or certain coal mining methods pursuant to 43 CFR 3461.5.”). BLM’s Buffalo (WY) and Miles City (MT) Field Offices cover federal coal in the Powder River Basin.

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Comment Number: 0002467\_Fettus\_20160728-64

Organization I: Natural Resources Defense Council

Commenter I: Geoffrey Fettus

Other Sections: 2

Comment Excerpt Text:

Although, as noted, BLM’s regulations specify some areas as unsuitable for mining, 43 C.F.R. § 3461.5, under this alternative BLM would more expansively identify specific areas where coal development should be avoided due to high conflicts with wildlife and fisheries, water, air and protected lands, and set a schedule for amending Resource Management Plans to exclude them from future leasing.

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Comment Number: 0002468-1

Organization I: Powder River Basin Resource Council

Commenter I: Shannon Anderson

Comment Excerpt Text:

Our organizations strongly believe that any reform measures must achieve the following objectives:

- Ensuring a fair return to the American public for the leasing and mining of our publicly owned mineral resources by increasing royalty rates and closing loopholes in coal valuation processes;
- Increasing transparency of and public oversight around the federal coal program;
- Preventing impacts of coal leasing, mining, and burning on the global climate;

- Better protecting our air, land, water, and wildlife resources; and
- Addressing the legacy issues of decades of federal coal mining, including ensuring reclamation of currently leased areas before new leasing can proceed.

To meet these shared economic and environmental goals, as part of its coal reform efforts, the Department should propose to replace Coal Production Regions and Leasing by Application with a new model of leasing that balances the nation's energy needs with the effects of coal mining, transportation and burning on air, land, water, wildlife resources and the global climate. The new leasing model must take into account the latest information on the availability of coal reserves, coal demand, and replacement energy sources. The Department must re-assert itself as the driver of the leasing process and acknowledge that leasing should only be carried out if it can protect our public land resources and is consistent with the public interest objectives of the Mineral Leasing Act.

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Comment Number: 0002470-11

Organization I: Taxpayer for Common Sense

Commenter I: Ryan Alexander

Comment Excerpt Text:

The Programmatic EIS should consider a regulatory framework that gives the BLM and ONRR a more proactive role in determining the value of federal coal for the purpose of royalty calculation and the value of applicable deductions, rather than relying so heavily on industry reported data. Transparency should be a priority in this process.

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Comment Number: 0002477\_Saul\_20160728\_CBD\_UPHE-27

Organization I: Center for Biological Diversity

Commenter I: Michael Saul

Comment Excerpt Text:

However, it is not only that the criteria themselves that are inadequate to prevent coal mining from unduly harming our communities and habitats ? the implementation of the screening criteria is likewise inadequate. For example, several exemptions allow the criteria to be bypassed. Pursuant to 43 C.F.R § 3461.2-1(a)(1), "each of the unsuitability criteria shall be applied to all coal lands with development potential identified in the comprehensive land use plan or land use analysis;" however, that section adds that "for areas where 1 or more unsuitability conditions are found and for which the authorized officer of the surface management agency could otherwise regard coal mining as a likely use, the exceptions and exemptions for each criterion may be applied." This broad grant of authority to disregard the applicability of the unsuitability criteria in cases where coal mining is somehow still considered a "likely use" is dangerous, especially without any indication of the factors that would be used to determine its applicability. Allowing lands to be mined even when the unsuitability criteria suggest it should not be, simply because some "authorized officer" thinks that coal mining is a "likely use," provides nothing other than a means for mining companies to exert influence on the agency in an attempt to disregard the criteria intended to protect sensitive areas from harm. This provision must be changed such that no mining is allowed on lands that have been shown to be unsuitable.

Furthermore, 43 C.F.R § 3461.2-1(b)(1) allows the "authorized officer" to make that assessment "on the best available data that can be obtained given the time and resources available to prepare the plan." This standard falls well short of what is normally used to ensure that environmental resources are not unduly adversely impacted. Under both the ESA and NEPA, the standard is to use the "best available science."<sup>243</sup> The limitation provided in 43 C.F.R § 3461.2-1(b)(1) regarding time and resources, however, is a slippery slope that would allow decisions to be made based on incomplete and unreliable information - especially given the fact that resources at both the state and federal level for gathering data to support studies regarding the impacts of coal mining on the environment are entirely lacking. The regulations also do not require that all relevant information be used in BLM's analysis. 43 C.F.R § 3461.2-1 states that "land use analysis shall include an indication of the adequacy and

reliability of the data involved;” however, the regulation does not prohibit BLM from making a determination if the information is incomplete, but rather allows BLM to determine that a criterion “cannot be applied” due to “inadequate or unreliable data,” and then merely requires that the “analysis [] discuss the reasons therefor and disclose when the data needed to make an assessment with reasonable certainty would be generated.” This provision allows decisions to be made without sufficient information or regard for environmental impacts, and is therefore precarious when we must be precautionary.

(243) See 16 U.S.C. § 1536(a)(2).

Comment Number: 0002477\_Saul\_20160728\_CBD\_UPHE-28

Organization 1: Center for Biological Diversity

Commenter 1: Michael Saul

Organization 2: Utah Physicians for a Healthy Environment

Other Sections: 2

Comment Excerpt Text:

A provision that states emphatically that decisions must be based on the best available science, and that no mining may be allowed absent sufficient information on the potential impacts on human health and the environment, is necessary to prevent the devastating harm that coal mining has already caused and will continue to cause if more enforceable restrictions are not employed. NEPA, for example, requires agencies to gather information where there is incomplete information essential to making a determination of impacts.<sup>244</sup> If that information cannot be obtained, then BLM should not merely have to disclose the reasons why the data is unavailable and when it could be obtained, but should have to assess the relevance of that information, as required under NEPA,<sup>245</sup> and no determination must be made until such information is available.

(244) 43 C.F.R. § 1502.22(a) (“If the incomplete information relevant to reasonably foreseeable significant adverse impacts is essential to a reasoned choice among alternatives and the overall costs of obtaining it are not exorbitant,

the agency shall include the information in the environmental impact statement.”).

(245) *Id.* at § 1536(b).

Comment Number: 0002477\_Saul\_20160728\_CBD\_UPHE-30

Organization 1: Center for Biological Diversity

Commenter 1: Michael Saul

Organization 2: Utah Physicians for a Healthy Environment

Other Sections: 1

Comment Excerpt Text:

I. The Unsuitability Screening Criteria

i. Criterion I

Criterion I prevents coal mining on “all Federal lands” including not only obvious areas such as National Parks and wilderness areas, but on all National Forests. This is a reasonable limitation, especially given the fact that sufficient private land exists for coal exploitation, and public lands must be managed under public trust principles, which are inconsistent with the harms to both the local and global environment caused by coal mining. The only way to protect public lands and the species that rely on them from undue harm from coal mining is to prevent these activities on our public lands.

However, there is an exception that swallows this rule. It states that a lease may be issued for mining on National Forest lands if there are “no significant recreational, timber, economic or other values which may be incompatible with the lease, and [] surface operations and impacts are incident to an underground coal mine.” First, that surface impacts are incident to underground mining is meaningless, and does not prevent undue harm to our

National Forests. The fact that there is no language about minimizing these incidental impacts to the surface resources is totally unreasonable, given that minimization of impacts is essential to protecting resources. While the regulations provide for BLM to place “particular emphasis” on protecting certain environmental resources,<sup>247</sup> a more specific requirement that harm be minimized should be included at the very least.

Second, this exception provides too much leeway for the decision to allow mining on National Forest lands. Whether there are “values” that are inconsistent or incompatible with the lease is a very broad, undefined inquiry. As discussed above, the “value” attributable to preventing further climate harm should outweigh all economic basis for allowing further coal mining; however, apparently this provision has not been properly employed, since coal mining continues to occur, regardless of the impacts. Further, this provision ignores impacts to habitats and species, focusing instead on the economic values associated with National Forests, such as timber and recreation. This provision should be broadened to include habitat, such that mining on National Forest lands may not be allowed if such activities are incompatible with the habitat needs of species that rely on those areas? particularly species protected under state and/or federal law, or that have been otherwise identified as imperiled.

#### ii. Criterion 3

Criterion 3 provides that lands within 100 feet of the outside line of the right-of-way of a public road or within 100 feet of a cemetery, or within 300 feet of any public building, school, church, community or institutional building or public park or within 300 feet of an occupied dwelling are unsuitable. While providing strict buffers for these sensitive areas is warranted (and the same must be done for environmental resources as well, such as streams), the distances provided here are insufficient to protect our communities. This provision allows coal mining within 300 feet (just one football field) of a school or home. Based on what we now know about the harmful effects of mining on local communities, including both water impacts from the release of pollutants and air impacts from toxic coal dust, a much larger buffer (i.e. 500 feet or more) should be employed.<sup>248</sup>

#### iii. Criterion 4

Criterion 4 states that “Federal lands designated as wilderness study areas shall be considered unsuitable while under review by the Administration and the Congress for possible wilderness designation. For any Federal land which is to be leased or mined prior to completion of the wilderness inventory by the surface management agency, the environmental assessment or impact statement on the lease sale or mine plan shall consider whether the land possesses the characteristics of a wilderness study area. If the finding is affirmative, the land shall be considered unsuitable....”

This provision, while protecting areas that have been designated for potential inclusion into wilderness areas, leaves too many sensitive areas open to coal mining activities. The provision should apply not only to wilderness study areas and those areas with wilderness characteristics, it should also include all inventoried roadless areas, as well as other large habitat blocks that are vital to species that rely on intact habitat.

Habitat fragmentation is one of the biggest threats to biodiversity.<sup>249</sup> Maintaining large habitat blocks is not only essential for the species that rely on them, but for all species to adapt and adjust to climate change. Given that coal is rapidly becoming an obsolete source of energy mostly because we now know that exploiting coal resources is horrible for the environment? there is absolutely no reason to continue to allow mining activities in areas that would cause greater habitat fragmentation or otherwise adversely affect large habitat blocks. The revamped program should therefore provide that intact habitat blocks (i.e. greater than \_\_\_ acres) must be protected, and any lands where mining activities would contribute to fragmentation are unsuitable.

#### iv. Criterion 6

Pursuant to criterion 6, “Federal lands under permit by the surface management agency, and being used for scientific studies involving food or fiber production, natural resources, or technology demonstrations and experiments shall be considered unsuitable for the duration of the study, demonstration or experiment...” It is not clear whether “natural resources” is intended to cover studies regarding habitat or species, but it should be made clear that such studies ? especially those involving habitat needs and the impacts of mining on species or waterways ? would also render lands unsuitable.

#### v. Criterion 9

Criterion 9 states that designated or proposed critical habitat for listed species, and habitat for such species which is determined to be of essential value and where the presence of threatened or endangered species has been scientifically documented, shall be considered unsuitable. While this should be the end of it, and no coal mining activities should ever be allowed to take listed species or adversely modify essential or critical habitat, there is an exception in Criterion 9 that not only swallows the rule, it chews it up and spits it out.

The exception states that a “lease may be issued and mining operations approved if, after consultation with the Fish and Wildlife Service, the Service determines that the proposed activity is not likely to jeopardize the continued existence of the listed species and/or its critical habitat.”

There are several problems with this exception. The first is that while site-specific consultation may result in measures to reduce or avoid harm to species, that process fails to provide a holistic analysis of the cumulative impacts caused by coal mining activities.

The second is that consultation often does not take place on specific mining projects regulated under SMCRA, due to a 1996 Biological Opinion, which covers all take of all listed species, for all time (including future listed species) from impacts associated with coal mining.<sup>250</sup> The Service relies on this BiOp to find that individual mines will not jeopardize listed species absent site-specific analysis, yet mining activities continue to drive species to the brink of extinction. This is due, in part, to the reliance on Protection and Enhancement Plans (PEPs), which are intended to implement measures to mitigate take, such that mining activities will not jeopardize species in violation of Section 7 of the ESA. However, FWS has only provided PEP Guidance for some listed species, such as the Indiana bat and blackside dace, but not for all species that may be directly and indirectly impacted by surface and/or underground coal mining of federal coal. Endangered or threatened species directly affected by existing or proposed mines on federal coal leases include but not limited to:<sup>251</sup>

Ute ladies’-tresses blowout penstemon  
 Gunnison sage-grouse Mexican spotted owl  
 Southwestern willow flycatcher Yellow-billed cuckoo  
 Greenback cutthroat trout Pawnee montane skipper  
 Canada lynx Preble’s meadow jumping mouse  
 DeBeque phacelia Penland alpine fen mustard  
 Colorado hookless cactus bonytail chub  
 humpback chub razorback sucker  
 Colorado pikeminnow Utah prairie dog  
 gray bat Virginia Big-eared bat  
 dusktail darter palezone shiner  
 Cumberland darter Cumberland elktoe  
 Fanshell Cumberlandian combshell  
 oyster mussel tan riffleshell  
 snuffbox pink mucket  
 little-wing pearlymussel Cumberland bean pearlymussel

Cumberland sandwort Cumberland Rosemary  
 American chaffseed white-haired goldenrod  
 Virginia spiraea running Buffalo clover

Absent site-specific consultation and PEPs that actually implement protections for species, it is impossible for mine operators to “minimize disturbances and adverse impacts on fish and wildlife and related environmental values, including compliance with the Endangered Species Act...”<sup>252</sup> Further, even where the agencies do not rely on the 1996 BiOp and do conduct consultations, history has shown that this has not worked to protect imperiled species. Data published since 1996 document increasingly significant declines in numerous imperiled and federally protected taxa, and degradation of their habitats, as the result of surface coal mining.<sup>253</sup>

Recent scientific and policy documents further show that surface mining is increasingly imperiling numerous species of many taxa, contrary to the conclusions of the 1996 Biological Opinion, and perhaps specifically because OSM and FWS have failed to properly implement and oversee the implementation of the requirements of the 1996 Biological Opinion.<sup>254</sup> It is therefore clear that this criterion is failing to ensure the protection of listed species.

As discussed above, there is no reason to allow coal mining generally, and even less to allow these activities in areas that support listed or proposed species. This dying industry should not be allowed to drag down with it the imperiled species that rely on lands that coal companies want to exploit for profit. Rather, the standard should be that any land with suitable habitat for listed or proposed species is unsuitable for coal mining, and if an exception must be provided (and there really is no good reason to do so), then the exception should be allowed only if after surveys and studies it has been shown that no habitat for listed or proposed species would be negatively impacted, and a concurrence letter from FWS stating that no take is expected to occur.

#### vi. Criterion 10

Criterion 10 states that Federal lands containing critical habitat for state listed plant or animal species shall be considered unsuitable. While in theory this is protective of species, it suffers from some of the same issues as discussed above regarding federally-listed species. In short, this is not being enforced correctly, and the results speak for themselves. Too many species have suffered from coal mining over the past few decades ? with many driven to the brink of extinction or extirpated entirely ? for anyone to argue that this criterion (or Criterion 9) is doing what it intended. A new rule that does not allow any adverse modification of habitat for any listed species, state or federal, is warranted to ensure that species do not continue to be harmed by a process that allows for wanton destruction of habitat.

It is, in fact, readily apparent that state programs are not being properly enforced. In West Virginia Highlands Conservancy, for example, the court detailed the damage done by OSM’s refusal to properly oversee the inadequate West Virginia program. It noted many direct impacts and wide ranging indirect impacts, finding:

“a climate of lawlessness, which creates a pervasive impression that continued disregard for federal law and statutory requirements goes unpunished, or possibly unnoticed. Agency warnings have no more effect than a wink and a nod, a deadline is just an arbitrary date on the calendar and, once passed, not to be mentioned again. Financial benefits accrue to the owners and operators who were not required to incur the statutory burden and costs attendant to surface mining; political benefits accrue to the state executive and legislators who escape accountability while the mining industry gets a free pass. Why should the state actors do otherwise when the federal regulatory enforcers’ findings, requirements, and warnings remain toothless and without effect?<sup>255</sup>

The Federal coal program is therefore not being properly implemented, which has resulted in undue adverse impacts to habitats and the species that rely on them.



## vii. Criteria 12, 14 and 15

Criterion 12 protects bald and golden eagle roost and concentration area used during migration and wintering, and Criterion 14 protects high priority habitat for migratory bird species. While these protective measures are vitally important to these species, it is not clear that they are being properly implemented. As set forth herein, recent history has shown that coal mining has had severe adverse impacts on habitats. It is not clear whether the process that has been put in place to determine those areas that are vital to eagles and other migratory birds is being properly followed.

In order to be sufficiently protective, all concentration areas for eagles and migratory birds used for migration and wintering should be considered unsuitable. Moreover, there should be no exceptions to this rule. As discussed above, sacrificing any of these essential habitat areas in order to exploit coal resources is illogical and unconscionable. We must move beyond coal now, and cannot allow this dying industry to continue to cause undue adverse harm.

However, we do note that these criteria contain important protections that should apply likewise to other species. Areas where species congregate or that contain high biodiversity and unique habitats must be protected, for current and future generations. Furthermore, the notion that we must protect roost and concentration areas for migration and wintering should be applied to ESA species as well. Criterion 9 protects critical habitat; however, not all listed species have designated critical habitat. Therefore, we urge that these protections be extended, such that all lands that are relied on by listed species, as well as those that contain important habitat areas for other species, are not despoiled by mining activities. This should include not just those areas that species currently rely on, but also those areas that are important for habitat connectivity, which is essential for climate resilience (i.e. species must be able to adapt to climate change, which in many cases requires north/south movement to maintain habitat niches as areas are altered by climate change).

Furthermore, the focus must be not only on the immediate area, but on the entire area impacted by coal mining activities. This is especially important for impacts to sensitive river systems and the species that rely on them, such as freshwater mussel, many of which are critically imperiled. Studies and analysis indicate that threatened and endangered species that rely on the waterways impacted by surface coal mining, such as fish and freshwater mussels, are most susceptible when they are within ten river miles of mining projects.<sup>256</sup> The sediments and pollutants that harm these species are most prevalent within this ten mile area; therefore, we urge BLM to protect our rivers and streams, and to fulfill its ESA obligations, by ensuring that mining activities do not result in the introduction of sediment or other pollutants, such that no harm will occur to species within at least ten river miles of a mining project. We also emphasize that only considering pollution impacts ten river miles downstream may not adequately address comprehensive downstream water quality impacts such as cumulative sedimentation or biomagnification of contaminants. For this reason, we ask BLM to consult with the Services on this issue (see below).

We do note that Criterion 15 has the potential to provide a means for the protection of these essential habitat areas, and therefore it would seem that BLM understands ? at least in theory ? the prudence of habitat protection; however, the issue seems to be one of enforcement and accountability, and it is readily apparent that many such areas are not being protected from coal mining. As discussed above, even with these unsuitability criteria in place, data published since 1996 document increasingly significant declines in numerous imperiled and federally protected taxa, and degradation of their habitats, as the result of surface coal mining. Recent scientific and policy documents further show that surface mining is increasingly imperiling numerous species of many taxa.<sup>257</sup> Clearly, more must be done to protect essential habitats and the species that rely on them from coal mining.

(247) See 43 CFR 3420.1-4(e)(3) (“In making these multiple use decisions, the Bureau of Land Management or the surface management agency conducting the land use planning shall place particular emphasis on protecting the following: Air and water quality; wetlands, riparian areas and sole-source aquifers; the Federal lands which, if leased, would adversely impact units of the National Park System, the National Wildlife Refuge System, the National System of Trails, and the National Wild and Scenic Rivers System.”).

(248) The public health issues raised by coal extraction, transportation and use include increased air pollution from coal dust (mercury, arsenic, lead, uranium), soil contamination by coal dust, and increased noise. The EIS should include a specific focus on children, the elderly, and other vulnerable members of the community. Air quality impacts and pollution from nitrogen dioxide (NO<sub>2</sub>), particulate matter, and coal dust must be analyzed. NO<sub>2</sub> exposure can have a wide range of health impacts depending on the length of exposure and various other factors. Epidemiologic research establishes a plausible relationship between NO<sub>2</sub> exposures and adverse health effects ranging from the onset of respiratory symptoms to hospital admission. Particulate matter (PM) refers to a broad class of diverse substances that exist as discrete particles of varying size. Environmental Protection Agency, Integrated Science Assessment for Particulate Matter, 4-2. EPA/600/R-08/139F, December 2009, 76 Fed. Reg. 57105 at 57302; Exh. 147, Health Effects and Economic Impacts of Fine Particle Pollution in Washington, Washington Dep’t of Ecology (Dec. 15, 2009).

(249) See e.g. U.S. DEPARTMENT OF THE INTERIOR, DRAFT STREAM PROTECTION RULE ENVIRONMENTAL IMPACT

STATEMENT 4-95 (2015) (stating that the removal of trees and habitat fragmentation associated with coal mining “may cause species to become threatened or endangered, and can contribute to species extinction”); *Id.* at 4-113 (“The negative effects of mining on specific features of habitats (soils, topography, water quality, and vegetation) may make it more difficult for wildlife species to reestablish after a mining disturbance and may increase the proliferation of non-native species on reclaimed landscapes.”); *Nat’l Parks Conservation Ass’n v. Jewell*, 62 F. Supp. 3d 7, 16 (D.D.C. 2014) (noting that “[d]irect effects of surface coal mining and reclamation operations on threatened, endangered, or proposed species or critical habitat consists [sic] primarily of habitat alteration by land clearing and earthmoving operations.... If a species of concern lacks individual mobility, land clearing and excavation activities may result in a direct take”).

(250) 1996 Biological Opinion and Conference Report on Surface Coal Mining and Reclamation Operations under SMCRA (hereafter “1996 Biological Opinion”).

(251) See BLM, Final Environmental Impact Statement for the Wright Area Coal Lease Applications 3-188 (July 2010); USDA Forest Service, Rulemaking for Colorado Roadless Areas, Supplemental Draft Environmental Impact Statement 21 (Sept. 2015); BLM, Draft Environmental Impact Statement, Alton Coal Tract Lease By Application at 3-83 (Nov. 2011); BLM and USFS, Environmental Assessment, Bledsoe Coal Lease, KYES-53865 (Oct. 2012), available at

[http://www.blm.gov/style/medialib/blm/es/minerals/coal/coal\\_lease\\_sales\\_nepa.Par.46357.File.dat/BledsoeCoalLease.EA.12Oct2012.LowResolu.pdf](http://www.blm.gov/style/medialib/blm/es/minerals/coal/coal_lease_sales_nepa.Par.46357.File.dat/BledsoeCoalLease.EA.12Oct2012.LowResolu.pdf).

(252) 30 C.F.R. § 780.16(b).

(253) Melvin Warren & Wendell Haag, Spatio-temporal patterns of the decline of freshwater mussels in the Little South Fork Cumberland River, USA, *Biodiversity and Conservation* 14: 1383–1400 (2005); James Wickham et al., The effect of Appalachian mountaintop mining on interior forest, *Landscape Ecology* 22: 179-187 (2007); Douglas Becker, D.A. et al., Impacts of mountaintop mining on terrestrial ecosystem integrity: identifying landscape thresholds for avian species in the central Appalachians, United States, *Landscape Ecology* 30: 339- 356 (2015); Emily Bernhardt & Margaret Palmer, The environmental costs of mountaintop mining valley fill operations for aquatic ecosystems of the Central Appalachians, *Annals of the New York Academy of Sciences* 1223: 39–57 (2011); Emily Bernhardt et al., How many mountains can we mine? Assessing the regional degradation of Central Appalachian rivers by surface coal mining, *Environmental Science and Technology* 46: 8115-8122 (2012).

(254) STEVEN AHLSTEDT ET AL., LONG-TERM TREND INFORMATION FOR FRESHWATER MUSSEL POPULATIONS AT TWELVE FIXED-STATION MONITORING SITES IN THE CLINCH AND POWELL RIVERS OF EASTERN TENNESSEE AND SOUTHWESTERN VIRGINIA 1979-2004(2005); Nathaniel Hitt & Douglas Chambers, Temporal changes in taxonomic and functional diversity of fish assemblages downstream from

mountaintop mining, *Freshwater Science* 33(3): 915- 926 (2014); Brenee Muncy et al., Mountaintop removal mining reduces stream salamander occupancy and richness in southeastern Kentucky (USA), *Biological Conservation* 180: 115-121 (2014); U.S. ENVIRONMENTAL PROTECTION AGENCY, THE EFFECTS OF MOUNTAINTOP MINES AND VALLEY FILLS ON AQUATIC ECOSYSTEMS OF THE CENTRAL APPALACHIAN COALFIELDS, EPA/600/R-09/138F (2011); Gregory Pond, Patterns of Ephemeroptera taxa loss in Appalachian headwater streams (Kentucky, USA), *Hydrobiologia* 641:185–201 (2010); Todd Petty et al., Landscape indicators and thresholds of stream ecological impairment in an intensively mined Appalachian watershed, *Journal of the North American Benthological Society* 29(4):1292-1309 (2010); Endangered status for the Cumberland

Darter, Rush Darter, Yellowcheek Darter, Chucky Madtom, and Laurel Dace, Final Rule, 76 Fed. Reg. 48,722 (Aug. 9, 2011); Endangered species status for the Big Sandy Crayfish and the Guyandotte River Crayfish, Proposed Rule, 80 Fed. Reg. 18,710 (Apr. 7, 2015).

(255) West Virginia Highlands Conservancy v. Norton, 161 F. Supp. 2d 676, 684 (S.D. W.V. 2001).

(256) Anderson, R. M., Layzer, J. B., & Gordon, M. E. (1991). Recent catastrophic decline of mussels (Bivalvia, Unionidae) in the Little South Fork Cumberland River, Kentucky. *Brimleyana*, (17), 1-8.; Layzer, J. B., & Anderson, R. M. (1992). Impacts of the coal industry on rare and endangered aquatic organisms of the upper Cumberland River Basin. Kentucky Department of Fish and Wildlife Resources; Warren Jr, M. L., & Haag, W. R. (2005). Spatio-temporal patterns of the decline of freshwater mussels in the Little South Fork Cumberland River, USA. *Biodiversity & Conservation*, 14(6), 1383-1400; Houpp, R. E. (1993). Observations of long-term effects of sedimentation on freshwater mussels (Mollusca: Unionidae) in the North Fork of Red River, Kentucky. *Transactions of the Kentucky Academy of Science*, 54(3-4), 93-97; U.S. Environmental Protection Agency. (2002). Clinch and Powell Valley Watershed Ecological Risk Assessment. EPA/600/R-01/050; Newton, T. J., & Bartsch, M. R. (2007). Lethal and sublethal effects of ammonia to juvenile *Lampsilis* mussels (unionidae) in sediment and water-only exposures. *Environmental Toxicology and Chemistry*, 26(10), 2057-2065; Vannote, R. L., & Minshall, G. W. (1982). Fluvial processes and local lithology controlling abundance, structure, and composition of mussel beds. *Proceedings of the National Academy of Sciences*, 79(13), 4103-4107; Pond, G. J., Passmore, M. E., Borsuk, F. A., Reynolds, L., & Rose, C. J. (2008). Downstream effects of mountaintop coal mining: comparing biological conditions using family-and genus-level macroinvertebrate bioassessment tools. *Journal of the North American Benthological Society*, 27(3), 717-737; Jenkinson, J. J. (2005). Specific gravity and freshwater mussels. *Ellipsaria*, 7, 12-13; McCann, M.T. & Neves, R.J.( 1992). Toxicity of coal-related contaminants to early life stages of freshwater mussels in the Powell River, Virginia. Virginia Cooperative Fish and Wildlife Research Unit, Dept. of Fisheries and Wildlife Sciences. Research Work Order No. 23 for U.S. Fish and Wildlife Service, Asheville Field Office. August 1992; Kitchel, H. E., Widlak, J. C., & Neves, R. J. (1981). The impact of coal-mining waste on endangered mussel populations in the Powell River, Lee County, Virginia. Report to the Virginia State Water Control Board, Richmond; Ahlstedt, S. A., & Tuberville, J. D. (1997). Quantitative reassessment of the freshwater mussel fauna in the Clinch and Powell Rivers, Tennessee and Virginia. Conservation and management of freshwater mussels II. Upper Mississippi River Conservation Committee, Rock Island, Illinois, 72-97; Burkhead, N. M., & Jelks, H. L. (2001). Effects of suspended sediment on the reproductive success of the tricolor shiner, a crevicespawning minnow. *Transactions of the American Fisheries Society*, 130(5), 959-968; Sutherland, A. B., & Meyer, J. L. (2007). Effects of increased suspended sediment on growth rate and gill condition of two southern Appalachian minnows. *Environmental Biology of Fishes*, 80(4), 389-403; Jones, E. B., Helfman, G. S., Harper, J. O., & Bolstad, P. V. (1999). Effects of riparian forest removal on fish assemblages in southern Appalachian streams. *Conservation biology*, 13(6), 1454-1465; Sutherland, A. B., Maki, J., & Vaughan, V. (2008). Effects of suspended sediment on whole-body cortisol stress response of two southern Appalachian minnows, *Erimonax monachus* and *Cyprinella galactura*. *Copeia*, 2008(1), 234-244; Zamor, R. M., & Grossman, G. D. (2007). Turbidity affects foraging success of drift-feeding rosyzide dace. *Transactions of the American Fisheries Society*, 136(1), 167-176; Newcombe, C. P., & Jensen, J. O. (1996). Channel suspended sediment and fisheries: a synthesis for quantitative assessment of risk and impact. *North American Journal of Fisheries Management*, 16(4), 693-727; Newcombe, C. P., & MacDonald,

D. D. (1991). Effects of suspended sediments on aquatic ecosystems. *North American Journal of Fisheries Management*, 11(1), 72-82.  
(257) See Notes 13 and 14.

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Comment Number: 0002480\_Culver\_20160728\_TWS-10

Organization I: The Wilderness Society

Commenter I: Nada Culver

Other Sections: I

Comment Excerpt Text:

Under BLM's coal mining regulations, coal cannot be leased competitively until it has been evaluated in a comprehensive land use plan or land use analysis. 43 C.F.R. § 3420.1-4(a). This analysis must be conducted pursuant to BLM's planning regulations at 43 C.F.R. Part 1600, which requires development of an EIS to support the RMP. Id. § 3420.1-4(b)(1). In making the "major land use planning decision" concerning the coal resource resulting from this planning, which is "the identification of areas acceptable for further consideration for leasing," four screening procedures that must be complied with are specified. Id. § 3420.1-4(e). The four screening criteria are:

1. Only areas that have "development potential" can be deemed acceptable for further consideration for leasing.
2. The BLM must assess whether the areas being considered for possible leasing are unsuitable for all or certain stipulated methods of mining, as provided for in the BLM's unsuitability regulations. 43 C.F.R. Part 3460.
3. After application of the unsuitability criteria the BLM is to make further multiple-use decisions which "may eliminate additional coal deposits from further consideration for leasing" so as to protect other resource values and uses that are important or unique but not included in the unsuitability criteria. These multiple use considerations include those specified in section 522(a)(3) of SMCRA and the OSMRE regulations at 30 C.F.R. § 762.5. "[P]articular emphasis" is to be placed on protecting air and water quality, wetlands, riparian areas, and sole source aquifers, as well as Federal lands in the following systems: National Park System, National Wildlife Refuge System, National System of Trails, and the National Wild and Scenic River System.
4. In preparing the land use plan analysis, the BLM is to consult with surface owners who meet certain criteria "to determine preference for or against mining by other than underground mining techniques."

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Comment Number: 0002480\_Culver\_20160728\_TWS-11

Organization I: The Wilderness Society

Commenter I: Nada Culver

Comment Excerpt Text:

The BLM should adopt a new policy that would require the BLM to complete and document all 4 steps of the screening process as part of the land use planning process. Emphasis should be placed on ensuring there is full consideration of the specified multiple-use values rather than defaulting to leaving the vast majority of areas available for coal leasing. There is also a need for full compliance with and application of the unsuitability criteria at the land use planning stage. The new policy could also note the types of "land uses" to be protected by application of the multiple-use principles, including preference for renewable energy development and other uses that would have the effect of reducing the climate change contribution of coal from the federal lands.

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Comment Number: 0002480\_Culver\_20160728\_TWS-12

Organization I: The Wilderness Society

Commenter I: Nada Culver

Comment Excerpt Text:

The PEIS should reiterate and require that when the BLM makes the "acceptable for further consideration for leasing" determination in its land use plans that it fully applies the four specified screening factors specified in its

regulations at the planning stage, although additional information can certainly be considered at the time of leasing. In particular, the unsuitability criteria and consideration of additional multiple use values which “may eliminate additional coal deposits from further consideration for leasing” and which should be given “particular emphasis” should be fully applied at the planning stage such that the agency does not continue to default to keeping all lands available for coal leasing. As part of this planning, the BLM should also emphasize the potential impacts from precluding development of renewable sources of energy on the federal estate, which could assist in our transition away from fossil fuels. The PEIS should ensure that new leasing does not occur without further evaluation of the unsuitability criteria and multiple use considerations. Further, the PEIS should update the decisions in priority RMPs where ongoing leasing and development are most likely to address potential conflicts, as set out above.

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Comment Number: 0002480\_Culver\_20160728\_TWS-13

Organization I: The Wilderness Society

Commenter I: Nada Culver

Comment Excerpt Text:

Meeting the existing unsuitability criteria specified in the BLM’s regulations so as to determine areas that should not be available for coal mining is one of the most important environmental protection mechanisms that is available to the BLM. BLM’s regulations call for the application of these criteria when RMPs are developed. Unfortunately, however, the BLM has all too often deferred application of the unsuitability criteria at the planning stage. The PEIS should direct that the unsuitability criteria must be faithfully, and fully, applied when the BLM develops an RMP. Loopholes in the unsuitability criteria should also be scrutinized and narrowed as appropriate. In addition, the BLM should also consider whether the existing criteria are sufficient and develop new criteria as needed, such as to deal with climate change issues.

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Comment Number: 0002480\_Culver\_20160728\_TWS-56

Organization I: The Wilderness Society

Commenter I: Nada Culver

Other Sections: 2

Comment Excerpt Text:

Interim guidance should also be issued to:

1. Define the “public interest” that governs decisions in the coal program and elaborate on how this can and should be taken into account in evaluating leasing proposals.
2. Require tracking and quarterly reporting of climate emissions;
3. Require development and application of a climate budget, as well as quarterly reporting on actions taken toward achieving the budget;
4. Reiterate the intent and application of the unsuitability criteria and multiple-use considerations and require evaluation of whether proposed leases meet these criteria in the context of the planning area prior to any new leasing;
5. Require that BLM complete and document all 4 steps of the screening process as part of the land use planning process, with an emphasis on ensuring that BLM evaluates the “multiple use considerations” carefully, looking at impacts on land health, species, water, air and protected lands, to determine if conflicts would support making land unavailable and/or specifying required mitigation practices. The policy would also note that the types of “land uses” to be protected by application of the multiple use consideration include the preemption of renewable energy development and other uses that would have the effect of reducing the climate change contribution of the federal lands.
6. Require an enhanced showing of technical and financial capability to qualify for leasing.

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Comment Number: 0002480\_Culver\_20160728\_TWS-61

Organization I: The Wilderness Society

Commenter I: Nada Culver

Other Sections: 2

Comment Excerpt Text:

For plans that were completed without making these determinations, the BLM would ensure that a more rigorous application of the criteria would be made prior to new leasing and commit to a schedule for updating those determinations and plans. For areas that currently have ongoing coal leasing and development, BLM should complete these updated analyses and amendments as part of the PEIS. We recommend the BLM address needed updates to the following RMPs in the PEIS:

- Miles City RMP, Montana,
- Buffalo RMP, Wyoming,
- Bighorn Basin RMP, Wyoming
- Kanab RMP, Utah,
- Uncompahgre RMP, Colorado (a Draft RMP was recently issued without a sufficient analysis; a supplement could efficiently incorporate appropriate analyses and updated decisions into the range of alternatives).

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Comment Number: 0002480\_Culver\_20160728\_TWS-62

Organization I: The Wilderness Society

Commenter I: Nada Culver

Other Sections: 1

Comment Excerpt Text:

Currently there are 20 criteria listed in the regulations that define areas as unsuitable for surface mining. 43 C.F.R. §§ 3461.5(a)(1) to (t)(1). In the PEIS the BLM should carefully review these criteria and determine whether new criteria should be added to the regulations. It seems apparent the current regulations are not comprehensive enough—there are many conditions that should make an area unsuitable for surface mining that are not recognized in the current regulations. For example, areas with important bat roosts and colonies should probably be made unsuitable. Important Greater sage-grouse habitats—priority habitat management areas (PHMA) and sagebrush focal areas (SFA)—should clearly be made unsuitable for coal mining. This change will likely also require amendments to the recent land use plan revisions the BLM put in to place for sage-grouse conservation, and this issue will be discussed further below. (6) And perhaps most importantly, the BLM should consider designating areas unsuitable for surface mining where the coal mining would have significant climate change impacts. In particular, if an area can serve as important carbon sink it should not be available for coal mining. There are likely many other additions to the unsuitability criteria that should be made in the PEIS and related rulemaking.

(6) See <http://www.blm.gov/wo/st/en/prog/more/sagegrouse.html> (presenting the BLM sage-grouse RMP revisions and amendments).

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Comment Number: 0002480\_Culver\_20160728\_TWS-69

Organization I: The Wilderness Society

Commenter I: Nada Culver

Comment Excerpt Text:

BLM should determine where additional leasing should be given “particular emphasis” and “eliminate additional coal deposits from further consideration for leasing” within RMPs, or for areas where such determinations have not been made, as part of the 5-year plans. Within the Western Coal Production Region, BLM should prioritize revising land use plans in areas where there are active coal mines.

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Comment Number: 0002488\_Sanderson\_20160728-17

Organization I: Colorado Mining Association

Commenter I: Stuart Sanderson

Comment Excerpt Text:

In response to climate related concerns raised by stakeholders, BLM will also be considering through the PEIS the methodology for determining which, or how much, Federal coal and/or acreage is made available for leasing; and whether to develop a landscape-level approach to identify geographic areas for potential leasing to identify and address potential conflicts (81 FR 17727). BLM must ensure that the future DEIS documents comply with FLPMA's multiple use and sustained yield mandate under § 102(a)(7), and in the land use planning title of FLPMA at § 202(c)(1), and the directive under § 102(a)(12), to recognize the Nation's need for domestic sources of minerals.

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Comment Number: 0002490\_Emrich\_20160728\_CloudPeakEnergy-26

Organization I: Cloud Peak Energy Inc.

Commenter I: Andrew C. Emrich, P.C.

Other Sections: I

Comment Excerpt Text:

BLM's proposed changes to the federal coal program threaten to discourage the development of federal coal resources. BLM's consideration of increased costs on federal coal leasing and production will make the business of coal mining uneconomic and will deter future coal development on public lands. BLM's discouragement of federal coal production will harm state and local economies, which rely heavily on the royalties and taxes generated from coal mining operations. State and local governments have a direct and substantial economic interest in the continued production of federal coal. For instance, in Wyoming coal mining provides the second largest source of tax revenue for state and local governments, generating more than \$1 billion in annual revenue from royalties and taxes. See Attachment 6, Wyoming Mining Association, "Coal's Economic Impact."

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Comment Number: 0002490\_Emrich\_20160728\_CloudPeakEnergy-35

Organization I: Cloud Peak Energy Inc.

Commenter I: Andrew C. Emrich, P.C.

Comment Excerpt Text:

BLM should review its unsuitability screening criteria, which is used to identify geographic areas suitable for federal coal leasing. Under the existing regulatory scheme, many of the criterion are arbitrary, impractical, and prevent BLM from maximizing the full economic recovery of federal coal. The application of the existing unsuitability screening criterion at the land use planning stage often results in a premature determination regarding the appropriateness of leasing coal in a given area. Often, geographic areas are excluded from coal leasing before a determination can be made as to whether there is any concern that legitimately prevents coal mining or whether those concerns could be avoided through stipulations or other measures. Many of the existing criteria cannot be properly evaluated during the land use planning stage, which involves a high-level view of the geographic landscape to determine available uses on public lands.

For example, Criterion Number 3 requires an unsuitability finding for lands located within 100 feet of public roads. Yet, BLM regularly and consistently uses exemptions as a tool to maximize the economic recovery of federal coal. Criteria Numbers 2 and 6 should also be reviewed at the time BLM considers specific leasing actions. Moreover, Criteria Numbers 9 through 15 relate to the exclusion of certain habitats from coal leasing before the potential impacts from a specific coal leasing action can be assessed. The evaluation of potential impacts to threatened or endangered species and critical habitats could be conducted more effectively and more efficiently at the time BLM considers a specific leasing action. For these reasons, the regulations should be modified to allow BLM to make a determination as to whether leasing in the area is appropriate at the time an applicant submits an application for leasing. BLM's standard practice of granting exemptions for the above-listed criteria is evidence

that the consideration of geographic areas for leasing and development is best addressed in the context of specific leasing applications, not in the broader context of land use planning.

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Comment Number: 0002490\_Emrich\_20160728\_CloudPeakEnergy-4

Organization I: Cloud Peak Energy Inc.

Commenter I: Andrew C. Emrich, P.C.

Other Sections: 1

Comment Excerpt Text:

Even before the conclusion of the public scoping process for the current PEIS, the administration offered answers to some of the very questions for which it ostensibly seeks the public's input. On June 22, 2016, the White House Council of Economic Advisors issued a report (the "White House Coal Report") setting forth several conclusions and recommendations related to key questions at issue in BLM's PEIS. The administration's predetermination on these important issues has fundamentally undermined the integrity and objectivity of the NEPA process. See Attachment I, Letter from Senator Barrasso and 8 Other Senators to Secretary of the Interior Sally Jewell (July 14, 2016). BLM must disavow the White House Coal Report if it intends to retain any semblance of objectivity in the ongoing PEIS process.

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Comment Number: 0002491\_Weiskopf\_20160728\_NextGenClimateAmer-17

Organization I: NextGen Climate America

Commenter I: David Weiskopf

Other Sections: 4.6 1

Comment Excerpt Text:

The Mineral Leasing Act requires BLM to modify its coal leasing program to serve the public interest, which includes climate consistency

The Mineral Leasing Act of 1920 ("MLA") states that the Secretary of the Interior is authorized to divide any lands for coal leasing if found in the public interest.<sup>16</sup> Interior has capacious legal authority to interpret this term. "The Secretary of the Interior is authorized to prescribe necessary and proper rules and regulations and to do any and all things necessary to carry out and accomplish the purposes of this chapter."<sup>17</sup> This authority extends to Interior's discretion to reject individual leases or to end the practice of offering new leases and lease extensions altogether if the department determines that these practices are not in the public interest, on the basis of a broad array of factors.

[16 30 U.S.C § 201]

[17 30 U.S.C § 189]

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Comment Number: 0002491\_Weiskopf\_20160728\_NextGenClimateAmer-35

Organization I: NextGen Climate America

Commenter I: David Weiskopf

Other Sections: 2 1

Comment Excerpt Text:

Executive Order 13653 directs agencies to "identify opportunities to support and encourage smarter, more climate-resilient investments by States . . . including by providing incentives through agency guidance."<sup>38</sup> Executive Order 13693 also directs agencies to improve their environmental performance and pursue renewable or alternative energy solutions. President Obama's Climate Action Plan establishes a suite of obligations using executive power to address climate change, affirming the strong policy direction to act on climate.<sup>39</sup>



[38 Exec. Order No. 13653, Preparing the United States for the Impacts of Climate Change, 78 Fed. Reg. (Nov. 1 2013).]

[39 See White House Executive Office of the President, ‘The President’s Climate Action Plan’ (2013). Available at <https://www.whitehouse.gov/sites/default/files/image/president27sclimateactionplan.pdf> accessed 13 June 2016.]

Comment Number: 0002500\_Sweeney\_20160728-6

Organization I: National Mining Association

Commenter I: Katie Sweeney

Comment Excerpt Text:

Land Use Planning (FLPMA, FCLAA and SMCRA)

o BLM conducts, in cooperation with other federal agencies and states, a rigorous land use planning process to review the public lands for potential coal leasing incorporating the considerations set forth by statute in the Federal Land Policy Management Act (FLPMA), the Federal Coal Leasing Act Amendments (FCLAA) and the Surface Mining Control and Reclamation Act (SMCRA). These considerations include multiple use, sustained yield, protection of critical environmental areas and the application of specific unsuitability criteria. The purpose of the coal screening stage of the land use planning process is to identify those federal lands that are acceptable for further consideration for coal leasing and development. No other resource on federal lands is subjected to such a far ranging and in depth assessment for determining what lands should remain open for use or leasing.

\* NEPA Analysis Prior to Coal Lease Sale

o When DOI accepts an application to lease a tract of federal lands for coal leasing, it begins an analysis under the National Environment Policy Act (NEPA) of potential environmental impacts of the proposed leasing action, including “reasonably foreseeable” direct, indirect, and cumulative impacts of leasing coal. Over the past several years, DOI has prepared multiple Environmental Impact Statements evaluating all of the issues raised in the Scoping Notice. See e.g., Final EIS for the Wright Area Coal Lease Applications (July 2010). Final EIS for the South Gillette Area Coal Lease Applications (Aug. 2009); Final EIS for the West Antelope II Coal Lease Application (Dec. 2008). Each EIS evaluates issues mentioned in the Scoping Notice, and more, including: quantity and quality of water resources; aquifer drawdown; impacts on streams and alluvial valley floors, air quality and associated effects on health and visibility; wildlife; endangered species; other land uses; effects of coal combustion on greenhouse gas emissions and associated climate change-related effects. Notably, the Scoping Notice is devoid of any discussion about these comprehensive reviews or the serial and unsuccessful attempts by certain so-called “stakeholders” to have them set aside in court as inadequate.

\* Mine Plan Review (MLA and SMCRA)

o Any lessee must receive approval of a Mineral Leasing Act (MLA) mining plan by DOI that ensures the maximum economic recovery of the coal resource.

\* Mining Permits (SMCRA and other laws)

o A state SMCRA permit application must be submitted and approved which includes a detailed operation and reclamation plan, monitoring, mitigation and reclamation requirements. Mining operations must also receive permits related to air and water quality under state corollaries to the Clean Air Act and Clean Water Act. Much of the analysis is redundant among these applications as well as with the NEPA analysis already performed prior to the lease sale.

Several organizations that the Scoping Notice refers to as “stakeholders” have also advanced a wholly uninformed critique of the coal industry’s environmental performance. To the extent they take issue with the percentage of mined lands reaching phase III bond release, their complaint goes to the applicable law—the Surface Mining Control and Reclamation Act—which precludes even applying for final release until at least 10 years after a mined area has been reclaimed. A substantial amount of the mine permit areas include long-term facilities (e.g., buildings, roads, stockpiles and ancillary support areas) that are intended to serve the life of the mine. When long term facilities are excluded to evaluate the pace of reclamation with mining, well over half--61 percent--of the lands disturbed by mining in Wyoming and Montana have already been restored (backfilled, graded and revegetated)

according to the Office of Surface Mining (OSM). Moreover, OSM reports that the mines in those states were free of any off-site impacts.

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Comment Number: 0002942\_Harbine-52

Organization I: Earthjustice

Commenter I: Jenny Harbine

Comment Excerpt Text:

B. The PEIS Should Evaluate the Impacts of Federal Coal Leasing on Public Lands, Water, and Wildlife The PEIS also must evaluate whether mining federal coal is consistent with responsible stewardship of our public lands, water, and wildlife This stewardship is both a policy priority for the nation and an imperative under the statutes that govern BLM's management of public resources. In a November 3, 2015 Memorandum, President Obama established a policy for the Department of the Interior and other federal agencies that mining and other development projects on America's public lands should result in a net benefit—or at a minimum no net loss—for the nation's public lands, public waters, and wildlife resources. 113 The memorandum recognizes that “[w]e all have a moral obligation to the next generation to leave America's natural resources in better condition than when we inherited them. . . . It is this same obligation that contributes to the strength of our economy and quality of life today.” 114 This policy echoes BLM's statutory obligations under the Federal Lands Management Policy Act (“FLPMA”), 43 U.S.C. §§ 1701-1785, which directs that: public lands be managed in a manner that will protect the quality of scientific, scenic, historical, ecological, environmental, air and atmospheric, water resource, and archeological values; that, where appropriate, will preserve and protect certain public lands in their natural condition; that will provide food and habitat for fish and 111 State of Colorado, Coal Mine Methane in Colorado, at 14, attached as Ex. 29. 112 See 2010 Conservation Scoping Letter (Ex. 30) at 88-89. 113 See Presidential Memorandum: Mitigating Impacts on Natural Resources from Development and Encouraging Related Private Investment (Nov. 3, 2015), available at <https://www.whitehouse.gov/the-press-office/2015/11/03/mitigating-impacts-natural-resources-development-and-encouraging-related>, published at 80 Fed. Reg. 68,743 (Nov. 6, 2015). 114 Id. 40 wildlife and domestic animals; and that will provide for outdoor recreation and human occupancy and use. Id. § 1701(a)(8). Under FLPMA's “multiple use and sustained yield” management directive, id. § 1701(a)(7), the federal government must manage public lands and resources in a manner that “takes into account the long-term needs of future generations for renewable and nonrenewable resources, including, but not limited to, recreation, range, timber, minerals, watershed, wildlife and fish, and natural scenic, scientific and historical values; and harmonious and coordinated management of the various resources without permanent impairment of the productivity of the land[.]” id. § 1702(3). Further, “[i]n managing the public lands the Secretary shall . . . take any action necessary to prevent unnecessary or undue degradation of the lands.” Id. § 1732(b). Under these authorities, BLM is required not only to evaluate the impacts of federal coal leasing to public lands, water, and wildlife resources, but to avoid harm to those resources whenever possible. As described below, thorough analysis of these impacts at the programmatic scale should lead BLM to conclude that the irreversible harmful consequences to these resources due to mining and burning coal irreconcilably conflict with BLM's stewardship obligations and can be avoided only by ending the federal coal leasing program

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Comment Number: WO\_CoalPEIS\_0002437\_Downing\_20160727\_WyMineAssoc-15

Organization I: Wyoming Mining Association

Commenter I: Jonathan Downing

Comment Excerpt Text:

Finally, the federal coal leasing process is inherently risky even without the long-term investment. At any time in the process, the BLM can conclude on the basis of public comment or information collected that some or all of the projected lease area is unsuitable for mining.

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Comment Number: WO\_CoalPEIS\_0002437\_Downing\_20160727\_WyMineAssoc-24

Organization I: Wyoming Mining Association

Commenter I: Jonathan Downing

Comment Excerpt Text:

WMA believes Federal coal should continue to be leased and produced to meet thermal coal electric generation needs. Arbitrary “budgets” to restrict access to the resource should be avoided.

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Comment Number: 0000741\_Perry\_NWF-4

Commenter I: Edward Perry

Comment Excerpt Text:

Finally, I hope you will closely consider the impacts on our public lands. Unlike other uses of public lands, there isn't any multiple use when a coal mine is in operation

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### **ISSUE 5.3 - COAL LEASING PAUSE**

Total Number of Submissions: 82

Total Number of Comments: 104

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Comment Number: 00000120\_Wasserburger\_20160517-2

Commenter I: Jeff Wasserburger

Comment Excerpt Text:

The moratorium on coal leasing also decreases the amount of money that the federal government receives in royalty payments. For the Powder River Basin in Wyoming, which produces over 80 percent of coal reserves on federal land, the federal government receives 40 cents on every dollar of coal sold. The question is with the national debt of \$18 trillion, you would think the federal government would be seeking to increase revenues off of coal. The federal coal program provides substantial revenues to the federal and state government totaling \$13.8 billion since 2013. To Wyoming in the last fiscal year, coal supplied just over \$1 billion in revenue to our state. Keeping federal coal in the ground results in no return to the taxpayers here in Wyoming or in Washington, D.C.

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Comment Number: 00000166\_MCKELVY\_20160517-1

Commenter I: Erin McKelvy

Comment Excerpt Text:

I'm also appreciative of the pause on new coal leases during this review process. I would love to see that expanded, and encourage you all emphatically to terminate all coal leases on federal lands.

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Comment Number: 00000188\_LAINE\_20160517-1

Organization I: Tennessee Mining Association

Commenter I: Chuck Laine

Comment Excerpt Text:

I am opposed to the moratorium that will be on the federal lands while you are doing the study. And I have a reason for that. Here's what happens when that happens. If you decide to do that, the taxes that are provided for the rural schools and infrastructure will disappear.

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Comment Number: 00000282\_Heaps\_20160519-1

Organization I: Bowie Resource Parters Skyline Mine

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Commenter I: Corey Heaps

Comment Excerpt Text:

I recommend the BLM remove the three- year moratorium. The coal program can be analyzed without delaying three years. The federal government makes important decisions every day without taking a three-year sabbatical. The existing federal leasing program is much less complex and can be done without delaying future leasing actions. Placing a moratorium on federal coal leasing only adds more uncertainty to the future of acquiring coal mines. This detracts future investments and increases the likelihood of shutting down more coal mines. I

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Comment Number: 00000305\_ HOPES \_ CarbonCounty\_20160519-1

Organization I: Carbon County

Commenter I: Casey Hopes

Comment Excerpt Text:

I would respectfully request that the moratorium on coal leasing be lifted, and if there is a need for further evaluation on coal leasing, that it be done without harming the communities that they impact.

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Comment Number: 00000306\_ OGDEN \_ SevierCounty\_20160519-2

Organization I: Sevier County

Commenter I: Garth Ogden

Comment Excerpt Text:

I oppose the moratorium on coal. I had a business, and I couldn't shut my business down to study it for three years. It would be devastating

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Comment Number: 00000311\_ SMALDON \_ FriendsCoalWest\_20160519-1

Organization I: Friends of Coal West

Commenter I: David Smaldone

Comment Excerpt Text:

The moratorium is shortsighted and dangerous to our nation's economy and national security. It is imperative that the backbone of our electric grid be allowed to continue, and coal is the answer. Finally, I request that the BLM discontinue the current coal leasing moratorium immediately

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Comment Number: 00000313\_ DIMMICK\_20160519-1

Organization I: Skyline Mine

Commenter I: Kelly Dimmick

Comment Excerpt Text:

I'm here to ask to stop the current moratorium on coal leases.

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Comment Number: 00000319\_ BARTHOLOMEW\_20160519-1

Organization I: Sanpete County

Commenter I: Scott Bartholomew

Comment Excerpt Text:

We would strongly suggest that you lift the moratorium to keep the cheap reliable power flowing to us.

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Comment Number: 00000336\_ May \_20160519-1

Organization I: SUFCO Mine

Commenter I: Kenneth May

Comment Excerpt Text:

Nationwide, coal mines on federal leases account for 42 -- I think somebody said 43, I've got 42 percent of all the US production. This moratorium could eliminate a major portion of domestic coal supplies, create less fuel diversity and seriously -- with serious consequences for power generation, both terms of affordability and reliability.

---

Comment Number: 00000347 \_ Johnson \_20160519-2

Organization I:Alton Coal Development

Commenter I:Larry Johnson

Comment Excerpt Text:

The BLM director, Neil Kornze, has to confirm that the moratorium will last at least three years and impact some 50 pending lease applications, including applications submitted by Alton Coal Development back in 2004. 2004! This has a significant economic impact on Alton Coal, and I am sure on other operations, by bearing the cost of environmental analysis, but now can't proceed to a record of decision or final lease. It's hard to understand how the department is harmed by completing these pending leases. The leasing process includes NEPA, public comment, competitive bidding, confirmation that the bid meets fair market value and is not anti-competitive. Our pending lease applications have already met this ability for criteria of leasing under the Federal Mineral Leasing Act, the Federal Land Policy and Management Act, and the Surface Mining Control and Reclamation Act.

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Comment Number: 00000347 \_ Johnson \_20160519-4

Organization I:Alton Coal Development

Commenter I:Larry Johnson

Other Sections: 8.4

Comment Excerpt Text:

Alton Coal requests that the secretary consider suspending the moratorium and allowing existing leases to be completed and awarded. Alton's LBA has been pending for more than 12 years and the environmental analysis is nearly complete. Allowing to complete and award these pending leases would allow those coal companies to meet their coal supply agreements and will return bonus bid and lease payment revenues to both the state and the Federal Government.

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Comment Number: 00000366 \_ Brady \_20160519-1

Organization I:Emery County

Commenter I:Keith Brady

Comment Excerpt Text:

And while I do not object to the programmatic EIS, I do object to the three-year moratorium on new coal leases on federal land

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Comment Number: 00000375 \_ Watson \_20160519-1

Organization I:Ziegler Sales

Commenter I:Larry Watson

Comment Excerpt Text:

To go on, you understand, if we shut this thing down too quickly, the rolling blackouts that we're going to have across this country, we cannot do this moratorium that you're talking about here. We've got to ease into this more slowly

Comment Number: 0000072\_Tully\_20160517-3

Organization I: Northern Plains Resource Council

Commenter I: Tom Tully

Comment Excerpt Text:

Furthermore, because there's already more coal leased than can be mined in the next 20 years, there should be a moratorium on coal leasing when BLM takes time to revamp the federal coal program.

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Comment Number: 0000084\_Christopherson\_EngyCapEconDev\_20160517-1

Organization I: Energy Capital Economic Development

Commenter I: Phil Christopherson

Comment Excerpt Text:

Number one, how are we going to use our natural resources to provide affordable energy to continue to provide our nation with the lifestyle, the technology that we have? That's where your focus should be, not on all these other peripheral things. The current coal moratorium that's on, the coal lease moratorium is purely a political move. It doesn't help anybody. It has not been reviewed because it brings a lot of attention to it. I think the review needs to continue, but the focus needs to shift to how are we going to continue to provide our citizens with the lifestyle that we enjoy? If you have a smart phone or a tablet or a car or a home and the home is heated in the winter and cool in the summer, you should be very thankful because a large majority of the citizens of this world do not have that. We have things like that because of affordable energy, and the focus needs to be how do we continue to provide that energy that's affordable to our people?

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Comment Number: 0000095\_Mead\_GovWy\_20160517-1

Organization I: State of Wyoming

Commenter I: Matt Mead

Comment Excerpt Text:

I commented on the federal coal lease moratorium announced in January. Then, I said this moratorium will hurt miners. It will hurt all businesses that support coal mining. It will take away the competitive advantage coal provides for every U.S. citizen.

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Comment Number: 0000279\_Nelson\_20160519-4

Commenter I: Laura Nelson

Comment Excerpt Text:

Utah disagrees strongly with BLM's unjustified moratorium on coal leasing and is exploring its legal options. Utah and the BLM have worked together for decades enjoying a successful federal leasing program that produces numerous benefits to Utah and to the U.S. 83 percent of Utah coal is produced from federal land. In 2014 Utah coal produced from federal lands had a total sales value of \$570.8 million and generated royalty revenues in excess of \$41.1 million. Without consultation with Utah and other impacted states, BLM has unilaterally announced a review of its coal leasing program and three-year moratorium on coal leasing. The BLM's decision to halt leasing while they review the program is really, we feel, a violation of its fiduciary duties to its beneficiaries.

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Comment Number: 0000280\_TATTEN\_20160519-1

Commenter I: Kurt Tatten

Comment Excerpt Text:

Please see if we can get rid of the moratorium and open it up. It takes a long time to get mines running coal. It's not unusual from the time of thinking about trying to get some type of a lease to be 15 years down the road and you're still not mining that coal, so three years is a major hiccup to our mine plans.

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Comment Number: 0000573-2

Commenter I: Keith Ervin

Comment Excerpt Text:

Please make permanent the current pause in new leases.

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Comment Number: 0000753\_Smaldone\_FriendsCoal\_20160623-2

Organization I: Friends of Coal West

Commenter I: David Smaldone

Comment Excerpt Text:

The moratorium is short-sighted and dangerous to our nation's economy and national security. It is imperative that the backbone of our electric grid be allowed to continue, and coal IS the answer.

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Comment Number: 0000756\_Reece\_Club 20\_20160623-2

Organization I: CLUB 20

Commenter I: Christian Reece

Comment Excerpt Text:

The moratorium and Programmatic Environmental Impact Statement will put nearly 65,000 direct and indirect jobs at risk as well as impact billions of dollars in revenues to these states which are used for basic infrastructure such as education, public safety, and reclamation.

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Comment Number: 0000772\_Nielsen\_20160623-3

Commenter I: Nicholas Nielsen

Comment Excerpt Text:

In the recent 2013 audit of the BLM's coal management program 6 of the 13 recommendations for corrective actions were directed toward improving the work done on fair market valuations. Has the BLM not acted on or done a good enough job adjusting to these recommendations? If I worked on a project and within a short time frame, I had to reevaluate the project, I would expect my boss would ask about the quality and diligence of my work. Is the BLM not adjusting to the recommendations of the 2013 audit? Is a complete moratorium necessary to evaluate work that has already been done?

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Comment Number: 0000778-2

Organization I: Bowie Resources

Commenter I: Jeff Erickson

Comment Excerpt Text:

I recommend not placing a 3 year coal moratorium on coal leases. A review process and decision should not take 3 years.

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Comment Number: 0000796-1

Commenter I: Craig Johnson

Comment Excerpt Text:

I ask to stop the moratorium go ahead on your review but look at the mines you're involving you will see how responsive they are.

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Comment Number: 0000826-1

Organization I: Wyoming State Senate

Commenter I: Stan Cooper

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## Comment Excerpt Text:

Because of the Stack Emission (Green House Gases) rules recently imposed by the EPA, the coal industry has pretty much stopped bidding on coal leases which makes Federal coal deposits about worthless at his time.

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Comment Number: 0000828-3

Organization I: Friends of Coal West

Commenter I: David Smaldone

## Comment Excerpt Text:

The moratorium is short-sighted and dangerous to our nation's economy and national security. It is imperative that the backbone of our electric grid be allowed to continue, and coal IS the answer.

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Comment Number: 0001114\_CATER-KING\_GilleteWY mayor\_20160621-1

Organization I: Gillete, WY

Commenter I: Louise Carter-King

## Comment Excerpt Text:

At any point in time the BLM can choose to study this data to determine if the American taxpayer is being compensated fairly for coal mined on federal property. Given these facts, this moratorium can only be viewed as another attempt by this administration to stop the mining of coal. There can be no other explanation.

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Comment Number: 0001119\_BROWN\_20160621-2

Organization I:

Commenter I: Elizabeth Brown

## Comment Excerpt Text:

The pause is on the wrong side of the economic cycle. You can lift it because it's really not necessary to the scope of the PEIS

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Comment Number: 0001184-1

Commenter I: Carol Dansereau

## Comment Excerpt Text:

You need to establish a permanent moratorium on all new coal leases. You don't need to go to the existing coal leases and cancel them. Fossil fuels that you control need to stay in the ground, period.

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Comment Number: 0001197\_Carlton\_20160621-1

Commenter I: Lee Carlton

## Comment Excerpt Text:

I understand that you're looking at a three-year process, but I would urge you to immediately cease the extraction of coal from public lands, extend the moratorium on leases indefinitely, and look at rescinding the existing leases.

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Comment Number: 0002009\_CenterBioDiversity\_20160329-2

Organization I: WildEarth Guardians

Commenter I: Jeremy Nichols

## Comment Excerpt Text:

You have already committed to a pause on most coal leasing and you have signaled that the Bureau of Land Management will issue guidance related to additional interim reforms. These interim reforms are critical to

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ensure that options for long-term reform are not foreclosed, that the American public interest is fully protected, and that publicly owned resources are not unduly squandered.

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Comment Number: 0002026\_Willett\_20160623-1

Commenter I: Kayla and Bruce Willett

Comment Excerpt Text:

If the government were to shut down our coal production, it should have another source to fulfill the vital needs that coal presently meets in our state and throughout our nation.

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Comment Number: 0002045\_Johnson\_20160620-3

Organization I: Cloud Peak Energy

Commenter I: Gabriel Johnson

Comment Excerpt Text:

Additionally, it makes no sense why the federal coal leasing program must be stopped in order to evaluate the effectiveness of the process. Why is it necessary to stop the coal leasing process for this evaluation? The evaluation could simply continue congruent with ongoing coal leases.

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Comment Number: 0002110\_Reagor\_20160626\_att-1

Commenter I: Paul Reagor

Comment Excerpt Text:

The pause in leasing, while slightly reasonable, does not fall within the authorizations of the enabling law. The objective of the leasing program is to maximize revenue from the coal deposits.

If there are lessees waiting to lease, then the failure get any return, by your failure to issue a lease, constitutes a dereliction of duty.

Pausing because of misguided comments from the EPA, is an insufficient reason to halt leasing. You do not answer to the EPA, you answer to the people, according to the rules set forth in the law setting up the leasing program.

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Comment Number: 0002110\_Reagor\_20160626\_att-5

Commenter I: Paul Reagor

Comment Excerpt Text:

You have no authority to pause leasing, even if the EPA is correct. And you have no reason to pause leasing if the EPA is wrong.

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Comment Number: 0002112\_Sanderson\_20160624\_CoMineAssoc-2

Organization I: Colorado Mining Association

Commenter I: Stuart Sanderson

Comment Excerpt Text:

There is no basis for the moratorium, which will in fact halt development within a short time of the King II mine in Colorado, and could potentially impact all mines producing federal coal because of its vague language. In fact, the Bureau has qualified its listing of mines subject or not to the "pause" as "potential," leaving the door open for further mischief. The moratorium is a draconian measure that is not needed to address any concerns about royalties, due to the amount of time it takes to obtain a lease and actually obtain the permits needed to begin production.

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Comment Number: 0002145\_Buchanan\_20160513\_IEEFA-4

Organization I: Institute for Energy Economics and Financial Analysis

Commenter I: Tom Sanzillo

Comment Excerpt Text:

As the largest owner of coal in the U.S., DOI must address the reality that the current coal lease moratorium will not be followed by robust expansion of coal markets, but instead by a period in which the coal industry and the Powder River Basin will face a declining market.

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Comment Number: 0002147\_Anderson\_20160621\_BlueGreenAlliance-13

Organization I: BlueGreen Alliance

Commenter I: Kim Glas

Comment Excerpt Text:

Given the serious concerns that have been raised about the federal coal program, and the enormous reserves of coal already under lease, the BlueGreen Alliance agrees with the BLM's decision to institute a pause on new coal leasing on public lands while this review is taking place. Future coal leases should benefit from all of the lessons learned and public comment gathered during the course of this programmatic review process.

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Comment Number: 0002147\_Anderson\_20160621\_BlueGreenAlliance-6

Organization I: BlueGreen Alliance

Commenter I: Kim Glas

Comment Excerpt Text:

Key to our support for this pause is the fact that companies that are already producing coal from existing federal leases have enough coal leased to be able to continue mining operations without interruption during the span of this program review and beyond. A comprehensive review of this broken system is needed. Nevertheless, as part of that review, the BLM should consider provisions to protect communities supported by existing mines.

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Comment Number: 0002152\_Bruse\_20160518-18

Commenter I: Debbie Bruse

Comment Excerpt Text:

The pause on new coal leasing is not needed and market conditions will dictate a company's need.

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Comment Number: 0002152\_Bruse\_20160518-7

Commenter I: Debbie Bruse

Comment Excerpt Text:

A three year moratorium on coal leasing and a PEIS review adds undue costs to the mining company, and is frankly a HUGE waste of taxpayer money. Market conditions will dictate the need for additional coal reserves on a company by company basis, as currently being seen in today's market. Low demand means less need and less capital for the purchase of a new coal lease. If the demand is not there, coal companies will not bid on the lease.

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Comment Number: 0002160\_Kot\_20160629\_SweetwtrCnty-16

Organization I: Sweetwater County

Commenter I: Wally Johnson

Comment Excerpt Text:

Sweetwater County strongly believes that the current moratorium on coal leasing and the Coal PEIS process should be halted and the existing federal coal leasing and regulatory programs should remain in place. If the moratorium remains in place and the PETS goes forward, we strongly believe that these federal actions will make it more costly to mine coal and produce electricity which, in turn, may cost employees their jobs and homes, drive up the cost of living and destroy our local communities.

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Comment Number: 0002160\_Kot\_20160629\_SweetwtrCnty-2

Organization I: Sweetwater County

Commenter I: Wally Johnson

Comment Excerpt Text:

Existing three year moratorium on federal coal leasing: Sweetwater County strongly opposes the Obama three year moratorium on federal coal leasing. Sweetwater County believes that the three year moratorium, when added to the seven years necessary to obtain required mining permits, will disrupt coal mining plans within our county and Wyoming for up to 10 years. If a coal mining company survives this 10 year period, and it successfully complies with all permitting requirements, mining still may not occur due to the increased mining costs caused by this Coal PEIS.

If this scenario occurs, coal mining may largely stop, federal coal resources would be left in the ground and the revenues generated by these resources would cease to flow to area residents, businesses and to all levels of government. This would be devastating to the economy of Sweetwater County and the State of Wyoming. Our position is supported by Senator Barrasso, who in recent comments regarding the coal leasing moratorium, stated:

"There seems to be no limit to the number of job-crushing regulations, executive orders and insults Secretary Jewell and President Obama will throw at America's middle class. This administration is in a full-scale war with coal communities and families. When rural America says President Obama has contempt for their lives and livelihoods, they mean decisions like today's announcement. A moratorium on federal coal leasing effectively hands a pink slip to the thousands of people in Wyoming and across the West employed in coal production."

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Comment Number: 0002163\_McFarlane\_20160626-1

Commenter I: Kurt McFarlane

Comment Excerpt Text:

Do not put a moratorium on coal leases.

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Comment Number: 0002231\_Schwend\_20160620-5

Organization I: Cloud Peak Energy

Commenter I: David Schwend

Comment Excerpt Text:

Or is the moratorium on coal a plan to hurt coal companies by taking time away from permitting of new leases to slow the process down even further and see what companies cannot make it through the leasing drought?

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Comment Number: 0002231\_Schwend\_20160620-7

Organization I: Cloud Peak Energy

Commenter I: David Schwend

Comment Excerpt Text:

The moratorium on coal will affect communities, families, and create an economic slowdown.

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Comment Number: 0002284\_Madsen\_20160719-2

Commenter I: Travis Madsen

Comment Excerpt Text:

I want to see the moratorium on new coal leases become permanent.

Comment Number: 0002309\_Monseu\_20160721\_AmericanCoalCouncil-15

Organization I: American Coal Council

Commenter I: Betsy Monseu

Comment Excerpt Text:

The step taken by the Secretary of the Interior in January 2016 to impose a moratorium on new federal coal leases is incongruent with the status of the federal coal leasing program. This program is not broken, and no pause is needed.

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Comment Number: 0002326\_Moench\_20160724\_UtahPhysicHealthyEnviron-70

Organization I: Utah Physicians for a Healthy Environment

Commenter I: Malin Moench

Comment Excerpt Text:

Selling Federal coal below market also encourages the domestic American economy to delay its urgently-needed transition from polluting, climate-disrupting fossil fuels to clean sources of electric power.(3) These economically- and socially-damaging effects of selling Federal coal below its market value have revived the need for a fourth moratorium on the leasing of Federal coal. During that moratorium, another high-level review and overhaul of the Federal coal-leasing program should be conducted

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Comment Number: 0002326\_Moench\_20160724\_UtahPhysicHealthyEnviron-71

Organization I: Utah Physicians for a Healthy Environment

Commenter I: Malin Moench

Comment Excerpt Text:

The Federal court ruling halting the leasing of Federal coal in Colorado in June of this year rests, in part, on a finding that increasing the quantity of cheap Federal coal available to the energy market shifts domestic demand away from low-carbon sources of energy. See Restraining Order issued June 27, 2014, in High Country Conservation Advocates vs. U.S. Forest Service, Civil Action No. 13-cv-01723-RBJ (Federal District Court, Colorado) at 30.

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Comment Number: 0002360\_Saulsbury\_20160721-1

Commenter I: David Saulsbury

Comment Excerpt Text:

I am against the BLM putting a moratorium on coal leasing

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Comment Number: 0002389\_Schwend\_20160721-1

Organization I: Spring Creek Mine

Commenter I: David Schwend

Comment Excerpt Text:

The DOI's recent moratorium on federal coal leases will negatively impact funding for local schools, governments, and communities. When industry is regulated into bankruptcy or near bankruptcy it has a ripple effect into every part of the state's economy. Not only are coal miners, power plant workers and coal industry companies affected; equipment and part suppliers, manufacturers, railroads, truckers, steel manufacturers and a long list of service jobs are all greatly affected.

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Comment Number: 0002389\_Schwend\_20160721-3

Organization I: Spring Creek Mine

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Commenter I: David Schwend

Comment Excerpt Text:

In 2015 Spring Creek Coal Mine paid \$52 Million to the State of Montana for taxes and royalties and approximately \$20 Million to the federal government. We exported 3.6 Million tons of coal to Asia in 2015 and lost money. Cloud Peak Energy (CPE) as a whole lost \$204.9 Million and paid \$303 Million in taxes and royalties. CPE pays approximately \$0.39 for every dollar on taxes and royalties. How much more taxes does the government want coal companies to pay? 39% isn't enough? Or is the moratorium on coal a plan to hurt coal companies by taking time away from permitting of new leases to slow the process down even further and see what companies cannot make it through the leasing drought? Is adding to the taxes and export royalties an additional measure to ensure coal companies are not successful and the Federal Government's portion of the "keep it in the ground" campaign is? Isn't the moratorium (which is very unclear that it will be resolved in three (3) years), the longer permitting timelines advocated by the government, higher tax rate for exports, numerous new legislation backed by the current Administration, and potential change to the bonus bid process just the Federal Government's way to stop coal mining and coal electrical generation.

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Comment Number: 0002391-1

Commenter I: Tom Tully

Comment Excerpt Text:

1) Coal leasing should be based on what's good for the public, not coal companies. This requires that the BLM decide where, when, and how much coal is leased, rather than allowing coal companies to dictate the terms. Because there is already more coal leased than can be mined in the near future, the moratorium on coal leasing recently enacted while the BLM takes time to revamp the federal coal program was a smart move by our federal government.

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Comment Number: 0002439\_Horian\_20160721-1

Commenter I: Rose Haroian

Comment Excerpt Text:

First and foremost, the moratorium should be lifted during the evaluation of EIS comments.

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Comment Number: 0002443\_Koontz\_20160727\_BowieResources-2

Organization I: Bowie Resource Partners, LLC

Commenter I: Gene DiClaudio

Comment Excerpt Text:

Bowie is especially concerned about the statement in Order 3338 and in separate commentary to the press by the Secretary's Office that the expected duration of the leasing moratorium is not of concern, because "20 years supply" of coal is already under lease. Bowie is unsure of the data the Secretary's Office relied upon for this assertion, and it is a material oversimplification of the actual nature and state of the coal market. First, it is problematic to aggregate all federally leased coal together, because not all federal coal is the same. Federal coal varies widely in BTU, sulfur, ash, moisture, and similar characteristics, as well as geography. Critically, state-of-the-art coal-fired generating units are "tuned" to specific range of coal characteristics, and either cannot efficiently consume coal outside that range, or cannot do so without expensive retrofitting. As a result, as a practical matter there is not a single unified "coal market", but rather a wide array of sub-markets, each with its own, sometimes narrow, range of sources. Some of these sub-markets may have a fairly significant amount of coal already under lease, but others are much more supply constrained, and the length of the proposed moratorium may cause significant supply disruptions, particularly given the presently litigious and politicized state of federal coal leasing and permitting.

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Comment Number: 0002449\_Lyon\_20160727\_NWF-26

Organization I: National Wildlife Federation Action Fund

Commenter I: Jim Lyon

Comment Excerpt Text:

This is not the first time a pause has been imposed on new federal coal leasing to allow for thoughtful reforms to modernize the program. As the Secretary points out, two other comprehensive reform reviews and new leasing moratoriums of the coal program resulting in reforms have occurred: one in the late-1960s and the second in the early 1980s. (7) The Secretary's current halt on new coal leasing is a prudent measure that will allow for comprehensive reforms to be considered before placing new land under risk. The halt will have virtually no impact on coal mining or coal supply as there is a 20 year supply of coal already under lease. (8)

(7) Id. at 5-6.

(8) Id. at 2.

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Comment Number: 0002462\_Compton\_20160728\_UtahMineAssoc-1

Organization I: Utah Mining Association

Commenter I: Mark Compton

Comment Excerpt Text:

In moving forward with the moratorium and preparation of the PEIS, DOT is feigning concern about issues that just a few years earlier it had rejected out of hand. In the PEIS scoping meetings and in the media, various anti-development organizations have resurrected these claims by deploying a combination of incomplete and misinformation to produce a fictional narrative about the revenue and other economic returns to the public through bonus bids, royalties and surface rental fees.

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Comment Number: 0002462\_Compton\_20160728\_UtahMineAssoc-10

Organization I: Utah Mining Association

Commenter I: Mark Compton

Comment Excerpt Text:

The Utah Mining Association opposes the unjustified moratorium on federal coal leasing and therefore recommends the Department of the Interior lift the moratorium immediately.

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Comment Number: 0002462\_Compton\_20160728\_UtahMineAssoc-15

Organization I: Utah Mining Association

Commenter I: Mark Compton

Comment Excerpt Text:

The moratorium and the policies under consideration in the PEIS are short-sighted and dangerous. Coal is still the backbone of our nation's and the world's energy supply, and restricting access to this affordable and abundant resource will destroy jobs and lead to higher and higher electric bills for every American.

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Comment Number: 0002462\_Compton\_20160728\_UtahMineAssoc-3

Organization I: Utah Mining Association

Commenter I: Mark Compton

Comment Excerpt Text:

The Reasons Underlying the Moratorium and PEIS Rely on Market Distortions and Mischaracterizations of the Coal Leasing Process Which Would Decrease Coal Production and Return for Taxpayers  
Many of the potential policy options listed in BLM's PEIS Scoping Notice disguised as measures for ensuring fair return are actually market distorting policies designed to make federal coal uneconomic to mine which will result

in denying communities, states and all Americans the twin-benefits of coal revenues and access to lower cost and reliable electricity

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Comment Number: 0002462\_Compton\_20160728\_UtahMineAssoc-8

Organization I:Utah Mining Associaton

Commenter I:Mark Compton

Comment Excerpt Text:

BLM should lift the moratorium on federal coal leasing and consider lowering federal coal royalty rates, thereby lowering energy bills for homes and businesses

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Comment Number: 0002464\_Connelly\_20160728\_WyCoaltLocalGov-1

Organization I:Coalition of Local Governments

Commenter I: Kent

Comment Excerpt Text:

The Coalition opposes the indefinite leasing moratorium issued on January 15, 2016, by the Secretary of the Interior, Secretarial Order No. 3338. This moratorium has no definite end date but is expected to last until this federal coal program review is complete, which the BLM expects will take about three years. However, based on the already divergent views on the issues identified in the NOI, it is very unlikely that this review and any proposed changes will be finalized within three years.

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Comment Number: 0002464\_Connelly\_20160728\_WyCoaltLocalGov-2

Organization I:Coalition of Local Governments

Commenter I: Kent

Other Sections: I

Comment Excerpt Text:

A new lease was last issued in the State of Wyoming in 2012, and it took about six years to finalize. See BLM Wyoming, Powder River Basin Coal Leases by Application, [http://www.blm.gov/wy/st/en/programs/energy/Coal\\_Resources/PRB\\_Coal/lba\\_title.html](http://www.blm.gov/wy/st/en/programs/energy/Coal_Resources/PRB_Coal/lba_title.html) (last updated Feb. 11, 2016). There are also at least six lease sale applications currently pending that will not have final decisions issued nor result in a lease sale because of Secretarial Order No. 3338's lease moratorium. See id. This moratorium, therefore, will disrupt the coal mining plans within the state of Wyoming for an indefinite amount of time.

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Comment Number: 0002467\_Fettus\_20160728-11

Organization I:Natural Resources Defense Council

Commenter I:Geoffrey Fettus

Other Sections: I

Comment Excerpt Text:

**B. The Moratorium On Additional Coal Leasing Must Remain In Effect Until Implementation Of The New Leasing Framework**

The moratorium on continued coal leasing, which should continue until a new regulatory system goes into effect, is also necessary and appropriate. Indeed, as the Secretary explained in Order 3338, because lease terms are for twenty years or longer, allowing new leases during this process “risks locking in for decades the future development of large quantities of coal under current rates and terms that the PEIS may ultimately determine to be less than optimal.” Order at 8. It is well-established that BLM is not required to lease public lands for energy development. See, e.g., *U.S. ex rel. McLennan v. Wilbur*, 283 U.S. 414 (1931) (upholding President Hoover’s oil leasing moratorium under the Mineral Leasing Act).

It is also evident that additional coal leasing is entirely unnecessary to meet domestic energy needs while this process is under way, as the Secretarial Order identifies that, on average, mines have 20 years of federal coal supplies (see chart below showing reserves for major coal producing companies at the time of the Order). Additionally, for mines that have fewer reserves on hand, the Secretarial Order provides for exceptions to the moratorium. In this context, it makes little sense to allow any new twenty-year leases at antiquated lease prices, with no consideration of the myriad issues that will be explored in the PEIS and addressed in the agency's coming revised regulations. A moratorium pending completion of a new leasing framework is entirely consistent with the approach taken by the Reagan Administration, which similarly halted issuance of new leases while the program underwent extensive review.

See Attached for Table 2 - Coal reserves of major western US producers

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Comment Number: 0002467\_Fettus\_20160728-45

Organization I:Natural Resources Defense Council

Commenter I:Geoffrey Fettus

Comment Excerpt Text:

In the Secretarial Order and Scoping Notice the Secretary and BLM explain the need for a new PEIS, and why it is appropriate to impose a leasing moratorium until the process is completed.

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Comment Number: 0002476\_Bullock\_20160728\_GovMt-1

Organization I:Montana Governor

Commenter I:Steve Bullock

Comment Excerpt Text:

While I believe it is appropriate to review the federal coal leasing program and bring it up to date, I oppose the moratorium as ill-timed and ill-conceived. The timing couldn't be worse for the coal industry, and the effect of the blanket moratorium is to deprive the industry of the certainty it needs to make sound business choices about future development.

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Comment Number: 0002482\_Jones\_20160728\_NAM-2

Organization I:National Association of Manufacturers

Commenter I:Ross Eisenburg

Comment Excerpt Text:

Manufacturers oppose the introduction of market-distorting barriers to production or energy exports. The NAM recommends the withdrawal of the moratorium during the review of the leasing program and a full examination into the true impact on the manufacturing community and the supply chain supporting the coal sector.

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Comment Number: 0002487\_Clarke\_20160728\_UtahGovOffice-1

Organization I:Utah Office of the Governor

Commenter I:Kathleen Clarke

Comment Excerpt Text:

The BLM's decision to halt leasing while it reviews the program is an egregious violation of the agency's fiduciary duties to its beneficiaries, the citizens of the United States. On January 15, 2016, without consulting any western states to be impacted, the BLM unilaterally announced a review of its coal leasing program and a three year moratorium on federal coal leasing. The moratorium undermines a long-standing partnership between Utah and the BLM, who have worked together for decades on developing a successful coal leasing on federal land in the state.

BLM's coal leasing program should be reviewed without unjustifiably freezing new leasing and causing undue harm



and uncertainty to the industry. Under the Mineral Leasing Act, BLM is charged with maximizing economic recovery for coal mined on federal lands.<sup>1</sup> The moratorium violates this fiduciary duty since the BLM does not demonstrate any reason it cannot review an ongoing program. The BLM itself calculates that the program has produced \$12 billion dollars of royalties, rents, bonuses and other payments over the last decade. This flow of crucial revenues will be interrupted unnecessarily by the moratorium. The BLM also fails to present any evidence that anything has changed related to the program to justify an unprecedented one-size-fits-all national moratorium.

Violating public process under the Administrative Procedures Act<sup>2</sup> and other applicable law, the BLM's action also denied states and local governments the ability to provide meaningful data and input on the merits of the moratorium. The BLM failed to support the national moratorium with its own data or consultation with in-the-field experts.

130 U.S.C. §201(a)(3)(C).

2 5 U.S.C. §500.

Comment Number: 0002487\_Clarke\_20160728\_UtahGovOffice-5

Organization I: Utah Office of the Governor

Commenter I: Kathleen Clarke

Comment Excerpt Text:

Withdrawal or suspension of the leasing of federal coal acreage adjacent to a school section containing coal resources, therefore, has the unintended effect of sterilizing the coal resources within the school section. Loss of trust land coal resources harms public education and frustrates the intent and purposes of Congress in granting trust lands to the state. The current moratorium on federal coal leasing should immediately be lifted to facilitate the leasing and development of trust land and federal coal resources. Additionally, the BLM should coordinate with the SITLA to exchange BLM land for school sections so that school sections can be "blocked up" into mineable land blocks.

Comment Number: 0002487\_Clarke\_20160728\_UtahGovOffice-6

Organization I: Utah Office of the Governor

Commenter I: Kathleen Clarke

Other Sections: 2

Comment Excerpt Text:

It is crucial that the BLM's coal leasing program review be appropriately limited. The BLM's proposal to impose climate-change mitigation costs on the coal industry is in direct conflict with the Mineral Leasing Act, which obligates the BLM to maximize the economic recovery for coal mined on federal lands.<sup>10</sup> Along with not being authorized, the BLM's proposed approach would unfairly burden coal as opposed to other sources of carbon, and would likely be counterproductive to the BLM's stated goal of reducing global carbon emissions. In fact, the BLM's moratorium and proposed carbon penalty may actually increase global carbon emissions by decreasing the production and utilization of Utah's high-energy, lower carbon emitting coal, which would likely be replaced in domestic and global markets by inferior sources of coal. Reducing carbon emissions would be more effectively and appropriately pursued by increasing federal investment in cleaner coal technologies, and encouraging the production and export of Utah's superior coal into foreign markets.

(10) 30 U.S.C. §201(a)(3)(C).

Comment Number: 0002488\_Sanderson\_20160728-7

Organization I: Colorado Mining Association

Commenter I: Stuart Sanderson

Other Sections: 1

## Comment Excerpt Text:

However, as revealed in a white paper (1) prepared for National Mining Association (hereinafter NMA) DOI had already considered the arguments of anti-coal groups and rejected the underlying rationale for the imposition of the moratorium and programmatic review in 2011. The same groups, here, are simply repackaging issues that have already been settled.

(1) Norwest Corporation, Federal Coal Leasing Moratorium: An Examination of the Reasons Driving Disruptive Policy, National Mining Association (2016) hereinafter NMA White Paper.

The moratorium is based upon flawed assumptions, misrepresentation of the current management situation, cherry-picked datasets and metrics, and twisted facts, which were used to suit pre-conceived theories about fair return, market conditions, and externalities. As such, CMA opposes the moratorium, and cautions both BLM and DOI, that information relied upon and disseminated by the Federal government must be in compliance with the DQA.

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Comment Number: 0002490\_Emrich\_20160728\_CloudPeakEnergy-5

Organization I: Cloud Peak Energy Inc.

Commenter I: Andrew C. Emrich, P.C.

## Comment Excerpt Text:

Because the executive branch has tainted the ongoing NEPA review through its impermissible predetermination of the outcome of key policy objectives at the heart of that public review, BLM should lift the current leasing moratorium during the pendency of the federal coal program PEIS review. The Department of the Interior has offered no coherent reason why coal producers should be punished by an arbitrary leasing moratorium during BLM's review of the coal program. Similarly, BLM should complete its PEIS process as quickly as possible to avoid lingering uncertainty about the future of the coal leasing program.

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Comment Number: 0002491\_Weiskopf\_20160728\_NextGenClimateAmer-57

Organization I: NextGen Climate America

Commenter I: David Weiskopf

Other Sections: 4.5.2.1

## Comment Excerpt Text:

Alternative B: Proposed Action (Preferred Alternative) Permanently Extending Lease Moratorium  
Under this alternative BLM would permanently implement the coal leasing moratorium, allowing all existing leases to naturally sunset without extension. Under this alternative, assuming deployment from CCS, as noted by Carbon Tracker, "the potential production from existing leases is sufficient to meet projected demand in every year through 2040."<sup>65</sup> In this scenario, the number of leases are sufficient to meet demand for a range of plausible and high levels of CCS deployment: 450 with CCS deployment in 2020, 450 with widespread CCS deployment in 2030, and 450 with no CCS deployment through 2040.<sup>66</sup>

[<sup>65</sup> Carbon Tracker Report, supra note 3 at 12.]

[<sup>66</sup> Resources for the Future, "Putting a Carbon Charge on Federal Coal: Legal and Economic Issues." Available at <http://www.rff.org/files/sharepoint/WorkImages/Download/RFF-DP-15-13.pdf>; Carbon Tracker Report, supra note 3 at 10.]

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Comment Number: 0002493\_Mead\_20160728\_GovWY-18

Organization I: Office of Governor Matthew H. Mead

Commenter I: MATTHEW H. MEAD

Other Sections: 8.5

## Comment Excerpt Text:

DOI's estimate appears to be a nationwide figure which amalgamates all federal coal leases. However, the mines

in Wyoming account for 80% of all federal coal being produced today and BLM Wyoming figures show the average mine life for Wyoming coal mines is 16.4 years. See Wyoming Coal Mines- Estimated Mine Life (WY0-00914). Even this number is skewed by one mine, the Caballo mine, which is projected to last for 80 years. (Id.). And the 80 year projection cannot be relied upon because the Caballo mine is known to contain significant amounts of uneconomically mineable reserves. (Id.). Thus, DOI is overestimating the remaining life of existing mines, including those in Wyoming.

DOI has used its 20-year estimate to downplay the impact that the moratorium will have on coal production. Again, DOI is not telling the whole story. Assuming no legal challenges, the best timeline estimate for a new lease approval will likely require 13 to 15 years (3 year PEIS process; 2 years for rule/Resource Management Plan (RMP) revisions; 5 years for EIS development of same; 2 years for Record of Decision and lease sale; 3 years for state/federal OSMRE permitting). A 15 year time lag for post-moratorium new coal production cuts dangerously close to BLM's estimate that the mines in Wyoming that produce 80% of federal coal will continue for 16.4 years. But this best case scenario is not the most likely scenario because litigation is likely to occur. Unfortunately, the moratorium and PEIS process has created an uncertainty in the nation's thermal coal baseload fuel supply. Because the moratorium has stopped the coal leasing process while existing leases continue to produce, DOI has created a time lag in production that is not likely to be overcome once leasing resumes. Therefore, the BLM must consider ways to significantly expedite coal leasing once the moratorium is lifted.

#### 1.5.2- Concerns with Order No. 3338- Sec. 6, Exclusions

The exclusions identified in Order No. 3338 appear designed to mitigate potential mine life conflicts; however, the emergency lease and lease modification provisions may be insufficient to sustain some mining operations. The DOI's calculation of tons of reserves in Wyoming is inaccurate. It is apparently based on total tons of coal leased nationwide. The more appropriate calculation of tons of coal reserves should be on the basis of minable tons within approved lease tracts. The DOI evaluation does not take into account the balancing of strip ratios across the mining reserve base (field average) and actions taken by BLM in the leasing process that impact those reserves ultimately leased. The BLM is required to lease in accordance with the public interest. Therefore, lease tracts include unrecoverable tons that lie under rail lines and extend to the 40 acre subdivision. The unrecoverable tons within these lease units include tons that are not economically recoverable, but have been added into the lease tract total tonnage evaluation and sale to prevent reserve sterilization.

Order No. 3338 also does not account for strip ratio variability (overburden thickness/coal thickness) and how strip ratio factors into lease modification requests and actions. As stated previously, a lease action often includes areas of high strip ratio and marginal coal in order to prevent sterilization of reserves. LBA and Lease by Modification (LBM) actions include both lower cover reserves in conjunction with marginal high cover reserves in an attempt to balance the strip ratio and recover the maximum coal tons from the reserve base. This action facilitated by the LBA/LBM process provides for maximum recovery and public benefit from the leased coal. In contrast, Order No. 3338, as established, will force operations into marginal reserves early in the mine life and create economic winners and losers based on policy rather than coal recovery and market conditions. Additionally, coal companies may choose to pay a penalty and bypass marginal reserves as they are simply too costly to mine without lower stripping ratio reserves available to offset the respective increased cost of mining. The public benefit from these reserves is compromised and is in contrast to BLM's public benefit mandate. The increase in the cost of coal will be passed onto the end consumer resulting in higher utility rates. The BLM must consider these factors now, as it relates to Order No. 3338, and in its PEIS.

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Comment Number: 0002493\_Mead\_20160728\_GovWY-2

Organization I: Office of Governor Matthew H. Mead

Commenter I: MATTHEW H. MEAD

Comment Excerpt Text:

From a nationwide perspective, the OIG report did NOT conclude that the program has resulted in loss of revenue. Instead, it found that updating certain agency policies would minimize certain hypothetical risks for the

undervaluation of the resource. The policy changes to guidance proposed by the GAO and OIG reviews are administrative, offering guidance to the BLM to assure the program's continued effectiveness and transparency. They do not call for this PEIS with its monumental and expensive consequences. The vast majority of federal coal leased and mined in the U.S. (80 percent in Wyoming) is being managed in an exemplary manner. The moratorium on new coal leases and lease modifications on these facts alone is unwarranted and should be lifted immediately.

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Comment Number: 0002493\_Mead\_20160728\_GovWY-3

Organization I: Office of Governor Matthew H. Mead

Commenter I: MATTHEW H. MEAD

Other Sections: 4.6

Comment Excerpt Text:

The PEIS process is having a disproportionate impact on Wyoming and time is of the essence for Wyoming and Wyoming mine workers. DOI has suggested that this review is temporary and time limited- three years. However, there is no written commitment by the DOI or the BLM to a three-year schedule. It regularly takes a minimum of seven to ten years to complete an Environmental Impact Statement in Wyoming. Interestingly the BLM's Solar Energy Development PEIS- considered a priority of the Obama administration- took more than four years to complete and the BLM is only now proceeding with updating its rules and regulations. The BLM needs to stop the PEIS, but at a minimum it needs to commit in writing what it has promised repeatedly, that the PEIS will be completed by January 15, 2019 and, completed or not, that the moratorium will expire on that date.

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Comment Number: 0002495\_Bucks\_20160728-6

Commenter I: Dan Bucks

Comment Excerpt Text:

Secretarial Order 3338 contains all the reasons why the current systems are deficient and need to be replaced. The programmatic reviews in the 1970s and 80s set precedents for using the PEIS process to develop new practices and procedures. Interior's pause in leasing while the coal review is completed implicitly confirmed that the leasing process was flawed and could not be continued. Indeed, if the scope of the PEIS does not include work on improved administrative systems, Interior will undermine the credibility of the leasing pause. Critics will ask, "If the PEIS is simply an academic, analytical exercise of no consequence to operational policy and practice, why then was the pause imposed on leases? Surely, analysis can proceed while we get on with the real business of leasing and producing coal." The rationale for the leasing pause is reinforced if the scoping document makes an explicit commitment to develop through the PEIS a new leasing system to replace lease by application. By ceding substantial control of the pace and degree of coal leasing to coal producers and allowing them to self-assess royalties, Interior has denied itself the ability to guarantee a fair return to the public, to minimize and mitigate the external cost of coal production, or to fulfill other public purposes. The existing administrative systems are obstacles standing in the way of the goals of the PEIS. They are too infected by private control serving private interests to yield results that serve the public interest. These systems need to be replaced, and that vital work should be accomplished through the PEIS, with new systems ready to be implemented at its completion.

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Comment Number: 0002500\_Sweeney\_20160728-1

Organization I: National Mining Association

Commenter I: Katie Sweeney

Comment Excerpt Text:

If the BLM is sincere in its goal to achieve a fair return for taxpayers, the BLM should lift the moratorium on federal coal leasing and abandon those proposals which would short change American taxpayers and raise energy costs across the nation. Instead of pursuing these destructive policies, the BLM should recommit itself to ensuring

the proper and expedient function of the federal coal leasing program on behalf of the public that it serves. Attached and incorporated in these comments is a report on the “Federal Coal Leasing Moratorium: An Examination of the Reasons Driving a Disruptive Policy” which analyzes the misguided rationales for the moratorium and policy proposals included in the PEIS that are designed to make federal coal uneconomic.

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Comment Number: 0002500\_Sweeney\_20160728-3

Organization I: National Mining Association

Commenter I: Katie Sweeney

Comment Excerpt Text:

II. The Reasons Underlying the Moratorium and PEIS Rely on Market Distortions and Mischaracterizations of the Coal Leasing Process Which Would Decrease Coal Production and Return for Taxpayers

Many of the potential policy options listed in BLM’s PEIS Scoping Notice disguised as measures for ensuring fair return are actually market distorting policies designed to make federal coal uneconomic to mine which will result in denying communities, states and all Americans the twin-benefits of coal revenues and access to lower cost and reliable electricity.

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Comment Number: 0002503\_Hamman\_20160729-1

Organization I: Lignite Energy Council

Commenter I: Tyler Hamman

Comment Excerpt Text:

Given the mine-mouth nature of lignite coal mines and electric generating facilities, mining companies in North Dakota have secured long-term supply contracts with their utility customers. As a result, mining companies secure the majority of leases needed to satisfy decades-long fuel supply contracts, as well as the surface area they intend to mine, before submitting an application for a mine permit from the North Dakota Public Service Commission (PSC). After these pieces have fallen into place, coal producers can begin mining activity and have developed the practice of pursuing a federal coal lease by accounting for an appropriate amount of lead time in their mine plan. In announcing the three-year moratorium on federal coal leasing, the Department indicated that it would not impact existing operations since there is enough coal already leased to maintain current production levels for 20 years[2]. Despite the relatively small amount of federal coal in North Dakota, the three-year moratorium can actually be more damaging since coal producers do not secure federal coal decades from production as is standard practice in areas of the West with significant federal coal reserves.

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Comment Number: 0002507\_Nettleton\_20160801-1

Organization I:

Commenter I: Jerry Nettleton

Other Sections: 4.6

Comment Excerpt Text:

Along with preparation of the EIS, the Secretary of Interior has imposed a de-facto moratorium on coal leasing pending completion of this review.

Part of the stated justification for these actions is reports resulting from review by the Government Accounting Office (GAO) and the DOI-Office of Inspector General (OIG) of the current coal program. Given, however, that the referenced reports stated that the current leasing program is sound and contributes significant benefits to the taxpayers, that the reports offered only modest recommendations for program improvements, and that in 2014 the BLM already developed new protocols, policy guidance, and a manual and handbook to implement the GAO/OIG recommendations, there is a reasonable basis to question the need and motivation for both the EIS and the leasing moratorium. It must also be noted that the proposed regulatory changes illegally conflict with and attempt to supercede existing law and regulation under SMCRA (30 U.S.C. 25), FLPMA (30 U.S.C. 1701), MLA (30 U.S.C. 181), MMPA (30 U.S.C. 21a), NEPA (40 U.S.C. 4321, and DQA (Pub. L. No. 106-554, 515).

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Comment Number: 0003001\_MasterFormA\_Care2Petitions-I

Organization I:Care2 Petitions

Comment Excerpt Text:

As a person who is concerned with climate change I urge you to maintain the moratorium on new coal leases on public land for the next three years.

This moratorium is an important step to transitioning the American economy away from fossil fuels and showing that the United States can become a leader in the fight against climate change.

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Comment Number: 0003012\_MasterFormK-I

Comment Excerpt Text:

The moratorium placed on new federal coal leases will cause undue harm to a vital source of electricity for millions of Americans. If the Administration chooses to conduct a Preliminary Environmental Impact Statement, then it should do so without halting new leases. We can continue our country's track record of environmental stewardship without destroying the coal industry and driving up electricity prices.

I believe the coal moratorium is a damaging policy with grave ramifications. I urge the Secretary to reconsider this policy and end the moratorium today.

---

Comment Number: 0020012\_Holmes\_UCARE\_20160712-I

Organization I:Utah Citizens Advocating Renewable Energy

Commenter I:Stanley Holmes

Comment Excerpt Text:

UCARE members support continuation of the current Department of Interior (DOI) moratorium on federal lands coal leasing until a comprehensive assessment of coal's costs to American citizens has been conducted by the DOI, the Environmental Protection Agency, the Department of Health and Human Services, and other relevant agencies of the federal government.

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Comment Number: 0020028\_Brady\_EmergencyCounty\_20160722-I

Organization I:Emery County Commission

Commenter I:Keith Brady

Comment Excerpt Text:

"Coal has been an important domestic energy source for decades and that will continue in the years ahead. The federal government plays a major role in facilitating and regulating U.S. coal production; taxpayer-owned federal lands supply roughly 40 percent of all U.S. coal production."

This opening statement in Department of Interior's (DOI) Coal Reform Fact Sheet should be seen as perhaps the best reason to not impose the moratorium on coal leasing as the DOI evaluates the federal coal program. Coal will continue to dominate the energy production field in the year's ahead. Coal from federal leases provide nearly half of the nation's power. To throw on the brakes on the leasing process while it is being re-evaluated makes absolutely no sense.

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Comment Number: 0020028\_Brady\_EmergencyCounty\_20160722-2

Organization I:Emery County Commission

Commenter I:Keith Brady

Comment Excerpt Text:

The likely result of the moratorium will be a lag in leasing, resulting in unavailable resources in the future as bureaucracy tries to catch up to demand. Secretary Jewell should scrap the moratorium and allow leasing and production to proceed while DOI slogs through the evaluation process.

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Comment Number: 0020031\_Parkins\_20160722-19

Commenter I:438596

Comment Excerpt Text:

the moratorium on coal leasing should be lifted and we should get back to the important work of providing energy to the nation. There is no benefit in disrupting the supply of coal from BLM lands for the period of the moratorium.

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Comment Number: 0020034\_Koontz\_TownofHotchkiss\_20160729-5

Organization I:Town of Hotchkiss

Commenter I:Wendell Koontz

Comment Excerpt Text:

A three year moratorium on leasing to study the issue is illogical given the known demands for coal and power generation and the impacts on employment, royalties paid, and lives affected.

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Comment Number: 0020056-1

Organization I:Bowie Resource Partners, LLC

Commenter I:Gene DiClaudio

Comment Excerpt Text:

Bowie is especially concerned about the statement in Order 3338 and in separate commentary to the press by the Secretary's Office that the expected duration of the leasing moratorium is not of concern, because " 20 years supply of coal is already under lease. Bowie is unsure of the data the Secretary s Office relied upon for this assertion, and it is a material oversimplification of the actual nature and state of the coal market. First, it is problematic to aggregate all federally leased coal together, because not all federal coal is the same. Federal coal varies widely in BTU, sulfur, ash, moisture, and similar characteristics, as well as geography. Critically, state-of-the-art coal-fired generating units are tuned to specific range of coal characteristics, and either cannot efficiently consume coal outside that range, or cannot do so without expensive retro-fitting. As a result, as a practical matter there is not a single unified coal market, but rather a wide array of sub-markets, each with its own, sometimes narrow, range of sources. Some of these sub-markets may have a fairly significant amount of coal already under lease, but others are much more supply constrained, and the length of the proposed moratorium may cause significant supply disruptions, particularly given the presently litigious and politicized state of federal coal leasing and permitting.

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Comment Number: 000001242\_SANDERSON\_Colorado Mining Association \_2016062-1

Organization I:Colorado Mining Association

Commenter I:Stuart Sanderson

Other Sections: 8.7

Comment Excerpt Text:

I'm also appearing today as part of a coalition of 17 organizations of local governments and other groups throughout Colorado, which are really concerned and are in opposition to the Department of the Interior's efforts to impose a leasing moratorium, as well as to hike royalty rates. This is not only not in the interests of Colorado, or in the interest of the economy. But, it will jeopardize our nation's long-term interest in securing an affordable, reliable, and yes clean, source of energy.

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Comment Number: 000001242\_SANDERSON\_Colorado Mining Association \_2016062-4

Organization I:Colorado Mining Association

Commenter I:Stuart Sanderson

## Comment Excerpt Text:

The leasing moratorium pause that has been imposed, not only threatens operations in this State and threatens their cessation within three years, it is clearly an over-reaction.

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Comment Number: 000001243\_COMPTON\_Utah Mining Association\_20160623-1

Organization I:Utah Mining Association

Commenter I:Mark Compton

Comment Excerpt Text:

I believe this coal moratorium -- well, maybe not surprising coming from the current administration, is nevertheless shortsighted and dangerous.

---

Comment Number: 000001243\_COMPTON\_Utah Mining Association\_20160623-3

Organization I:Utah Mining Association

Commenter I:Mark Compton

Comment Excerpt Text:

In addition to removing Federal coal reserves, the moratorium will reduce the lease revenues of Western States.

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Comment Number: 000001245\_COFIELD\_20160623-1

Organization I:Wagner Equipment Company

Commenter I:Brad Cofield

Comment Excerpt Text:

moratorium on Federal coal leases is the latest attempt to shut down a vital fuel source at a time when our worldwide energy demands continue to increase.

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Comment Number: 000001250\_SEGO\_20160623-1

Commenter I:Jeff Sego

Comment Excerpt Text:

I would urge Secretary Jewell to immediately end the moratorium on the Federal Coal Leasing Program.

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Comment Number: 000001288\_Stein\_20160623-1

Commenter I:Joe Stein

Comment Excerpt Text:

In the wake of a global climate crisis, we as Americans must maintain our current moratorium on Federal coal leases in order to meet our intended goals and prevent environmental disaster, paired with wise policy, emphasizing green subsidies. The extension of the current moratorium on coal will create jobs, lower greenhouse gas emissions, and show the world that America is once again a global energy leader. According to Sally Jewell, the current Secretary of the Interior, we already have 20 years' worth of coal supply at current production levels, at least for extraction. Because production levels are dropping, that stock will last longer and longer. We simply have no need for new coal plants. Removing the moratorium on Federal coal leases after signing on to the Paris Agreement, would be a step in the wrong direction at the most pivotal point in American energy history.

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Comment Number: 000001295\_Malzbender\_20160623-1

Organization I:Climate Reality Project

Commenter I:Katie Malzbender

Comment Excerpt Text:



The moratorium on new coal leases must be made permanent as the United States transitions from the dirty energy sources of the past to clean, healthy, and renewable sources of energy.

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Comment Number: 000001300\_Cowen\_20160623-1

Organization I: West Elk Mine

Commenter I: Vince Cowen

Comment Excerpt Text:

I'd ask you to reconsider the moratorium. Try to end it as soon as possible. It's going to help all of us.

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Comment Number: 000001301\_Permut\_20160623-2

Organization I: Climate Reality Project

Commenter I: Susan Permut

Comment Excerpt Text:

But, to ensure the health and wellbeing of our children, we need to make this ban permanent. So, please, make the temporary ban on new Federal coal lease -- coal leases permanent.

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Comment Number: 00001273\_Grange\_20160623-1

Commenter I: Jordan Grange

Comment Excerpt Text:

This moratorium is a huge waste of time. I support stopping this moratorium immediately and streamlining, streamlining the Federal lease -- the Federal Coal Leasing Program

#### **ISSUE 5.4 - SPECIFIC COAL LEASE APPLICATIONS**

Total Number of Submissions: 12

Total Number of Comments: 17

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Comment Number: 00000347\_Johnson\_20160519-4

Organization I: Alton Coal Development

Commenter I: Larry Johnson

Other Sections: 8.3

Comment Excerpt Text:

Alton Coal requests that the secretary consider suspending the moratorium and allowing existing leases to be completed and awarded. Alton's LBA has been pending for more than 12 years and the environmental analysis is nearly complete. Allowing to complete and award these pending leases would allow those coal companies to meet their coal supply agreements and will return bonus bid and lease payment revenues to both the state and the Federal Government.

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Comment Number: 0000376-1

Commenter I: Melinda McIlwaine

Comment Excerpt Text:

In lieu of having the sage grouse listed on the endangered species list, Utah agreed to ramp up its efforts to protect this bird and its habitat. The Alton Coal Mine will impact where these birds accomplish their annual mating rituals, which are quite amazing to see.

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Comment Number: 0000377-1

Organization I:Utah's Second Congressional District

Commenter I:Chris Stewart

Comment Excerpt Text:

"I ask the Bureau to pay particular attention to the permits and proposals for the Greens Hollow Tract and the Alton Coal Tract.

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Comment Number: 0000834-1

Commenter I:Bobbi Bryant-Salvato

Comment Excerpt Text:

The Alton Coal Mine, if permitted by BLM, will be a strip coal mine on 3,500 acres of public lands. Highway 89 will be the haul route of this coal. Highway 89, the Mormon Heritage Highway, is a small two lane highway that goes through the towns of Hatch and Panguitch. In the latest SEIS by BLM I quote, "adverse impacts of community and social well-being and tourism related business, population, housing and public safety and health" will result from permitting this mine. BLM has heard from more than 200,000 members of the public asking they not approve this mine. Truck traffic through these small towns will be estimated at up to 300 double tandem truck trips operating 24 hours a day 6 days a week. You can imagine the noise and road hazards.

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Comment Number: 0002390\_Pfister\_20160721-8

Organization I:Northern Plains Resource Council

Commenter I:Ellen Pfister

Comment Excerpt Text:

The Bull Mountain mine

has been permitted in fits and starts by both the State and BLM. The logical mining unit here is the whole coal reserve. The Billings Federal Judge told us that it was speculation that the other half of the coal reserve might be leased. Signal Peak has filed a prospecting permit for that half as of April 15, 2016. The Judge issued her ruling on March 31, 2016. The company has been talking about this for 15 years, and neither the Helena DEQ nor the MT BLM has wanted to believe that it could be serious. They have used checklist Environmental Assessments when full blown EISes were warranted. There has been desire to minimize the damage that can and will occur.

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Comment Number: 0002436-1

Commenter I:Sharon St Joan

Other Sections: 16

Comment Excerpt Text:

A tributary of Kanab Creek has already been relocated by the mine and has been polluted with coal dust. Kanab Creek provides the drinking water for the city of Kanab. New expansion of coal on to public lands would further contaminate Kanab Creek, which is also the main source of water for wildlife.

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Comment Number: 0002436-2

Commenter I:Sharon St Joan

Comment Excerpt Text:

The Alton Coal Mine – other impacts

About an hour north of where I live, in Kanab, Utah, is the Alton Coal Mine, built years ago on private land. For the past nine years, the BLM has been working on a proposal to lease 3,000 acres of adjacent public land to be used for open pit coal mining. While there is nothing we can do about coal mining on private land, we who live in

this area have watched for years the destruction that has already taken place to the surrounding ecosystem, and we fear the threat of far greater and more devastating damage to nearby public lands if they were to be opened up to coal mining, as is being proposed.

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Comment Number: 0002436-3

Commenter I: Sharon St Joan

Other Sections: 17

Comment Excerpt Text:

A "lek," or breeding ground, of the severely threatened sage grouse lies at the exact location of planned new coal expansion onto BLM land. Although the sage grouse species should have been listed for protection under the Endangered Species Act, it was not. Instead, an impractical plan has been agreed to by eleven western states to "manage" sage grouse habitat. This plan involves allowing key, essential sage grouse habitat to be taken over by coal strip--mining and other industrialization, while at the same time attempting to design new habitat, which, it is hoped, any sage grouse that survive may move on to.

This new habitat is being created by having machines crunch up miles and miles of beautiful native pinion and juniper trees, leaving the dead remains of the trees littering the ground, so that it is impossible even for a human to walk over them. It is hard to imagine the sage grouse doing their beautiful mating dance on top of broken, splintered trees. In some cases, nonnative grasses have been planted at these sites, which is ecologically inappropriate.

There is no proof that the sage grouse will move onto these miles and miles of destroyed trees, which do not in any way resemble sage grouse habitat. In the meantime, the habitat of all the native species who used to live there – the coyotes, the deer, the elk, the rabbits, the beavers, foxes, cougars, bobcats, and the many small mammal and avian species -- has been eradicated.

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Comment Number: 0002436-5

Commenter I: Sharon St Joan

Other Sections: 17

Comment Excerpt Text:

these public lands being considered for new coal expansion are right on a wildlife corridor that runs up through the Grand Canyon, through the Kaibab forest, through Kane County, Utah, and farther north on up to Canada. This is a key wildlife corridor for the annual mule deer migration, along with the animals that travel with them – including cougars and coyotes.

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Comment Number: 0002449\_Lyon\_20160727\_NWF-53

Organization I: National Wildlife Federation Action Fund

Commenter I: Jim Lyon

Other Sections: 1

Comment Excerpt Text:

In 2014, the National Wildlife Federation estimated that the CO<sub>2</sub> emissions from burning the coal leased under nine leases in the Powder River Basin would be equivalent to about 250 coal fired power plants working non-stop for ten years. Additional proposals on public lands in Colorado, Utah, West Virginia, and Alaska would add an additional one billion tons of CO<sub>2</sub> to the atmosphere, equivalent to bringing 31 coal-fired power plants online. This would make the total impact of burning leased coal would be the addition of over 10.5 billion tons of CO<sub>2</sub> released. (125)

(125) National Wildlife Federation, Issue Brief: Accounting for Carbon Pollution from Coal Mining on Federal Lands (2014) at 3-4, available at [http://www.nwf.org/~media/PDFs/Global-Warming/Policy Solutions/2014/nwf\\_issue\\_briefs\\_layout\\_web.pdf](http://www.nwf.org/~media/PDFs/Global-Warming/Policy_Solutions/2014/nwf_issue_briefs_layout_web.pdf).

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Comment Number: 0002460\_Berry\_20160728-1

Organization I: Town of Paonia

Commenter I: Jane Berry

Comment Excerpt Text:

Not all coal is created equal. The coal that comes out of the North Fork Valley is high heat and low sulfur. I have been advised by members of the environmental community that they believe that North Fork coal is cleaner than natural gas. They see North Fork coal as a bridge to alternative forms of energy. If the country is to have energy at a reasonable cost, coal will continue to be used to generate electricity for years to come. Why not burn clean coal mined by responsible companies? North Fork coal should be part of our energy future.

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Comment Number: 0002485\_Brooke\_20160728-1

Organization I: Black Warrior River

Commenter I: Nelson Brooke

Other Sections: 17

Comment Excerpt Text:

A recent lease of 160 acres was awarded to Narley Mine No. 3, operated by Best Coal, Inc. That surface mine has discharges through six sediment basins to an unnamed tributary to Trouble Creek, which flows into Trouble Creek, and then into the Locust Fork of the Black Warrior River in Jefferson County, AL. This stretch of the Locust Fork is federal ESA Critical Habitat for six species of freshwater mussels, and is also home to the Endangered Cahaba Shiner, the Endangered plicate rocksnail, the Threatened flattened musk turtle, and the Candidate Black Warrior Waterdog, among other rare aquatic species. Alabama is number one in the U.S. for aquatic biodiversity, and the Locust Fork is a key priority watershed for rare species habitat, reintroductions, and recovery.

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Comment Number: 0002487\_Clarke\_20160728\_UtahGovOffice-2

Organization I: Utah Office of the Governor

Commenter I: Kathleen Clarke

Comment Excerpt Text:

BLM's actions threaten several major coal mine expansion projects in Utah including the Alton Coal Mine expansion application to lease 2,683 acres of Federal coal and recover approximately 49 million tons, the Sufco Mine expansion application to the 6,175-acre Green Hollow coal tract, and the Lila Canyon Mine application to lease the 4,200-acre Williams Draw Tract.

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Comment Number: 0002490\_Emrich\_20160728\_CloudPeakEnergy-15

Organization I: Cloud Peak Energy Inc.

Commenter I: Andrew C. Emrich, P.C.

Other Sections: 1

Comment Excerpt Text:

Cloud Peak Energy is one of the safest producers of low sulfur, high quality subbituminous coal in the United States. Cloud Peak Energy wholly owns and operates three coal mines on federal leases located in the Montana and Wyoming portions of the Powder River Basin. Cloud Peak Energy operates the Spring Creek Mine in southeastern Montana and the Cordero Rojo Mine and the Antelope Mine in northeastern Wyoming. Cloud Peak Energy's coal mines have been mining and shipping coal since the mid-1970s. Cloud Peak Energy also has two major development projects, the Youngs Creek project and the Big Metal project with the Crow Tribe in the northern Powder River Basin. In 2015, the coal that Cloud Peak Energy produced generated approximately 3% of the electricity produced in the United States. See Cloud Peak Annual Report, at 2 (2015). Cloud Peak Energy is the only Wyoming-headquartered company listed on the New York Stock Exchange (NYSE: CLD).

Comment Number: 0002505\_Brooke\_20160729-1

Organization I: Black Warrior River Keeper

Commenter I: Nelson Brooke

Other Sections: 16

Comment Excerpt Text:

A recent BLM lease (ALES-055199) of 160 acres was awarded to Narley Mine No. 3 utilizing the “emergency lease” qualification, under the premise that the 868,423 tons of recoverable federal coal were needed within a three-year timeframe to maintain an existing mining operation – the adjacent Narley Mine. Operated by Best Coal, Inc., Narley Mine No. 3 (surface mine) is permitted by the U.S. Army Corps of Engineers (NWP 21: SAM-2012-00615-CMS), the Alabama Surface Mining Commission (P-3954) and the Alabama Department of Environmental Management (NPDES: AL0075752). NPDES AL0075752 allows discharges through six sediment basins to an unnamed tributary to Trouble Creek, which flows into Trouble Creek, and then into the Locust Fork of the Black Warrior River in Jefferson County, AL. Sediment basins are allowed to be placed within streams in Alabama by utilizing a grandfather provision to exercise use of the old Nationwide Permit 21. This Corps permitting system is outdated and destructive – its use was discontinued in all other Appalachian coal mining states years ago. Sadly, its use has been allowed to continue in Alabama. It is stated that fill impacts would not be had by this operation on Trouble Creek, but there will be fill impacts to Trouble Creek’s tributaries. For this mine, SAM-2012-00615-CMS allows for the destruction and fill of 4,080 linear feet of intermittent streams and 7,106 linear feet of ephemeral streams. Headwater tributaries and their critical ecosystem functions should not and cannot be overlooked when considering the cumulative impacts of an operation within a watershed. Placement of fill and sediment ponds in drainages and tributaries is a key concern of Black Warrior Riverkeeper, and we believe this is a practice allowed by NWP 21 that should be expressly banned. These streams are headwater tributaries, and any impacts to them eventually have a downstream cumulative impact on the Locust Fork. A 100 foot Stream Buffer Zone cannot and should not be touted as a sufficient measure to protect water quality and aquatic species, as it is in the EA on page 46.

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Comment Number: 0002505\_Brooke\_20160729-2

Organization I: Black Warrior River Keeper

Commenter I: Nelson Brooke

Comment Excerpt Text:

The June 2, 2014 EA (DOI-BLM-ES-0020-2012-0039-EA) performed by engineering firms PERC & MEC for this lease was inadequate for multiple reasons. Consultation with multiple state and federal regulatory agencies failed to adequately consider water quality and wildlife habitat impacts to the Locust Fork of the Black Warrior – both individually from this mine and cumulatively with numerous other active, reclaimed, and abandoned coal mines along this stretch of the river. Neither ADEM nor AMSC – the two state agencies with regulatory authority over coal mining in Alabama – perform cumulative impacts analyses when making permitting decisions. Their permitting systems do not adequately take into consideration downstream impacts of surface coal mines on receiving river basins, their habitat, their intended uses, or their actual uses.

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Comment Number: 0002505\_Brooke\_20160729-3

Organization I: Black Warrior River Keeper

Commenter I: Nelson Brooke

Other Sections: 4.6

Comment Excerpt Text:

While the applicant states in the EA on page 48 that the ADEM NPDES permit “provides strict water quality restrictions that control the quality of water that will be allowed to be discharged into the nearby streams,” ADEM’s NPDES permits actually allow for rain event exemptions on pollutant limitations, essentially permitting coal mines to discharge sediment and heavy metals-laden water over spillways or through pipes into receiving streams during rain events. These unfortunate exemptions circumvent the intent of the Clean Water Act, and

place downstream waters and species in harm's way at times when pollutant limitations are needed most. ADEM's coal mining NPDES permits are designed to allow massive quantities of sediment to discharge into receiving waters during rain events. The idea touted on page 48 that sediment basins are adequate to trap sediment in runoff from coal mines cannot be trusted. There is a lot of talk in the EA about all the regulations and plans in place to protect the environment, but the reality on the ground is: strip mines in Alabama are overseen by lax regulations and minimal regulatory oversight.

A misleading representation of the NPDES compliance history of the applicant at its Narley Mine was provided as a justification for the lease in this EA. Such misinformation should not be taken lightly, and should be ample fodder for revocation of this lease. The EA states on page 48: "Best Coal, Inc. has not experienced a non-compliance discharge from any of its basins associated with the NPDES Permit AL0075752 since March 15, 2011." Upon a quick Black Warrior Riverkeeper review of NPDES Permit AL0075752 monthly discharge monitoring reports publicly available on ADEM's eFile database, we found this statement to be patently false. From March 15, 2011 to January 2012, Narley Mine had 217 violations of its NPDES permit – by exceeding limitations for toxicity and selenium.

On page 48 the following was stated: "In addition, there are no issues or concerns brought forth relating to the past mining operations in the area according to their past compliance records." Additionally on page 35 the following was stated: "Best Coal had tested the Narley Mine overburden and interburden to determine whether acid or other toxic-forming substances were present in amounts that might pollute water resources. The results indicated that toxicity issues with respect to the materials tested were minimal. The three overburden cores contained small amounts of acid-forming shale zones near one or more of the coal beds to be mined. The volume of this toxic material was small compared to the total volume of overburden. Excavation of the overburden would not necessarily mix the spoil thoroughly. Therefore, there is a possibility that pods of toxic shale might be positioned within the backfill where they could have some localized environmental effect. However, considering the volumes involved, that effect would be limited to a few patches of sparse vegetation, which could be mitigated with an application of agricultural lime." Taking these two items into consideration, it is of note that some of the NPDES permit violations at the Narley Mine were with respect to toxicity failures in their discharges. It is clear that the applicant's representation of operations at Narley Mine differ from the facts on the ground.

The stretch of the Locust Fork near Narley Mine No. 3 is classified as federal Critical Habitat under the Endangered Species Act for six species of freshwater mussels: Alabama moccasinshell (*Medionidus acutissimus*) [Threatened], Dark pigtoe (*Pleurobema furvum*) [Endangered], Orange-nacre mucket (*Hamiota perovalis*) [Threatened], Ovate clubshell (*Pleurobema perovatum*) [Endangered], Triangular kidneyshell (*Ptychobranhus greenii*) [Endangered], and Upland combshell (*Epioblasma metastrata*) [Endangered]. It is also known habitat for the following rare species: Black Warrior waterdog (*Necturus alabamensis*) [Candidate], Cahaba shiner (*Notropis cahabae*) [Endangered], Flattened musk turtle (*Sternotherus depressus*) [Threatened], and Plicate rocksnail (*Leptoxis plicata*) [Endangered]. Amazingly, Table 4 in the EA erroneously states about the Cahaba Shiner: "this species is only found in the main channel of the Cahaba River." Actually, the most robust population of the Cahaba shiner lives within the Locust Fork near this mine site. With such a clear mistake, it is hard to imagine that a Section 7 Consultation meaningfully took place, even though the U.S. Fish & Wildlife Service informed the BLM on 6/27/13 that Best Coal's contractor met consultation requirements. Unfortunately, without a serious cumulative impacts review, these species well-being and the habitat and water quality impacts from coal mining were not seriously considered through this process. The habitat assessment performed by MEC simply focused on the immediate area of the mine – an area already impacted by multiple activities over the years, but failed to survey areas immediately downstream that will be impacted by polluted runoff from the mine during operation, during reclamation activities, and well into the future beyond post-reclamation closure. Alabama is the number one state in the U.S. for aquatic biodiversity, and the Locust Fork is a key priority watershed for rare species habitat, reintroductions, and recovery. If the BLM's federal coal EA process were adequate, the importance of the

Locust Fork, its water quality, its aquatic habitat, and its inhabitants would not have been glossed over as it was here.

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Comment Number: 0000730\_Rothfus\_USRep\_20160628-2

Commenter I: Keith Ross

Comment Excerpt Text:

As you know, under Secretarial Order 3338, the federal government has imposed a moratorium on further coal lease sales pending completion of the Programmatic Environmental Impact Statement (PEIS). In doing so, BLM is putting 65,000 jobs at risk and threatening further hardship in coal communities. As the representative from a district with a long history of mining - and one that has suffered as a result of Washington's job killing policies - Congressman Rothfus cannot sit silent as regulators threaten to impose further hardships on the American people.

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Comment Number: 0000731\_Ranii\_20160628-1

Commenter I: Mary Ranii

Comment Excerpt Text:

I support this pause on new coal leases on public lands. These lands should be for recreational and educational use and purposes. Mining projects pose undue threats to the health of nearby communities not to mention the health of waterways, air and wildlife. As we also see, the impacts of climate change more and more we need to make decisions that protect our future.

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#### **ISSUE 5.5 - COAL LEASING PROCESS (WHERE, WHEN, HOW, WHO)**

Total Number of Submissions: 111

Total Number of Comments: 205

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Comment Number: 00000122\_Kirkbride\_Wyoming\_State\_House-1

Organization I: Wyoming State House

Commenter I: Dan Kirkbride

Comment Excerpt Text:

Coal mining companies pay some of the highest taxes on any commodity in the world. They in turn gave us jobs for working families, electricity for the populous on a national scale, and taxes for county, state, and federal governments, and in the process reclaiming the land oftentimes to better than original condition. That is win-win and a whole lot more. As you review the leasing program, please consider continuing full utilization of Wyoming's reserves by the coal industry with the added possibility of providing for an even more streamlined and transparent permitting process.

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Comment Number: 00000128\_Schladweiler\_BTS\_Environmenta-1

Organization I: BTS Environmental Associates

Commenter I: Brenda Schladweiler

Comment Excerpt Text:

Number one, after 30-plus years of interpreting natural resources data or collecting that data for purposes of submittal to federal and state regulators, I have felt that the leasing process for coal as well as the state's permitting process is a slow methodical process that takes, quote, time, unquote. That time frame has increased significantly since I began work in this area, a testimony to the complexity of the issues and the regulators'

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attempts to address those issues. Because of these safeguards, I do not see the need to revamp the coal leasing process.

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Comment Number: 00000138\_Simonson\_20160517-2

Organization I: Wyoming Machinery Company

Commenter I: David Simonson

Comment Excerpt Text:

The lease-buy application process is effective at seeing that a fair value is received on federal leases. If the amount of the bid is too low, it's simply rejected and re-auctioned.

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Comment Number: 00000139\_Craft\_20160517-1

Organization I: Wyoming Coal Company

Commenter I: Lecia Craft

Comment Excerpt Text:

The entire permitting process extends well beyond ten years and needs to be streamlined, not lengthened. Implementation of the coal leasing moratorium only adds further uncertainty to an already cumbersome permitting process.

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Comment Number: 00000141\_Kline\_20160517-2

Commenter I: David Kline

Comment Excerpt Text:

We need to get rid of the redundancy. It took ten years is what it will take to roughly get a permit before you turn the first shovel of dirt.

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Comment Number: 00000143\_Short\_20160517-4

Commenter I: Robert Short

Comment Excerpt Text:

Any change to current leasing rules which will result in longer permitting processes will all but sanction the eradication of an entire industry

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Comment Number: 00000145\_Butler\_20160517-1

Commenter I: Michelle Butler

Comment Excerpt Text:

finish this PEIS in a timely manner, and if anything, only simplify the leasing process and let us go back to work providing affordable, reliable electricity for millions of families across the country.

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Comment Number: 00000146\_Cady\_20160517-1

Commenter I: Kelli Cady

Comment Excerpt Text:

I encourage you to simplify the leasing process and do not increase taxes.

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Comment Number: 00000293\_ETTER\_20160519-1

Commenter I: Art Etter

Comment Excerpt Text:



If changes must be made to the federal leasing process, let's make these positive changes by simplifying and streamlining the leasing process

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Comment Number: 00000297\_ PAGE \_20160519-1

Organization I:Northern Plains Resource Council in Mountana

Commenter I:Julia Page

Comment Excerpt Text:

We need much more transparency in this program. We need to close loopholes and get a fair return for taxpayer-owned coal.

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Comment Number: 00000321 \_ MASON \_20160519-1

Organization I:Sevier County

Commenter I:Gary Mason

Comment Excerpt Text:

One of the big problems that I think you need to address as you study your new program, your new requirements, you've got to shorten the time frame to get a lease. These guys have been working on it for 12 years and they still don't have it, and its costing our county bigtime. We need that lease so bad. There's no reason it should take 12 years to get a lease through. I mean that's just ridiculous.

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Comment Number: 00000334 \_ Potter \_ Carbon County \_ 20160519-2

Organization I:County Commissioner

Commenter I:Jay Potter

Comment Excerpt Text:

The second thing is that the coal should be leased in its entirety. You should open up those lands where coal is available and let those leases go forward.

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Comment Number: 00000361 \_ Akers \_20160519-3

Organization I:Norwest Corporation

Commenter I:Pat Akers

Other Sections: 8.7

Comment Excerpt Text:

I wanted to hit on one particular issue, the comment in order No. 3338 that notes that about 90 percent of federal coal lease sales receive only one bid and that's typically from the operator of a mine adjacent to the new lease given to a large investment required to open a new mine. Commenters have questioned whether an accurate fair market value can be identified in the absence of a truly competitive marketplace. I will say that based on economics, the owner of the adjacent mine will always have an advantage over other bidders. This is due to the investment the operator has made in infrastructure and equipment that can be used to produce the efficient coal. His cost will be lower than the other bidder because of this investment. Other bidders will need to include this capital, which is hundreds of millions of dollars in their cost, and will need a return on that capital, which will reduce the amount they can afford to pay for the lease. To ensure that the adjacent operator does not take advantage of the Federal Government, the BLM handbook has a special set of valuation rules to determine the minimum bid for these situations. The BLM sets the minimum value in these situations by calculating the value of the mine without the adjacent lease and the value of the mine with the adjacent lease. And the difference between these two values is set as the minimum. This has the effect of transferring all of the profit above the 10 percent discount rate to the Federal Government.

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Comment Number: 0000067\_Laresche\_20160517-2

Organization I: Powder River Basin Resource Council

Commenter I: Bob Laresche

Comment Excerpt Text:

Second, the leasing system must be modernized and simplified to fit new market realities. Interior must take control of the leasing program that reflects markets, both supply and demand, and must retire the present lessee-driven system.

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Comment Number: 0000072\_Tully\_20160517-2

Organization I: Northern Plains Resource Council

Commenter I: Tom Tully

Comment Excerpt Text:

Coal leasing should be based on what is good for the public, not coal companies. This requires that the BLM decide where, when, and how much coal is leased rather than allowing coal companies to dictate the terms.

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Comment Number: 0000072\_Tully\_20160517-5

Organization I: Northern Plains Resource Council

Commenter I: Tom Tully

Comment Excerpt Text:

Ensure competitive and transparent leasing so that the public knows exactly who is bidding on coal and the terms of the lease.

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Comment Number: 0000074\_Alexander\_TaxpyrComnSense\_20160517-1

Organization I: Taxpayers For Common Sense

Commenter I: Ryan Alexander

Comment Excerpt Text:

For the last 25 years coal companies have proposed tracts of land put up for sale by BLM through a lease-application process. Close to 90 percent of these sales have only a single bidder. The lack of competition for federal coal leases makes the process of determining fair market value for coal controversial. There are legitimate problems in continuing to value lease tracts that lack competitive appeal because it's to maximize profits for the bidder and not the taxpayer. Because of the lack of competition, comparisons for the purpose of appraisal are difficult.

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Comment Number: 0000075\_Anderson\_20160517-2

Organization I: Powder River Basin Resource Council

Commenter I: Shannon Anderson

Comment Excerpt Text:

Revenue losses also occur from loopholes in the coal royalty valuation, loopholes that the department is currently working to close.

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Comment Number: 0000075\_Anderson\_20160517-3

Organization I: Powder River Basin Resource Council

Commenter I: Shannon Anderson

Comment Excerpt Text:

The department must also look critically at the leasing process and consider reforms that will create better planning and review systems to take into account the coal program's role in our nation's energy mix and the

impact of leasing on our environment and our communities. Today, lease tracts, as applied for by the coal companies, are designed to benefit that company, not the public. The department must get back into the driver's seat to decide when, where, and how much of the public coal to sell.

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Comment Number: 0000082\_Marshall\_20160517-5

Organization I: Cloud Peak Energy

Commenter I: Colin Marshall

Comment Excerpt Text:

As the DOI knows, the auditing process is exhaustive, open, and transparent. The basis of accusations from opponents of coal that there are loopholes in the current system do not stand up to informed examination and can't stand up to the DOI's constance.

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Comment Number: 0000093\_Barteaux\_20160517-1

Commenter I: Wendy Barteaux

Comment Excerpt Text:

If it hasn't been done already, get rid of the loophole called lease by application and any other loopholes that allow a lease of land with boundaries designed by the coal companies, talking gross under-valuation of the lease and the lack of competition. Or make it so that lands that produce the majority of this nation's coal like the Powder River Basin, make it so they have to be considered coal production regions. They have to be given that designation so that the BLM and the coal companies have to follow the rules of coal leasing that are already in place.

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Comment Number: 0000099\_Wilbert\_20160517-4

Commenter I: Kim Wilbert

Comment Excerpt Text:

Lastly, the new coal leasing program must create transparency, eliminate tax loopholes, and allow the owners of these public resources full access to public -- to coal leasing processes and transactions.

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Comment Number: 0000511\_Pfister\_WesternOrg of Resource Councils\_20160517-6

Organization I: Northern Plains Resource Council

Commenter I: Ellen Pfister

Comment Excerpt Text:

BLM should look at how much area will be drawn into a mining area. The old rules talk about logical mining units, but actually doing that has been short changed. The Bull Mountain mine has been permitted in fits and starts by both the State and BLM. The logical mining unit here is the whole coal reserve

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Comment Number: 0000511\_Pfister\_WesternOrg of Resource Councils\_20160517-9

Organization I: Northern Plains Resource Council

Commenter I: Ellen Pfister

Comment Excerpt Text:

This whole process from beginning to end is opaque financially, beginning with the financial viability of the proposed operation, At no point is the financial viability of the lessee's proposed operation seriously examined— not at leasing and not at permitting under OSM. How much of the federal coal will be mined and sold, and how much will be mined and put in a waste heap? When will the price be determined on the coal sold, and when will the arm's length buyer be found?

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Comment Number: 0000542-3

Organization I: Vulcan Inc.

Commenter I: Dave Stewart

Comment Excerpt Text:

Second, since 1990 BLM has operated under a passive lease-by-application process, in which BLM reviews industry-nominated parcels for potential lease sales. As a result, the General Accounting Office found in 2013 that approximately 90 percent of all federal coal lease sales since 1990 had attracted only a single bidder, notwithstanding Congress' statutory directive that federal coal be leased through competitive bidding. Noncompetitive sales breed bad results and bad deals for American taxpayers.

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Comment Number: 0000547-1

Organization I: Vet Voice Foundation

Commenter I: Hegdahl

Comment Excerpt Text:

Experts say uncompetitive leasing practices have cost taxpayers \$1 billion per year for 30 years, revenue that might have reduced deficits or kept our roads and schools in better shape.

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Comment Number: 0000552-1

Commenter I: Thomas Gordon

Comment Excerpt Text:

In the Powder River Basin, in the last twenty years, the majority of leases received only one bid. If the bid does not reflect fair market value, the sale should be denied. Royalties are 12.5% of the fair market value and are the way our country receives money for its natural resource. Also, a common practice is for the coal company to buy coal through a subsidiary at the domestic rate and then sell overseas for a higher rate, cheating our country out of the additional royalties. Reuters found that two companies, Arch Coal and Peabody Energy, sold coal to India, South Korea, and Japan and have not paid their full royalties. Now these companies have shaky financial ground under them and have filed for bankruptcy. Also, there is currently a process for the coal company to request a royalty rate reduction. If the coal company can't pay the royalty, then it can't afford the lease

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Comment Number: 0000552-3

Commenter I: Thomas Gordon

Comment Excerpt Text:

And to ensure the whole process is fair, no former coal company executives in the BLM or Department of the Interior should be allowed to be involved in the sales, processing, and oversight of leases.

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Comment Number: 0000555-1

Organization I: US Senate

Commenter I: Cantwell

Comment Excerpt Text:

The fact that 90 percent of federal lease sales since 1990 had single bidders suggests that western coal markets are structurally non-competitive. The federal government readily leases tracts nominated by the mining company that submits the only bid. Confidential appraisals and sealed bids introduce an imperfect proxy for competition, but the government has too often been a passive auctioneer rather than a steward. No law requires the BLM to sell coal as requested and nearly at cost, turning the government into the supplier of first resort.

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Comment Number: 0000556-2

Organization I: Conservation Northwest

Commenter I: Jeff Baierlein

Comment Excerpt Text:

The Federal leasing structure should be transparent and truly competitive to ensure that the American taxpayer receives a fair return from Federal coal resources.

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Comment Number: 0000565-2

Organization I: Western Organization of Resource Councils

Commenter I: Bob LeResche

Comment Excerpt Text:

THE LEASING SYSTEM MUST BE MODERNIZED AND SIMPLIFIED TO FIT NEW MARKET REALITIES. INTERIOR MUST RE-TAKE CONTROL OF THE LEASING PROGRAM, REFLECT MARKETS -- BOTH SUPPLY AND DEMAND - AND ABOLISH WHAT HAS BECOME A NON-COMPETITIVE LESSEE DRIVEN SYSTEM

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Comment Number: 0000567-3

Organization I: Conservation Committee of Tahoma Audubon

Commenter I: Bruce Hoeft

Comment Excerpt Text:

We ask that the BLM quantify:

-how much the extraction, processing, transport, and use of coal mined from federal property contributes to climate change

-how the BLM can ensure that the royalties charged for coal mining on federal property reflect the costs imposed on taxpayers to mediate the impacts of the mining, processing, transport, and burning of that coal; those impacts should include climate change, from the desiccation of California, to the flooding of the Mississippi basin, to the impact of sea level rise on Florida

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Comment Number: 0000762\_CSUMountaineeringClubetal\_20160623-2

Organization I: Mountaineering Club

Comment Excerpt Text:

Federal coal operations cost taxpayers, states and local communities millions in lost revenue. Loopholes in policy allow coal companies to get by without paying their full royalties to the government for their use of public lands and federal coal. Royalties were set at 12.5 percent, yet companies often get away with paying as little as 4.9 percent. Loopholes in the government's coal program cost taxpayers and state governments more than \$1 billion a year in lost royalties—money that could be used for local schools and roads. As of 2012, loopholes in our guidelines had cost taxpayers over \$30b. Federal coal reform improves our air quality. During blasting operations, coal mines release significant amounts of air pollution, and make our air hazier, not to mention contributing to ozone levels.

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Comment Number: 0000765\_Jahshan\_NRDC\_20160623-1

Organization I: Natural Resources Defense Council

Commenter I: Amanda Jahshan

Comment Excerpt Text:

Reforms are needed to create better planning and review mechanisms to account for the impacts of coal mining on our communities, wildlife, and environment. Improvements to the program should close existing loopholes in coal royalty valuation and weight environmental and social impacts of coal mining appropriately.

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Comment Number: 0000812-1

Organization I: National Parks Conservation Association

Commenter I: Cory MacNulty

Comment Excerpt Text:

A plan first, lease later process that includes greater coordination with adjacent federal land managers, similar to Master Lease Planning for oil and gas development, would minimize potential user conflicts and protect sensitive lands such as national parks, wilderness and critical wildlife habitat.

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Comment Number: 0000822-1

Commenter I: Nicholas Nielsen

Comment Excerpt Text:

Changing the mechanism to decide which coal leases and how it is leased would be detrimental. If the goal of this EIS is to better the coal program, it will find that leases should be available as mining companies find them economically viable. The leasing process is already lengthy and time sensitive if limited further coal companies will financially not be able to withstand outage or be willing to invest the capital for leases. Is this the ultimate goal of this EIS? This will result in no royalty payments and no return to the taxpayers. On the other hand, if companies were incentivized and a royalty reduction was applied, mining companies could further maximize reserves by mining challenging areas and provide more return for taxpayers.

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Comment Number: 0000824-1

Commenter I: Garrett Atwood

Comment Excerpt Text:

The current leasing process is too lengthy and burdensome and should be streamlined and simplified to enable easier leasing of coal.

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Comment Number: 0000828-1

Organization I: Friends of Coal West

Commenter I: David Smaldone

Comment Excerpt Text:

The Obama administration's ongoing regulatory efforts have sent coal prices into a tailspin, but now Secretary Jewell's push to hike the cost of coal leasing royalties is set to deliver another punch, making it more expensive to operate a coal mine and subsequently raise the price of electricity for all consumers.

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Comment Number: 0001115-2

Organization I: Wyoming Infrastructure Authority

Commenter I: Jason Begger

Comment Excerpt Text:

Also, I would like the BLM and Department of Interior to look at possible overpayments. There isn't one bidder on these leases. The BLM sets the floor. If a company does not meet that floor price, the bid isn't awarded. So you're always bidding against the government automatically. So more likely than not, if it is a winning bid, it didn't hit that floor exactly. It was probably over.

So if the BLM sets their own disclosed price at 90 cents a ton and a bid comes in at 95 cents a ton, the government accepts the 95 cents. This is a premium of 5 cents a ton over the asking price. I would ask the BLM to go back and look at the overpayments that it made over the own valuation price that they set years and years ago.

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Comment Number: 0001119\_BROWN\_20160621-1

Commenter I: Elizabeth Brown

Comment Excerpt Text:

The federal coal leasing program operates within the context of a free-market economy and therefore, the scope of the PEIS must also be designed in that context. For supporting evidence, please review the PRB applications from 2007 to June 2011 and the BLM WYWI80384 nominated shortly thereafter.

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Comment Number: 0001119\_BROWN\_20160621-3

Commenter I: Elizabeth Brown

Comment Excerpt Text:

In the Powder River, the coal fields, BLM averages five and a half years to process applications, not including the exploration that precedes it or the mine plan approvals that follow it. The PEIS must seek out duplicated efforts and potentially budget-protecting make work. The inordinate time the BLM takes to process an application to final sale has to be addressed. Please consider YW -- WYWI72684 as a case study. There are over a billion people on this planet who would sacrifice a lot for a small bit of the energy equity and the energy security that we take for granted here in the U.S. And coal is a very common rock. It's found everywhere and it's going to be mined. U.S. coal, the federal coal, is at least accountable to the U.S. people, to Americans. We do operate under economic and environmental regulations

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Comment Number: 0001148-2

Organization I: Powder River Basin Resource Council

Commenter I: Bob LeResche

Comment Excerpt Text:

Interior must regain control of the leasing program to reflect markets, both supply and demand, and abolish what has become a noncompetitive lessee-driven system.

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Comment Number: 0002009\_CenterBioDiversity\_20160329-3

Organization I: WildEarth Guardians

Commenter I: Jeremy Nichols

Other Sections: 2

Comment Excerpt Text:

On transparency, Bureau of Land Management state and field offices must be directed to immediately post online pending requests to lease coal, pending applications to reduce royalties, pending lease readjustments, pending lease suspensions and pending proposals to accept advance royalties in lieu of continued operation, and any and all findings that operators are not diligently developing or meeting continued operation requirements. Ensuring that these proposals and findings are made public will be critical for buttressing the integrity that Interior expects to bring to its reform efforts.

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Comment Number: 0002045\_Johnson\_20160620-2

Organization I: Cloud Peak Energy

Commenter I: Gabriel Johnson

Other Sections: 2

Comment Excerpt Text:

Under the current system, coal producers bid for leases without knowing the federal government's

predetermined fair market value, so it is worth asking how much coal producers have paid beyond the federal valuation when reviewing the lease process.

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Comment Number: 0002079\_Horwitz\_20160623-1

Commenter I: Christopher Horwitz

Other Sections: 8.13

Comment Excerpt Text:

landholders should be paid up front for their land, including the remediation charges; the coal production should only then proceed.

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Comment Number: 0002081\_Inouye\_20160626-1

Organization I: University of Maryland

Commenter I: David Inouye

Comment Excerpt Text:

We are approaching a tipping point where renewable energy resources are supplanting fossil fuels. The BLM should acknowledge this and consider being very restrictive in the issuing of future coal leases.

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Comment Number: 0002100\_OHair\_20160613-4

Commenter I: Todd O'Hair

Comment Excerpt Text:

The PEIS scope should also include examination of the ever growing length of time it takes to permit federal leases. The scope should review how long on average it took to permit a federal coal lease 20 years ago compared to the average length it takes to permit a federal lease today. And the increased cost to the producer due to that lengthening permit process.

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Comment Number: 0002145\_Buchanan\_20160513\_IEEFA-19

Organization I: Institute for Energy Economics and Financial Analysis

Commenter I: Tom Sanzillo

Other Sections: 2

Comment Excerpt Text:

Establish a True, Balanced Public Private Partnership (9)

A public private partnership is generally understood as a business venture between government and business designed to provide a service or good. The private vendor and the government enter into a contract in which the private sector accepts technical, financial and operational risks. Financing can be either wholly the responsibility of the private sector or supported by some combination of public and private resources. Government contribution to financing typically flows from in-kind contributions such as the transfer of assets, capital subsidies, revenue guarantees, tax breaks, regulatory streamlining or quasi-monopolistic markets. The private sector usually contributes its value with production efficiencies the government could not achieve. The combined package draws investment capital based upon a holistic evaluation of the quality of the partnership. The borrowing and the financial life of the investment is considered an off-balance-sheet activity for government, allowing it to use its balance-sheet resources for other public needs.

The adoption of an alternative model for the federal coal leasing system would rebalance the current partnership and allow it to address the conditions of a declining market. The product to be produced from the partnership would be coal, mined for the purpose of domestic consumption principally in the electricity sector.



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Comment Number: 0002145\_Buchanan\_20160513\_IEEFA-6

Organization I: Institute for Energy Economics and Financial Analysis

Commenter I: Tom Sanzillo

Comment Excerpt Text:

The coal industry proposals identified in the Notice of Intent (Page 26) would either: 1) speed up the lease process to allow more coal to be mined with less oversight, or 2) reduce revenues from coal sales to state and federal governments. (6)

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Comment Number: 0002145\_Buchanan\_20160513\_IEEFA-9

Organization I: Institute for Energy Economics and Financial Analysis

Commenter I: Tom Sanzillo

Comment Excerpt Text:

The actual relationship between the coal industry and the federal government under the current system is not a functioning lessee/lessor relationship. It is instead an unbalanced public private partnership—one in which the private sector has the upper hand, determining where, when and how coal is mined, who it is sold to and at what price. Consequently, as the PEIS indicates, the government now support a lease payment system based on a fundamentally flawed valuation process, a royalty payment system in search of a rationale, and an antiquated annual rent payment.

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Comment Number: 0002152\_Bruse\_20160518-11

Commenter I: Debbie Bruse

Comment Excerpt Text:

Yes the current leasing process is broken, but not because it is not fair to the public, it is broken because it takes too long, making long range planning difficult for coal companies.

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Comment Number: 0002152\_Bruse\_20160518-12

Commenter I: Debbie Bruse

Comment Excerpt Text:

In general, and since the process to lease and mine coal is long, coal companies must nominate an approximate 10 year reserve thru the LBA process, well before they are down to 10 years of existing reserves. So when the LBA coal is finally available for mining, the mining company's machinery can seamlessly mine into the newly acquired coal lease. Mining occurs in long strips (hence the term strip mining) and the equipment must have this room in order to operate efficiently. If the reserves are dwindling and the dragline must continue to mine smaller strips, it is not efficient or cost effective. Continued Washington DC oversight, ensuing red tape and NGO lawsuits have the potential to unreasonably add years to this process.

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Comment Number: 0002152\_Bruse\_20160518-13

Commenter I: Debbie Bruse

Comment Excerpt Text:

The BLM should not be deciding the tract size or configuration, as they do not have the best details of geology, geotechnical, environmental and land related impacts that the company will be facing when deciding the best tract option or configuration. The mining company literally can spend a year comparing all of the impacts that alternative lease tract configurations can have on each configurations value, when determining the optimum tract configuration to nominate.

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Comment Number: 0002152\_Bruse\_20160518-16

Commenter I:Debbie Bruse

Comment Excerpt Text:

Market conditions will dictate the need for additional leasing and the coal companies should be making the decision of when to nominate and where based on a long process that most companies already go thru in order to identify the optimum tract configuration and maximize their return on investment. There is also already enough oversight by federal state and local agencies to manage temporary impacts to water, soil, vegetation and wildlife, and a review of impacts during the PEIS is not necessary.

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Comment Number: 0002152\_Bruse\_20160518-5

Commenter I:Debbie Bruse

Comment Excerpt Text:

The current leasing process has historically taken a minimum of 8 years from Lease by Application (LBA) submittal for additional reserves until the company has the ability to mine the coal reserves. The current environment, in which Washington has taken away the regional BLM offices ability to make decisions without significant oversight, has not only added red tape, it has added more time to the already cumbersome and long process.

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Comment Number: 0002152\_Bruse\_20160518-6

Commenter I:Debbie Bruse

Comment Excerpt Text:

There may be 20 years of coal currently available under lease, but mining companies must have this cushion, because the leasing process is getting more convoluted. The mining companies have no idea how long a lease, nominated today, will take to get thru the EIS and permitting process. Streamlining the Lease by Application process (the HOW) should be the priority for the BLM, not making it more cumbersome. The When and Where to lease should be up to the mining company making the decision based on their needs, estimated timing to get the lease thru the EIS and permitting process, and what works for their current pit configuration.

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Comment Number: 0002154\_Riordan\_20160627-2

Commenter I:Michael Riordan

Comment Excerpt Text:

As I noted in my article and elsewhere, there was an inherent subsidy built into the previous coal-leasing policies, to encourage utilities' burning of low-sulfur thermal coal from western US mines, particularly in the Powder River Basin of Wyoming and Montana, to help reduce acid rain. That need is no longer evident, as the problem it attempted to address has been ameliorated and will eventually disappear as thermal coal use in the United States continues to decline.

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Comment Number: 0002154\_Riordan\_20160627-4

Commenter I:Michael Riordan

Other Sections: I

Comment Excerpt Text:

Specifically, the coal-leasing program should set a floor on the per-acre costs of coal leases that reflects the added profits that can be generated from export sales. And whenever possible, these leases should be subject to competitive bidding by the coal companies. Finally, as Clark Williams-Derry noted in a recent Sightline Institute paper, the lease prices should also reflect the opportunity value involved in purchasing an option to mine this public resource in the future, when coal prices may recover from current lows.

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Comment Number: 0002155\_Krupnick\_20160622-3

Organization I: Center for Energy and Climate Economics Resources for the Future

Commenter I: Alan Krupnick

Other Sections: 7.1

Comment Excerpt Text:

The lack of competitiveness in the federal coal leasing market may limit the effectiveness of any carbon charge. Since most leases are granted in bids with only one bidder, bidders may simply reduce their bid by some amount of the carbon charge. Protections against such actions may be gained through evaluation of BLM's internal fair market valuation processes to ensure that climate costs are considered in those processes.

- The Administration's Interagency Working Group on the Social Cost of Carbon has released estimates for the social cost of carbon for agencies to consider in their programs.

- At the midrange SCC estimate (\$46/ton CO<sub>2</sub>), the corresponding carbon charge would be over \$90/ton of coal, which far exceeds the average mine-mouth price of coal from the Powder River Basin (recently selling at around \$9.35/ton).

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Comment Number: 0002159\_smallfry\_20160521-2

Commenter I: Smallfry

Comment Excerpt Text:

Stop delaying lease permitting!

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Comment Number: 0002189\_Jozwik\_20160517-2

Commenter I: Darryl Jozwik

Comment Excerpt Text:

THE CURRENT LEASE BY APPLICATION WORKS WELL. NO MONEY IS BEING SPENT ON RESERVES THAT NO ONE WANTS TO MINE.

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Comment Number: 0002189\_Jozwik\_20160517-3

Commenter I: Darryl Jozwik

Comment Excerpt Text:

SHOULD SCHEDULED SALES BE USED (E.G., LIKE ONSHORE OIL & GAS) – NO, WASTE TIME AND TIME AND MONEY ON RESERVES THAT NO ONE WANTS TO MINE.

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Comment Number: 0002189\_Jozwik\_20160517-4

Organization I:

Commenter I: Darryl Jozwik

Comment Excerpt Text:

SHOULD MARKET CONDITIONS AFFECT THE TIMING OF LEASE SALES, SUCH THAT SALES WOULD OCCUR WHEN COAL VALUES ARE HIGHER RATHER THAN DURING DOWNTURNS – NO. LEASES ARE MADE AS NEED BE AND ARE ONLY MADE DURING GOOD MARKET CONDITIONS, SO BEST VALUES ARE OBTAINED.

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Comment Number: 0002189\_Jozwik\_20160517-5

Commenter I: Darryl Jozwik

Comment Excerpt Text:

WHERE, AND WHERE NOT, SHOULD THE BLM LEASE CONSISTENT WITH TAKING A LANDSCAPE LEVEL VIEW – NO AREAS. NONE OF THE MAJOR COAL BASINS FALL INTO THIS.

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Comment Number: 0002197\_Wise\_20160519-1

Organization I: Kiewit Mining Group Inc.

Commenter I: Dirk Wise

Comment Excerpt Text:

Concerns over lack of bidders (currently 90% of LBA's only have a single bidder) In my opinion I believe that if there is only a single bidder that would be fine as long as the fair market value was met in the bid.

b. When to lease-Bidding should be within each fiscal year, the mines as well as the BLM can determine if more land is needed for expansion.

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Comment Number: 0002221\_Anderson\_20160524-3

Organization I: University of Utah

Commenter I: Samuel Anderson

Comment Excerpt Text:

I strongly support the BLM's decision to reevaluate the leasing process. Environmental impacts should be the greatest priority when deciding to lease federal lands.

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Comment Number: 0002239\_Baierlein\_20160621-3

Organization I: Conservation Northwest

Commenter I: Jeff Baierlein

Comment Excerpt Text:

The leasing program should restrict supply, diminish extraction, and institute requirements in recognition of coal's significant environmental and health impacts, and the increasing availability of other sources of energy supply including efficiency.

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Comment Number: 0002269\_Holubec\_20160715-1

Commenter I: Allen Holubec

Other Sections: 2

Comment Excerpt Text:

Streamline the leasing process

a. Takes too long to get a lease

i. Mine permitting – a company can only start the permitting process when the lease has been issued. Sometimes, the state, OSM, other various agencies throw up road blocks that takes time to sort out

ii. Leasing to companies with 10 years of reserves, it takes too long to get a lease, maybe 20 years of reserves at that location

iii. The delays in leasing are generally from the state office, not working on the application. The companies are paying cost recovery and a priority should be placed with the state office to get these done.

b. Shorten timeframes to get things listed in the Federal Register

i. The state office should be able to submit things to the general register to get published, leave it to the state office to check for proper format, content, etc.

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Comment Number: 0002269\_Holubec\_20160715-3

Commenter I: Allen Holubec

Other Sections: 2

Comment Excerpt Text:

Cost recovery –

i. Change this in its entirety, charge a set amount depending on type of mine and application does not matter if a

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new lease application or a lease modification.

ii. Again, it takes three or four months to get a cost recovery number, we need to streamline so a company know what it is going to cost for their own budgeting.

iii. This type of collecting cost recovery has been asked about. This is a cheaper, quicker method to do it, it is simpler.

iv. For Example;

1. Set amount - \$50k

2. Adder – underground - \$10k

a. Possibly add another \$5k for each new surface disturbance

3. Adder – Surface - \$20k

4. Adder – Acreage (TOTAL surface disturbance of a mine)

a. Up to 50 acres - \$5k

b. 50 to 100 acres - \$10k

c. 100 to 250 acres - \$15k

d. Add \$5k per each additional 150 acres

5. Adder – possibly an adder for leased tonnage or recoverable tonnage

6. Some cost recovery examples

a. New Lease Application (LBA) - Surface mine 1400 acres total disturbance

i. They would Pay

1. Set Amount - \$50K

2. Adder for Surface - \$20k

3. Adder for Acreage

a. First 250 acres - \$15k

b. Each additional 150 acres x8 or \$40k

c. Acres total - \$55k

4. Total amount for cost recovery - \$125,000

b. New Lease Application (LBA) – Underground mine with 75 Acres surface disturbance

i. They would pay

1. Set Amount - \$50k

2. Adder for underground - \$10K

3. Adder for surface disturbance - \$10K

4. Total amount for cost recovery - \$70K

c. Lease Modification (LM) – Underground with no new surface disturbance

i. They would pay

1. Set Amount - \$50K

2. Adder for underground - \$10K

3. No adder for Acres (no new surface disturbance)

4. Total amount for cost recovery - \$60K

7. Another method would be to have a different type of adder for tons in reserve, the bigger surface mines would end up paying more than a small underground mine.

8. Cost would be charged and processed against the accounts set up for the cost recovery as they are now. If the cost exceeds the listed amounts, the extra cost would be charged to the applicant at the time of the lease sale.

The applicant must have a separate check to pay the overages to the BLM before the lease sale and paid to the lease sale team. Any amount of the cost recovery dollars paid and not used would be refunded to the applicant at the time of the lease sale, before the lease sale by the lease sale team. If the company does not pay, they would be exempt from the leasing the parcel. Any company that bids on the lease parcel and wins would be required to reimburse the original applicant for the cost recovery, including any overage amount.

a. Invoicing to cost recovery account will be sent to the applicant quarterly for their information.

b. Work on the lease application cannot be stopped due to a deficiency of funds in the cost recovery accounts

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Comment Number: 0002269\_Holubec\_20160715-4

Commenter I: Allen Holubec

Comment Excerpt Text:

Keep the industry nominated process,

- i. This is much cheaper
- ii. The BLM doesn't know what industry wants or needs
- b. The Government needs to stay out of oversupply or market processes as the government cannot know what the industry needs or anticipate for the future
- c. Bidding
  - i. Highest bid should exceed the estimated fair market value not just meet it
  - ii. Based upon recoverable coal not total coal reserves
- d. Lease prohibitions
  - i. Not leasing to violators on OSM list
    - I. This list is supplied to the BLM at the time of the lease sale and taken into account at the lease sale not before and not after
    - ii. Not leasing to companies that have not met present or past reclamation requirements whether private or federal leases
    - iii. The violator list has to be updated not only by company but by personnel of that company.
      - I. For example; ABC Company (John Doe as president) gets put on the violator list. John Doe cannot start DEF Company to get a lease. Also John Doe's daughter cannot start DEF Company to get a lease for her father. (This is happening!)
  - e. Lease modification
    - i. the price paid for the bonus bid should be based upon the main lease bonus bid, adjusted for inflation plus 10%

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Comment Number: 0002276\_Henderson\_20160715\_350Colorado-13

Organization I: 350 Colorado Board of Directors

Commenter I: Gina Hardin

Organization 2: 350 Colorado Board of Directors

Comment Excerpt Text:

Leasing of Coal

Coal producers enjoy an overly comfortable relationship with local BLM offices in many areas. This can result in excessively favorable treatment in terms of royalty reductions (see above); in the requirements for actual reclamation bonds; in arrangements for leasing when companies want to lease, rather than when there is maximum competition; by not recognizing the cost to the U.S. of holding the land for mining; by handing the federal administration of coal leases over to the states or counties; and by not holding companies accountable for infractions. Financial losses to the U.S. taxpayer add up. The overly comfortable relationship between BLM and coal producers also contributes to public perception of BLM complicity in 'crony capitalism' favoring large corporations; and lack of enforcement dramatically diminishes the public's perception of BLM's ability to professionally and competently manage these areas. BLM's reputation as a land manager will always be second or third rate as a result. Reforms should look at these cozy relations and bring BLM's management up to par.

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Comment Number: 0002276\_Henderson\_20160715\_350Colorado-3

Organization I: 350 Colorado Board of Directors

Commenter I: Gina Hardin

Comment Excerpt Text:

Specific comments regarding the leasing of coal:

- How much coal leasing is required for U.S. energy requirements? Have those needs been met, except for mine extension requests? What criteria for leasing should be revised in relation to these questions?
- Reinstate "Coal Producing Areas" status on areas such as the Power River Basin, to ensure a larger view of coal

- production, competition, environmental impact, as well as reassertion of federal government control
- Require the use of the NEPA process, with public comment, as part of the “Coal Producing Area” decertification process
    - o Given the significant impact of methane on the environment, a Categorical Exclusion is not appropriate
  - To encourage competition, change the timing of lease auctions to a regular schedule such that companies may anticipate leasing and plan ahead
    - o Recognize that there is a cost to industry for the U.S. to hold off mining and integrate this cost into planning and bonus bids
  - Prohibit companies that have failed to perform in any manner in the past from obtaining leases, including mine extension leases
  - Provide detailed direction on the new rules, via Manual and Handbook (not Informational Bulletins nor Instructional Memoranda) to ensure that there is consistent implementation across the agency
    - o Provide monitoring and mentoring of those offices that may have been too close to industry in the past
    - o Clarify that BLM’s mission is to obtain fair market value and not subsidize the coal industry
  - Do not leave direction in a “draft” state for political expediency
  - Prohibit leasing or extensions to any entity related to entities that have not fully complied with science-based reclamation requirements on prior leases, including those who have negotiated diminished requirements through bankruptcy proceedings.

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Comment Number: 0002282\_Bradford\_20160719-1

Commenter I: David Bradford

Comment Excerpt Text:

I believe the issue of how and when to lease is appropriate for a Programmatic EIS. However the issue of where to lease seems well beyond the scope of what can be considered in a national programmatic EIS. The level of detail that must be considered in determining where to lease is well in excess of what can be reasonably considered at the national level. The Grand Mesa, Uncompahgre and Gunnison National Forests have completed analyses on where to lease on those three individual national forests. I believe that is the appropriate level for where this determination should be made, not a national PEIS completed in Washington, D.C. The issues of how to lease and when to lease could reasonably be considered at the national level. I believe both issues should be accomplished as simply as possible. The current procedures seem more than adequate to me and if anything should be made simpler. Any changes in the current procedures should only be considered if they simplify and expedite the process.

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Comment Number: 0002286\_Watts\_20160719-3

Commenter I: Howard Watts

Comment Excerpt Text:

BLM has the a framework to deny leases in areas if it believes that such a decision is, on balance, better for the other multiple uses the agency must manage for.

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Comment Number: 0002295\_Stewart\_20160719-3

Commenter I: Dan Stewart

Comment Excerpt Text:

BLM should process process new coal lease applications in a timely, neutral manner.

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Comment Number: 0002309\_Monseu\_20160721\_AmericanCoalCouncil-8

Organization I: American Coal Council

Commenter I: Betsy Monseu

## Comment Excerpt Text:

Delays related to the mine permitting process mean that permitting can take seven to ten years in the United States, far longer than other advanced economies with similar environmental standards. Permitting is facilitated by efficient, timely review and effective coordination between federal and state agencies. Delays add barriers and costs to mining, and are increasingly a disincentive to coal production. Some organizations and individuals have suggested the federal coal leasing program should be changed to address environmental concerns and climate impacts, but such reform is unnecessary. Leases already undergo multi-layered reviews prior to approval, and climate effects are already subject to review under the NEPA process.

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Comment Number: 0002310\_Payne\_20160721-6

Commenter I: Steven Payne

Comment Excerpt Text:

Coal executives are exploiting loopholes in our broken guidelines, leaving taxpayers to shoulder their tax burden

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Comment Number: 0002324\_Dubbert\_20160722\_BME-5

Organization I: Blue Mountain Energy

Commenter I: Jeffrey C Dubbert

Comment Excerpt Text:

Each and every coal lease is auctioned to the highest bidder. How can a system that has a public bidding process not be competitive? Coal leases and mining is extremely expensive and complex, just open any trade journal today as there will be an article about a coal company facing financial crisis. Increasing taxes or royalties will only increase the number of coal companies going bankrupt.

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Comment Number: 0002326\_Moench\_20160724\_UtahPhysicHealthyEnviron-10

Organization I: Utah Physicians for a Healthy Environment

Commenter I: Malin Moench

Comment Excerpt Text:

The evidence, however, shows that instead of deciding whether there is sufficient demand for coal and designing tracts to maximize competition, the BLM defers to the mining companies, who—not surprisingly—design tracts to avoid competition. A report by mining consultant John T. Boyd Company that was prepared for XCEL Energy describes the current system this way: (5) Cited in Taxpayers for Common Sense, referenced above.

As a practical matter, most companies will attempt to define LBA tracts that, because of location or geometry, are of interest only to the nominating company. This minimizes competitive bidding on the tract, and may result in a lower cost lease. Where competition has existed for coal (mostly in the southern Gillette area but recently in the central portion of the coalfield) relatively high bonus bids in the range of \$0.90 –\$1.10/ton have resulted. BLM has, even in non-competitive cases, required “Fair Market Value” bids in this range, particularly in the Southern PRB

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Comment Number: 0002326\_Moench\_20160724\_UtahPhysicHealthyEnviron-11

Organization I: Utah Physicians for a Healthy Environment

Commenter I: Malin Moench

Other Sections: 8.7

Comment Excerpt Text:

Decertification sidesteps the competitive system mandated by the FCLAA by eliminating the first step on which all the other procedures depend—drawing up a regional leasing plan. This makes the ad hoc LBA system the only system. Under the LBA system, the BLM does not set the level of coal that it leases by taking into account changes in the market, such as the recent decline in domestic demand for coal brought about by the dramatic



decline in the price of domestic natural gas, and the increase in the profitability of coal exports. Instead, it receives a request for a lease tract containing the amount of coal desired by the requester. It determines a fair market value floor for the tract currently being requested by identifying the most recent comparable lease and treating the sale price of that lease as a proxy.

The problem with this approach is that the most recent comparable tract that was leased is typically one that was tailored by the bidder to suit its own interests. That sale price, therefore, typically reflects the unsuitability of that tract for any other buyer. The fair market value of a lease determined in this artificial manner is typically a fraction of what the same coal would be worth if it were mined outside of the Powder River Basin. "Fair market value" determined with this downward bias sets the floor for evaluating the acceptability of bids. It therefore imparts a downward bias to the price ultimately paid for leases. The artificially-reduced lease price, in turn, lowers the price that the mining company charges to sell its leased coal to a broker. This reduces the amount of royalties collected, because royalties are calculated as a percentage of the price at which the mining company sells its coal to a broker. Using the price of a lease designed to be non-competitive as a proxy for the fair market value of the subsequent lease results in a rolling sequence of under-market valuations that shortchanges Federal and state governments and the public that they represent

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Comment Number: 0002326\_Moench\_20160724\_UtahPhysicHealthyEnviron-12

Organization I: Utah Physicians for a Healthy Environment

Commenter I: Malin Moench

Comment Excerpt Text:

UPHE agrees with Taxpayers for Common Sense that a resource as important as the PRB should not continue to be disposed of through sequential, single-bid, limited-interest tracks at far below their fair market value. Instead, the BLM should wait for times of adequate market demand to offer new leases and then aggregate a sufficient number of adjacent tracts to attract multiple bids from the incumbent mining companies, or even bids by new entrants to the PRB market. To encourage aggressive bidding, the BLM should experiment with specifying in the lease offer that only a certain percentage of tracts attracting the highest bids above the fair market value of the coal will be sold. Of course, these specific reforms should be instituted in the context of recertifying the Powder River Basin (and other Federal coal leasing areas, where justified) as an official Coal Producing Region in which regional planning that takes market conditions and environmental impacts into account is the first step in the leasing process.

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Comment Number: 0002333\_Magagna\_20160725\_WyStockgrowers-6

Organization I: Wyoming Stock Growers Association

Commenter I: Jim Magagna

Comment Excerpt Text:

At a time when coal prices and production are declining, WSGA urges your Department to take actions that will expedite the leasing of coal in areas such as the Powder River Basin of Wyoming. Now is not the time for punitive changes to the coal leasing program.

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Comment Number: 0002336\_Cole\_20160725\_MesaCntyCO-3

Organization I: Mesa County Colorado, Board of County Commissioners

Commenter I: Kristen Cole

Comment Excerpt Text:

Revisions to the existing coal leasing program should focus on streamlining and expediting the coal leasing process. The current system is too lengthy and cumbersome. Expediting the leasing process will allow for the responsible development of our natural resources, provide additional revenue to the public through royalties and other taxes and allow job creating companies to continue to prosper

Comment Number: 0002342\_Etter\_20160726-1

Organization I: Bowie Resources, LLC

Commenter I: Art Etter

Comment Excerpt Text:

The Department must streamline the existing permitting process, so federal coal can be more competitive with state and privately owned coal reserves, that don't require such extensive permitting processes.

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Comment Number: 0002342\_Etter\_20160726-2

Organization I: Bowie Resources, LLC

Commenter I: Art Etter

Comment Excerpt Text:

• Bid payments should be postponed until mining has commenced in the newly leased tracts. This is how most state owned reverses are bid, and the process serves the states well. It allows companies Internal Rate of Return to be substantially improved.

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Comment Number: 0002390\_Pfister\_20160721-1

Organization I: Northern Plains Resource Council

Commenter I: Ellen Pfister

Comment Excerpt Text:

The current coal leasing procedures were established under the Nixon administration, revised somewhat under Reagan, and have not been seriously examined since then. Time, expediency, and bureaucratic passivity have undermined whatever protections of the public interest that existed in those procedures. The largest bulk of leases in recent years have been let with no competitive bids with mines stocking up on mining stocks sufficient to last for several years in advance.

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Comment Number: 0002391-3

Commenter I: Tom Tully

Comment Excerpt Text:

3) The public deserves transparency! Ensure competitive and transparent leasing so that the public knows exactly who is bidding on coal and the terms of the lease.

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Comment Number: 0002393-1

Commenter I: Mike Penfold

Comment Excerpt Text:

All aspects of the coal program need transparency, planning, mining, reclamation and pricing of leases. We should not be subsidizing any aspect of the coal development and loopholes should be closed.

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Comment Number: 0002443\_Koontz\_20160727\_BowieResources-10

Organization I: Bowie Resource Partners, LLC

Commenter I: Gene DiClaudio

Comment Excerpt Text:

Federal coal leasing takes too long, and is taking ever longer. For example, the applications for the proposed federal coal leases examined Wright Area Environmental Impact Statement were submitted in the years 2005-2006. The first lease sale of the leases did not occur until 2011. Leasing takes even longer under lands

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administered by the United States Forest Service. For example, Bowie submitted the application for the Greens Hollow lease tract in 2005. As of this writing, a BLM Record of Decision for the Green Hollow tract has not yet issued, much less a lease sale.

Long leasing times have significant environmental and economic consequences. On the economic side, lengthy leasing processes increase administrative costs and require applicants to propose larger leases so as to ensure that leased reserves are not exhausted by the time the next round of leasing, permitting, and mine planning can be completed. This requires greater up-front bonus bid submissions, and longer times before that capital can be recovered. Economic pressure from large capital overhangs is one significant factor in the distress currently experienced by the coal industry. Quicker leasing would allow the issuance of smaller, more efficient lease tracts, allowing the industry to be nimbler in responding to economic trends and the needs of their utility and industrial customers.

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Comment Number: 0002443\_Koontz\_20160727\_BowieResources-4

Organization I: Bowie Resource Partners, LLC

Commenter I: Gene DiClaudio

Comment Excerpt Text:

Although it is pure window-dressing when cited by environmental activists, competition does play a key role in ensuring efficient energy markets and value to the nation's industrial coal consumers, electricity users, and ratepayers. Adequate supply means not only that there is adequate supply in each of the coal sub-markets, but also adequate supply to a reasonable range of coal mining companies. A coal sub-market cannot be competitive if all the coal of a particular type is in the hands of one or two suppliers. Thus, blanket statements about the aggregate amount of coal under lease are misleading if they do not account for how leasing is distributed among coal types, regions, and suppliers.

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Comment Number: 0002443\_Koontz\_20160727\_BowieResources-8

Organization I: Bowie Resource Partners, LLC

Commenter I: Gene DiClaudio

Comment Excerpt Text:

As suggested in Order 3338, one of the drivers for re-consideration of lease sale scheduling appears to be the leasing model employed for oil and gas leases. However, coal leasing is fundamentally different from oil and gas leasing. Oil and gas leasing is inherently about exploration, with wide lease-to-lease variation in whether significant exploitable reserves will be discovered, when they can be brought to market, and the rates that will make sense under current market conditions. In that environment, regular, systematic lease sales are an efficient development mechanism. In contrast, federal coal leasing typically occurs with relatively better quality information about the coal reserve, in the context of maintenance tracts intended to sustain production at an existing mine. Moreover, coal mines are far more capital-intensive than oil and gas drill rigs. An oil and gas lease is essentially about the location and development of a petroleum reserve; a coal lease is typically about the continued operation of an entire coal mine. It is thus that mine's specific status and needs that determine the appropriate timing and size of coal leasing, and there is no evidence that such assessment can be performed as well by federal committee as by the mining industry.

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Comment Number: 0002448\_FoleyHein\_20160727-8

Organization I: Institute for Policy Integrity

Commenter I: Jayni Foley Hein

Comment Excerpt Text:

Bidding and Leasing Reform

The final panel focused on bidding and leasing reform.

Mary Ellen Kustin (Policy Director, Public Lands Project, Center for American Progress) discussed bid reform

recommendations, recognizing that reassessing the federal coal program will be difficult, but that change is necessary. From 1990 to now, about 90 percent of all coal lease sales had only one bidder. Kustin reviewed the three main objectives of the PEIS as described by BLM: (i) the appropriate lasting mechanism to determine how, when, and where to lease; (ii) how to account for the environmental and public health impacts of the coal program; and (iii) how to make sure tax payers are getting their fair share. Kustin detailed the Linowes Commission's investigation and focus on inter-tract bidding as a potential method to increase competition and allow for a better return for taxpayers. Inter-tract bidding introduces more competition into the process by having a ranking system for leases, in which not every lease makes the cut. The Linowes Commission said tracts could be limited for environmental or social reasons, as well. Kustin closed with some remaining questions: (i) is it preferable to auction coal amounts, as opposed to tracts; (ii) what administrative hurdles stand in the way of inter-tract bidding; and (iii) what is the best way to factor in a carbon budget into this process?

Dan Bucks (former Montana Director of Revenue) discussed the importance of developing a new leasing process to serve the public interest. Bucks noted that many of the ideas and solutions discussed at this workshop—which are generally related to integrating into federal coal decisions the consideration of external costs to society of coal production—cannot fit into Interior's existing leasing and royalty systems. For example, changing the amount of coal leased to account for climate change cannot occur in the lease by application system where coal companies decide what, when and where coal will be produced. Increasing royalties to price in external costs of coal can be undermined by corporate self-reporting of coal values through creative accounting. Thus, Interior should incorporate the development of new systems of leasing and royalty administration into its coal PEIS.

Bucks said it is time for Interior to take control of the leasing and royalty processes and move toward a more open and transparent process for managing federal coal. The secrecy of the current system, Bucks explained, undermines its integrity and effectiveness, so Interior should reassess its system to include more public participation. The fundamental flaw in the current coal leasing system, in his view, is that it is secret. Leasing by application allows coal company to drive leasing decisions; and minimum bids are set and not disclosed before bidding occurs, denying the ability of the public to participate in the process. Bucks also said that the royalty process is secret because of corporate self-reporting. Royalties should be viewed like a property tax, whereby Interior is the property assessor. Instead, Interior has delegated this authority to corporate self-reporting systems of self-assessment of the value of the coal. This breaks from the best reading of the relevant statutes. Interior should implement energy supply and regional landscape planning to decide when, where, and what coal to lease in order to maximize public value. Leasing by application should not be reinstated.

Bucks stated that Interior should also consider adopting an entirely open process modeled after Montana's Otter Creek coal tract sale. For example, proposed minimum bids can be made public and submitted for public comment, and Interior should be prepared to withdraw tracts from sale if minimum bids or environmental or social standards are not fulfilled by bids. Finally, Bucks warned that if royalty rates are raised without eliminating the self-assessment done by coal companies of the base valuation on which royalties are assessed, companies will find ways to lower the base valuation, hindering the efficacy of royalty rate reform. So, Interior must control the base valuation by assessing the value of coal based upon final delivered prices adjusted for heat content, quality of coal, and the location of the coal. This is a recommendation in the new CEA report. If Interior directly values the coal, it can control the base and make other effective changes, like increasing royalty rates to account for environmental and social costs.

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Comment Number: 0002449\_Lyon\_20160727\_NWF-36

Organization I: National Wildlife Federation Action Fund

Commenter I: jim Lyon

Comment Excerpt Text:

- Ensure an open and transparent leasing process and end lease-by-application. Lease decisions must be open, transparent and competitive. The practice of LBA must be ended, and leases must occur pursuant to five years plans that are consistent with the goals of protecting wildlife, natural resources, achieving successful reclamation and meeting carbon reduction goals.

Comment Number: 0002449\_Lyon\_20160727\_NWF-47

Organization I: National Wildlife Federation Action Fund

Commenter I: Jim Lyon

Other Sections: 8.6

Comment Excerpt Text:

Fix coal reclamation before opening up more land to coal mining. For decades, the federal coal program has opened up large areas of the arid west for mining. The requirements of existing law promise and require that land, water, and habitat be protected in the siting and operation of the mines, and fully reclaimed to demonstration standards after mining concludes. While it is primarily the job of the OSM and the states to regulate how coal mining and reclamation occur on federal lands, BLM should work with these sister agencies to ensure lands and waters are properly protected. As such, before BLM opens up more new coal leases for development, it should require that it be demonstrated by that reclamation is occurring contemporaneously and providing land reclaimed at a higher and better use and that water quality and water resources are protected, even if this means that new rules are promulgated under SMCRA to provide more assurances that reclamation and reclamation enforcement occur.

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Comment Number: 0002449\_Lyon\_20160727\_NWF-5

Organization I: National Wildlife Federation Action Fund

Commenter I: Jim Lyon

Other Sections: 1

Comment Excerpt Text:

Additionally, 90% of all coal lease sales only have a single bidder, and the formula DOI uses to estimate fair market value is kept confidential along with the rates applied to each leased and the cost deductions given to the coal companies. (73)

(71) Greg Zimmerman, Claire Moser, Jessica Goad, and Matt Lee-Ashley, Fair Share Scorecard: Ensuring Taxpayers Receive a Fair Share (Fair Share) (Center for American Progress and Center for Western Priorities Aug. 2015) at 7, available at <https://cdn.americanprogress.org/wp-content/uploads/2015/08/14133642/FairShareScorecard-report-817.pdf>, citing Matt Lee-Ashley and Nidhi Thakar, Cutting Subsidies and Closing Loopholes in the U.S. Department of the Interior's Coal Program (Washington: Center for American Progress, 2015), available at <https://cdn.americanprogress.org/wp-content/uploads/2015/01/CoalSubs-brief2.pdf>; Mark Haggerty, HEADWATERS ECONOMICS, AN ASSESSMENT OF U.S. FEDERAL COAL ROYALTIES: CURRENT ROYALTY STRUCTURE, EFFECTIVE ROYALTY RATES, AND REFORM OPTIONS (2015) at 1, available at <http://headwaterseconomics.org/wphw/wp-content/uploads/Report-Coal-Royalty-Valuation.pdf>.

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Comment Number: 0002449\_Lyon\_20160727\_NWF-52

Organization I: National Wildlife Federation Action Fund

Commenter I: Jim Lyon

Other Sections: 1

Comment Excerpt Text:

The basic structure for the federal coal leasing program established under FCLAA was set out in the 1979 and 1982 regulations, which are now outdated. (49) The process begins with the establishment of “coal production regions.” (50) In designated federal coal production regions, the BLM carries out a four-stage leasing process: (1) land use planning; (2) regional leasing level planning; (3) coal lease activity planning; and (4) lease sale. (51) In areas outside coal production regions, the coal leasing process is simplified to expedite leasing, often with competition cut out of the process. As a practical matter this means that, contrary to the plain language of FCLAA and BLM rules, the coal industry – not the government – drives the coal leasing process. (52) In 1990, the PRB – despite

the fact that vast majority of federal coal leased comes from that region – was decertified as a coal production region. (53)

(49) 43 C.F.R. §§ 3400-3487.

(50) The rules do not define the term “coal production regions,” but the words seem self-explanatory. The meaning of the phrase “coal production region” is critical to the operation of the leasing program because the rules make clear that “[c]oal production regions shall be used for establishing regional leasing levels... .” 43 C.F.R. § 3400.5 (2011).

(51) For a more detailed description of the coal leasing process and the requirements of the MLA and FCLAA, see Mark Squillace, *The Tragic Story of the Federal Coal Leasing Program*, 27 NAT. RESOURCES J. 3, AT 29 (Winter 2013); see also U.S. Bureau of Land Management, *Federal Coal Leasing*, available at [http://www.blm.gov/wo/st/en/prog/energy/coal\\_and\\_non-energy.print.html](http://www.blm.gov/wo/st/en/prog/energy/coal_and_non-energy.print.html); U.S. Bureau of Land Management, *Coal Operations*, available at [http://www.blm.gov/wo/st/en/prog/energy/coal\\_and\\_non-energy.print.html](http://www.blm.gov/wo/st/en/prog/energy/coal_and_non-energy.print.html).

(52) Mark Squillace, *The Tragic Story of the Federal Coal Leasing Program* at 29, 27 NAT. RESOURCES J. 3 (Winter 2013).

(53) 55 Fed. Reg. 784-85 (Jan. 9, 1990).

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Comment Number: 0002458\_Friez\_20160728-2

Organization I: North American Coal Corporation

Commenter I: Christopher Friez

Comment Excerpt Text:

Currently, the federal coal leasing process takes far too long and is far too costly to companies trying to obtain leases. The process must be streamlined where possible. A process that used to take less than two years is now taking seven to ten years. In addition to the unbelievable length of time it takes to process an application and grant a lease, the costs a company incurs to obtain a lease is exorbitant and uncompetitive in the market. The federal appropriations process should allocate funding for staff to review lease applications and administer our public lands. Instead, the coal companies are expected to pay up front for all expenses of staff time and consulting fees required to process and obtain a federal coal lease.

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Comment Number: 0002462\_Compton\_20160728\_UtahMineAssoc-12

Organization I: Utah Mining Association

Commenter I: Mark Compton

Other Sections: I

Comment Excerpt Text:

DOT seems to now blithely accept the characterization of two key government reports by anti-leasing groups and rely on that in prominently highlighting the reports in the rationale for the moratorium. These two reports on coal leasing, one conducted by the DOT Inspector General (IG) and the other by General Accountability Office (GAO) however, did not identify systemic weaknesses in the current leasing system. Specifically, GAO did not repudiate its 2010 finding that the LBA method can achieve the objectives of ensuring fair return to the public. When the IG testified before Congress on her report, she confirmed that taxpayers are receiving a fair return from the federal coal program, and in many cases receiving more than fair market value. In fact, in the months after the reports were released, DOT informed members of the U.S. Senate that neither report identified concerns meriting a moratorium on federal coal leasing. While each report identified some inconsistencies in the application of guidance or documentation for decisions, BLM has since addressed those concerns. To date, the agency has published an Updated Coal Evaluation manual and handbook as well as seven instruction memoranda to its field offices in response to the modest suggestions by the IG and GAO.

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Comment Number: 0002462\_Compton\_20160728\_UtahMineAssoc-13

Organization I: Utah Mining Association

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Commenter I: Mark Compton

Comment Excerpt Text:

abandoning the LBA method of leasing and returning to centralized or regional lease sales is unlikely to attract more bidders or yield higher bids. The earlier system of scheduling lease sales based upon national and regional demand forecasts failed with many tracts receiving one or no bids.

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Comment Number: 0002462\_Compton\_20160728\_UtahMineAssoc-5

Organization I: Utah Mining Association

Commenter I: Mark Compton

Comment Excerpt Text:

With the advanced development of the coal regions, coal companies have sought new leases at roughly the rate of depletion of coal at existing operations as predicted by BLM when it shifted to the LBA leasing method. This reflects the reality that market changes and depletion drive the number of bidders for a lease, not the LBA process itself. Also, since 2003, total revenues from federal coal leases (bonus bids, royalties and surface rentals) amount to \$13.8 billion; lease revenues in 2014 were twice the amount in 2003; bonus bids have increased substantially; coal royalty revenue is 88 percent higher despite coal production increasing by only 2 percent; revenue per acre under lease has increased 40% despite lower coal prices recently. The facts dispose of any notion that the program is not continuing to ensure a fair return for taxpayers.

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Comment Number: 0002462\_Compton\_20160728\_UtahMineAssoc-7

Organization I: Utah Mining Association

Commenter I: Mark Compton

Comment Excerpt Text:

Furthermore, we should improve the efficiency of the federal coal leasing program. Unnecessary delays in the leasing process certainly do not result in a fair return to the taxpayer.

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Comment Number: 0002465\_Burnham\_20160728\_BurnhamCoal-4

Organization I: Burnham Coal, LLC

Commenter I: Bob Burnham

Comment Excerpt Text:

As far as single bids for most leases, there have been cases where multiple bids have been made resulting in higher prices at the sale and in bids at future sales. The issue is identifying coal resources that are accessible from more than one mine. This is usually not possible. Coal mines cannot be relocated to fit the resources being offered.

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Comment Number: 0002466\_Smith\_20160728\_SELA-5

Organization I: Safe Energy Leadership Alliance

Commenter I: Rachel Smith

Comment Excerpt Text:

The DOI should establish minimum bids for each coal region, as required by current regulations, taking into account geologic conditions, coal quality and supply, and demand for federal coal (including exports), and increase the royalty rate for surface--mined coal in all new leases and lease renewals to ensure fair return. BLM's review of policies, pricing, and royalty rates for public coal should factor in the market reality that much of the coal mined from public lands today and planned in the future is destined for export to other countries.

Comment Number: 0002467\_Fettus\_20160728-22

Organization I: Natural Resources Defense Council

Commenter I: Geoffrey Fettus

Other Sections: 2

Comment Excerpt Text:

Alternatives To Address Direct Environmental Impacts

Once the PEIS properly characterizes the impacts of coal leasing in the areas where it occurs, BLM should consider and present an analysis of alternatives that will address those impacts, including:

a. New leasing framework

As noted, the Powder River Basin was “decertified” as a coal production region in 1990, and all other coal regions have been likewise “decertified.” This decision turned leasing into a non-competitive framework through the “Lease by Application” process. Rather than a process in which BLM acts proactively and leads decision making with respect to federal coal mining, mining companies apply for parcels to be leased and BLM responds to such applications. Under the Mineral Leasing Act regulatory framework, the “Lease by Application” (LBA) process was an exception to the rule of competitive, BLM-driven leasing, but it has now become the norm.

As a policy matter, the current company-driven LBA system must be replaced with a new national programmatic approach and this PEIS analysis should commence that work. A new leasing framework should be presented and fully analyzed that provides a basis to determine when, where, and how much federal coal, if any, might be considered for lease in leasing plans. The alternatives analysis of leasing plans should specify the amount, timing, and location of potential leasing activity, if any, that the Secretary of the Interior determines will best meet national energy needs, achieve GHG emission reduction targets, protect other uses and resources, and ensure a fair return to taxpayers over a five year period.

A useful model for this analysis and for when to lease can be found in the outer continental shelf (OCS) leasing framework. See 43 U.S.C. § 1344. That program consists of a national schedule of proposed lease sales indicating the size, timing and location of leasing activity that best meets national energy needs for the five-year period following plan approval. The plans also dictate tailored leasing strategies instead of defaulting to industry proposals as done with the current LBA approach BLM follows. A PEIS is completed for the five-year leasing schedule to gather public input and ensure proper environmental analysis and mitigation. The five-year lease schedule, which is reviewed by the Secretary annually, examines environmental and socio-economic considerations, landscape-scale approaches to mitigation, national energy markets and needs, production substitutes for the energy resources, and assurances for fair market value.

A useful model for this analysis and for where to lease can be found in the Western Solar Program, where BLM prepared a PEIS to identify the preferred locations for development and excluded development from high conflict and/or low potential areas. That PEIS also set out required design features to be incorporated where development is permitted, and a commitment to mitigating impacts that could not be adequately avoided or minimized. Parameters to guide the management of solar resources were also shaped by a robust economic and technical analysis, further ensuring that leasing contemplation would be in balance with market conditions.

BLM should also analyze what the elimination or retention of the Coal Teams would mean in terms of environmental impacts. The Coal Teams, while advisory in nature, have had substantial power in determining whether lease applications should move forward. Members of the Coal Teams, notably Governors of coal-dependent states, have inherent conflicts of interest, making them unable to balance the desire for more leasing and revenue from leasing with other considerations.

Under any approach, BLM must also incorporate expanded unsuitability criteria, including protecting environmentally sensitive areas and areas that may be suitable for renewable energy development. Through this



new leasing framework, regardless of whether it follows the OCS approach, BLM can protect local environmental conditions by making affirmative decisions about whether, where, and under what conditions mining may occur.

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Comment Number: 0002467\_Fettus\_20160728-29

Organization I:Natural Resources Defense Council

Commenter I:Geoffrey Fettus

Other Sections: 1

Comment Excerpt Text:

The statute directs the agency to “award [coal] leases . . . by competitive bidding,” id. § 201 (emphasis added), as a theoretical means to insure that the American people “receive fair market value of the use of the public lands and their resources . . . .” 43 U.S.C. § 1701(a)(9). Under BLM’s regulations, the agency is supposed to determine the “fair market value” [FMV] for the coal, and then consider various bids, accepting the highest bid above FMV from a qualified mining company. 43 C.F.R. § 3400.05 (defining Fair Market Value to mean “that amount in cash, or on terms reasonably equivalent to cash, for which in all probability the coal deposit would be sold or leased by a knowledgeable owner willing but not obligated to sell or lease to a knowledgeable purchaser who desires but is not obligated to buy or lease”); see also id. Part 3422. The regulations include a bid floor of “\$100 per acre or its equivalent in cents per ton.” Id. § 3422.1(b)(2).

In practice, however, there is typically only one bidder. For example, between 1990 and 2013 96 of 107 tracts leased (about 90 percent) involved only a single bidder in the bonus bid leasing auction. See GAO, *Coal Leasing: BLM Could Enhance Appraisal Process, More Explicitly Consider Coal Exports, and Provide More Public Information* (GAO 14-140) (Dec. 2013) at 16. (4) As a result of this and other factors, the agency has often failed to obtain FMV, and has sold federal coal for much less than a dollar a ton.

(4) This is largely due to the fact that most lease applications come from existing operators seeking to expand their existing mining operations, rather than new companies competing for new mines.

(SEE TABLE I in the Attached Comment)

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Comment Number: 0002467\_Fettus\_20160728-65

Organization I:Natural Resources Defense Council

Commenter I:Geoffrey Fettus

Other Sections: 2

Comment Excerpt Text:

Restricting leasing eligibility

The Department of the Interior has significant discretion to reject a coal lease if, based on the Secretary’s assessment, it is not in the “public interest.” 30 U.S.C. § 201(a)(1) (authorizing coal leasing by the Secretary for lease tracts “he finds appropriate and in the public interest.”). BLM’s rules require that, “[a]n application for a lease shall be rejected in total or in part if the authorized officer determines that ... leasing of the lands covered by the application, for environmental or other sufficient reasons, would be contrary to the public interest.” 43 CFR § 3425.1-8. This provision is distinct from the screens BLM must apply to identify lands that are unsuitable or unacceptable for coal development, and is also distinct from BLM’s requirements to obtain “fair market value” for a lease.

Under this alternative BLM would establish additional criteria for determining the fitness of a coal operator as a buyer to ensure leasing is in “the public interest.” One principal restriction would be that an operator cannot obtain a new or modified lease where it owns a current mine – or combination of mines – that has more than 10 years of reserves. According to GAO, “[o]fficials from coal companies told us they typically submit new applications for federal coal leases to maintain a 10-year coal supply at their existing mining operations.” Yet, BLM

documents suggest that mines with pending lease applications in Wyoming have from 10.6 – 19 years of remaining recoverable reserves, based on the most recent annual production numbers available and, until BLM’s rejection of the West Jacobs Ranch LBA, the agency continued to make coal available for lease whenever coal companies apply. BLM must consider a reserve limit to ensure leasing is in the public interest.

Other criteria would preclude any new leases to any company that is out-of-compliance with SMCRA, Clean Water Act, Clean Air Act, or any other environmental requirements at any mine site they operate, particularly in regards to their reclamation and contemporaneous reclamation requirements. BLM should also assess whether the buying company has any history of environmental violations related to reclaiming current or past mines at any of its facilities.

Finally, eligibility requirements might include whether the company is operating an existing and viable coal facility, whether the company is financially healthy, and whether the operator is being diligent in developing existing leases.

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Comment Number: 0002470-1

Organization I: Taxpayer for Common Sense

Commenter I: Ryan Alexander

Other Sections: 8.7

Comment Excerpt Text:

The BLM must use the Programmatic EIS process to design a system of coal leasing that promotes competition among coal companies for federal coal leases. Competition is an essential part of any functioning market; without it, the program must compensate in various ways to achieve fair coal pricing. The lack of competition also leads to public skepticism that the federal coal program is not ensuring a fair return for these resources.

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Comment Number: 0002470-2

Organization I: Taxpayer for Common Sense

Commenter I: Ryan Alexander

Comment Excerpt Text:

The BLM asserts that it does not simply accept a tract for leasing as described in an application, but rather uses: “... a wide variety of information, including geologic data that delineates the location, quality, and quantity of coal within a given area, to determine the most appropriate tract configuration that would encourage competition and help achieve maximum economic recovery of the resource.”<sup>5</sup> Yet, most lease sales in the Powder River Basin (PRB) are for tracts adjacent to deposits already leased by a company.<sup>6</sup> Moreover, the tracts are often of a size or design that precludes another company from economically mining them and bidding on them. The evidence is clear: The BLM, instead of deciding whether there is sufficient demand for coal and designing tracts to maximize competition and economic value, defers to industry, which, in turn, avoids competition and designs tracts to maximize company share value and strategic positioning in the market. This assessment is confirmed in a market analysis report prepared for XCEL Energy by the John T. Boyd Company, a mining and geological consultant:

-As a practical matter, most companies will attempt to define LBA tracts that, because of location or geometry, are of interest only to the nominating company. This minimizes competitive bidding on the tract, and may result in a lower cost lease. Where competition has existed for coal leases (mostly in the southern Gillette area but recently in the central portion of the coalfield) relatively high bonus bids in the range of \$0.90 – \$1.10/ton have resulted. BLM has, even in noncompetitive cases, required “Fair Market Value” bids in this range, particularly in the Southern PRB.<sup>7</sup>

<sup>5</sup> Bureau of Land Management, U.S. Department of the Interior, “General Comments and Requests for Clarification,” in response to U.S.

Department of the Interior, Office of Inspector General, Report No. CR-EV-BLM-0001-2012., “Coal Management

Program,” June 2013

6 Government Accountability Office, Report: GAO-14-140, “COAL LEASING: BLM Could Enhance Appraisal Process, More Explicitly Consider Coal

Exports, and Provide More Public Information,” December 18, 2013

7 John T. Boyd Company. Report No. 3155.001. “Powder River Basin Coal Resource and Cost Study.” Prepared for XCEL Energy, Sept. 2011.

Available at: <http://www.xcelenergy.com/staticfiles/xcel/Regulatory/Regulatory%20PDFs/PSCo-ERP-2011/8-Roberts-Exhibit-No-MWR-1.pdf>

Comment Number: 0002475\_Kustin\_20160728\_CAP-3

Organization I: Center for American Progress

Commenter I: Mary Ellen Kustin

Comment Excerpt Text:

In the discussions of the past month and a half, the Center has suggested that a public process that sets a cap on either coal tonnage or British thermal units (BTUs) and accepts bids only until that cap is met would better address the PEIS concerns.

Comment Number: 0002475\_Kustin\_20160728\_CAP-4

Organization I: Center for American Progress

Commenter I: Mary Ellen Kustin

Other Sections: 4.5

Comment Excerpt Text:

We suggest considering a modified version of intertract bidding. Rather than hosting a lease sale with multiple tracts up for simultaneous bid, BLM could allow companies to bid on a fixed amount of mining credits. The winning bidders would gain the right to mine a certain amount of coal, as measured in dollars per BTU or dollars per ton. These bidders would then submit applications for the specific tracts of land on which they would like to mine the coal for which they have rights. This process would allow the BLM to better prioritize the fairest return available to taxpayers while allocating credits up to a pre-set carbon, BTU, or tonnage cap. The allocation of credits could also be weighted based on the companies’ proven track records of reclamation, financial stability, and worker safety and compensation.

Comment Number: 0002478\_Haggerty\_20160728\_HeadwaterEcon-11

Organization I: Headwaters Economics

Commenter I: Mark Haggerty

Other Sections: 8.7 | 11

Comment Excerpt Text:

Several recent reports from the Government Accountability Office and the Inspector General of the Interior Department raised concerns about the leasing process, including the social and environmental impacts of the federal coal program, and whether the program was receiving a fair return for taxpayers.<sup>4</sup> Importantly, the federal coal leasing and royalty program has not been reviewed for 30 years.<sup>5</sup>

(4) "Coal Leasing: BLM Could Enhance Appraisal Process, More Explicitly Consider Coal Exports, and Provide More Public Information, February 2014" U.S. Government Accountability Office <http://www.gao.gov/products/gao-14-140>; "Coal Management Program, U.S. Department of the Interior, Report No. CR-EV-BLM-0001-2012, June 2013" Office of the Inspector General, U.S. Department of the Interior, <https://www.doioig.gov/reports/coal-management-program-us-departmentinterior>.

(5) The Secretary of the Interior, Order No 3338: Discretionary Programmatic Environmental Impact Statement to Modernize the Federal Coal Program

(Washington, D.C., 2016)

[http://www.blm.gov/style/medialib/blm/wo/Communications\\_Directorate/public\\_affairs/news\\_release\\_attachments.Par.4909.File.dat/SO%203338%20Coal.pdf](http://www.blm.gov/style/medialib/blm/wo/Communications_Directorate/public_affairs/news_release_attachments.Par.4909.File.dat/SO%203338%20Coal.pdf).

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Comment Number: 0002480\_Culver\_20160728\_TWS-17

Organization I:The Wilderness Society

Commenter I:Nada Culver

Other Sections: 2

Comment Excerpt Text:

The BLM should look to its Solar PEIS and Oil and Gas Master Leasing Plan policy as Models for Landscape-scale Guided Development and Avoidance that could be Incorporated into the Coal PEIS.

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Comment Number: 0002480\_Culver\_20160728\_TWS-19

Organization I:The Wilderness Society

Commenter I:Nada Culver

Comment Excerpt Text:

The BLM should carefully analyze the current coal leasing system in the PEIS and develop new regulations to modernize the process, incorporating elements from the Solar PEIS and oil and gas Master Leasing Plans discussed above. The agency should terminate the LBA leasing system and replace it with a Western Regional Coal Leasing Program that incorporates some of the principles from the current regulations but is updated to reflect current knowledge and policy. This regional system should evaluate bidding on individual tracts with bidding on an amount of coal that the BLM has determined should be available for development. This leasing system should be consistent with the carbon budget recommendations we make elsewhere in these comments. This new system could be put in place based on five-year plans of development similar to the system used in Outer Continental Shelf oil and gas leasing. These plans of development should be designed to meet national program objectives and done from a Western Regional perspective, not a local one. The BLM should also abandon the use of Regional Coal Teams and instead determine regional leasing needs based on the BLM's expert analysis. The provisions for NEPA compliance should be maintained in the regional coal leasing program. In all cases this leasing system must ensure the federal government achieves a fair market value for the federal coal it leases.

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Comment Number: 0002480\_Culver\_20160728\_TWS-22

Organization I:The Wilderness Society

Commenter I:Nada Culver

Comment Excerpt Text:

While the BLM is required to consider MER in the federal coal program, achieving MER should not be treated as a unilateral, unvarying command. It should be achieved in recognition and in compliance with the BLM's broad multiple-use mission, which is also mandatory.

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Comment Number: 0002480\_Culver\_20160728\_TWS-67

Organization I:The Wilderness Society

Commenter I:Nada Culver

Comment Excerpt Text:

BLM should use the PEIS to develop a new, multi-year approach for the leasing and development of federal coal in the West. This will likely require some new regulations but can be developed and subjected to NEPA analysis in the PEIS. Under a new approach, BLM would initiate new leasing activity based on market circumstances, progress on climate objectives and other considerations; determine where coal leases will be considered and

screen for potential conflicts; develop new methods for selling coal resources in collaboration with the industry and leading economic experts; enhance the assurances that potential lessees have the financial and technical capabilities to viably operate the lease in question for its anticipated duration; and issue leases for specific tracts.

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Comment Number: 0002480\_Culver\_20160728\_TWS-68

Organization I: The Wilderness Society

Commenter I: Nada Culver

Other Sections: 1 2

Comment Excerpt Text:

In order to create a unified approach to coal leasing and to allow the BLM to manage the amount and timing of coal lease sales, the BLM should create a Western Coal Production Region based on the region as defined by the Energy Information Administration (EIA). EIA defines the Western coal region to include Alaska, Arizona, Colorado, Montana, New Mexico, North Dakota, Utah, Washington, and Wyoming. (11) According to the latest state-specific data from EIA's Annual Coal Report, of the coal produced in the United States in 2014, 54 percent was produced in the Western coal region, with Wyoming producing the lion's share: 73% of the coal mined in the Western coal region. (12) This region also encompasses 94 percent of the leases BLM had on record in 2015. (13)

(11) See U.S. Energy Information Administration, <http://www.eia.gov/tools/glossary/?id=coal>.

(12) See Table I in U.S. Energy Information Administration, Annual Coal Report 2014, March 2016. Available at <http://www.eia.gov/coal/annual/pdf/acr.pdf>. (Accessed July 26, 2016.)

(13) Cross Reference of BLM Coal Lease Serial Numbers and MSHA Identification Numbers, Feb. 3, 2015. BLM FOIA# 2015-00462. Mark Haggerty, Headwaters Economics, pers. comm.

Given significant differences in the geology, coal rank and quality, and mining conditions within the Western Coal Production Region, the BLM could consider special circumstances faced by mine-mouth power plant situations, where coal rank and value may be low, but the lack of transportation costs creates unique captive markets. Any exception process for mine-mouth plant situations would have to consider the climate change implications of extending leasing and operations of the plant and the socio-economic dislocations associated with continuing or restricting coal availability for the local community (as discussed in Section VIII).

For coal resources outside the western region, BLM should consider whether to create an eastern coal leasing region and apply new leasing approaches to those areas as well.

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Comment Number: 0002480\_Culver\_20160728\_TWS-70

Organization I: The Wilderness Society

Commenter I: Nada Culver

Other Sections: 2

Comment Excerpt Text:

The BLM should significantly modify the orientation of the agency to the industry in reforming the federal coal program. As the dramatic, rapid changes in the coal industry over the past two years have shown, federal lands deserve a more objective arbiter of whether, where and when additional coal resources should be put on the block for development. To accomplish this, the BLM should assume a greater role in specifying the size and timing of potential leasing activity that the Secretary of the Interior determines will best meet national energy needs, achieve U.S. carbon emission reduction goals, and ensure a fair return to taxpayers.

Under this approach, BLM would set the total amount of coal resource available for sale by auction each year consistent with a 5-year plan. There is precedent within BLM and elsewhere with the Interior Department for such a program: the Bureau of Ocean Energy Management (BOEM) has a Five-Year Program for oil and gas

development. It establishes a schedule of oil and gas lease sales proposed for planning areas of the U.S. Outer Continental Shelf (OCS). The Program specifies the size, timing, and location of potential leasing activity that the Secretary of the Interior determines will best meet national energy needs. BOEM also has a leasing program for its off-shore renewable energy that incorporates a multi-phase leasing process. We recommend the BLM seriously consider the five-year planning process for use in determining how much and which coal resources should be made available on a shorter time horizon than afforded by the PEIS.

In these five year plans, the BLM could set production targets for the total amount of coal resource sales that would be needed to meet declining coal production demand from public lands. The BLM should also consider carbon performance for coal's allocated share of all federal lands energy under a "carbon budget" calibrated to leading domestic and international climate goals. Our views on the need for a carbon budget are discussed in section VI.E. of these comments.

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Comment Number: 0002480\_Culver\_20160728\_TWS-71

Organization I: The Wilderness Society

Commenter I: Nada Culver

Other Sections: 1 2

Comment Excerpt Text:

To overcome the problems related to assuring a fair return for coal in a declining market dominated by incumbent mines leasing coal adjacent to their existing mines, BLM should develop an alternative bidding program for allocating federal coal in the Western Coal Production Region. BOEM has studied different auction systems for issuing renewable energy leases, easements, and rights-of-way on the OCS that may provide models for BLM to look at as it modernizes its coal leasing program. (14)

(14) BOEM issued a contract to Power Auctions, LLC to study different types of auctions for wind rights. The study has been published in three parts, and is available at the links below:

- Auction Design for Wind Rights
- Multiple Factor Auction Design for Wind Rights
- Comparison of Auction Formats for Auctioning Wind Rights

One approach to selling coal rights would have BLM auction coal resource allocations (or lease credits) rather than specific tracts for lease. BLM could specify the amount of coal made available for lease in terms of a total British thermal units (Btu) value, to establish basic parity among different areas within the leasing region. Because the quality of coal resource varies tremendously from one location to another, using a more static unit of measurement such as acres of land or tons of coal as the limit on the amount available for lease would disproportionately affect and disadvantage mines or companies producing lower quality coal. Btu content measures the heating value of the resource and therefore reflects the need for a larger amount of acreage or tons of coal to be developed to reach that limit in poorer quality areas. Additionally, leasing based on total Btu allows the BLM to easily track and measure potential GHG emissions from approved leases and compare that to the agency's climate targets or goals under the carbon budget discussed in section VI.E.

During this phase of the program, the sale of coal resource allocations (or lease credits) gives the successful bidder the right to subsequently seek BLM approval for the development of a leasehold. The lease credit does not grant the holder the right to construct any facilities; rather, the lease credit grants the right to develop a lease application and plan of development, which must be approved by BLM before the project can move on to the next stage of the process.

A coal resource allocation auction system would help to convey coal resource allocations (credits) to entities most likely to successfully develop the resources and to meet the statutory requirement to obtain a fair return on coal sales. It could also provide a mechanism for reducing the carbon consequences of the federal coal

program by putting BLM in charge of the pace and scale of coal allocation sales.

BLM should develop new auction formats to implement the new program and address important program performance goals. Performance measures developed by BOEM for its auction process for Wind Energy Areas (15) could be applied to BLM's approach:

15 <http://www.boem.gov/Renewable-Energy-Program/Regulatory-Information/RenewableEnergy-Auction-Formats.aspx>

- Economic Efficiency: The auction process should try to ensure that future federal coal sales are awarded to those who value the coal resource the most because these entities would likely be the most efficient at using the resource;
- Fair Return: BLM is statutorily required to obtain a “fair return” for coal resources.
- Program Efficiency: The coal auction process must be manageable for BLM to administer;
- Lease Boundary Flexibility: Within constraints fixed by BLM, the auction should allow bidders to apply coal allocations to the optimal lease areas;
- Competition: The auction process must be fair, and encourage participation from all interested bidders while minimizing the opportunity for collusion among bidders;
- Transparency: The auction process must be an open one in which bids are comparable and the reason why the winners won is clear;
- Neutrality: The auction process must ensure that all bidders are treated equally;
- Simplicity: The auction process must be easily understood and implemented, for both the bidders and BLM; and
- Consistency: The auction process should be applicable to the issuance of leases in a variety of contexts.

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Comment Number: 0002480\_Culver\_20160728\_TWS-72

Organization I: The Wilderness Society

Commenter I: Nada Culver

Other Sections: 2

Comment Excerpt Text:

Issuing specific leases to exercise coal credits.

Once sold, the credits could then be applied to specific lease tracts in the Western Coal Production Area identified by the successful bidders from within lands made available to leasing by the BLM. Though the selection of tracts would look similar to what those companies would propose under the lease by application system, allocations would have to be within areas pre-screened by BLM and BLM would not have to determine the fair market value at this stage—it will have been determined at the auction stage. BLM would still have to determine the Btus contained within a specific tract, but the agency could do that in a public and transparent way since there would not be bidding on the specific lease tract.

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Comment Number: 0002480\_Culver\_20160728\_TWS-9

Organization I: The Wilderness Society

Commenter I: Nada Culver

Comment Excerpt Text:

In deciding how, when and where to lease, BLM decision-making should:

- Ensure that the screening criteria outlined in its regulations are fully applied when the BLM evaluates whether areas might be “acceptable for further consideration for leasing” as part of its development of resource management plans (RMP); these criteria can also be applied at the leasing stage to address current conditions and new information.
- Ensure the BLM's unsuitability criteria are fully applied at the leasing stage.
- Provide protections for lands with wilderness characteristics and Greater sage-grouse.

- Prepare a reasonably foreseeable development analysis of coal resources.
- Establish a regional leasing program that incorporates landscape level planning and more active BLM management, looking at examples such as the Solar PEIS and master leasing plans.
- Comply with NEPA and mitigation obligations to protect other resources and address other impacts, such as contributions to and effects of climate change.
- Address new and existing leases.
- Ensure that, in fulfilling these recommendations, the statutory and regulatory requirements that there will be “maximum economic recovery” from coal leasing and development need to be understood properly in the multiple-use context.

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Comment Number: 0002488\_Sanderson\_20160728-10

Organization I: Colorado Mining Association

Commenter I: Stuart Sanderson

Comment Excerpt Text:

The Notice also indicates that BLM will examine whether the current regulatory framework (lease by application, LBA) should be changed to provide a better mechanism or mechanisms to decide which coal resources should be made available and how the leasing process should work, based upon concerns that the current LBA method lacks competition.

However, the belief that competition among multiple bidders is the only way to produce a fair market value return is flawed. The facts are that mineral asset and lease sales do occur for fair market value with a single bidder. In determining fair market value under the existing lease process, BLM relies upon peer-reviewed analyses that include comparable sales. Any criticism regarding fair market value and the valuation process has to do with internal BLM valuation metrics and formulas, not the lack of bidders. All that said, BLM has already begun implementing a number of reforms designed to improve and standardize the valuation process, including the establishment of a Memorandum of Understanding with the Department's Office of Valuation Services.

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Comment Number: 0002488\_Sanderson\_20160728-11

Organization I: Colorado Mining Association

Commenter I: Stuart Sanderson

Comment Excerpt Text:

BLM is requesting comment on whether timing of lease sales should be revised, presumably in an effort to create more competition, and whether market factors should impact lease timing. However, the proposal to conduct lease sales at only set times, for example quarterly, has not worked in the past which is demonstrated by the failure of the regional lease sales method. Historically, scheduled lease sales were established based upon demand forecasts both nationally and regionally. However, under this framework uncertainties impacting supply and demand were not adequately addressed, and operator interest in leases were not accounted for, resulting in many tracts receiving little to no interest.

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Comment Number: 0002488\_Sanderson\_20160728-12

Organization I: Colorado Mining Association

Commenter I: Stuart Sanderson

Comment Excerpt Text:

CMA contends that the current state of the coal industry, uncertainties in the regulation of the Coal Program, and the nature of how the coal regions are developed does not lend itself to a regional leasing method, or a method that only allows lease sales at set times. In general, coal operators apply for new leases at roughly their depletion rate. What this means is, they bid or lease only when they need to. Further, frequently there may only be one interested bidder, the company that has invested in the infrastructure to develop the mine, and is now



seeking to lease adjacent reserves; which is why LBA is the optimal method for leasing coal resources. Creating arbitrary demand through lease timing restrictions, or regional lease planning, fails to address operator interest in certain leases, and blindly assumes that regional planning and timing restrictions will result in increased competition and “fair return.” For the reasons discussed above, LBA must be carried forward.

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Comment Number: 0002488\_Sanderson\_20160728-15

Organization I:Colorado Mining Association

Commenter I:Stuart Sanderson

Comment Excerpt Text:

The proposal to evaluate increasing the minimum bid allowed is out of touch in light of the “fair market value” requirements. CMA opposes any increase or change in minimum bid, and suggests BLM eliminate this proposed approach from detailed analysis because this provision does not apply.

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Comment Number: 0002488\_Sanderson\_20160728-3

Organization I:Colorado Mining Association

Commenter I:Stuart Sanderson

Comment Excerpt Text:

Critics of the program point to rental and royalty rates, ignoring the substantial bonus bids paid by companies to acquire the lease. They also criticize the fact that leases may have a single bidder from an adjacent lease. Rather than presenting some problem with the process, or lack of competition, it should be expected that an operator already familiar with the lease area who has already invested significant infrastructure costs would be the bidder. The criticism also ignores the cumulative fees and taxes paid to federal, state and local governments to mine the coal. These cumulative fees, taxes, royalties, etc. have been estimated to consume 40 cents of every dollar received from the sale of the coal.

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Comment Number: 0002490\_Emrich\_20160728\_CloudPeakEnergy-28

Organization I:Cloud Peak Energy Inc.

Commenter I:Andrew C. Emrich, P.C.

Other Sections: 2

Comment Excerpt Text:

BLM should continue with an applicant-driven application process for federal coal leasing. First, mine operators are in the best position to determine when the next tract of federal coal is needed to ensure its future mining operations. For example, Cloud Peak Energy has a unique understanding regarding its own business operations and is best positioned to determine the timeframe for acquiring additional coal leases. As it currently stands, Cloud Peak Energy determines the timing for obtaining additional coal leases based upon careful consideration of existing coal reserves, the nature and length of the comprehensive permitting process, and market conditions. Any other framework for issuing federal coal leases would fail to address the individual needs of each lessee and the optimal timeframe for acquiring additional coal leases. BLM should defer to each mining company’s knowledge and expertise concerning its own business operations, including the need for, and timing of, acquiring additional tracts of federal coal.

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Comment Number: 0002490\_Emrich\_20160728\_CloudPeakEnergy-29

Organization I:Cloud Peak Energy Inc.

Commenter I:Andrew C. Emrich, P.C.

Other Sections: 2

Comment Excerpt Text:

BLM should retain the existing LBA process because its proposal to hold scheduled coal lease sales will not result

in increased competition for federal coal leases. The substantial up-front costs necessary to commence mining operations make the creation of competitive leasing conditions nearly impossible for periodic scheduled lease sales. See above at 7-8. Unless BLM identifies a lease parcel that is directly adjacent to an existing mining operation, it is unlikely that any coal company (let alone more than one company) would bid on the offered tract. See Attachment 5, BLM Petition Denial, at 4 (Jan. 28, 2011) (“Regional leasing is difficult where existing mines are competing in an open coal market, depleting their existing leases at market rates, and needing to replace reserves throughout a continuum of time”). And if BLM fails to offer parcels adjacent to an existing coal mine at a time that meets the economic and operational needs of the mine, that mine could be forced to prematurely close. Due to the substantial economic costs and additional regulatory burdens associated with closing and then restarting a coal mine, any premature mine closure would likely preclude the leasing and development of coal reserves adjacent to that mine in the future, thereby effectively wasting those federal coal reserves and denying the American taxpayers any revenue on the wasted federal coal. Finally, the use of scheduled lease sales would result in increased environmental impacts. BLM recently explained how the use of scheduled lease sales would result in greater environmental disturbance than allowing the expansion of existing mine operations. *Id.* (“leaving tracts unleased and undeveloped in between the existing Federal coal lease and the proposed production maintenance tract . . . would require significant additional disturbance and cost to mine independently” (emphasis added)).

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Comment Number: 0002490\_Emrich\_20160728\_CloudPeakEnergy-30

Organization I: Cloud Peak Energy Inc.

Commenter I: Andrew C. Emrich, P.C.

Comment Excerpt Text:

BLM should, as part of its general review of the federal coal program, implement specific measures to streamline the federal coal leasing and permitting processes. A number of steps could be taken to adapt BLM’s program to the current economic realities facing the domestic coal industry, address the need for increased domestic energy security, and help level the playing field among domestic energy sources.

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Comment Number: 0002490\_Emrich\_20160728\_CloudPeakEnergy-31

Organization I: Cloud Peak Energy Inc.

Commenter I: Andrew C. Emrich, P.C.

Comment Excerpt Text:

BLM should reduce the exceedingly long delays associated with coal leasing and permitting. BLM should establish specific timelines and procedures for expeditious completion of the federal leasing and permitting processes. The reduction in the time necessary for processing federal coal leases and permit approvals would allow leasing of smaller lease tracts.

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Comment Number: 0002490\_Emrich\_20160728\_CloudPeakEnergy-32

Organization I: Cloud Peak Energy Inc.

Commenter I: Andrew C. Emrich, P.C.

Comment Excerpt Text:

BLM should consider how the efficient leasing of smaller tracts might better ensure the maximum economic recovery of coal and deliver value to the American people. Smaller coal leases reduce the risk of market uncertainties associated with larger lease tracts. In addition, smaller tracts provide incrementally larger bonus payments to the federal government due to the higher FMV valuations associated with the substantially shortened duration of mining operations.

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Comment Number: 0002491\_Weiskopf\_20160728\_NextGenClimateAmer-19

Organization I: NextGen Climate America

Commenter I: David Weiskopf

Other Sections: I

Comment Excerpt Text:

Interior regulations establish the public interest basis for coal leasing: “[an] application for a lease shall be rejected in total or in part if the authorized officer determines that . . . leasing of the lands covered by the application, for environmental or other sufficient reasons, would be contrary to the public interest” (emphasis added).<sup>18</sup> Up until now, BLM’s decisions to approve lease applications have been justified as serving the public interest because they offer competitive sales for meeting national coal demand,<sup>19</sup> provide a reliable and continuous “supply of stable and affordable energy for consumers,”<sup>20</sup> and reduce U.S. “dependence on foreign energy supplies and [provide] significant socioeconomic benefits.”<sup>21</sup> These interpretations of the public interest ignore two key aspects of the coal program: near-term health burdens imposed on American communities and long-term climate burdens on BLM land as well as all areas of the United States. Moreover, the BLM Records of Decision do not consider the Carbon Tracker finding that reserves from existing mines are sufficient to supply the transitional period for coal plants – thus, even the overly narrow public interpretation is deficient on its own terms. BLM should expressly consider health and climate change in the public interest as it undertakes the programmatic review, and it should reform the coal program to bring leasing decisions into alignment with these considerations.

[18 43 C.F.R. § 3425.1-8]

[19 Record of Decision, Environmental Impact Statement, Belle Ayr North – WYWI61248 – July 2010; Record of Decision, Environmental Impact Statement, South Hilight Field – WYWI74596 – March 2011.]

[20 Record of Decision, Environmental Impact Statement, North Porcupine LBA – WYWI73408 – October 2011; Record of Decision, Environmental Impact Statement, South Porcupine LBA – WYWI76095 – August 2011.]

[21 Id.]

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Comment Number: 0002491\_Weiskopf\_20160728\_NextGenClimateAmer-32

Organization I: NextGen Climate America

Commenter I: David Weiskopf

Other Sections: I

Comment Excerpt Text:

The third statute enabling Interior to apply a carbon budget to its programmatic review is the Energy Policy Act of 2005, which establishes a basis for BLM to account for coal reserves in alignment with climate objectives.<sup>35</sup> The Act requires the Secretary of the Interior to “review coal assessments and other available data to identify . . . the extent and nature of any restrictions on the development of coal resources on Federal lands” (emphasis added).<sup>36</sup> Given the Carbon Tracker conclusion that BLM has leased more coal than it can afford to burn in a carbon consistent scenario, the large volume of non-combustible reserves should factor into Interior’s review of restrictions on coal resources. This mandate is also relevant for the U.S. Geological Survey, which is in the process of developing a national inventory of carbon in federal lands. As part of its inventory, the USGS “will establish a baseline and public database that accounts for carbon emitted from fossil fuels produced on public lands.”<sup>37</sup>

[35 U.S. Department of the Interior, Question and Answer, Department of the Interior Federal Coal Reforms, Available at [www.blm.gov/style/medialib/blm/wo/Communications\\_Directorate/public\\_affairs/news\\_release\\_attachments.Par.98.291.File.dat/Questions%20and%20Answers%20Coal.pdf](http://www.blm.gov/style/medialib/blm/wo/Communications_Directorate/public_affairs/news_release_attachments.Par.98.291.File.dat/Questions%20and%20Answers%20Coal.pdf)]

[36 42 U.S.C. § 15991]

[37 Supra, note 35.]

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Comment Number: 0002493\_Mead\_20160728\_GovWY-11

Organization I:Office of Governor Matthew H. Mead

Commenter I:MATTHEW H. MEAD

Comment Excerpt Text:

The BLM must properly evaluate why the regional leasing system was abandoned in the 1980s in favor of the lease by application (LBA) process. To properly do this, it is important to evaluate the fiscal, technical, business and administrative advantages of the LBA process.

In 1979, the DOI promulgated new regulations significantly revising the coal management program. 43 C.F.R. Part 3400. The new regulations established two leasing mechanisms, regional leasing in coal production regions, which is agency-driven, 43 C.F.R. Part 3420; and LBA, which is industry driven, 43 C.F.R. Part 3425. Regional leasing intended to make government planning the primary emphasis in leasing decisions within defined coal production regions. The interest in regional leasing was nominal at best, and by 1990, the BLM decertified the nation's eight coal production regions and abandoned regional leasing in favor of LBA with support centered largely on "programmatic efficiencies associated with leasing by application, especially in a reduced regional coal market." See Decertification of the Powder River Coal Production Region, 55 Fed. Reg. 784 (Jan. 9, 1990); (WY0-00133 to 00134). BLM determined that LBA was the most efficient method to lease coal as that method is market driven and removes the need for predictive guesswork.

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Comment Number: 0002493\_Mead\_20160728\_GovWY-13

Organization I:Office of Governor Matthew H. Mead

Commenter I:MATTHEW H. MEAD

Other Sections: 8.7

Comment Excerpt Text:

Furthermore, as noted above, the existing regulations have been set in place to clearly establish the LBA process as a competitive form of leasing, even if only one company offers a bid. The BLM sets an undisclosed FMV floor price and a company must meet or exceed BLM's valuation in order to receive the lease. Even if only one company submits a bid, they do not automatically receive the lease. There have been several instances that BLM's floor price was not met and a lease was not awarded. Since companies do not know the BLM floor price, it is fair to assume that acceptable bids exceed the BLM price. In those instances, the American public receives a premium - or more than FMV. As part of this scoping process, the BLM should consider this information and review prior LBA sales to better understand the amount of additional money paid over the years because the accepted bid price exceeded FMV.

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Comment Number: 0002493\_Mead\_20160728\_GovWY-14

Organization I:Office of Governor Matthew H. Mead

Commenter I:MATTHEW H. MEAD

Comment Excerpt Text:

The BLM must also consider the infrastructure costs and the minimum necessary investment to construct a new mine which would likely be required under a regional or scheduled lease scenario. Huge investments in property, plant, equipment and coal reserves ranging anywhere from \$500 million to more than \$3 billion are required to mine in Wyoming. Federal coal leases require extensive capital investments before an ounce of coal is mined and a relatively high level of financial risk in a volatile commodity-type market. Therefore, the successful bidders in the past consisted of major coal operators who could finance such ventures and have the technical and marketing expertise to be successful.

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Comment Number: 0002493\_Mead\_20160728\_GovWY-15

Organization I: Office of Governor Matthew H. Mead

Commenter I: MATTHEW H. MEAD

Other Sections: 8.7

Comment Excerpt Text:

Table 1.3.2.1 below provides more complete and correct information as compared to Table 4 in the WEG report because it highlights the tracts for which more than one sale was held as well as sales for which there was more than one bidder. Table 1.3.2.1 illustrates that BLM held more than one sale and therefore, received more than one bid on 11 of the 27 tracts that have been leased since decertification of the PRB in 1990. Of these 11 tracts, 4 (36%) have had more than one bidder on the second sale. One tract had two bidders on the first sale. Therefore, only one bid has been received on 16 of the 27 tracts, or 59% of the tracts offered since decertification as compared to 81.5% of the tracts that received only one or no bid during the period of regional leasing between 1975 and decertification of the PRB in 1990. Further, all bids accepted by the BLM exceeded the FMV determined by the BLM. Clearly, the LBA process has not "severely diminished" competition for federal coal in the PRB.

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Comment Number: 0002493\_Mead\_20160728\_GovWY-16

Organization I: Office of Governor Matthew H. Mead

Commenter I: MATTHEW H. MEAD

Other Sections: 8.7

Comment Excerpt Text:

The 1984 Linowes Commission report identified the complex property ownership patterns in the western U.S. as a major deterrent to having multiple competitors bid on a federal lease tract. (WY0-00258 to 00912). Specifically, the report states that "Due to ownership patterns... the Government seldom reaps the benefit of being able to offer all the mineral and surface rights needed for an entire economic mining unit. Were the Government to do so, it could guarantee to each potential bidder an opportunity to invest in a lease without uncertainty about whether additional private rights could be acquired, and at what cost, after the lease sale. Typically, however, economic mining units consist of private, State or previously leased federal coal interspersed with or adjacent to the federal lease tract. In other instances, the Government may own the coal mineral rights while a private party owns the surface." Linowes Commission 1984 - p. 155; (WY0-00428). Nowhere is this situation more evident than Wyoming's Powder River Basin. The Linowes Commission Report compares regional differences in federal coal and lists the Wyoming PRB as having only 11 percent of its acreage under a federal surface/federal coal ownership pattern. Linowes Commission 1984- p. 158 (Table 3); (WY0-00431). Conversely, 72 percent of the property ownership is non-federal surface/federal coal and 17 percent is non-federal or federal surface/non-federal coal. (See Map 1.3.3.1)

The Green River/Hams Fork Coal Region in southwestern Wyoming has a different surface/mineral ownership pattern with a much larger percentage (52 percent) in federal surface/federal coal ownership pattern with very little (3.5 percent) in non-federal surface/federal coal. According to the Linowes Commission Report, coal tracts offered in the Green River/Hams Fork and Uinta-Southwestern Utah regions had achieved the most bidding competition. See Linowes Commission Report 1984- p. 159; (WY0-00432) and (see also Maps 1.3.3.2 and 1.3.3.3).

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Comment Number: 0002493\_Mead\_20160728\_GovWY-17

Organization I: Office of Governor Matthew H. Mead

Commenter I: MATTHEW H. MEAD

Other Sections: 19

Comment Excerpt Text:

Order No. 3338 suggests that the BLM's PEIS should examine where to lease federal coal and proposes as an

example the BLM's Solar PEIS (Western Solar Plan) which "amended land use plans across six southwestern states and established preferred locations for solar development." Order, p. 7. The BLM must consider its current and adequate regulatory process to examine preferred locations for coal development, including coal planning completed as part of the Resource Management Plan (RMP) process. The BLM's coal planning process includes, but is not limited to, a screen for coal development potential, unsuitability, multiple use and surface ownership consultation. In Wyoming, this was recently completed as part of the revision to the BLM's Buffalo RMP.

The use of twenty unsuitability criteria at 43 C.F.R § 3461.5 represent only one of five screens employed by BLM to determine "where and where not" to lease coal. The other four found at 43 C.F.R. § 3420.1-4(e)(1) through (4) are the principal decisions used to determine which lands are suitable for further consideration. These screening criteria have been and continue to be more than adequate to identify the most appropriate locations for federal coal leasing. If the BLM is intent on considering the Western Solar Plan, the BLM must consider that coal resource development is confined to the location of commercial quantities and qualities of coal. Solar resources are presumably more widespread across the landscape, which allows a greater degree of flexibility in establishing preferred locations for development.

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Comment Number: 0002493\_Mead\_20160728\_GovWY-18

Organization I: Office of Governor Matthew H. Mead

Commenter I: MATTHEW H. MEAD

Other Sections: 8.3

Comment Excerpt Text:

DOI's estimate appears to be a nationwide figure which amalgamates all federal coal leases. However, the mines in Wyoming account for 80% of all federal coal being produced today and BLM Wyoming figures show the average mine life for Wyoming coal mines is 16.4 years. See Wyoming Coal Mines- Estimated Mine Life (WYO-00914). Even this number is skewed by one mine, the Caballo mine, which is projected to last for 80 years. (Id.). And the 80 year projection cannot be relied upon because the Caballo mine is known to contain significant amounts of uneconomically mineable reserves. (Id.). Thus, DOI is overestimating the remaining life of existing mines, including those in Wyoming.

DOI has used its 20-year estimate to downplay the impact that the moratorium will have on coal production. Again, DOI is not telling the whole story. Assuming no legal challenges, the best timeline estimate for a new lease approval will likely require 13 to 15 years (3 year PEIS process; 2 years for rule/Resource Management Plan (RMP) revisions; 5 years for EIS development of same; 2 years for Record of Decision and lease sale; 3 years for state/federal OSMRE permitting). A 15 year time lag for post-moratorium new coal production cuts dangerously close to BLM's estimate that the mines in Wyoming that produce 80% of federal coal will continue for 16.4 years. But this best case scenario is not the most likely scenario because litigation is likely to occur. Unfortunately, the moratorium and PEIS process has created an uncertainty in the nation's thermal coal baseload fuel supply. Because the moratorium has stopped the coal leasing process while existing leases continue to produce, DOI has created a time lag in production that is not likely to be overcome once leasing resumes. Therefore, the BLM must consider ways to significantly expedite coal leasing once the moratorium is lifted.

#### 1.5.2- Concerns with Order No. 3338- Sec. 6, Exclusions

The exclusions identified in Order No. 3338 appear designed to mitigate potential mine life conflicts; however, the emergency lease and lease modification provisions may be insufficient to sustain some mining operations.

The DOI's calculation of tons of reserves in Wyoming is inaccurate. It is apparently based on total tons of coal leased nationwide. The more appropriate calculation of tons of coal reserves should be on the basis of minable tons within approved lease tracts. The DOI evaluation does not take into account the balancing of strip ratios across the mining reserve base (field average) and actions taken by BLM in the leasing process that impact those reserves ultimately leased. The BLM is required to lease in accordance with the public interest. Therefore, lease

tracts include unrecoverable tons that lie under rail lines and extend to the 40 acre subdivision. The unrecoverable tons within these lease units include tons that are not economically recoverable, but have been added into the lease tract total tonnage evaluation and sale to prevent reserve sterilization.

Order No. 3338 also does not account for strip ratio variability (overburden thickness/coal thickness) and how strip ratio factors into lease modification requests and actions. As stated previously, a lease action often includes areas of high strip ratio and marginal coal in order to prevent sterilization of reserves. LBA and Lease by Modification (LBM) actions include both lower cover reserves in conjunction with marginal high cover reserves in an attempt to balance the strip ratio and recover the maximum coal tons from the reserve base. This action facilitated by the LBA/LBM process provides for maximum recovery and public benefit from the leased coal. In contrast, Order No. 3338, as established, will force operations into marginal reserves early in the mine life and create economic winners and losers based on policy rather than coal recovery and market conditions. Additionally, coal companies may choose to pay a penalty and bypass marginal reserves as they are simply too costly to mine without lower stripping ratio reserves available to offset the respective increased cost of mining. The public benefit from these reserves is compromised and is in contrast to BLM's public benefit mandate. The increase in the cost of coal will be passed onto the end consumer resulting in higher utility rates. The BLM must consider these factors now, as it relates to Order No. 3338, and in its PEIS.

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Comment Number: 0002493\_Mead\_20160728\_GovWY-19

Organization I:Office of Governor Matthew H. Mead

Commenter I:MATTHEW H. MEAD

Comment Excerpt Text:

The LMU has been used to manage coal production from multiple federal, private and state lease tracts and to ensure timely development, continuous operation and diligent coal recovery. The LMU requires a coal operator to mine the diligent development tonnage (1% of the LMU reserve) from the defined reserve based on an average one in three year test. The coal operator must meet the continued operation requirement in an annual average amount of 1% of all the LMU reserves associated with the lease for all following years. The annual average amount will be calculated on a 3-year basis with the 2 preceding years. The coal operator is also required to post a bond to cover the LMU. When the LMU process was established, it was not envisioned to encompass the scale of the coal reserves of the PRB. The LMU process only has a mechanism to add new reserves into the LMU until a maximum of 25,000 acres/LMU is reached. There is currently no mechanism to remove leases (tonnage) that have been completed and released by the BLM from the LMU. This has resulted in LMU diligent development tonnage requirements only increasing. Under current regulation, any change to the LMU diligent development tonnage requirement is at the discretion of the authorized officer. Moving forward, this process would benefit from a formal and defined method for removing tons from the LMU. As part of the PEIS, consideration should be given to revising the LMU process to provide for reduction of the diligent development tonnage requirements associated with completed leases. See 30 U.S.C. § 202a and 43 C.P.R. § 3487.1.

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Comment Number: 0002493\_Mead\_20160728\_GovWY-67

Organization I:Office of Governor Matthew H. Mead

Commenter I:MATTHEW H. MEAD

Comment Excerpt Text:

The following points must be adequately considered in the event that BLM is still compelled to evaluate various leasing alternatives. As indicated in the BLM's own findings, the regional leasing process requires the agency to have adequate resources available in order to undertake and fund the required activities to bring federal coal leases to sale. This same situation is expected to be the case when considering scheduled lease sales as suggested in Order No. 3338 (p.7). By comparison, the LBA process requires the company nominating the lease to pay all costs associated with the federal coal leasing process including cost recovery fees for the time that BLM employees spend on the processing of the proposed lease. The BLM must calculate costs and consider the

availability of agency resources when determining which leasing alternative would provide the American public the greatest return.

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Comment Number: 0002493\_Mead\_20160728\_GovWY-68

Organization I: Office of Governor Matthew H. Mead

Commenter I: MATTHEW H. MEAD

Comment Excerpt Text:

1.2 Lease-by-Application Process -Wyoming Powder River Basin

In its December 2013 coal leasing evaluation, the GAO stated: "The Powder River Basin is the largest coal-producing region in the U.S., and all 10 of the top-producing U.S. coal mines are in the Powder River Basin, with 9 of these located in the Wyoming portion of the basin, according to [U.S. Energy Information Administration (EIA)] data. Coal in the Powder River Basin has less sulfur than eastern coals, making it attractive to utilities for meeting Clean Air Act requirements." U.S. GAO, Report to Congressional Requesters, Coal Leasing, BLM Could Enhance Appraisal Process, More Explicitly Consider Coal Exports, and Provide More Public Information, p. 10 (Dec. 2013) (GAO Report); (WY0-03626). Considering the critical role played by the abundant supply of federal coal mined in Wyoming to meet national energy needs and environmental requirements, BLM must properly evaluate the LBA process as it is implemented by BLM Wyoming.

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Comment Number: 0002493\_Mead\_20160728\_GovWY-69

Organization I: Office of Governor Matthew H. Mead

Commenter I: MATTHEW H. MEAD

Comment Excerpt Text:

Order No. 3.338 notes "concerns about lack of competition in the lease-by-application process." BLM must properly consider and evaluate the competitive process which is inherent within the LBA system. Information and examples of competition under the LBA process conducted by BLM in Wyoming are provided below

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Comment Number: 0002494\_Smyth\_20160728-6

Organization I:

Commenter I: Joe Smyth

Comment Excerpt Text:

In addition to coal quality and economic viability, the Interior Department should consider additional factors when deciding which already leased coal should be taken back, including the lease holder's record and ability to meet its mine reclamation obligations, whether the lease holder plans to export the federal coal, and other actions of the lease holder.

(8) <http://ieefa.org/wpcontent/uploads/2015/08/FederalCoalLeaseProgramDOIcommentsIEEFAug2015final1.pdf>

Companies that have leased the most federal coal do not support US climate goals Federal coal production is dominated by three companies: Peabody Energy, Arch Coal, and Cloud Peak Energy. Although the Interior Department does not publicly report how much federal coal is extracted by each company, or from each mine, I submitted a Freedom of Information Act (FOIA) request to the Interior Department for this data. The results of that FOIA show that in 2014, Peabody Energy, Arch Coal, and Cloud Peak Energy together mined 407,914,000 tons of federal coal, accounting for 77% of the total federal coal production from all companies and subsidiaries that were reported in the FOIA results. (9)

(9) <http://www.greenpeace.org/usa/research/corporatewelfareforcoal/>

In addition, the FOIA data shows that federal coal accounted for the vast majority of each of those three companies US coal production in 2014: 88% of Cloud Peak Energy's total coal production, 83% of Arch Coal's, and 68% of Peabody Energy's total 2014 US coal production. In effect, the federal coal program has amounted to a major corporate welfare program for these three companies. This domination of federal coal production by a few coal mining companies reflects the Interior Department's past decisions that have allowed allowed the coal



mining industry itself to largely manage the development of federal coal.

As the Interior Department pursues reforms of the federal coal program in order to support US climate commitments, it is abundantly clear that these coal mining companies are not partners in this reform effort. Bankruptcy filings reveal that the two largest producers of federal coal, Peabody Energy and Arch Coal, have secretly funded organizations that seek to confuse the public about the threat of climate change. (10) (11)

(10)

<http://www.prwatch.org/news/2016/02/13049/bankruptcydocumentsindicatearchcoalfundingclimatedeniallegalgroup>

(11)

<http://www.prwatch.org/news/2016/06/13114/peabodycoalbankruptcyrevealsextensivefundingclimatedenialnetwork>

In order to help meet US climate commitments, the Interior Department will need to take active control of the management of our federal coal, including federal coal that has already been leased, instead of allowing coal mining companies to continue extracting federal coal without regard for the impacts on the climate of the mining and burning of federal coal.

Comment Number: 0002495\_Bucks\_20160728-1

Commenter I: Dan Bucks

Comment Excerpt Text:

Recommendation I. Through the PEIS, Interior should develop new public management systems to replace the coal lease by application and royalty self-assessment systems.

Secretarial Order 3338 raises a number of vital issues affecting the public that can be successfully resolved only within a framework where decisions are based on maximizing the welfare of society overall. Whether it be ensuring a fair return to the public for the coal they own, harmonizing coal production with climate change, reclaiming mined lands, preventing adverse effects on public health or helping coal communities and workers adapt to changing energy markets or other issues—their effective resolution requires public action in the public interest.

In analytical terms, the purposes of the coal PEIS as described in Secretarial Order 3338 fall into three categories:

1. Ensuring a fair return to the public on federal coal as required by law,
2. Reducing the external costs and impacts of coal production, including climate change, but also a host of other environmental and socio-economic concerns, and
3. Determining the future role of federal coal in relation to the nation's energy supply.

None of these purposes can be achieved through the existing structures for administering the coal program: the coal lease by application (LBA) process and the coal producer self-assessment method of collecting royalties.

Both these systems are the source of the problem of the American people being denied the fair return on coal required by law. The sources of the problem will not be its solution.

The LBA system allows companies to determine when, where and in what amounts federal coal can be leased. The companies propose small tracts adjacent to existing operations, resulting in more than 90% of leases having only one bidder. These non-competitive bids combined with company control of the timing of the leases, and the completely closed nature of the bid process produce lease payments consistently below fair market value, shortchanging the public by tens of billions of dollars over several decades. (1)

(1) Tom Sanzillo, "The Great Giveaway: An Analysis of the United States' Long-Term Trend of Selling Federally Owned Coal for Less Than Fair Market Value, Institute for Energy Economics and Financial Analysis, 20, (June 2012).

The long-term failure of the LBA system to achieve the fair return required by law is sufficient by itself to justify including in the scope of the PEIS the development of a new leasing process to replace it. However, it becomes absurd to leave in question the need to terminate and replace the LBA process given that it is incompatible with the full and effective consideration and mitigation of the public costs of coal production.

The LBA process allows coal companies to drive the leasing process based upon their own narrow calculus of private costs and private benefits—effectively disregarding public costs or benefits. Further, despite court orders

directing broad NEPA analysis of LBA tracts, the company-nominated tracts are simply too small to evaluate properly the cumulative external effects of coal mining on the broader environmental, social and economic landscape. Thus, in both conceptual and practical terms, lease by application excludes the proper consideration of large-scale issues of climate change, public health and other external costs of coal production imposed on society. Taking external costs into account adequately will require a new and fundamentally different system of lease decision-making, controlled by Interior but informed by active public participation and designed from the outset to weigh fully the public costs and benefits of coal production.

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Comment Number: 0002495\_Bucks\_20160728-3

Commenter I: Dan Bucks

Comment Excerpt Text:

Recommendation 2. Interior's development work on new management systems should place a priority on (a) public control of public resources and (b) transparency and public participation.

The discussion above noted how current systems delegate decision-making to coal producers in ways that conflict with achieving the public interest in the management of federal coal. So one principle that Interior should apply in designing new management systems is to insure public control of public resources. That means that Interior, not the coal producers, should determine when, where and in what amounts coal leasing will occur. It also means that Interior, as the Mineral Leasing Act plainly authorizes, should assess directly the value of coal for royalty purposes, like a property tax, instead of allowing producers to self-assess the values, like an income tax. Compounding the problem of public decisions being over-delegated to private interests is the fact that much of this decision-making is secret and hidden from the public. So the public often knows only well after problems have occurred the price they paid for the shortcomings of these systems.

Throughout the history of federal minerals management, secrecy has been the common factor contributing to various scandals, crises or chronic failures to fulfill the law. Secrecy facilitated the Teapot Dome bribery scandal in the 1920s and the oil royalty in-kind debacle eight decades later. Secrecy, in the form of private recordkeeping of production, enabled producers to steal oil from federal lands and Indian reservations in the decades following WWII. Keeping minimum coal lease bids secret, combined with the alleged leaking of a minimum bid to some producer interests, contributed to the notorious 1982 sale of 1.6 billion tons of Powder River Basin coal at a price the GAO determined was 60% below fair market value. To this day, secret minimum bids for coal leases continue to facilitate leasing at amounts below market value. Secret royalty returns by coal producers hide from the public the royalty values and payments on the coal they own and enables persistent underreporting.

Another principle Interior should apply in the design of new management systems is to maximize transparency and public participation—ending the secrecy that plagues the current system. In general, Interior should allow access to information and secure public comment on pending decisions whenever feasible. In particular, that means setting minimum bids and lease boundaries in public, taking comment on proposals for both before soliciting proposals from the coal producers. It also means establishing the values of coal of different quality, heat content and distance for market for royalty purposes based on valid samples of market price data (both public and private), with the resulting composite values posted publicly for producers to use in calculating royalty payments and for the public to know what they are being paid. In this process, proprietary market price data is not released, as will be explained in greater detail later in the report. However, the value that is derived from a sample of proprietary data points would be released because that value cannot, in the normal course, be traced back to individual sales or producers. The value is a composite number that would be developed by Interior.

Based on the maxim "sunshine is the best disinfectant," transparency and public participation obviously improves the integrity of and accountability for coal decisions. Further, it enhances public understanding of those decisions. There are other benefits as well. The diverse issues Interior considers in coal decision-making involves complex information of diverse types, ranging from scientific and financial information to knowledge by citizens of a particular landscape or impacts that are occurring. Interior cannot capture through its own resources all of the reasonably relevant information that bears on particular decisions. Open processes that solicit ideas, information and expertise from the public can be of great aid to decision-making. The United States is an advanced capitalist society overflowing with financial expertise and information, including expertise and information about coal. If

Interior established minimum bids for leases through a public process, it would garner the benefit of this expertise and knowledge in its decision-making.

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Comment Number: 0002495\_Bucks\_20160728-5

Commenter I: Dan Bucks

Comment Excerpt Text:

For similar reasons, lease by application is also an obstacle to determining on a public policy basis the extent to which federal coal should be supplied in response to the nation's energy requirements. The Secretarial Order suggests the PEIS should examine the role of coal in the nation's energy supply. (2) It is difficult to see how that task could be accomplished if the current system were left in place because LBA effectively allows coal companies to answer energy supply issues on their own terms separate from public policy considerations.

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Comment Number: 0002495\_Bucks\_20160728-7

Commenter I: Dan Bucks

Other Sections: 8.7

Comment Excerpt Text:

Transparency and open participation would also connect Interior with the public they are to serve. Coal decisions are made privately with interaction at key points with coal producers whose interest is to minimize payments for the coal itself or for mitigating the external impacts of coal production. The current systems cut off Interior from the public that wants to help secure a fair return from coal and properly mitigate the public costs of its production. These systems are illogical. Privileged access is provided to parties whose interests often conflict with the public interest, while those who want to see the public interest served are kept out of the loop at key stages of decision-making. Adopting open, public processes of decision-making will logically align decision-making with the goals and interests that, under the law, ought be served.

Finally, the public simply has a right to know about the issues and decisions that affect them. Resource management decisions often have major impacts and typically involve choices among public values. The public should have access to such decisions as they are being made and not after the fact, when the impacts may not be mitigated or their values preserved.

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Comment Number: 0002495\_Bucks\_20160728-8

Commenter I: Dan Bucks

Other Sections: 2

Comment Excerpt Text:

Recommendation 3. Through the PEIS, Interior should develop a transparent and participatory coal planning and leasing process that (a) integrates and reconciles energy supply, environmental, social and long-term economic issues, (b) mitigates or reduces the public costs of coal production, and (c) secures a fair return for the public in lease payments.

This section and the following one outlines some working ideas for a new public management system that would be a focus of consideration during the PEIS. The PEIS could well discover and refine even better ways of applying the principles advocated in the prior section. The purpose is certainly not to suggest that these particular ideas must be implemented for they are the best of all available options. Rather their purpose is to provide helpful starting points for further analysis in the PEIS and to illustrate that it is feasible to adopt systems that conform to the principles of "public management in the public interest."

A new system of coal planning and leasing might well begin with a national analysis of energy supply and demand and the largest scale of external effects of coal use and production, especially climate change. The analysis would be updated periodically such as every 5 to 7 years and would be subject to public comments as it is conducted. It would be relevant to and used to support both the leasing and, as explained in the next section, the royalty system. For leasing purposes, this analysis would seek to answer the question, "How much federal coal should be

leased in the foreseeable future?” Answering that question would require addressing subsidiary questions related to estimates of the range of coal needed to supply energy demand, methods of minimizing the harmful effects of coal through substitution of other fuels or changes in technology for using coal, and other relevant issues. For adverse effects of coal production that cannot be eliminated through other means, the analysis could produce estimates of changes in royalties to compensate society for the social costs of carbon.

Once completed, the national analysis would yield a target level of coal to be leased broken down by coal production regions along with an accompanying target level of alternative, renewable energy that might be developed on federal land. Because the level of future coal production is likely to be less than in the past, Interior could also work with other federal agencies and state and local governments to develop strategies to assist coal dependent communities and workers in adjusting to changing energy circumstances. The thread of activity related to coal communities and workers would also be carried through to the regional and community level as a part of mitigating the socioeconomic impacts of the life cycle of federal coal production.

With the targets for both coal and alternative energy production from federal lands, a public planning process could then proceed within each coal production region. The end results of the regional planning process would be to prepare plans and boundaries for broad tracts for coal leasing, tracts of federal land for renewable energy development and mitigation strategies associated with both. Particular attention could be paid to develop tracts for future coal leasing large enough to meet two criteria. The tracts should be large enough to have the potential for attracting competitive bids to help attain a fair return for the public. They should also be of sufficient size to effectively evaluate the environmental and socioeconomic effects of additional development and develop associated mitigation strategies to minimize costs and maximize benefits associated with future development. In terms of methodologies, the regional planning process could draw on the policies, strategies and practices called for in Secretarial Order 3330, “Improving Mitigation Policies and Practices of the Department of Interior,” issued by Secretary Jewell in October 2013, and in the report of Interior’s Energy and Climate Change Task Force of April 2014, “A Strategy for Improving the Mitigation Policies and Practices of the Department of Interior.” Landscape-scale approaches to the development and conservation of resources could be applied as much as possible throughout the regional planning process. In addition, strategies that focus on natural resources should be supplemented by methods of evaluating how socioeconomic conditions and energy infrastructure in the region are affected by coal and alternative energy development. Addressing the needs of coal communities and workers and encouraging the efficient common use of energy transmission facilities by multiple sources of energy are among the topics that could be addressed in this process. The regional planning would be transparent and be assisted by active public participation throughout.

Interior would need to develop policies and practices around the timing of decisions to offer for leasing planned tracts for energy development. Timing decisions are significant for securing a fair return for the public as well as effectively implementing mitigation strategies for development.

Once offered for leasing, Interior should adapt for its use the transparent process used by Montana to lease its Otter Creek coal tracts. An appraisal process would yield a proposed minimum bid that would be subject to public hearings and comment. After the public process, Interior would decide and announce the minimum bid it had set for the tract and would proceed to solicit proposals for leasing. Although bids would be submitted in a sealed process, they would be opened and announced publicly. Decisions by Interior to accept bids, along with their terms and amounts, would likewise be released publicly.

This broad outline of public leasing process should be evaluated and refined through the PEIS. The development of a public coal planning and leasing process of this type should include:

- an evaluation of gaps in information sources,
- the need for new analytical tools to support the process,
- methods of coordinating the process with other public agencies and levels of government,
- procedures for effectively securing public participation in the process, and
- consideration of other tools and practices needed to enable the process to work effectively.

While the details need to be expanded and improved, this type of planning and leasing process should significantly enhance Interior’s ability to secure a fair return on lease sales for the public and minimize external costs on society from coal development.

Comment Number: 0002499\_Nichols20160728-4

Organization I: WildEarth Guardians

Commenter I: Jeremy Nichols

Other Sections: 4.5 2 8.1 8.7 7.1 8.9 11

Comment Excerpt Text:

## 2. Just Transition Alternative

The “Just Transition Alternative” is meant to both wind down the federal coal program in order to keep fossil fuels in the ground and to ensure an orderly, effective, and fair transition of workers and communities away from coal to more prosperous and sustainable economies. The “Just Transition Alternative” is defined by the following key components:

1. An end to federal coal leasing: Consistent with authorities and discretion under the Mineral Leasing Act, the Just Transition Alternative imposes a permanent pause on the leasing of federal coal. The primary basis for adopting this permanent pause would be to ensure the protection of the public interest and the interests of the United States. Such justification for an end to leasing is clearly supported by the Mineral Leasing Act.

This pause would apply to all competitive leases (including all leases by application, including emergency leases, as defined by 43 C.F.R. § 3425.1-4) and lease modifications. We further believe there is ample justification for applying a permanent pause to other forms of non-competitive leasing, such as preference right lease applications and lease exchanges. With regards to lease exchanges, the BLM has clear authority to reject exchanges that are not in the “public interest.” 43 C.F.R. § 3435.4(a); see also 43 C.F.R. § 3436.0-2(b) (related to alluvial valley floor exchanges) and 43 C.F.R. § 2200.0-6 (generally related to exchanges). With regards to preference right lease applications, the BLM has the authority to reject such applications where there does not exist “commercial quantities” of coal. 43 C.F.R. § 3430.5-1(a)(1). Given the dismal state of the coal industry and the overwhelming climate costs that coal imposes on society, it would be dubious at best to claim that any commercial quantities of coal exist where there are preference right lease applications. Accordingly, the BLM has the authority to reject such applications. (20)

Furthermore, to ensure an orderly end to federal coal leasing, the BLM and the Department of the Interior should issue a rule or guidance requiring that as land management planning is undertaken pursuant to 43 C.F.R. § 1610, et seq., that all lands within a resource management area that are not currently leased for coal, be made unavailable for leasing. The authority to impose such direction is set forth at 43 C.F.R. § 3420.1-4(e), which gives the BLM broad discretion to “eliminate additional coal deposits from consideration to protect other resource values.” 43 C.F.R. § 3420.1-4(e)(3).

(20) The only preference right lease applications that exist are in northwestern New Mexico, where Arch Coal, which is currently bankrupt, has the rights to acquire 21,000 acres of leases. Legislation was introduced in the U.S. House of Representatives that would allow the Secretary to retire these preference right lease applications. See HR-1820, available online at <https://www.congress.gov/bill/114th-congress/house-bill/1820/text>. If this legislation is passed, there would be no additional preference right lease applications requiring action. We support this legislation and urge the Secretary of the Interior to encourage its passage in the U.S. Senate and adoption into law.

Putting a permanent pause on leasing will not destroy the U.S. economy or otherwise endanger our energy security. As a recent report looking at leasing in the Powder River Basin found, existing leased reserves in the Powder River Basin are sufficient to meet demand and effectively contribute to limiting temperature increases.

(21) This report is instructive as the Powder River Basin is the largest coal producing region in the United States and imposes the greatest influence on energy supply and demand in the nation. If an end to federal leasing can be justified in the Powder River Basin, it can be justified for federal leasing elsewhere in the U.S.

21 See Exhibit 11, Fulton, M., D. Koplou, R. Capalino, and A. Grant, “Enough Already: Meeting 20C PRB Coal Demand Without Lifting the Federal Moratorium,” Report Prepared for Energy Transition Advisors, Earth Track, and Carbon Tracker Initiative (July 2016), available online at <http://www.carbontracker.org/report/enough-already-2c-powder-river-basin-coal-demand-federal-moratorium/>.

2. Increased royalty rates and rentals: Coal is exacting a tremendous toll on our nation, costing our society

billions in climate damages, adverse health impacts from air pollution, and water contamination. Royalty rates from production on existing coal leases and rentals on existing leases must be increased to begin to recoup the costs of these externalities, which are currently shouldered by the public.

Although royalty rates are normally imposed through new leasing, we recommend that the Interior Department and BLM incorporate higher royalty rates into existing leases as existing leases are readjusted pursuant to 43 C.F.R. § 3451.1. To accomplish this, we urge the amendment of 43 C.F.R. § 3473.3-2(a)(1) and (2) to incorporate increased royalty rates for both surface and underground mining. As leases are readjusted, these royalty rates must be applied to existing leases pursuant to 43 C.F.R. § 3451.1(a)(2).

Increasing royalty rates has been recommended by the White House as both a means to generate revenue and address the costs of environmental externalities, including carbon costs. (22)

(22) See Exhibit 12, Executive Office of the President of the United States, “The Economics of Coal Leasing on Federal Lands: Ensuring a Fair Return to Taxpayers” (June 2016), available online at [https://www.whitehouse.gov/sites/default/files/page/files/20160622\\_cea\\_coal\\_leasing.pdf](https://www.whitehouse.gov/sites/default/files/page/files/20160622_cea_coal_leasing.pdf).

Furthermore, royalty rate reductions should not be approved. Currently, royalty rate reductions are routinely granted as companies claim poverty or difficulty in mining with little apparent scrutiny as to whether the reductions are justified. In Colorado, for example, BLM officials have approved royalty rate reductions to facilitate methane venting and most recently proposed to approve a retroactive royalty rate reduction for a mine that was not even producing coal. (23) See Exhibits 13 and 14.

Similarly, we urge Interior and BLM to amend 43 C.F.R. § 3473.3-1(a) to raise rental rates for federal coal leases. Currently, rental rates are set at \$3.00 per acre, a figure that has not been adjusted since 1979, if not earlier. This rental rate not only has failed to be adjusted to account for inflation, but fails to account for the fact that some leases may be of small acreage, yet yield significant amounts of coal. Rentals should reflect the value of the lease, which depends on the amount of coal a lease contains. In accordance with 43 C.F.R. § 3473.3-1(a), any increased rental rate must be applied to any readjusted coal lease.

3. Existing leases that are not producing must be canceled: Where a lease is not meeting continued operation requirements under 43 C.F.R. § 3483.1(a)(2), it is subject to cancellation pursuant to 43 C.F.R. § 3452.2. Where a lease is not meeting continued operation requirements, BLM and the Interior Department should make clear that cancellation of the lease must be pursued. To this end, discretionary avenues for avoiding cancellation should be prohibited. Thus, lease suspensions under 43 C.F.R. § 3483.3 and payment of advanced royalties in lieu of continued operation under 43 C.F.R. § 3483.4 should be barred.

The justification for imposing such direction is very clear. Currently, BLM regularly grants lease suspensions and allows payment of royalties in lieu of continued operation with no assessment of whether such actions are appropriate or in the public interest. BLM appears to be under the impression that lease suspensions or advanced royalties are somehow mandated, and that the agency has no choice but to approve company requests. An egregious example of this is with regards to Arch Coal’s Carbon Basin Lease in southern Wyoming (No. WYW-139975). Arch acquired this lease with the aim of developing a mine to fuel a proposed coal to liquids facility. However, this coal to liquids facility has never materialized or even shown any promise of materializing. Most recently, the Wyoming Department of Environmental Quality terminated the permit for the proposed facility.

(24) Nevertheless, since 2010, Arch has failed to meet continued operation requirements. The BLM has allowed Arch to maintain its lease, however, by routinely allowing the company to pay advanced royalties in lieu of continued operation. (25) These decisions appear to be pro forma in nature, and do not reflect any consideration as to whether it is appropriate or remotely in the public interest to accept advance royalties in lieu of continued operation.

(24) See Exhibit 15, Wyoming Department of Environmental Quality, “Permit Termination, Medicine Bow Fuel and Power Coal to Liquid Project” (June 27, 2016).

(25) See Exhibit 16.

Furthermore, where an existing lease is not producing, yet is part of a producing logical mining unit, BLM and the Interior Department should use their discretion to modify the boundaries of logical mining units to eliminate the non-producing lease and facilitate its cancellation. BLM has such discretion under 43 C.F.R. § 3478.1.

Cancelling leases that are not producing will serve the goal of preventing any potential future development of

existing leases and contribute to an orderly end to the federal coal program.

4. Accounting for carbon costs in coal management: It should be made clear, whether through new rules or guidance, that carbon costs must be analyzed, assessed and disclosed as federal coal management decisions are made. Such decisions are most likely to include mining plan modifications issued pursuant to the Mineral Leasing Act, 30 U.S.C. § 207(c), and the Surface Mining Control and Reclamation Act (“SMCRA”), 30 C.F.R. § 746, and lease readjustments. It is imperative that the BLM and Interior maintain close accounting of the carbon emissions and costs resulting from its coal management actions, to ensure full transparency around these emissions and costs, and to meaningfully act to address these emissions and costs. Particularly given that, pursuant to authorities under the Mineral Leasing Act and SMCRA, the Secretary of the Interior has full discretion to disapprove mining plans authorizing the development of leased federal coal, it is imperative that carbon emissions and costs factor into and influence such decisionmaking.

5. Reclamation must be guaranteed: To ensure an orderly end to the federal coal program, full and final reclamation must be guaranteed within a reasonable timeframe. We urge two regulatory changes to ensure this occurs.

First, Interior should amend regulations at 30 C.F.R. §§ 816.100 and 817.100 to provide clarification and specificity around contemporaneous reclamation. Current rules are vague and fail to ensure that reclamation proceeds in a manner that is as “contemporaneously as possible” with mining in accordance with 30 U.S.C. § 1202(e). These regulations should be amended to make clear that the success of contemporaneous reclamation must be measured based on a comparison of Phase III bond release acres, as defined under 30 C.F.R. § 800.40(c)(3), with disturbed acres and ensure that reclamation proceeds at a 1:1 rate, in other words for every acre disturbed, one acre should be fully reclaimed to meet Phase III bond release standards.

Second, just as current BLM rules require diligent development of federal coal, these rules should also require diligent reclamation. To this end, Interior and BLM should consider rule changes to ensure that nonproducing coal leases are fully reclaimed within two years of failing to meet continued operation requirements and set deadlines for the full reclamation of federal coal leases that are no later than 2035. This reclamation deadline should be established by rule and incorporated into lease terms as leases are readjusted.

Finally, Interior should amend self-bonding regulations at 30 C.F.R. § 800.23, and any other regulations, as appropriate, to prohibit self-bonding whenever publicly owned coal is permitted to be mined. This will ensure that, as coal companies continue their decline, that American public resources are fully protected and fully guaranteed to be cleaned up.

6. Prioritizing transition: Above all, the BLM and Interior must make transition away from coal a foremost goal as the federal coal program comes to an end. To do this, the agencies should not only explicitly commit, to the extent possible, their leadership, resources, and expertise to ensure that workers and communities receive the support and assistance they need to transition to more sustainable and prosperous economies. Among the actions that Interior and BLM can and should undertake to ensure transition:

- Work to secure Congressional authorization to direct increased royalty and rental payments toward worker and community support. Under NEPA, agencies are required to rigorously explore and objectively evaluate reasonable alternatives “not within the jurisdiction of the lead agency.” 40 C.F.R. § 1502.14(c). Here, although BLM and Interior may not be able to direct royalties toward transition support, they can recommend that Congress pass legislation that provides such authorization.

- Establishing an Economic Transition Fund, which would be sustained by an increase in reimbursement fees charged by the Interior Department when processing coal-related applications. Under the Federal Land Policy and Management Act (“FLPMA”), Interior has authority to recover reasonable costs associated with its coal management program and to appropriate and spend such monies. Specifically, FLPMA provides the Secretary of the Interior with authority to “require a deposit of any payments intended to reimburse the United States for reasonable costs with respect to applications,” including coal lease application. See 43 U.S.C. § 1734(b). Such payments are “authorized to be appropriated and made available until expended” by FLPMA. Id. Funds from the Economic Transition Fund should be directed toward transition-oriented initiatives.

-Prioritizing support and assistance to help communities transition. In addition to securing funds and making them available, the Department of the Interior can play a key role in helping direct communities to support, steering resources to support conservation and research projects in or near communities, encouraging renewable energy development on public lands. Such leadership could be conveyed through a Secretarial Order that simply makes it an overarching priority of the Interior Department to advance transition

Overall, the Interior Department and BLM must move to keep our publicly owned coal in the ground. However, keeping coal in the ground should not mean that we turn our backs on the workers and communities that have been dependent on coal for so long. Embracing an alternative that ensures “Just Transition,” in other a fair, compassionate, and orderly transition away from coal, is the most effective way to both protect our climate and help our nation effectively move to more sustainable economies and reliable and affordable means of energy production.

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Comment Number: 0002503\_Hamman\_20160729-6

Organization I:Lignite Energy Council

Commenter I:Tyler Hamman

Comment Excerpt Text:

The LEC believes that in order to ensure the best return to the taxpayer, the Department needs to analyze the leasing program to find ways to streamline leasing and uphold its statutory mandate to manage public resources for the greater good. The subtitle of the Mineral Leasing Act explicitly states that it is “an act to promote the mining of coal...” and mandates that “no mining operating plan shall be approved which is not found to achieve the maximum economic recovery of the coal within the tract[3]” (emphasis added). While the Department might maintain that it is adhering to the letter of this and other federal laws to promote federal mineral development, the status quo is certainly a gross violation of the spirit of these statutes.

Coal producers in North Dakota are faced with a years-long and costly analysis process, with little guarantee of success or return on investment in pursuing federal coal leases. In addition, with respect to the lignite industry, the federal government has limited options to lease coal due to the small number of producers who are able to mine the lease. Therefore, the lease-by-application process should run in parallel with resource recovery and protection plans, mine plan reviews, and other analysis to expedite the leasing process. Similarly, the federal leasing process must work in concert with state permitting agencies to ensure that a mine plan can be implemented without years-long delays to lease federal coal parcels within the mine area.

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Comment Number: 0002507\_Nettleton\_20160801-10

Commenter I:Jerry Nettleton

Comment Excerpt Text:

Timing and size of lease offerings must take into account the need for existing or proposed operations to have an adequate reserve base, and the time requirements for leasing and permitting. The ongoing support and funding of community, economic, and environmental benefits and programs from existing operations must be considered as offsetting positive impacts.

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Comment Number: 0002507\_Nettleton\_20160801-11

Commenter I:Jerry Nettleton

Comment Excerpt Text:

The leasing process should be streamlined to eliminate the multiple layers of review and approval (resource area/state/federal) by establishing mechanisms and systems for internal consultation and cooperation within the BLM. This administration has created a streamlined process for review and approval of renewable project applications, so it certainly is possible.



Comment Number: 0002507\_Nettleton\_20160801-12

Commenter I: Jerry Nettleton

Other Sections: 4.6

Comment Excerpt Text:

Multiple levels of broad-scope National Environmental Policy Act (NEPA) review should also be eliminated (currently required at the leasing stage - BLM, mine permitting stage - OSMRE, and the utility permitting stage - Various agencies). Separate analyses of the impacts of each action would be more realistic and appropriate (limit "related and connected" actions).

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Comment Number: 0002507\_Nettleton\_20160801-9

Commenter I: Jerry Nettleton

Comment Excerpt Text:

Focus lease offerings on tracts adjacent to existing viable operations and potential new operations which are positioned to take advantage of existing or proposed transportation and generation infrastructure.

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Comment Number: 0002508\_Fields\_20160728-2

Commenter I: Marjorie Fields

Comment Excerpt Text:

Although leasing was set up for bidding, there is often just one company bidding so it is more of a give-away.

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Comment Number: 0003015\_MasterFormN2\_WORC-4

Organization I: Western Organization of Resource Councils

Comment Excerpt Text:

Creating more transparency,

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Comment Number: 000761\_Bucks\_20160623-2

Commenter I: Dan Bucks

Comment Excerpt Text:

The leasing process itself should be thoroughly transparent. When Montana openly leased its Otter Creek coal tracts, it received lease payments more than twice the amount estimated by experts using the BLM valuation methodology. The BLM should adopt Montana's open process and should structure the PEIS around its anticipated use.

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Comment Number: 0020001\_Murnion\_20160712-3

Commenter I: David Murnion

Comment Excerpt Text:

There needs to be a competitive bidding process on Federal Coal Leases so that the coal is sold for real dollars per ton instead of pennies.

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Comment Number: 0020008\_Hoem\_20160712-5

Commenter I: Harold Hoem

Other Sections: 2

Comment Excerpt Text:

Any new coal leases should only be let out if the company can show a demonstrable record of past practices conforming to clean air, land and water standards.

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Comment Number: 0020012\_Holmes\_UCARE\_20160712-16

Organization I: Utah Citizens Advocating Renewable Energy

Commenter I: Stanley Holmes

Comment Excerpt Text:

While the PEIS evaluates the merits of regional leasing versus leasing by individual application, UCARE suggests that the BLM act systemically to adjust royalty rates to reflect the per-unit costs of harm to the public from the negative externalities resulting from coal development. Alternatively, damage-specific "adder" fees might be exacted for individual externality costs.

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Comment Number: 0020031\_Parkins\_20160722-1

Excerpt Text:

First, I'd like to state that the current Lease by Application process works very well and is an efficient way for the BLM to determine which tracts to delineate for leasing. In the past the BLM attempted to identify tracts they felt were good candidates for leasing nominations and wasted time, effort and money to develop interest in tracts that mining companies were not interested in mining. Many of these tracts were identified twenty-five (25) years ago or more and have lain dormant since then waiting for interest. With the current Lease by Application program, only those tracts that have a proponent will undergo the expense to move them forward and there is a good history of these tracts moving to leases.

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Comment Number: 0020031\_Parkins\_20160722-14

Other Sections: 2

Comment Excerpt Text:

It is important for the BLM as part of their strategic planning process to determine the nation's needs on BLM coal lands and to incent mining companies to mine BLM coal lands so that taxpayers receive income on these assets. The BLM or the Department of the Interior should have an obligation to review the expected depletion of coal resources in the United States and understand how this might change the need to lease BLM coal lands. Minimum levels of leasing activity should be set as guidelines to ensure that there are adequate coal resources under lease and actively being mined to keep the nation properly supplied with this key strategic resource and to lessen the possibility of damaging energy price spikes such as occurred in the 1970's, 1980, and to some degree in the first decade of this new millennium.

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Comment Number: 0020031\_Parkins\_20160722-2

Comment Excerpt Text:

Reforms that should be implemented are required time lines for action by the BLM to move the leases forward in a timely fashion. If the allotted time passes the process should move forward with the assumption that no further input is needed.

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Comment Number: 0020031\_Parkins\_20160722-4

Other Sections: 2

Comment Excerpt Text:

The BLM's core mission is to maximize returns to taxpayers. In line with this mission, the BLM should be charged with ensuring that adequate coal lands have been leased to maintain a reliable supply of this low cost energy for the nation's coal fired power plants and future energy needs. This requires a review of the coal under lease to active operations and the likelihood that additional economic reserves will be available to these active operations to prevent an interruption to this important fuel for the nation's energy security. Should shortfalls which might

potentially interrupt a mine's operations or cause a mining operation to bypass BLM coal lands, an expedited process for leasing should be developed to ensure coal lands are not lost due to bureaucratic delays.

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Comment Number: 002003I\_Parkins\_20160722-5

Other Sections: 2

Comment Excerpt Text:

In my opinion the best way to increase competition for BLM coal leases is to provide a reliable process by which proponents can obtain BLM coal. Leasing BLM coal is a very lengthy process without a reliable outcome. This adds risks and cost to any mining company that may be interested in the coal lands and will at some point lower the value to the BLM

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Comment Number: 002003I\_Parkins\_20160722-6

Other Sections: 2

Comment Excerpt Text:

Reducing up-front costs to those parties interested in leasing coal lands from the BLM might also be a way to increase competition. At the moment few companies can afford to acquire BLM coal lands unless there is already an active operation adjacent to these lands because of the high cost of entry to develop a new mining operation. BLM could consider delaying collection of Bonus Bids until mining is initiated on the leases and allow a royalty credit for the capital cost to establish a mining operation on BLM grounds as a means to incent more parties to express interest. They could also increase the period of time over which a Bonus Bid must be paid from the current 5 years to a greater period such as 7 years or 10 years, or the ability to suspend payments in the event of a delay in receiving permits to mine or operate. Additionally, if the Operator is unable to recover the tons advertised by the BLM when the tract is bid a refund of the appropriate Bonus Bid amount when the resource is better defined and permitted would reduce the risks to the Operator which would incent higher bids.

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Comment Number: 002003I\_Parkins\_20160722-7

Other Sections: 2

Comment Excerpt Text:

Another means to increase competition might be to open up the lease rate amount as part of the bidding process. Currently lease rates are fixed.

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Comment Number: 0020052-11

Organization I: Tri-State Generation and Transmission Association, Inc.

Commenter I: Barbara A. Walz

Comment Excerpt Text:

Seeking new ways to simplify the reporting, recordkeeping and administrative burdens for all parties involved; the public, the state and federal agencies that implement the program, and the regulated community.

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Comment Number: 0020056\_DiClaudio\_Bowie-19

Organization I: Bowie Resource Partners, LLC

Commenter I: Gene DiClaudio

Comment Excerpt Text:

there are a variety of legislative reforms that should further be analyzed. These include:

Bonus Bid Reform for Maintenance Tracts

Bonus bids under competitive leasing are required under the FCLAA, and are intended to: (a) provide a mechanism for choosing among qualified bidders, (b) incentivize diligence in production, and (c) compensate

taxpayers for the disposition of federal natural resources. Diligence is independently achieved by the federal diligence regulations and requirements, and taxpayers can be equally or more effectively compensated by payment of federal royalties. Bonus bids were also an effective tool in the 1970s when there were more frequent greenfield coal mine starts, and remain useful for any future greenfield proposals.

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Comment Number: 0020056-10

Organization I: Bowie Resource Partners, LLC

Commenter I: Gene DiClaudio

Comment Excerpt Text:

Third, the PEIS should examine more express and firm deadlines for the various steps in lease processing, including NEPA proceedings. Presently, the only deadlines are various statutory and regulatory minimums. There are very few maximums. Consequently leasing processes can drift for months or years, only coming to a head when the applicant is approaching a supply crisis. Firmer regulatory timelines will not only greatly facilitate planning by the mine operators, they will assist the Department of Interior ( Department ) in securing necessary appropriations to adequately staff the BLM and other offices to meet those deadlines. At this stage of scoping Bowie will not propose any specific timelines for any particular steps in leasing, but simply requests that this be an express subject of analysis, discussion, and recommendation in the PEIS.

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Comment Number: 0020056-14

Organization I: Bowie Resource Partners, LLC

Commenter I: Gene DiClaudio

Comment Excerpt Text:

Moreover, bonus bids serve no selection function when there is only one bidder, which is the norm for maintenance tracts. Consequently, the Secretary should evaluate abandoning bonus bids for maintenance tracts, and instead employ an adjusted revenue-neutral royalty schedule for those tracts. Shifting taxpayer compensation to royalties would significantly streamline the leasing process, ensure that taxpayers are more attuned to market conditions, and reduce the administrative burden on the BLM and Office of Natural Resources Revenue.

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Comment Number: 0020056-18

Organization I: Bowie Resource Partners, LLC

Commenter I: Gene DiClaudio

Comment Excerpt Text:

Federal coal leasing takes too long, and is taking ever longer. For example, the applications for the proposed federal coal leases examined Wright Area Environmental Impact Statement were submitted in the years 2005-2006. The first lease sale of the leases did not occur until 2011. Leasing takes even longer under lands administered by the United States Forest Service. For example, Bowie submitted the application for the Greens Hollow lease tract in 2005. As of this writing, a BLM Record of Decision for the Greens Hollow tract has not yet issued, much less a lease sale.

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Comment Number: 0020056-20

Organization I: Bowie Resource Partners, LLC

Commenter I: Gene DiClaudio

Comment Excerpt Text:

the Secretary should request more precise guidance from Congress on general leasing targets within the proven Lease-by-Application system. In that way the legislative and executive policies toward federal coal leasing can be better harmonized

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Comment Number: 0020056-4

Organization I: Bowie Resource Partners, LLC

Commenter I: Gene DiClaudio

Comment Excerpt Text:

NMA accurately describes the problems associated with rigid, centralized coal leasing. As suggested in Order 3338, one of the drivers for re-consideration of lease sale scheduling appears to be the leasing model employed for oil and gas leases. However, coal leasing is fundamentally different from oil and gas leasing. Oil and gas leasing is inherently about exploration, with wide lease-to-lease variation in whether significant exploitable reserves will be discovered, when they can be brought to market, and the rates that will make sense under current market conditions. In that environment, regular, systematic lease sales are an efficient development mechanism. In contrast, federal coal leasing typically occurs with relatively better quality information about the coal reserve, in the context of maintenance tracts intended to sustain production at an existing mine. Moreover, coal mines are far more capital-intensive than oil and gas drill rigs. An oil and gas lease is essentially about the location and development of a petroleum reserve; a coal lease is typically about the continued operation of an entire coal mine. It is thus that mine specific status and needs that determine the appropriate timing and size of coal leasing, and there is no evidence that such assessment can be performed as well by federal committee as by the mining industry.

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Comment Number: 0020056-6

Organization I: Bowie Resource Partners, LLC

Commenter I: Gene DiClaudio

Comment Excerpt Text:

Long leasing times have significant environmental and economic consequences. On the economic side, lengthy leasing processes increase administrative costs and require applicants to propose larger leases so as to ensure that leased reserves are not exhausted by the time the next round of leasing, permitting, and mine planning can be completed. This requires greater up-front bonus bid submissions, and longer times before that capital can be recovered. Economic pressure from large capital overhangs is one significant factor in the distress currently experienced by the coal industry. Quicker leasing would allow the issuance of smaller, more efficient lease tracts, allowing the industry to be nimbler in responding to economic trends and the needs of their utility and industrial customers.

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Comment Number: 0020056-7

Organization I: Bowie Resource Partners, LLC

Commenter I: Gene DiClaudio

Comment Excerpt Text:

Slow leasing and large leases also have environmental consequences. The greater the gap between lease application and lease issuance, the more likely that environmental analyses will require updating by both BLM and later OSMRE in mine planning, causing further delays. Similarly, large leases inhibit the ability of the mining companies and regulators to respond to developing environmental information.

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Comment Number: WO\_CoalPEIS\_0002437\_Downing\_20160727\_WyMineAssoc-10

Organization I: Wyoming Mining Association

Commenter I: Jonathan Downing

Comment Excerpt Text:

BLM must disclose the absurdity of the belief that they can guarantee competition in the leasing process through rulemaking. Instead BLM must assure that the current rules do not discourage competition. In fact, BLM must reach the conclusion that their determination of an undisclosed fair market value actually works as competition, driving bids up to ensure this threshold is met or exceeded.

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Comment Number: WO\_CoalPEIS\_0002437\_Downing\_20160727\_WyMineAssoc-11

Organization I: Wyoming Mining Association

Commenter I: Jonathan Downing

Comment Excerpt Text:

BLM must consult their files for compliance with the regulatory citations above to reveal that any attempts to engage in speculation have been properly dealt with. BLM also needs to review their lease records regarding diligent development to conclude that diligence has occurred in the vast majority of leases, and where it has not, the proper remedies were applied. In short, the BLM needs to conclude and to publish the findings that the 1976 statutory fixes to speculation were successful. Further fixes are unnecessary.

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Comment Number: WO\_CoalPEIS\_0002437\_Downing\_20160727\_WyMineAssoc-12

Organization I: Wyoming Mining Association

Commenter I: Jonathan Downing

Comment Excerpt Text:

I. The federal coal leasing program is a rigorous, cumbersome, very lengthy, and therefore a very costly program that sets a high bar for those who would choose to participate.

The federal coal leasing program requires considerable capital to participate thereby discouraging some otherwise interested and qualified companies from participating. Participation requires up-front investments of millions-to-over a billion dollars for significant periods of time before a return is ever realized. This severely limits the number of entities interested in or even capable of participating in the program.

Leasing federal coal is only one piece of a much larger program that is designed to provide a financial return on the coal to the American taxpayer. For the American taxpayer to realize the full value of the coal, it must be not only leased, but also mined and sold. In Wyoming, for example, it can typically take five to seven years to successfully acquire a lease for federal coal. At the point of being identified as the successful lessee, a bidder on federal coal will have invested millions of dollars with no return on the investment. At least another three-to-five years are still required to obtain permits and other authorizations before the coal can actually be mined and sold. During those “permitting” years the mining company will invest many millions more, with no return.

By the time the first ton of coal is authorized to be mined, at least ten years will have typically passed. The coal lessee will have invested a staggering sum of money including the bonus bid on the lease. So the American taxpayer will have begun to realize a return on the resource, but the coal lessee will not have realized any return on the enormous investment.

The size of this investment is critical. On a lease of 500 million tons of coal (for example), the investment when the final permit is issued could be in excess of \$650 million. Most of that is in the form of the lease bonus bid which gets distributed to the federal government and the affected state. There are not too many companies that are willing to risk an investment of that magnitude for at least ten years, with no near-term return on the investment.

Moreover, the size of the lease, and therefore the size of the investment, is a function of the time it takes to acquire the next lease. If it takes 10 years to navigate through the leasing/permitting process, a company must always ensure it has more than 10 years of reserves in order to survive the uncertainties of the program. In other words, because of the length of time it takes to negotiate the process, few entities can afford to participate.

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Comment Number: WO\_CoalPEIS\_0002437\_Downing\_20160727\_WyMineAssoc-13

Organization I: Wyoming Mining Association

Commenter I: Jonathan Downing

Other Sections: 2

Comment Excerpt Text:

If, the BLM concludes that the foregoing explanation requires fixing, then the BLM must also conclude that increasing royalties or fair market value of the coal will not be the fix to the absence of competitiveness. In fact, the BLM should conclude that increasing royalties or fair market value will further exacerbate the perceived problem. Instead the agency needs to evaluate ways to dramatically cut the elapsed time between applying for a lease and obtaining all authorizations to mine the coal. This will have the added benefit of accelerating the full return on the resource to the American taxpayer.

To reduce the elapsed time, BLM must consider the consolidation of leasing and permitting processes into the hands of fewer agencies. They must evaluate means for eliminating the overlapping requirements and redundant processes. And finally they must consider revising processes that have become attractive as delay tactics by those opposed to coal leasing and mining. Too much of the process today serves not to enhance the leasing process, but instead to facilitate unending delay to the process at increasing cost to the American taxpayer.

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Comment Number: WO\_CoalPEIS\_0002437\_Downing\_20160727\_WyMineAssoc-14

Organization I: Wyoming Mining Association

Commenter I: Jonathan Downing

Comment Excerpt Text:

The cost of obtaining a federal coal lease represents only a portion of the investment required to mine coal. In order to mine coal for commercial purposes, an operator needs access to mining, processing, maintenance and transportation facilities, equipment and personnel. This means hundreds of millions of dollars of investment in facilities, equipment and employees.

Taken in combination with the cost of the coal, these up-front investments represent the billion-dollar ante required to participate in the federal coal leasing process.

The majority of this ante occurs prior to mining a single ton of the coal in a new proposed lease tract. The significance of this is not only the sheer magnitude of the investment, but also the risk associated with the investment. This may be the greatest fact that limits the number of entities who may have the desire to participate in the process. It also discourages speculation in federal coal leases, contrary to claims in recent articles on this subject.

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Comment Number: WO\_CoalPEIS\_0002437\_Downing\_20160727\_WyMineAssoc-3

Organization I: Wyoming Mining Association

Commenter I: Jonathan Downing

Comment Excerpt Text:

The current leasing model accomplishes what it set out to do. While there may be other ideas that will be considered, BLM needs to first evaluate the efficacy of the charges and allegations that have led to this moratorium and programmatic evaluation. WMA contends that the current model is suitable and flexible enough to address any legitimate concerns that have been voiced, but that most of the issues and concerns are not legitimate with regard to leasing.

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Comment Number: WO\_CoalPEIS\_0002437\_Downing\_20160727\_WyMineAssoc-4

Organization I: Wyoming Mining Association

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Commenter I:Jonathan Downing

Comment Excerpt Text:

The fact is that no protections were lost and no opportunities or control were given away by the Department of Interior when they transitioned from the regional leasing process to the lease by application process. Critics who make this claim today cannot cite any facts to support their position. In this scoping process, BLM should evaluate and confirm that the two processes have very similar requirements. Moreover, BLM should evaluate the Wyoming State BLM Office coal leasing program. You will find that this state office has configured their coal leasing program precisely as the Federal Coal Leasing Amendments Act of 1976 and subsequent rulemakings intended.

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Comment Number: WO\_CoalPEIS\_0002437\_Downing\_20160727\_WyMineAssoc-6

Organization I:Wyoming Mining Association

Commenter I:Jonathan Downing

Comment Excerpt Text:

Competition in the leasing process is a function of many factors that fall completely outside the purview of the BLM. To believe that BLM can guarantee competition through rule-making is absurd, suggesting the BLM somehow controls or has sufficient influence over the national and international coal markets, coal transportation, coal sales and so forth.

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Comment Number: WO\_CoalPEIS\_0002437\_Downing\_20160727\_WyMineAssoc-7

Organization I:Wyoming Mining Association

Commenter I:Jonathan Downing

Comment Excerpt Text:

By definition and rule, the American taxpayer receives a fair return (fair market value or above) on the resource whether there is one bid or many bids. What the BLM can do in their rules is to assure that the rules governing the U.S. federal coal leasing process do not discourage competition or coal production.

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Comment Number: WO\_CoalPEIS\_0002437\_Downing\_20160727\_WyMineAssoc-8

Organization I:Wyoming Mining Association

Commenter I:Jonathan Downing

Comment Excerpt Text:

Current BLM rules have requirements which were designed to prohibit speculation in the federal coal leasing process. This is seen in the rules at 43 CFR Subpart 3483 which require and quantify diligent lease development. Claims that the United States coal industry speculates with federal coal leases have no factual basis, and the BLM does not need a moratorium or a 3-year evaluation to reach that conclusion. The BLM's scoping report should confirm this fact.

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Comment Number: 000001239\_RECKLE\_20160623-2

Commenter I:Eric Reckle

Comment Excerpt Text:

I think that the auctioning off of leases should be that. It should be an auction with two or more people doing it -- companies doing it. But, somehow we have to get that out there. We can't just let one company -- because then, it's not an auction. See, it's just one company giving you some money -- the BLM some money. I think there has to be some way -- I don't know how -- to make it a legal auction so we get the most money out of it for the communities that will be affected.



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Comment Number: 000001243\_ COMPTON \_Utah Mining Association \_20160623-5

Organization I:Utah Mining Association

Commenter I:Mark Compton

Commenter Type: Trade Group

Comment Excerpt Text:

It's difficult to see how the Interior Department or the American taxpayer is harmed by at least proceeding with pending lease applications. The leasing process involves public comment. Environmental stipulations can and are added to lease terms and conditions. And the process includes competitive bidding and confirmation that the bid accepted meets fair market value.

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Comment Number: 000001243\_ COMPTON \_Utah Mining Association \_20160623-7

Organization I:Utah Mining Association

Commenter I:Mark Compton

Comment Excerpt Text:

Unnecessary delays in the leasing process certainly do not result in a fair return to the taxpayer.I believe that public interest is served by policies that keep Federal coal available and competitive in the marketplace. The results of doing so: More revenues,high rates job creation in communities through the supply chain, and low-cost reliable electricity for everyone.

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Comment Number: 000001249\_ WILSON\_20160623-2

Commenter I:Ryan Wilson

Comment Excerpt Text:

If the BLM is truly working for ways to improve their leasing program, then approve the timeliness of this process.

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Comment Number: 000001249\_ WILSON\_20160623-4

Commenter I:Ryan Wilson

Comment Excerpt Text:

I propose that the leasing process be based on time limitations. There should be a set number of days for each step in the process. To start with -- losing my spot. To start with, the recent process from the time the tract is nominated to the time the lease sell is held should take no longer than three years. The NEPA process from the Notice of Intent to the final EIS should take at a maximum a year and a half. The fair market value needs to be completed within a month's time. All notices required to be published in the Federal Register cannot be bounced from desk to desk. Instead, notices should be published within a week of any decision being made. These timelines are not unreasonable.

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Comment Number: 000001250\_ SEGO\_20160623-4

Commenter I:Jeff Sego

Comment Excerpt Text:

It currently takes eight to nine years to get a lease approved. Secretary Jewell's poor decision could easily put that out 10 to 12 years. If you want to review and legitimate fix a problem in the Coal Leasing Program, fix that. The timeframe to get a lease and the cost incurred is shameful.

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Comment Number: 000001257\_ Petersen\_20160623-4

Organization I:Associated Governments of Northwest Colorado

Commenter I:Bonnie Petersen

## Comment Excerpt Text:

[Indiscernible] concerns rates regarding lack of competitors for Federal lease bids. That's a function of pricing on private land leases. Those leases are less expensive than Federal land leases. That impacts the number of companies willing to bid on Federal leases.

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Comment Number: 000001290\_Bruckner\_20160623-2

Organization I:Sustainable Business Development Strategies

Commenter I:Kristi Disney Bruckner

## Comment Excerpt Text:

My testimony will focus on one aspect of this report -- the need to involve local community stakeholders in long-term planning structures, particularly in planning strategies to manage economic transition at the end of the life of a mine. And all mines do, at some point, come to an end. SDSG is an accredited validator for the extractive industry's transparency initiative and also conducts assessments for governments under the intergovernmental forum on mining minerals, metals, and sustainable developments. These initiatives work toward greater transparency of revenue in the mineral sector, but also work to maximize social and economic benefits that may result from the wealth created by the sector. We've learned many lessons through this and other work. But, some of the key themes include the following. First, social and economic planning must be integrated into the mine permitting process and should include ongoing consultation with local community stakeholders. Social and economic impacts must be addressed on the same level as environmental impacts and should be part of an integrated environmental and social impact assessment and management plan. Second, community stakeholders must be consulted in the development of mine closure plans and activities. Mine closure planning should begin early in the life of the mine and should include plans for post-closure economic transition for mining communities. Third, government revenue for mining is optimized when managed at the local level by multi-stakeholder Boards with expenditures based on long-term objectives and ongoing consultation with local communities.

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Comment Number: 000001293\_Porter\_20160623-2

Commenter I:Aaron Porter

## Comment Excerpt Text:

The other thing is that's been brought up is that sometimes you'll only have one bid on a piece of -- on a lease that's right next to an existing coal mine. Well, the fact is is that it costs something like \$450 million dollars to start a new mine. So, if you're going to lease it right next to an existing mine, most operators aren't going to be able to start up a new mine. So, you've already got a mine right next door. They're the ones that bid on it. And that's the way it goes.

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Comment Number: 000001294\_Peterson\_20160623-5

Organization I:GCC Energy

Commenter I:Trent Peterson

## Comment Excerpt Text:

there really needs to be something done with leasing reform to streamline the leasing process and NEPA requirements. And as was said earlier, impose strict time limits to the stages of the application process. Right now the company I work for is looking at a, a [indiscernible] that's been in process for five and a half years. And now it's on hold for three more because of the coal moratorium. If it doesn't meet the exemption qualifications, it's going to cost real [indiscernible] before the Programmatic EIS is done.

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Comment Number: 00001276\_Bear\_20160623-1

Commenter I: Bill Bear

Comment Excerpt Text:

I would specifically like to see the PEIS address the cumulative impacts of the Coal Leasing Program. Specifically, the impacts of lack of leasing and restricting to -- restrictions of leasing.

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Comment Number: 0000731\_Ranii\_20160628-2

Commenter I: Mary Ranii

Comment Excerpt Text:

I'm encouraging the BLM to make this pause on new leases on public lands permanent and to consider revoking leases on existing coal projects on public lands that do not meet strict land health, environmental and safety standards.

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Comment Number: 0000733\_Szybist\_NRDC\_20160628-1

Organization I: natural resources defense council

Commenter I: Mark Szybist

Comment Excerpt Text:

NRDC believes that America's federal lands and waters are a nation's commons to be managed for the common good of all Americans. In the 21st century that does not include coal leasing that scars our landscapes and hinders the crucial shift to clean energy. We support a phase out of fossil fuel leases on federal lands starting with a phase out of new leases and no renewal of non-producing leases.

---

Comment Number: 0000733\_Szybist\_NRDC\_20160628-2

Organization I: natural resources defense council

Commenter I: Mark Szybist

Comment Excerpt Text:

The BIM should be in firm control of when, where and how coal federal coal is leased, not coal companies as is currently the case. The agency should only lease when:

- It can ensure areas for lease are low conflict and away from important wildlife, water, air, and protected lands. Also that coal mine methane is captured.
- Coal companies have demonstrated less than 10-years of reserves available
- Coal Companies meet measurable and enforceable standards for reclaiming mined lands. The scope of the review should be expanded to include OSM
- Taxpayers will get a fair return for coal sold. That means cutting out captive transactions, substantially raising minimum bids, and eliminating royalty rate reductions.

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Comment Number: 0000842\_Mantell\_WildernessSociety-1

Organization I: The Wilderness Society

Commenter I: Joshua Mantell

Comment Excerpt Text:

Number one, we are currently leasing coal at the behest of companies and the coal industry. We need federal land managers and experts to be in charge of where, when and how we lease coal

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Comment Number: 0000842\_Mantell\_WildernessSociety-3

Organization I: The Wilderness Society

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Commenter I: Joshua Mantell

Comment Excerpt Text:

Three, the impacts of coal on the land, water, local communities and our climate are not being accounted for at any point during the leasing process. These impacts should be accounted for and mitigated before a lease is approved.

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Comment Number: 0000845\_Lyon\_NWF-2

Organization I: National Wildlife Federation

Commenter I: Jim Lyon

Comment Excerpt Text:

the leasing application process is neither competitive nor strategic, and as we know the 12 and a half percent royalty is woefully below fair market. The study found that coal leases have attracted only one bidder at rock bottom prices. Recently the Council of Economic Advisors reported that companies used questionable loopholes. As Larry just pointed out, we just lost \$30 billion in royalty rates. So a future program must ensure that these sites are competitive bids, royalties must be at fair market and close loopholes.

---

Comment Number: 0000854\_Doyon\_20160628-4

Commenter I: Michelle Doyon

Comment Excerpt Text:

Finally, BLM has a choice in whether or not to approve proposed coal leases and should base their decisions on the public interests, the administration's climate objectives and how severe the project's environmental and climate consequences are.

#### **ISSUE 5.6 - COAL BONDING**

Total Number of Submissions: 64

Total Number of Comments: 75

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Comment Number: 0000010\_Swingle\_20160526\_Oral-4

Commenter I: Rocky Swingle

Comment Excerpt Text:

Reevaluating whether the practice of "self-bonding" adequately protects taxpayers. When companies like Peabody declare bankruptcy, self-bonding funds are put in jeopardy and ultimately the public will fund what the companies should be paying for.

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Comment Number: 0000012\_Morales\_20160526\_Oral-2

Commenter I: Patrick Morales

Comment Excerpt Text:

End self-bonding and require a deposit equal to 2x expected income by coal company.

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Comment Number: 0000014\_Bicknese\_20160526-1

Commenter I: Erin Bicknese

Comment Excerpt Text:

I'd also like to ask BLM to review bonding regulations and eliminate the use of self bonding by coal companies. As these companies go bankrupt, they are leaving us, the American people, to pay for the damage done

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Comment Number: 00000157\_ PRATT \_20160517-1

Commenter I: Jack Pratt

Comment Excerpt Text:

And, finally, because coal companies had the ability to selfbond or self-insure, the government and taxpayers will be left with the bill. If all of the four U.S. coal companies go under, taxpayers will be left with a \$2 billion to \$3 billion -- that's with a "B" -- price tag to clean up the reclamation and the abandoned mines. How would this fare to taxpayers? Every American has to have car insurance to drive a car. Why shouldn't the coal companies have to be insured the same way?

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Comment Number: 00000158\_ FRENCH \_20160517-3

Organization I: Northern Plains Resource Council

Commenter I: Kate French

Comment Excerpt Text:

All over the West, the dismal rate of reclamation takes its toll on state and local coffers as well. In Wyoming, where self-bonding is allowed, known to recently bankrupt coal companies seem to be able to pay it for the cleanup that was basically insured by the self-bonding process. And taxpayers are the ones who are forced to pay for this burden.

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Comment Number: 00000163\_ MORALES \_20160517-2

Commenter I: Patrick Morales

Comment Excerpt Text:

And in self-bonding of coal facilities and require a cash bond based on an injective cost analysis of cleanup and reclamation of each individual mine, with the primary signature from those mining companies being the -- coming from the CFO and CEO regarding that contract to hold them legally liable if they fail to meet their requirements.

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Comment Number: 00000171\_ BLANTON \_20160517-3

Commenter I: Teri Blanton

Comment Excerpt Text:

The review should also reexamine the practice of self-bonding as well as under-bonding in light of recent bankruptcies of "too big to fail" corporations walking away from responsibilities of reclamation. And the practice of bond forfeitures where bonds do not adequately reflect cleanup. Full-cost bonding is desperately needed.

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Comment Number: 00000176\_ TORP \_20160517-2

Commenter I: Christian Torp

Comment Excerpt Text:

Furthermore, there is an estimated \$3.6 billion, that is billion with a "b," in outstanding self-bonded reclamation liability in the U.S.

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Comment Number: 00000185\_ BICKNESE \_20160517-2

Commenter I: Erin Bicknese

Comment Excerpt Text:

I would also like to ask BLM to review the bonding regulations and eliminate the use of self-bonding by coal companies. When these companies go bankrupt, which they do, they are leaving us, the American people, to pay for the damage

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Comment Number: 00000186\_ GELLERT\_20160517-3

Commenter I: Paul Gellert

Comment Excerpt Text:

I think we need to consider the risks of the bankruptcy and self-bonding issues. It poses a severe risk to reclamation efforts, and it may cost the U.S. taxpayer more than we gain through the leasing program.

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Comment Number: 0000067\_ Laresche\_20160517-3

Organization I: Powder River Basin Resource Council

Commenter I: Bob Laresche

Comment Excerpt Text:

Third, reclamation requirements must be completely revised and rigidly enforced so that water and land quickly are returned to their original best uses truly contemporaneously with mining. Self-bonding, which removes all incentive for timely reclamation and puts taxpayers at risk when corporations file bankruptcy, must be totally eliminated.

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Comment Number: 0000072\_ Tully\_20160517-6

Organization I: Northern Plains Resource Council

Commenter I: Tom Tully

Comment Excerpt Text:

Because the rate of reclamation of the coal mines in the West lags behind the rate of mining, ensure first the bonding is adequate for reclamation and the successful reclamation is completed or well under way before leasing more coal

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Comment Number: 0000076\_ Pfister\_20160517-2

Organization I: Western Organization of Resource Councils

Commenter I: Ellen Pfister

Comment Excerpt Text:

The easy profitable coal has been mined in the last 40 years at a much faster rate than was initially anticipated when leasing began in earnest. The funds to reclaim the mines should be available, but apparently they are not. I could foresee something happening under OSM's aegis where the self-bonded material is sold to satisfy the debtors. The State of Wyoming may decide that the debt for reclamation is too big for it to handle, and then BLM would wind up with their leases with just a big hole in the ground. And there's no way you're going to multiple-use those holes. BLM should not grant any more coal leases until reclamation is caught up with on the leases.

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Comment Number: 0000077\_ Penfold\_20160517-2

Organization I: BLM

Commenter I: Mike Penfold

Comment Excerpt Text:

We need to have stronger bonding. We need to have reclamation. Only 14 percent of the land we lease coal for has been reclaimed that's been mined. Strengthen bonding, you just have to get that.

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Comment Number: 0000085\_ Kresich\_20160517-2

Organization I: Yellowstone Bend Citizens Council

Commenter I: Joan Kresich

Comment Excerpt Text:

For fairness to American citizens and taxpayers for creating revenue for coal communities to make the transition for reclamation for addressing climate change, I hope you'll consider making coal companies pay fair market value for our public coal.

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Comment Number: 0000086\_Bean\_20160517-2

Organization I:Northern Plains Resource Council

Commenter I:Larry Bean

Comment Excerpt Text:

The bonding requirements should be reviewed to ensure there's adequate funds. The very concept of self-bonding provides absolutely no confidence to the public that the reclamation will actually be completed. Schedule bond releases to be set up so that there's always plenty of financial incentive to pursue reclamation to the very end.

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Comment Number: 0000093\_Barteaux\_20160517-2

Commenter I:Wendy Barteaux

Other Sections: 8.9

Comment Excerpt Text:

Institute a minimum bid. Don't allow self-bonding and require coal companies to reclaim old and current leases before buying new leases. Promising to pay for reclamation currently disturbed lands with future supposed profits constitutes a Ponzi scheme.

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Comment Number: 0000099\_Wilbert\_20160517-2

Commenter I:Kim Wilbert

Comment Excerpt Text:

Second, the rule has to be written to not allow coal corporations to self-bond their future mine reclamation costs.

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Comment Number: 0000565-3

Organization I:Western Organization of Resource Councils

Commenter I:Bob LeResche

Comment Excerpt Text:

RECLAMATION REQUIREMENTS MUST BE COMPLETELY REVISED AND RIGIDLY ENFORCED, SO THAT WATER AND LAND ARE QUICKLY RETURNED TO THEIR ORIGINAL BEST USES-TRULY CONTEMPORANEOUSLY WITH MINING. "SELF-BONDING," HAS REMOVED ALL INCENTIVE FOR TIMELY RECLAMATION AND PUT TAXPAYERS AT RISK WHEN CORPORATIONS HIDE BEHIND BANKRUPTCY LAWS. SELF-BONDING MUST BE TOTALLY ELIMINATED, AS PROPOSED IN SEN. CANTWELL'S BILL

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Comment Number: 0000621-1

Commenter I:Marc Thomas

Comment Excerpt Text:

Mining companies have an obligation to buy insurance to cover the cost of cleanups. But Congress has allowed some of the supposedly more financially secure coal producers to "self bond", meaning they promise to pay for cleanups themselves. But "self-bonding" failures can hurt taxpayers and cleanup site residents for years, just like in Moab, as mining companies file for bankruptcy or spend their dwindling dollars elsewhere trying to stay afloat. No wonder a recent congressional estimate puts the nation's unattended cleanup liabilities at \$3.6 billion.

Comment Number: 0000769\_Cascade\_Great Old Broads\_20160623-2

Organization I: Great Old Boards for Wilderness

Commenter I: Robyn Cascase

Comment Excerpt Text:

3. Reform self-bonding and reclamation requirements on leases to ensure money will be available to properly close sites. The current system has resulted in over 3.6 billion dollars of outstanding reclamation costs that will fall to taxpayers, and

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Comment Number: 0000827-2

Organization I: National Wildlife Federation

Commenter I: Sarah Bates

Comment Excerpt Text:

No new leases until self-bonding is banned and surety bonds are in place to ensure complete reclamation.

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Comment Number: 0001102\_CONSTANTINE\_KingCnty\_20160621-2

Organization I: King County

Commenter I: Dow Constantine

Comment Excerpt Text:

At the same time, the Office of Surface Mining Reclamation and Enforcement estimates that there is an over \$3.6 billion outstanding self-bonded reclamation liability in the United States.

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Comment Number: 0001148-3

Organization I: Powder River Basin Resource Council

Commenter I: Bob LeResche

Comment Excerpt Text:

reclamation requirements must be completely revised and rigidly enforced so that water and land are quickly returned to their original best uses truly contemporaneously with mining. Self-bonding has removed all incentive for timely reclamation and put taxpayers at risk when corporations hide behind the bankruptcy laws. Self-bonding must be totally eliminated as proposed in Senator Cantwell's recent bill.

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Comment Number: 0001170-2

Organization I: Earth Ministry

Commenter I: Jessie Dye

Comment Excerpt Text:

think the self-insurance system of coal companies for restoration and reclamation is sinful. I would use that word because it's vague, it's manipulative. They do not actually have the money to restore the land after they bankrupt out of it. So I ask you to change that.

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Comment Number: 0002009\_CenterBioDiversity\_20160329-7

Organization I: WildEarth Guardians

Commenter I: Jeremy Nichols

Comment Excerpt Text:

We also urge you to undertake additional near-term reforms to ensure the integrity of long-term federal coal reform efforts and to demonstrate to the American public the Administration's commitment to success. These near-term reforms must, at a minimum, include: A suspension of all self-bonding under the Surface Mining Control and Reclamation Act where mines are extracting coal from federal leases pending the completion of the



programmatic environmental impact statement. With large coal companies either filing for bankruptcy or nearing bankruptcy, it is critical that Interior take immediate steps to protect the American taxpayer and suspend its approval of any self-bonding involving the mining of federal coal<sup>4</sup> The Office of Surface Mining Reclamation and Enforcement is empowered to exercise oversight with regards to the mining of federal coal, even where states have delegated authority. This oversight authority must be exercised to secure actual surety bonds or other real reclamation guarantees during the pendency of the programmatic environmental impact statement.

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Comment Number: 0002081\_Inouye\_20160626-5

Organization I:University of Maryland

Commenter I:David Inouye

Comment Excerpt Text:

Although restoration of abandoned coal mines is possible, please keep in mind that taxpayers are being forced to assume financial responsibility of many of these efforts as owners of existing coal leases declare bankruptcy or go out of business. BLM needs to assure that funding of restoration efforts will be guaranteed by future lessors of coal resources.

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Comment Number: 0002099\_Notkin\_20160611-3

Organization I:KnowWho Services

Commenter I:Debbie Notkin

Comment Excerpt Text:

whether “self-bonding” is a gift to coal companies at taxpayers; expense

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Comment Number: 0002103\_Phillips\_20160623-3

Commenter I:Thomas Phillips

Comment Excerpt Text:

Ensures that when the existing coal mines close, the coal companies pay for the cleanup and not the US taxpayers

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Comment Number: 0002116\_Sharp\_20160626-2

Commenter I:Margaret Sharp

Comment Excerpt Text:

Self bonding isn't working as a way to guarantee that coal companies are held responsible for repairs made to the damage cause by coal mining

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Comment Number: 0002157\_Burger\_SabineCenter\_09132016-11

Organization I:Sabine Center for Climate Change Law

Commenter I:Michael Burger

Comment Excerpt Text:

Professor Mark Squillace started the panel with a presentation about reclamation liabilities under the Surface Mining Control & Reclamation Act (SMCRA). SMCRA requires companies to restore the area (including soils, hydrologic conditions, and all other resource values) to pre-mining conditions, which is a very costly endeavor. SMCRA also requires performance bonds to ensure the clean-up will take place, but it allows companies to self-bond. Regulatory criteria for self-bonding are relatively stringent, but still not enough to provide a real financial assurance that

the companies will be able to reclaim the land. One key problem is that the the Office of Surface Mining, Reclamation & Enforcement (OSMRE) has allowed parent companies that aren't eligible for self-bonding to meet SCRMA requirements by creating a subsidiary company that is eligible for self-bonding. When the parent

company goes bankrupt, the subsidiary does as well. Professor Squillace concluded by noting that there are some enforcement activities going on right now: compelled by complaints by WildEarth Guardians, OSMRE has issued notices to states re: violations of SMCRA, but the states have responded alleging that there is no violation, and OSMRE has not yet taken further action.

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Comment Number: 0002157\_Burger\_SabineCenter\_09132016-13

Organization I: Sabine Center for Climate Change Law

Commenter I: Michael Burger

Comment Excerpt Text:

During the discussion, the panelists agreed that OSMRE's decision to strengthen the self-bonding regulations might help address some of these problems – particularly if OSMRE required regulators to act more like private financial institutions when deciding whether companies should be eligible to self-bond.

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Comment Number: 0002157\_Burger\_SabineCenter\_09132016-9

Organization I: Sabine Center for Climate Change Law

Commenter I: Michael Burger

Comment Excerpt Text:

He also discussed how the problems with self-bonding became apparent in bankruptcy proceedings, citing the Alpha Natural bankruptcy as an example. Regulators had allowed Alpha to self-bond over \$650 million of its reclamation obligations in West Virginia and Wyoming. The same regulators eventually agreed to a bankruptcy reorganization plan in which Alpha was allowed to split into two companies, one with its most valuable assets and other with remaining high liability assets and no clear plan as to how it will satisfy its reclamation obligations (some money was set aside for reclamation, but not enough to cover all of the costs). Morgan said that the regulators reached this agreement because they were “negotiating with a gun to their head” – that is, the threat of Alpha filing for Chapter 7 liquidation and all of the costs going to the public.

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Comment Number: 0002269\_Holubec\_20160715-9

Commenter I: Allen Holubec

Comment Excerpt Text:

Bonding

- i. Self-bond – do away with this, this enables the companies not to have a pot in the game using “funny accounting”
- ii. Use outside bonding company only
- e. Require concurrent reclamation
- f. Operator may get bond money back for achieving stages of reclamation
  1. 50% of bond returned for final grading (including topsoil)
  2. 25% of bond back for planting
  3. 25% of bond held for the mine until 5 planting seasons have been achieved AND positive vegetation growth has been achieved

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Comment Number: 0002276\_Henderson\_20160715\_350Colorado-4

Organization I: 350 Colorado Board of Directors

Commenter I: Gina Hardin

Comment Excerpt Text:

Coal producers must be required to post real bonds as insurance guarantees to cover real anticipated costs of land reclamation, cleanup, and environmental remediation. The practice of "self-bonding" by companies must be ended. Self-bonding assumes that coal companies will act in good faith to fulfill promises and obligations to clean

up. However, with recent trends and bankruptcies in the coal industry, coal companies cannot be relied on to fulfill promises and obligations; either clean-up will not happen, or taxpayers will bear billions of dollars in toxic and contaminated mine cleanup costs. Self-bonding has continued even when coal companies lack the assets to cover anticipated cleanup costs. For example, shortly before Peabody Energy filed bankruptcy, Wyoming reduced Peabody's cleanup obligation by \$138 million, thus ensuring that taxpayers will bear cleanup costs. Reforms need to end this flagrant subsidy to coal producers and its consequences.

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Comment Number: 0002276\_Henderson\_20160715\_350Colorado-7

Organization I: 350 Colorado Board of Directors

Commenter I: Gina Hardin

Comment Excerpt Text:

- Reform the bonding process to ensure bonds are adequate to cover the remediation necessary, and fully up-to-date
  - o Self-bonding should be prohibited as this practice has been and is being abused by companies
  - o No leniency on reclamation bonds should be allowed due to bankruptcy or poor market conditions; the public should not take on the risks a company takes in the course of business
- Use the BLM National Operations Center to assist BLM Offices and local communities in understanding the transition away from coal based economies, in finding grants and other resources that can help to mitigate economic/social impacts, and dealing with negative or hostile reactions
- Place a "community reclamation" bond or a trust fund for community redevelopment to be used after a mine closes
- In creating this bond, the company should consider ways to ensure communities do not rely solely on the mine for economic stability (contrary to historical coal mining practices)

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Comment Number: 0002278\_Wynn\_20160717-3

Commenter I: Ralph Wynn

Comment Excerpt Text:

The holding of bonds by the coal companies for reclaiming mined lands, "selfbonding", is not a satisfactory means of assuring compliance with adequate reclamation of the devastation done to the land and the surrounding communities. It is too easy for any company to simply walk away from such an obligation as part of a declared bankruptcy. A better, externally monitored and assured, method of adequate amounts of money being set aside should be included in future lease agreements.

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Comment Number: 0002298\_Gordon\_20160720-1

Commenter I: Thomas Gordon

Comment Excerpt Text:

One report has the "self-bonding" deficit at \$3.6 billion. In the PEIS, make a scope that includes a requirement that the coal company have the funds for reclamation set aside in an account that can not be touched by the coal company before the lease is given out.

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Comment Number: 0002304\_McIntosh\_20160720-2

Commenter I: Tom McIntosh

Comment Excerpt Text:

proper and sufficient bonds/guarantees for reclamation of mines

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Comment Number: 0002330\_Hartman\_20160726-1

Commenter I: John Hartman

Comment Excerpt Text:

I think it is criminal that the coal companies have been allowed to self bond their mines, and have been allowed to self report their production for decades.

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Comment Number: 0002391-4

Commenter I: Tom Tully

Comment Excerpt Text:

4) Ensure that bonding is adequate for reclamation, and that successful reclamation is completed or well under way before leasing more coal.

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Comment Number: 0002392-2

Commenter I: Mary Fitzpatrick

Comment Excerpt Text:

All over the west, the dismal rate of reclamation takes a toll on state and local coffers, as well as land health and wildlife. In Wyoming, where self-bonding is allowed, none of the recently bankrupt coal companies seem able to pay for the reclamation that is required by law and that was supposedly ensured by the self-bonding process. These strip-mined lands need to be reclaimed and the taxpayers are forced to pay the debt of coal companies who walk away. In Montana, South Dakota, and Wyoming, only 10% of strip-mined lands have been able to reestablish native species and achieve phase III bond release. Taxpayers are on the hook when coal companies walk away from their obligations.

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Comment Number: 0002393-2

Commenter I: Mike Penfold

Comment Excerpt Text:

Do not allow self bonding. That is probably the reason that 14% of the reclamation has not been completed and will likely leave the public tax payers with the future bill of cleaning up the messes. We have a history of this mine, leave a mess and leave.

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Comment Number: 0002394-3

Commenter I: Barbara Archer

Comment Excerpt Text:

Adequate bonding for reclamation should be required. The public shouldn't be left holding the bag for reclamation and all other externalized costs, such as climate change, and the de facto subsidization of the export market while Billings and other cities absorb safety costs and traffic delays.

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Comment Number: 0002449\_Lyon\_20160727\_NWF-16

Organization I: National Wildlife Federation Action Fund

Commenter I: Jim Lyon

Other Sections: I

Comment Excerpt Text:

Reclamation has been a failure under SMCRA and bonding is not adequate to protect the public from companies non-compliance with reclamation requirements. This is especially true where self-bonding is at issue and financially broke coal operators can not make good on their bonding obligations.

(158) Montana Rule 17.24.1116, available at <http://www.mtrules.org/gateway/ruleno.asp?RN=17.24.1116>.

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(159) Western Organization of Resource Councils, Coal Mine Reclamation and Bonding Fact Sheet (May 2011), available at [http://www.worc.org/userfiles/file/Coal/Coal\\_Mine\\_Reclamation\\_&\\_Bonding.pdf](http://www.worc.org/userfiles/file/Coal/Coal_Mine_Reclamation_&_Bonding.pdf).

According to a report by NWF and partners, of 450 square miles of disturbed land in Montana, Wyoming and North Dakota, only 46 square miles have achieved Phase III bond release demonstrating successful establishment of vegetation and soils to satisfy permit requirements for post mining land uses. (160) Broken down by state, only 6% of disturbed acres in Wyoming have achieved Phase III bond release, just under 10% in Montana, and slightly over 20% in North Dakota. Wyoming has almost five times the amount of disturbed lands as Montana, and well over twice the amount of disturbed land as North Dakota. (161)

(160) Bonogofsky, et al., Undermined Promise II, supra at 4.

Comment Number: 0002449\_Lyon\_20160727\_NWF-18

Organization I: National Wildlife Federation Action Fund

Commenter I: Jim Lyon

Other Sections: I

Comment Excerpt Text:

Again, these failures are exacerbated and made more urgent by the precarious position self bonding has put the public in, with underwater companies no longer likely good for their bonds. According to a recent survey, more than \$3.6 billion in self-bonding obligations were reported by states. (167) The state with by far the highest amount of reclamation obligations backed by self bonded was Wyoming (63% of bonds for a total of \$2,138,201,079), where a vast amount of federal coal resides. Other states with federal coal, like Colorado (57% of bonds for a total of \$117,000,000 in obligations), have a substantial amount of reclamation obligations backed by self-bonding.

(167) Interstate Mining Compact Commission, Self-bonding Survey, available at <http://imcc.isa.us/Self%20Bonding%20Survey.pdf>.

It is important to note that many of these self-bonds are held by subsidiaries of companies, like Arch Coal and Peabody Energy Company, that do not themselves even qualify for self-bonding by virtue of their current insolvency and financial woes. (168) While these subsidiaries are technically structured in a manner that does qualify them for self-bonding, the fact they are backed by insolvent parents demonstrates how tenuous this bonding structure is. With parent companies in bankruptcy, it is highly unlikely the subsidiary companies will be able to fulfill the obligations of their self-bonds, as has been indicated in recent bankruptcy filings. In essence, assets – which have likely proved overvalued particularly as companies' worth has crashed – are obligated first to creditors, with little to none left over to satisfy bonding obligations. This means that the taxpayers are at extreme risk of being left holding the bag for high reclamation and clean-up costs.

(168) For examples, at the end of 2014 before declaring bankruptcy, Arch Coal had a ratio of total liabilities to net worth of 4.05 and Peabody had a ratio of total liabilities of net worth of 3.84, both well in excess of the permitted equal to or less than 2.5. Similarly, Peabody's reported self-bonding has exceeded 25% of its net worth repeatedly since at 2003 (e.g., 37.9% in 2003, 37.9% in 2004, 30.8% in 2005, 26.4% in 2006, 25.8% in 2012, 34.6% in 2013, and 49.9% in 2014. Bonogofsky, Undermined Promise II, supra at 15 & 17

Comment Number: 0002449\_Lyon\_20160727\_NWF-47

Organization I: National Wildlife Federation Action Fund

Commenter I: Jim Lyon

Other Sections: 8.5

Comment Excerpt Text:

Fix coal reclamation before opening up more land to coal mining. For decades, the federal coal program has opened up large areas of the arid west for mining. The requirements of existing law promise and require that land, water, and habitat be protected in the siting and operation of the mines, and fully reclaimed to demonstration standards after mining concludes. While it is primarily the job of the OSM and the states to regulate how coal mining and reclamation occur on federal lands, BLM should work with these sister agencies to

ensure lands and waters are properly protected. As such, before BLM opens up more new coal leases for development, it should require that it be demonstrated by that reclamation is occurring contemporaneously and providing land reclaimed at a higher and better use and that water quality and water resources are protected, even if this means that new rules are promulgated under SMCRA to provide more assurances that reclamation and reclamation enforcement occur.

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Comment Number: 0002449\_Lyon\_20160727\_NWF-48

Organization I: National Wildlife Federation Action Fund

Commenter I: Jim Lyon

Comment Excerpt Text:

End the practice of leasing to companies that are self-bonded. While allowed in some states, the financial woes of the coal industry make the practice of self-bonding extremely risky and greatly increase the likelihood that the public will be left holding substantial mine clean-up costs. It is critical that the public not be left responsible for these costs. As such, BLM should not allow leases for companies that are not adequately bonded by a third party surety, even if relevant states allow for such bonding. However, it is important that bonding reforms that can be made now to better protect the public from the liabilities of failed reclamation move forward now and not wait for or depend upon the PEIS or reform process.

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Comment Number: 0002466\_Smith\_20160728\_SELA-6

Organization I: Safe Energy Leadership Alliance

Commenter I: Rachel Smith

Comment Excerpt Text:

The Office of Surface Mining, Reclamation, and Enforcement estimates that there is more than \$3.6 billion in outstanding self-bonded reclamation liability in the United States.

Our concern is that U.S. taxpayers will be left with the bill for restoring public lands and waters damaged by mining. Updates to the federal coal leasing program should provide certainty that the private corporations that profited from public coal will repair damages to public lands and waters, and that the burden would not be shifted to taxpayers. The DOI's Inspector General should conduct an audit of the self-bonding program and its use to ensure companies have adequate funds or assets to cover the full cost of reclaiming lands and waters after mining. In doing so, the DOI should also seek independent review of bond amounts by hiring a consultant familiar with mine reclamation costs. This review is especially important for bonds held by the federal government for federal lands and minerals.

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Comment Number: 0002467\_Fettus\_20160728-59

Organization I: Natural Resources Defense Council

Commenter I: Geoffrey Fettus

Other Sections: I

Comment Excerpt Text:

Many coal companies "self-bond" to meet reclamation bonding requirements, meaning the company's reclamation commitment is backed only by the company's name and overall financial health, not by sureties or specific pledges of collateral. While it is technically allowed under federal and some state laws, self-bonding is an option, not a requirement. With declining coal company revenues and increasingly decreasing demand for coal, self-bonding practices are becoming more and more risky for State and Federal governments, and concerns will only grow. See, e.g., *Can Coal Companies Afford To Cleanup Coal Country?*, Washington Post, Apr. 1, 2016 (discussing concerns). Across the nation, \$3.5 billion in reclamation liabilities are covered only by self-bonds. Thus, as noted in the Scoping Notice, in recent years some companies mining federal coal resources have sought to shed their reclamation obligations in bankruptcy proceedings. See, e.g., *In re Alpha Natural Resources, Inc.*, No. 15-33896 (KRH) United States Bankruptcy Court, Eastern District of Virginia, Richmond Division (Aug. 3, 2015).

The PEIS should disclose the amount of reclamation liability for federal coal leases that are covered only by self-bonds, disclose the status of those bonds and the financial health of the companies, and disclose any reasonably foreseeable impacts and risks associated with self-bonding practices. This analysis is necessary for all lands overlying leased federal coal, regardless of ownership status, but it is especially important for federal public lands, as self-bonding presents additional risks to the Federal government as the owner and manager of those lands.

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Comment Number: 0002467\_Fettus\_20160728-61

Organization1:Natural Resources Defense Council

Commenter1:Geoffrey Fettus

Other Sections: 2

Comment Excerpt Text:

While BLM regulations require that operators be adequately bonded to fund eventual reclamation activities, see 43 C.F.R. Part 3474, as noted, BLM does not independently evaluate the sufficiency of bonding and leaves such analysis for post-leasing permitting from state environmental agencies and OSMRE.

While determination of the amount and type of reclamation bonding may ultimately come from another agency, as part of its leasing decision, BLM should consider the current bonding status of a mine. As discussed above, one of the bonding methods often allowed is “self-bonding,” which poses the risk of making taxpayers subsidize reclamation obligations should a company financially fail. See, e.g., Patrick Rucker, Arch Coal asks U.S. Bankruptcy Court To Ease Its Cleanup, Reuters, Jan 11, 2016 (reporting that the company asked the Judge to set aside 75 million for cleanup that is estimated to cost more than \$450 million).

To address this concern, under this alternative BLM should consider no longer awarding leases to any company that is self-bonded, regardless of the current financial condition of the company. BLM has this discretion – irrespective of federal and state reclamation bonding requirements – to ensure leasing is in the public interest.

BLM should also consider raising its own bond amounts, to insure adequate coverage of bonus bids, royalties, and other payments. This is especially important given the risk of frequently idled mines and current trends of mines laying off workers and decreasing production. In today’s market conditions, no mine is “too big to fail” and BLM must insure protection of taxpayers.

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Comment Number: 0002467\_Fettus\_20160728-62

Organization1:Natural Resources Defense Council

Commenter1:Geoffrey Fettus

Organization2:Natural Resources Defense Council

Other Sections: 2

Comment Excerpt Text:

Requiring bond release for previously mined lands

Under this alternative BLM would consider management options for new leases – or modification or renewal of existing leases – that incorporate bond release requirements. For example, BLM might require that a company may not obtain a new or modified lease until at least 50% of its current leased acreage has been released from bond. BLM might also not permit additional leasing for mines where reclamation has not been completed after waiting for the required 10 year period, meaning reclamation at that site cannot be demonstrated. Undermined Promise II at 42. These requirements should be accompanied with measurable and enforceable objectives to ensure contemporaneous reclamation standards are met.

While reclamation of mining operations is regulated by OSMRE under SMCRA, BLM can also play a role in helping to meet SMCRA’s commitment to ensure coal mines are reclaimed in a complete and timely fashion that

restores disturbed land, water and habitat features to their pre-mining integrity and productivity. This is especially important in the context of acreage of federal surface lands, including National Grasslands, occupied by mines, as BLM has a regulatory obligation to meet a “multiple use” mandate for federal lands and prevent “undue and unnecessary degradation of the lands.” 43 U.S.C. §§ 1701(a)(7), 1732(b).

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Comment Number: 0002470-16

Organization I: Taxpayer for Common Sense

Commenter I: Ryan Alexander

Comment Excerpt Text:

In recent years, coal companies have qualified for self-bonding in ways that were not anticipated by the original self-bonding rules promulgated in 1983, 18 by the Office of Surface Mining Reclamation and Enforcement (OSMRE), the regulatory authority created by SMCRA. Specifically, large coal companies have used the financial statements of subsidiaries to prove they have the assets available to cover reclamation costs.<sup>19</sup> The practice evolved from a provision in the original rule that allowed operators to post self-bonds using the financial statements of their parent companies. The idea was that a parent company’s financials would support any reclamation liabilities if a producer abandoned a mine. But the same analysis cannot be applied to subsidiaries. (18) 30 C.F.R 700-999

(19) Benjamin Storrow, Casper Star Tribune, “Feds Say Peabody Energy may be violating mining law,” February 17, 2016. Available at:

[http://trib.com/business/energy/feds-say-peabody-energy-may-be-violating-mining-law/article\\_9f9ff61c-a338-5433-b77a-36ccab78b628.html](http://trib.com/business/energy/feds-say-peabody-energy-may-be-violating-mining-law/article_9f9ff61c-a338-5433-b77a-36ccab78b628.html)

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Comment Number: 0002470-8

Organization I: Taxpayer for Common Sense

Commenter I: Ryan Alexander

Comment Excerpt Text:

SMCRA’s self-bonding option has proven inadequate to protect taxpayers for three reasons:

1. When a reclamation liability is bonded – whether by surety, collateral bond or self-bond -- Generally Accepted Accounting Principles allow the related liability to be carried “off balance sheet.” The reclamation liability is not shown on the balance sheet and does not increase total liabilities and the debt-to-equity ratio of the company. As a result, the company appears financially stronger than if these reclamation liabilities were carried on the balance sheet. Off-balance sheet accounting is not a great concern when an independent surety company has analyzed the permittee’s ability to pay and put its own assets at risk or when the permittee has pledged specific, identifiable assets to secure its performance. In both cases, the liability can be satisfied even if other assets carried on the balance sheet become unavailable. When a self-bond is used, the permittee avoids recording a balance sheet liability simply by making a self-serving promise and nothing more. In effect, the permittee distorts the reporting of its financial position by eliminating a liability without affecting the asset side of its balance sheet or shifting potential liability to an unrelated third party.

2. The value on which regulators rely when companies self-bond is always subject to the volatility of the coal market. The circumstances most likely to lead to an inability of the permittee to pay reclamation cost – a drop in the value of mining properties and assets and a drop in profitability – generally render a self-bond inadequate. In addition, current regulatory requirements depend on financial statements to assess the financial health of companies. The assets are not market-to-market, which means that the balance sheet may reflect value that does not exist under prevailing market conditions.

3. Regulators, in theory, can require surety or collateral when a company’s financial performance deteriorates. But that remedy often is not practical because the company’s ability to secure third-party surety



bonds or letters of credit evaporates rapidly. Similarly, liquid assets that might be pledged as collateral can be exhausted as the company experiences negative cash flow. Moreover, the value of illiquid mining assets (the mineral properties and mining equipment) also declines. In effect, in a coal market collapse, regulators depending on self-bonding will be unable to force a substitution of third-party guarantees or rely on company-owned assets to meet the liability. Taxpayers are left to pay for the reclamation costs.

Finally, in the event of a bankruptcy, there is no requirement that a company's promise to pay for reclamation costs through a self-bond will get any higher priority than other creditor claims. Frequently, the same assets used to signify the health of a subsidiary for self-bonding purposes are also posted as collateral to cover debt carried by its parent company. They are, in a sense, "double-pledged." The difference between the pledges, however, is that the parent company's creditors have claim to the assets in a bankruptcy while the regulatory agency does not.

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Comment Number: 0002480\_Culver\_20160728\_TWS-5

Organization I: The Wilderness Society

Commenter I: Nada Culver

Other Sections: I

Comment Excerpt Text:

One issue that has become increasingly significant relative to bonding is the question of "self-bonding." While this issue apparently applies to the OSMRE reclamation bonds, particularly as administered by the states, the BLM should consider this bonding issue in the PEIS. Self-bonding allows companies to avoid posting sureties as bonds and to instead rely on their company's paper net worth to provide assurance of reclamation capabilities. But this has become increasingly problematic as the average share value for publicly traded coal companies has plummeted more than 80 percent in the past two years (4) and as more than half the nation's production capacity is now in bankruptcy proceedings (5), leaving significant question as to whether self-bonded companies will have the capability to meet their reclamation obligations leaving taxpayers exposed to significant financial liability. This must not be allowed to happen. A promise to pay should not be allowed to substitute for a bond. Self-bonds are reported to now cover about \$3.75 billion in reclamation obligations in nine states.

(4) Based on performance of Dow Jones U.S. Coal Index as of July 28, 2016, available at <https://www.google.com/finance?cid=4931635>.

(5) Kuykendall, Taylor and Ashleigh Cotting. "Companies recently filing bankruptcy produce more than 2/3 of PRB Coal." SNL <https://www.snl.com/InteractiveX/Article.aspx?cdid=A-36118340-12086>.

This is a highly risky approach to ensuring reclamation obligations are met and it should not be allowed to continue. Under BLM's bonding regulations the BLM is allowed to set bonding levels sufficient to "assure that the lease bond covers reclamation within a permit area" where the OSMRE tells the BLM that reclamation costs need to be covered because of the lack of a state program. 43 C.F.R. § 3474.3(b)(1). Given the failure of self-bonding, the BLM should strongly consider modifying this regulation to allow it to put in place reclamation bonds where self-bonding has previously been used to guarantee reclamation. The BLM should fully consider in the PEIS whether self-bonding should be permitted on federal lands, and in our view it should not be permitted. The PEIS should provide that the BLM will not lease to self-bonded companies, and if rulemaking is needed to implement this decision it should be initiated. This is the best way to ensure federal lands are reclaimed, as required by SMCRA.

Recommendations: The BLM should carefully consider needed bonding levels in the PEIS, both bonds to ensure compliance with lease terms and conditions, and bonding to ensure reclamation. If needed, bonding amounts should be increased. Assuring environmental protection objectives are achieved and that the companies faithfully meet their lease obligations should be guiding themes. The BLM should put in place a prohibition on the use of self-bonding to meet reclamation bonding requirements on the federal mineral estate.

Comment Number: 0002488\_Sanderson\_20160728-22

Organization I: Colorado Mining Association

Commenter I: Stuart Sanderson

Comment Excerpt Text:

While the Notice only discusses the issue of self-bonding in terms of concerns raised by stakeholders (81 FR 17724), and does not specifically identify proposed approaches or modifications to self-bonding, CMA believes it is inappropriate to consider the issue of self-bonding under the PEIS due to the recent proposed rule, by the Office of Surface Mining Reclamation and Enforcement (hereinafter OSMRE).

The current economic challenges facing some companies have led to the speculative conclusion that companies will not reclaim their operations in the face of financial difficulties, an assumption that is not borne out by the facts. In fact, as our comments on the OSM Stream Protection Rule demonstrate, mining operations in the West continue to reclaim lands in accordance with statute and have an outstanding record in avoiding off site impacts. Even companies seeking the protection of the bankruptcy laws have continued to mine and reclaim in accordance with the laws. Moreover, only companies that meet the stringent criteria for self-bonding may qualify.

CMA contends that changes to the reclamation bonding program conflict with the statutory language of SMCRA that specifically provided for self-bonding, and gives States primacy over reclamation bonding. As such, States are responsible for ensuring adequate financial assurances cover reclamation costs. To that end, States are highly invested in adequate implementation of a self-bonding program. BLM should not interfere with the States' ability to regulate coal resources or to apply their discretionary authority over the bonding of such operations.

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Comment Number: 0002488\_Sanderson\_20160728-23

Organization I: Colorado Mining Association

Commenter I: Stuart Sanderson

Other Sections: I

Comment Excerpt Text:

SMCRA authorizes several methods for ensuring reclamation through bonding. SMCRA section 509(c) specifically provides for self-bonding:

“The regulatory authority may accept the bond of the applicant itself without separate surety when the applicant demonstrates to the satisfaction of the regulatory authority the existence of a suitable agent to receive service of process and a history of financial solvency and continuous operation sufficient for authorization to self-insure or bond such amount or in lieu of the establishment of a bonding program, as set forth in this section, the Secretary may approve as part of a State or Federal program an alternative system that will achieve the objectives and purposes of the bonding program pursuant to this section.”

Any changes to self-bonding must be in compliance SMCRA. Because SMCRA expressly provides for self-bonding, it is outside BLM, and DOI's authority to eliminate or even revise self-bonding as it would take an act of Congress to amend the explicit self-bonding provisions under SMCRA.

Further, the issue of self-bonding is already being considered by OSMRE under the proposed rule issued in May of 2016 (See 81 FR 31880). As such, revisiting the issue of self-bonding under the PEIS is again duplicative, unless the analysis is limited to cumulative effects to the Coal Program.

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Comment Number: 0002493\_Mead\_20160728\_GovWY-44

Organization I: Office of Governor Matthew H. Mead

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Commenter I: MATTHEW H. MEAD

Comment Excerpt Text:

The leasing moratorium as proposed will adversely impact the bonding of reclamation liability. Surety company third party bond instruments and banking institution letters of credit are largely dependent on a company's ability to produce product and secure revenue. Capital requirements for surety bonds or letters of credit are ranging from 22% to 50% of the face value of the bond instrument in the present marketplace for a company with a life of mine greater than 10 years.

The moratorium as proposed will have a negative impact on these types of financial instruments and the ability for an operator to obtain them. When a company's reserves are limited (<10 years), the ability of the company to generate revenue is also compromised. The ability to secure reasonable and affordable financial assurance instruments will become increasingly difficult.

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Comment Number: 0002511\_Krieger\_20160727-1

Organization I: Washington Environmental Council

Commenter I: Emily Krieger

Comment Excerpt Text:

The practice of self-bonding and the burden to taxpayers must be thoroughly examined. The bankruptcies of Peabody Energy and Arch Coal have showed that we need to ensure taxpayers are properly protected in the case that the company cannot pay for the cleanup they are responsible for.

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Comment Number: 0002513\_Lish\_20160707-7

Commenter I: Christopher Lish

Comment Excerpt Text:

Eliminating the practice of "self-bonding" where it allows financially insecure coal companies to escape their obligations to reclaim public lands damaged by coal mining, especially given the recent high-profile coal company bankruptcies and the \$3.6 billion in self-bonds held by coal companies in the U.S.;

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Comment Number: 0003004\_MasterFormD\_TheSierraClub-5

Organization I: The Sierra Club

Comment Excerpt Text:

Reevaluating whether the practice of "self-bonding" adequately protects taxpayers given recent high-profile coal company bankruptcies and the \$3.6 billion in self-bonds held by coal companies in the U.S.;

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Comment Number: 0003016\_MasterFormO\_EarthJustice-5

Comment Excerpt Text:

Eliminating the practice of "selfbonding" where it allows financially insecure coal companies to escape their obligations to reclaim public lands damaged by coal mining

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Comment Number: 0003063\_Clawsey\_G\_06132016-2

Commenter I: Mary Clawsey

Comment Excerpt Text:

At the very least, companies should be required to make monetary deposits before mining to cover the cost of damage.

Comment Number: 0020014\_Coppager\_20160712-2  
Commenter I: R. Coppager  
Comment Excerpt Text:  
neither are the required bonds being posted

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Comment Number: 0020031\_Parkins\_20160722-13  
Comment Excerpt Text:  
Bonds held as part of the existing mining permit process are the best means to ensure reclamation occurs at mine sites after mining has been completed.

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Comment Number: 0020033\_Werny\_20160722-2  
Commenter I: Isa Werny  
Comment Excerpt Text:  
money set aside for mitigation

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Comment Number: 0020043-3  
Organization I: Unitarian Church  
Commenter I: Barbara Davenport  
Comment Excerpt Text:  
Coal companies should be required to carry insurance

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Comment Number: Dvorak\_DvorakRaftingFishing\_20160623-2  
Organization I: Dvorak Rafting and Fishing Expeditions  
Commenter I: Bill Dvorak  
Comment Excerpt Text:  
Self-bonding for coal companies does not work, 26 companies have declared bankruptcy over the past few years leaving roughly 3.6 billion dollars in selfbonding liability that American taxpayers will have to fund.

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Comment Number: WO\_CoalPEIS\_0003061\_Post\_N\_20160707-1  
Commenter I: Charlie Post  
Comment Excerpt Text:  
Ending the practices of self-bonding,

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Comment Number: WO\_CoalPEIS\_0003061\_Post\_N\_20160707-2  
Commenter I: Charlie Post  
Other Sections: 8.9  
Comment Excerpt Text:  
Requiring adequate bonding to FULLY cover the costs of remediation,

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Comment Number: 000001226\_TYSON\_20160623-2  
Organization I: Colorado Wildlife Federation  
Commenter I: James Tyson  
Comment Excerpt Text:  
Self-bonding has allowed some of the country's largest coal companies to avoid putting aside cash, bonds, or

other securities to cover future mine cleanup costs. Instead, self-bonding allows the company to use its own assets as collateral. Being that 26 coal companies have declared bankruptcy over the past few years, and over half of Colorado coal companies are self-bonded. This presents major concerns when considering the future of the lands on which they operate and the communities supported by their jobs.

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Comment Number: 000001239\_RECKLE\_20160623-3

Commenter I: Eric Reckle

Comment Excerpt Text:

I think it's called self-bonding issue. And that's where -- yeah. So, it me, I'd like to do away with that. So, bonding that these companies do, we call a bust bond. Okay. And so, they put the money in this account. So, when the -- when they leave for whatever the reason is, there's a bust bond to help the community survive.

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Comment Number: 00001269\_Post\_20160623-2

Commenter I: Charlie Post

Comment Excerpt Text:

The self-bonding issue, I, I can't believe that that's a no-brainer for anybody else but me. I mean when you have a group of companies that are going bankrupt, you expect them to self-bond. So, that has to come off the table

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Comment Number: 00001279\_Phillips\_20160623-5

Commenter I: Tom Phillips

Comment Excerpt Text:

In addition, the BLM must ensure that when existing coal mines inevitably close, the coal companies pay for the cleanup and not be on the taxpayer

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Comment Number: 0003063\_Clawsey\_G\_06132016-2

Commenter I: Mary Clawsey

Commenter Type: Individual

Comment Excerpt Text:

At the very least, companies should be required to make monetary deposits before mining to cover the cost of damage.

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Comment Number: 0000846\_Hescox\_EvengelicalNetwork-1

Organization I: Evengelical Environmental Network

Commenter I: Mitchell Hescox

Comment Excerpt Text:

we can no longer afford or allow self-bonding by any coal company. The amount of bankruptcies are there, are witnessed around the country. It is that lack of bonding and the externalities that affect, has to be a way to accumulate those external costs.

## **ISSUE 5.7 - FAIR RETURN/COAL REVENUES**

Total Number of Submissions: 282

Total Number of Comments: 466

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Comment Number: 0000010\_Swingle\_20160526\_Oral-2

Commenter I: Rocky Swingle

Comment Excerpt Text:

Including the total, true cost of coal into on the royalty rates that coal companies pay for the right to mine publicly owned coal. The true cost should include the entire cycle of coal use: mining coal, burning coal, and disposing of coal waste, all of which have a negative impact on people and the environment.

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Comment Number: 00000103\_Williams\_Arch Coal\_ 20160517-3

Organization I: Arch Coal

Commenter I: Keith Williams

Comment Excerpt Text:

The Mineral Leasing Act is subtitled an act to promote the mining of coal and requires the department to achieve the maximum economic recovery of coal on federal lands. As you know, the single biggest source of federal coal is the Powder River Basin in Wyoming where Thunder Basin's mines are located. The PRB royalties, taxes, and fees approach 40 percent of the selling price of the product. Few industries anywhere generate such a high percentage of value. It's hard to see how anyone could argue that 40 percent is not an exceptional return for the American public, and arguments to the contrary are disingenuous

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Comment Number: 00000108\_Opfer\_ 20160517-2

Organization I: Thunder Basin Coal Company

Commenter I: James Opfer

Comment Excerpt Text:

At a time when our overall economy is still struggling to return to more robust growth, it would seem imprudent, irresponsible and to a point reckless to further increase taxes on coal in the form of higher royalty rates.

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Comment Number: 00000108\_Opfer\_ 20160517-4

Organization I: Thunder Basin Coal Company

Commenter I: James Opfer

Comment Excerpt Text:

If the need to increase the royalties from the federal leasing program is the real issue, then steps should be taken to improve the return to the American public while making coal on federally controlled lands more competitive in the current marketplace, not less

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Comment Number: 00000110\_Goran\_ 20160517-1

Commenter I: Sarah Goran

Other Sections: I

Comment Excerpt Text:

But increasing the royalty rate definitely will affect the revenues available to federal and state governments and consequently their capacity to deal with the coal industry's economic and environmental legacies, including the need for unemployment benefits, job retraining, and economic diversification. "Once again, I would like to call your attention to a study called 'Mineral Tax Incentives, Mineral Production and the Wyoming Economy' by Shelby Gerking, William Morgan, and Mitch Kunce dated December 2000, University of Wyoming. "This study as well as subsequent work by some of the same authors considers the interrelationships between coal producers, railroads, and the electric utilities. Although the study is approaching 20 years old, its conclusions regarding the market power of railroads, the goal of facility regulation and the negligible effect of taxes is still relevant when considering coal valuation, royalty rates, and lease rates. "The interrelationships between coal mining,

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transportation and utility regulation mean that lower mining costs don't necessarily translate into cheaper power costs for the ultimate consumer

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Comment Number: 00000112\_Lundvall\_20160517-1

Commenter I: Shilo Lundvall

Comment Excerpt Text:

Rates paid on federal coal leases are extensive. Over the last ten years, coal companies in the state have paid in excess of \$3 billion in funds that directly impact schools with \$2 billion of that coming from lease bonus payments.

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Comment Number: 00000115\_Chafee\_20160517-1

Organization I: Jack's Truck & Equipment

Commenter I: Richard Chafee

Comment Excerpt Text:

It's my understanding that the taxes being paid by the mine companies to mine and sell coal add up to a rate of 39 percent. That leaves the remaining 61 percent to be used to cover business expenses, which would hopefully be under that amount. If so, there would be a profit to the company for doing the mining which would be subjected to another 39 percent income tax. Then all the mining employees who are paid income out of the company expenses would also pay their respective income taxes, their Social Security tax, and their Medicare tax. Additionally, if you consider the sales tax that's paid on goods purchased by the mines' employees and the fuel taxes paid on the fuel they purchase, it makes a person wonder how much of every dollar actually does not end up being a tax. As a U.S. citizen, I do not think this is fair. I think we the people are being grossly overtaxed and so are these mines.

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Comment Number: 0000012\_Morales\_20160526\_Oral-1

Commenter I: Patrick Morales

Comment Excerpt Text:

Raise royalty fees to cover the true cost of coal - triple the fees.

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Comment Number: 0000012\_Morales\_20160526\_Oral-3

Commenter I: Patrick Morales

Comment Excerpt Text:

Talk further actions to end "captive transactions"

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Comment Number: 0000013\_Weaver\_20160526-1

Organization I: Appalachian Citizens' Law Center

Commenter I: Robert Henry Weaver

Comment Excerpt Text:

Any industry-wide subsidy should be carefully structured to further the interest of the public as a whole. Coal royalty rates constitute an implicit subsidy that has not be reconsidered in 30 years. This subsidy masks the brutal effects of coal mining on Appalachian communities, from health impacts to social dislocation.

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Comment Number: 00000142\_Deti\_20160517-1

Organization I: Wyoming Mining Association

Commenter I: Travis Deti

Other Sections: 11

## Comment Excerpt Text:

Attempts to artificially increase the fair market value and raise costs of leases on leased grounds appear political with the intent of making the resource uneconomical to develop. If the agency does choose to pursue this, we surely recommend the inclusion of a much more empirical social benefit standard to include not only the positive economic realities of vital jobs and revenues, schools, and infrastructure but the measurable positive contribution and reliable low cost electricity for our country and the world.

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Comment Number: 00000155\_ Paad\_20160517-3

Commenter I: Paul Paad

## Comment Excerpt Text:

talking about the royalties being paid, 12-and-a-half percent royalty paid on coal, on coal leased on federal lands are approximately 40 percent higher than rates paid by coal mined on private land in the Midwest and in the Appalachians. You know, companies also paid an additional fee on coal under these leases

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Comment Number: 00000156\_ Dargon\_ Congressman Phil Rowe \_20160517-1

Organization I: United States Congress

Commenter I: Bill Dardon

Other Sections: I I

## Comment Excerpt Text:

I want to begin by saying that Congressman Rowe believes that the review is unnecessary because the program is working well and providing a fair return to the taxpayers, both at the state and federal levels. To give you a sense of whether the program is giving a fair return, all you need to do is look at what has happened in the communities where coal producers have pulled out and stopped mining. There is widespread economic devastation, and federal agencies crafting these policies don't seem to care.

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Comment Number: 00000158\_ FRENCH\_20160517-4

Organization I: Northern Plains Resource Council

Commenter I: Kate French

Other Sections: I I

## Comment Excerpt Text:

The leasing, bonding, and bid rates set for federal coal mining is intended to count for all these externalities. However, in the West, these costs are far from sufficient. Half the funds collected through federal coal mining in Montana goes back to the state and to our local budgets and this pays for schools and roads. So, when the externalities are not taken into account, this severely affects what we can fund in our state

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Comment Number: 00000163\_ MORALES\_20160517-3

Commenter I: Patrick Morales

## Comment Excerpt Text:

And take further steps to end captive transactions, the captive transactions process for the Powder River Basin.

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Comment Number: 00000163\_ MORALES\_20160517-5

Commenter I: Patrick Morales

## Comment Excerpt Text:

if we must continue to honor these leases which have already been issued, make those royalty fees cover the full cost of those extraction processes

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Comment Number: 00000164\_ LEVENSHUS\_20160517-1

Organization I:Sierra Club

Commenter I:Jonathan Levenshus

Comment Excerpt Text:

Coal companies are taking advantage of these outdated federal rules to mine taxpayer-owned coal at cut-rate prices. This corporate giveaway costs taxpayers and state governments more than a billion dollars a year in lost revenues, money that could be used for local schools, roads, and infrastructure.

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Comment Number: 00000168\_ MOTT\_20160517-1

Commenter I:Barbara Mott

Comment Excerpt Text:

And, first of all, we haven't changed our tax rate in thirty years on the royalty rate from these minerals, from our resources.

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Comment Number: 00000171\_ BLANTON\_20160517-2

Commenter I:Teri Blanton

Comment Excerpt Text:

Also, the low royalty payments paid do not accurately the true cost of coal when we examine the amounts of carbon released, the destruction of the forest land, lowering the cost of electricity production while not allowing a level playing field to develop more sustainable energy choices. A fair review of the Federal Coal Leasing Program will uncover the true cost of coal mining on public lands and in our communities, our health, our wallets, and our planet.

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Comment Number: 00000176\_ TORP\_20160517-1

Commenter I:Christian Torp

Comment Excerpt Text:

Federal coal royalties have not changed in thirty years and are far below the royalty rates on natural oil and gas

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Comment Number: 00000183\_ MCKAY\_20160517-1

Commenter I:Don McKay

Comment Excerpt Text:

One, set the royalty rate at least equal to those of off-shore oil, which is 18 1/2 percent.

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Comment Number: 00000185\_ BICKNESE\_20160517-1

Organization I:

Commenter I:Erin Bicknese

Comment Excerpt Text:

Also, the coal royalty rates are absurdly low, and it's wrong to give away something that belongs to all of us.

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Comment Number: 00000194\_ ROLING\_20160517-1

Organization I:

Commenter I:Dan Roling

Comment Excerpt Text:

. I would just sum this up by saying the royalty rates are way too high. They are not flexible. They don't reflect real current economic conditions. The inability of the coal companies to producing coal relative to the market is governed by regulations instead of by demand. And I think that the federal government should become a lot

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more flexible on allowing coal companies to produce coal when it is needed by the market at a price that is respective of the market, and the royalties should be reduced.

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Comment Number: 00000285\_ Alexander\_TaxCommonSense\_20160519-2

Organization I:Taxpayers for Common Sense

Commenter I:Ryan Alexander

Comment Excerpt Text:

Just because the coal industry pay taxes like every other industry and small business does not mean it should not have to pay fair market value for federal coal. Private landowners charge royalties on the market value of private coal so too should taxpayers, the owners of federal resources.

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Comment Number: 00000290\_ BUNNELL \_20160519-1

Organization I:Bowie Resource Partners

Commenter I:Mark Bunnell

Comment Excerpt Text:

My point here is that as federal coal reserves become geologically more difficult and costly to mine, coal mining companies are incurring greater costs and bear all the financial risk involved. Our federal coal resources are important to our state and country, both of which benefit from royalty payments. Mines in federal coal already pay bonus bids and taxes in addition to the royalty. I feel currently royalty rates and rules are adequate and should be maintained as they are.

---

Comment Number: 00000306\_ OGDEN \_ SevierCounty\_20160519-1

Organization I:Sevier County

Commenter I:Garth Ogden

Comment Excerpt Text:

The Federal Coal Program sustained revenues to the federal and state governments totaling about \$13.8 million since 2003. Keeping the coal in the ground taxpayers lose. I think we are getting a great return from our investment from our coal leasing as it is now.

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Comment Number: 00000322\_ BRISCOE\_ UtahRep\_20160519-1

Organization I:Utah House of Representatives

Commenter I:Joel Briscow

Other Sections: I

Comment Excerpt Text:

The report, looking at coal royalty payments across the United States on federally leased lands from 2008 to 2012, suggests that the Federal Government is not receiving a fair return for taxpayers. They calculated the average, current effective rate of royalty payments of 4.9 percent, but that's without bonus payments. This is short of the statutory 12.3 percent and lower than the effective rates paid by oil and natural gas. As we look at how to structure or restructure these payments in a time of great change, I think it's unfortunate that we're sending inaccurate price signals to the market, even though it's been very disruptive for the lives of many of the people and the families sitting behind me. It's not good for us or for anyone to be sending false signals and encouraging things that are not being appropriately paid for. The estimate of this report estimates that taxpayers lost \$850 million in royalty payments between 2008 and 2012. There are several things we could do. We could do the valuation at the point of sale rather than the mine. We could reduce the amount of deduction for transportation. Research they've done suggested that money they might -- small amounts of money that might be used could be made up for and federal taxes back -- Utah, they estimate, would be -- in state taxes would gain over \$920,000. And the effects on coal production would be minimal, 0 to 1 percent.

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Comment Number: 00000332 \_ Collinson \_ 20160519-1

Organization I:

Commenter I:Angel Collinson

Other Sections: I I

Comment Excerpt Text:

Winter is shorter, warmer, we're receiving less snowfall. And it's having a real impact on skiers like me and our communities here depend on our winter sports economy. The outdoor recreation industry in Utah alone generates 12 billion annually and supports 122,000 jobs, which is one in every ten jobs. So our public lands are really important to us. And I'm speaking at this hearing to ask that the coal industry pays the fair market rate for these lands and not at a discounted rate as it currently can.

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Comment Number: 00000347 \_ Johnson \_ 20160519-1

Organization I:Alton Coal Development

Commenter I:Larry Johnson

Comment Excerpt Text:

Two contentions are brought forward by the secretary for raising royalty rates. One, these rates do not compensate the public for the removal of coal and externalities associated with its use. And, two, the federal coal sales representing nearly 41 percent of the total domestic production artificially lowers market prices, further reducing the amount of royalties received. On the contrary, this is significant evidence that the current royalty rates do provide a return on American public, around \$1.2 billion in 2012 alone. And reports from the Inspector General's office and government accounting office investigating the Federal Coal Program do not propose an increase in America.

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Comment Number: 00000356 \_ Provost \_ 20160519-5

Organization I:

Commenter I:Craig Provost

Comment Excerpt Text:

The federal coal leasing program has allowed our public lands to be used for commercial profit at historically low prices that have not kept up with the actual value of our land and our resources.

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Comment Number: 00000361 \_ Akers \_ 20160519-1

Organization I:Norwest Corporation

Commenter I:Pat Akers

Comment Excerpt Text:

The BLM coal valuation handbook is a comprehensive set of rules directed towards establishing the fair market value of any federal coal lease offered for sale. It includes provisions for the qualifications of an evaluation team, a geologic review, a determination of (reporter unable to hear), a mine plan, operating of capital cost estimates, analysis of coal markets and the selling prices, and three different methods of determining fair market value.

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Comment Number: 00000361 \_ Akers \_ 20160519-2

Organization I:Norwest Corporation

Commenter I:Pat Akers

Comment Excerpt Text:

My comments today focus on concerns about the fair return and market conditions specific to the GAOIG reports, lease sales from one bidder, the discount rate used in the fair market value analysis, the impact of high royalty rates on coal production, lease modifications and the royalty rate reductions, the impact of federal coal

sales on coal prices, higher electricity cost if coal is increased. And the lost revenue for Federal Government would be made up by increasing taxes to all Americans.

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Comment Number: 00000361 \_ Akers \_20160519-3

Organization I:Norwest Corporation

Commenter I:Pat Akers

Other Sections: 8.5

Comment Excerpt Text:

I wanted to hit on one particular issue, the comment in order No. 3338 that notes that about 90 percent of federal coal lease sales receive only one bid and that's typically from the operator of a mine adjacent to the new lease given to a large investment required to open a new mine. Commenters have questioned whether an accurate fair market value can be identified in the absence of a truly competitive marketplace. I will say that based on economics, the owner of the adjacent mine will always have an advantage over other bidders. This is due to the investment the operator has made in infrastructure and equipment that can be used to produce the efficient coal. His cost will be lower than the other bidder because of this investment. Other bidders will need to include this capital, which is hundreds of millions of dollars in their cost, and will need a return on that capital, which will reduce the amount they can afford to pay for the lease. To ensure that the adjacent operator does not take advantage of the Federal Government, the BLM handbook has a special set of valuation rules to determine the minimum bid for these situations. The BLM sets the minimum value in these situations by calculating the value of the mine without the adjacent lease and the value of the mine with the adjacent lease. And the difference between these two values is set as the minimum. This has the effect of transferring all of the profit above the 10 percent discount rate to the Federal Government.

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Comment Number: 0000067\_Laresche\_20160517-4

Organization I:Powder River Basin Resource Council

Commenter I:Bob Laresche

Comment Excerpt Text:

Finally, Interior must reassess the fair return on the nation coal. What is the fair return to the miners, to the communities and states? What is the fair return to the American citizens who own the coal? And what is the fair return to the corporations who lease the right to extract and sell it? There must be new means of assuring competition in bidding, transparent lease valuation, transparent royalty collections stripped of loopholes and unaudited selfreporting, and rational sharing of revenues with the States. The new program must treat fairly the whole broad range of stakeholders.

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Comment Number: 0000068\_Smitherman\_20160517-4

Organization I:The Wilderness Society

Commenter I:Dan Smitherman

Comment Excerpt Text:

Our public lands contain real value that we need to ensure that, when they are used for extraction, we are seeing the full value and our state and the American people are getting a fair share from their resources.

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Comment Number: 0000072\_Tully\_20160517-4

Organization I:Northern Plains Resource Council

Commenter I:Tom Tully

Comment Excerpt Text:

Tighten up loopholes that allow coal companies to underpay royalties in particular by bookkeeping tricks that

allow a company to pay royalties on the price of coal at the mine mouth at a much lower rate than when it is shipped even when owned by the same parent company.

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Comment Number: 0000072\_Tully\_20160517-9

Organization I: Northern Plains Resource Council

Commenter I: Tom Tully

Comment Excerpt Text:

The BLM should be working to maximize the return to the public rather than giving what is essentially a subsidy to the coal industry, even though it could be used to help the communities affected most by the decline in the coal mining industry

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Comment Number: 0000073\_Reavey\_20160517-2

Organization I:

Commenter I: Richard Reavey

Comment Excerpt Text:

Furthermore, with federal coal selling at historic lows, miners being forced out of their jobs, coal producers in bankruptcy, and PRB coal delivering 40 percent of the selling price in taxes, fees, and royalties, there is no economic justification for an increase in royalty or leasing rates. Instead Secretary Jewell has repeatedly stated that royalty and leasing rates should reflect the administration's climate objectives. If so, she should seek amendment of the Mineral Leasing Act in Congress because Congress has the authority to impose new taxes, not the Secretary. There's no economic justification for royalty and leasing rate increases. So any attempt to impose new increases on the basis of the administration's climate objectives is a social cost, a carbon tax, a climate tax, or whatever else she would like to call it, is illegal. Attempting to keep it in the ground by imposing taxes and fees that discourage the maximum economic recovery of coal is illegal.

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Comment Number: 0000074\_Alexander\_TaxpyrComnSense\_20160517-2

Organization I: Taxpayers For Common Sense

Commenter I: Ryan Alexander

Comment Excerpt Text:

Interior also undervalues federal coal when it is sold. The coal companies often sell coal to assist (unintelligible) and then turns around and sells it for a much higher price. Interior collects royalties on the lower price. According to the Energy Information Administration, these captive sales accounted for more than 30 percent of coal sales in Wyoming and Montana in 2013.

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Comment Number: 0000074\_Alexander\_TaxpyrComnSense\_20160517-3

Organization I: Taxpayers For Common Sense

Commenter I: Ryan Alexander

Comment Excerpt Text:

Then there's the shroud of secrecy that surrounds BLM's work. BLM does not disclose how it estimates fair market value and defines it by its own rules. The bids for leases are sealed. BLM cannot provide an accounting of the number of leases with reduced royalty rates. The process BLM uses to make sure taxpayers get fairly compensated is wiped out, also important to federal taxpayers especially those who live in states with significant coal production from federal land. As we've seen in Inspector General and Government Accountability Office reports have documented, even an undervaluation by a single penny per ton would result in a multi-million-dollar revenue loss. Undervaluation and problems with the coal program have already cost taxpayers billions of dollars.

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Comment Number: 0000075\_Anderson\_20160517-1

Organization I: Powder River Basin Resource Council

Commenter I: Shannon Anderson

Comment Excerpt Text:

Unfortunately, significant public revenue has been lost because of chronic under-valuation of coal-lease bonus bids and resulting subsequent losses from underpaid royalties. Recent government reports have shown that raising bid amounts a mere penny could bring up to \$7 million of additional revenue.

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Comment Number: 0000077\_Penfold\_20160517-1

Organization I: BLM

Commenter I: Mike Penfold

Comment Excerpt Text:

We're in a transition period of time, and there's no question that we're going to be leasing and mining coal for a long time. So let's get the pricing right. We heard how important the price is for the schools here in Wyoming. Let's not subsidize anything. The communities need the funds.

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Comment Number: 0000081\_Lempke\_20160517-2

Organization I: Tri-State Generation and Transmission Association

Commenter I: Doug Lempke

Comment Excerpt Text:

Consider the true cost to mine federal coal including state and federal royalty payments, all bonus bids, ad valorem property taxes, ad valorem production taxes, sales and use taxes, severance taxes, and abandoned mine land fees, new ways to simplify reporting and administrative burdens for all parties involved.

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Comment Number: 0000081\_Lempke\_20160517-4

Organization I: Tri-State Generation and Transmission Association

Commenter I: Doug Lempke

Comment Excerpt Text:

Curtailment or elimination of federal coal will simply shift the emphasis to use of private coal and eliminate any royalty payments and increase electricity costs.

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Comment Number: 0000082\_Marshall\_20160517-3

Organization I: Cloud Peak Energy

Commenter I: Colin Marshall

Comment Excerpt Text:

Further, with domestic federal coal producers bankrupt, coal prices at historic lows, and taxes and fees on Powder River Basin coal alone at over 40 percent of the selling price, there is no economic justification whatsoever to increase royalties or lease rates.

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Comment Number: 0000083\_Shober\_20160517-1

Organization I: Campbell County Commissioner

Commenter I: Mickey Shober

Comment Excerpt Text:

People are not spending their money. They're hanging on to it. So if we took coal that's \$11 a ton, the taxes at 12-and-a-half percent royalty would be a buck 30. The average bonus on that coal is a dollar per ton. The AML money that is assessed on a ton of the coal is \$0.28, black lung is \$0.55, state severance is 5.3 percent, county tax

is 4.5 percent -- which adds another \$1.08 to that value. So in total on an \$11 ton of coal, there's \$4.28 in taxes, which is probably one of the highest tax rates of the minerals industry in the United States.

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Comment Number: 0000088\_Kasperik\_Heart of Coal\_20160517-1

Organization I:

Commenter I:Norine Kasperik

Comment Excerpt Text:

The current system provides stable and very significant tax and royalty revenue

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Comment Number: 0000088\_Kasperik\_Heart of Coal\_20160517-2

Organization I:

Commenter I:Norine Kasperik

Comment Excerpt Text:

There is no evidence whatsoever to support claims that the current rules for royalty valuation don't work or that the American people are not getting their fair value. There is a great deal of evidence that the extremists are prepared to hoodwink the American people, manipulate the media, subvert the law to keep coal in the ground.

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Comment Number: 0000089\_Anderson\_WySenate\_20160517-1

Organization I:Wyoming Senate

Commenter I:Jim Anderson

Comment Excerpt Text:

Currently, royalty rates are above market, and an increase will only result in decreased production, decreased return on investment for taxpayers. That hurts schools, roads, infrastructure, hurts everybody in this state and the nation.

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Comment Number: 0000091\_Stubson\_WyLSO\_20160517-2

Organization I:Wyoming Legislature

Commenter I:Tim Stubson

Comment Excerpt Text:

I want you to keep in mind that, as you look at royalty rates, it's not just royalty rates. It's royalty rates combined with the bonus money, combined with the black lung excise tax, combined with AML, combined with severance, combined with county ad valorem. When you look at those together -- and you've heard this figure before -- 39 cents of every dollar of coal produced in the State of Wyoming goes to government. You cannot look at that figure and conclude that coal does not pay its fair share.

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Comment Number: 0000092\_Bradley\_MtWildFed\_20160517-3

Organization I:Montana Wildlife Federation

Commenter I:John Bradley

Comment Excerpt Text:

Montana Wildlife Federation believes that updating the royalty payment system is the best way to minimize further destruction of wildlife habitat and ensure the coal companies pay their fair share for mining our land

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Comment Number: 0000093\_Barteaux\_20160517-4

Organization I:

Commenter I:Wendy Barteaux

Comment Excerpt Text:

When considering the market value, consider all the taxes that are placed on coal, but also determine and add in the cost associated with burning that coal, the cost of climate, cost of health, the cost of other industries such as agriculture and tourism.

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Comment Number: 0000279\_Nelson\_20160519-1

Organization I:

Commenter I:Laura Nelson

Comment Excerpt Text:

Utah's coal economy is especially important to rural Utah, and I want to join also in thanking all of those from our rural communities that are here today. It provides roughly 2000 direct, high-paying jobs, and a significant portion of several rural counties' tax base.

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Comment Number: 0000283\_King\_20160519-1

Organization I:

Commenter I:Bill King

Comment Excerpt Text:

They should be asking for economically and environmentally safe ways to obtaining maximum coal extraction rates which would in turn provide an increased return of revenue while protecting the environment. If the BLM and other government agencies believe that increasing royalties causing coal to stay in the ground will benefit the environment, they are honestly mistaken. The cost of reducing emissions are enormous.

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Comment Number: 0000363\_HEIN\_20160519-3

Organization I:Institute for Policy Integrity

Commenter I:Jayni Hein

Comment Excerpt Text:

The Interior should evaluate whether the current coal program earns fair market value for taxpayers by reexamining its statutory mandate and conducting a cost-benefit analysis of the program. This analysis should take into account current royalty rates, bids, rental rates, jobs, and other economic benefits, as well as social and environmental costs.

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Comment Number: 0000511\_Pfister\_WesternOrg of Resource Councils\_20160517-4

Organization I:Northern Plains Resource Council

Commenter I:Ellen Pfister

Comment Excerpt Text:

BLM also has a responsibility to obtain the best price possible for the coal belonging to the public. It will need to look beyond the various flimsy corporate veils until it finds the first arm's length transaction between the mine operator and the coal buyer. When the coal was being set up for leasing here in the Bulls, the mine president came to the hearing and handed over an armload of financial records to BLM. I wondered which set of books they were. The justification for the lease price was kept totally secret, as were the means by which BLM determined if the price was adequate. Somehow, that did not seem like the way for the public's business to be conducted.

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Comment Number: 0000516\_Whyde\_20160517-2

Organization I:

Commenter I:Don Whyde

Comment Excerpt Text:



The 2nd is rock bottom natural gas prices prompting electric utilities to close older coal fired plants. This in the short term and maybe long term is the biggest problem facing the industry according to platts coal trader. When gas prices climb certain varieties of coal will be cost competitive. For example: Platts coal trader estimates that P.R. Basin coal is cost competitive when Nat. gas reaches \$2.50MMbtu or above

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Comment Number: 0000518\_Madden\_20160517-1

Organization I:Wyoming Legislature

Commenter I:Michael Madden

Comment Excerpt Text:

Before the BLM contemplates raising coal taxes this should be considered: In the Powder River basin, Federal, state and local taxes right now absorb about 40% of the market value of coal. This industry is already the highest taxed and highest regulated industry in the state of Wyoming - an industry that is already losing hundreds of millions annually and incurring bankruptcies.

Even the GAO and Interior Inspector general have separately found that the current coal lease program is sound and generates billions to the United State taxpayers.

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Comment Number: 0000520\_Barrasso\_US Senate\_20160517-2

Organization I:United States Senate

Commenter I:John Barrasso

Comment Excerpt Text:

In the last decade, ninety-five percent of bonus bid payments paid on federal coal were used to fund the construction of public schools. Thirty percent of royalties paid on federal coal were used to fund the operations of public schools and pay teacher salaries. Fifty percent of royalties paid on federal coal go toward general government operations, including environmental protection, health, justice, public safety, and higher education

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Comment Number: 0000520\_Barrasso\_US Senate\_20160517-3

Organization I:United States Senate

Commenter I:John Barrasso

Comment Excerpt Text:

If the Administration really wants to get a greater return on federal coal, it should reverse course immediately. It should scrap its new regulations on the production and consumption of coal. It should stop artificially suppressing demand for coal in the United States and around the world.

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Comment Number: 0000520\_Barrasso\_US Senate\_20160517-5

Organization I:United States Senate

Commenter I:John Barrasso

Comment Excerpt Text:

Given these numbers and the fact that BLM is having trouble selling federal coal now, it's inconceivable to me that BLM is considering raising the price on federal coal or restricting exports of federal coal. If anything, BLM should consider lowering prices on federal coal and promote exports of federal coal.

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Comment Number: 0000542-2

Organization I:Vulcan Inc.

Commenter I:Dave Stewart

Comment Excerpt Text:

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Here, BLM sells federal coal from Montana, for example, at an average price of 12 cents per ton, while the full cost to the public of burning that coal is over \$70 per ton.

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Comment Number: 0000543-3

Organization I:

Commenter I:Dianna Moesh

Comment Excerpt Text:

The low royalty rate and lack of competition in bidding “value coal” from end use rather than value at mine

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Comment Number: 0000544-1

Organization I:Climate Solutions

Commenter I:Kimberley Larson

Comment Excerpt Text:

The BLM and Department of Interior needs to fully account for the cost of coal sold from public lands. Taxpayers are not setting a fair share of the coal leased from public lands. The fact that at least 10% of carbon emissions comes from coal mined on federal lands acts against our U.S. climate reduction goals. And the cost is \$70/ton but sold for \$.12/ton.

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Comment Number: 0000556-1

Organization I:Conservation Northwest

Commenter I:Jeff Baierlein

Comment Excerpt Text:

Coal industry royalty rates are dramatically below standards in the oil and gas industry, and should be increased to at least the offshore Federal lease rate to reflect the full environmental and social costs of coal extraction.

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Comment Number: 0000565-4

Organization I:Western Organization of Resource Councils

Commenter I:Bob LeResche

Comment Excerpt Text:

INTERIOR MUST REASSESS "FAIR RETURN" ON THE NATION'S COAL. FAIR RETURN TO AMERICAN CITIZENS WHO OWN THE COAL OF COURSE. BUT ALSO FAIR RETURN TO THOSE ONTO WHOSE BACKS MASSIVE COSTS ARE NOW EXTERNALIZED - WE WHO BREATHE THE AIR, WE WHOSE GRANDPARENTS RAISED CATTLE ON GRASSLANDS AND AQUIFERS MINED FORTY YEARS AGO AND NOT YET RECLAIMED, WE WHO WAIT INTERMINABLY AT RAIL CROSSINGS IN OUR SMALL TOWNS AND LARGE CITIES. THERE MUST BE NEW MEANS OF ASSURING COMPETITION IN BIDDING; TRANSPARENT LEASE VALUATION; TRANSPARENT ROYALTY COLLECTION STRIPPED OF LOOPHOLES AND UNAUDITED SELF-REPORTING

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Comment Number: 0000606-1

Organization I:

Commenter I:Kristin Winn

Comment Excerpt Text:

The leasing rates do not take into account the true costs to the environment and the surrounding communities when coal is developed on federal lands

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Comment Number: 0000608-1

Organization I:JE Stoer & Associates

Commenter I:Tamme Bishop

Comment Excerpt Text:

The GAO recently concluded that 12.5% is already a "fair return".

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Comment Number: 0000608-2

Organization I:JE Stoer & Associates

Commenter I:Tamme Bishop

Comment Excerpt Text:

Increasing royalty rates will affect, increase the cost/ton of mining coal. Will that cost be accounted for? It will be passed on to the consumer, so cost of electricity will increase.

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Comment Number: 0000608-6

Organization I:JE Stoer & Associates

Commenter I:Tamme Bishop

Comment Excerpt Text:

How is "fair return" on leasing defined?

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Comment Number: 0000610-1

Organization I:City of Craig

Commenter I:Ray Beck

Comment Excerpt Text:

The current program also provides a more than fair return for taxpayers as current royalty rates are above market value and have contributed \$13.8 billion in revenue to federal and state governments since 2003. Coal producers currently pay the public almost 40% of every dollar they collect from the production of federal coal. If the BLM is truly concerned about maximizing a strong return on investment for taxpayers, it will consider decreasing royalty rates, streamlining the leasing process and making the permitting process more efficient.

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Comment Number: 0000614-1

Organization I:Bowie Resources

Commenter I:Garrett Atwood

Comment Excerpt Text:

The fair market valuation process is currently using a 10% discount rate. Given current market conditions, this discount rate is too low and doesn't properly account for the high cost of capitol expended by coal mining companies today nor does this rate properly account for the roles the proponent assumes when actually mining the resource. This rate should be changed to +20%.

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Comment Number: 0000618-3

Organization I:Citizens for Clean Air

Commenter I:Karen Sjoberg

Comment Excerpt Text:

We realize you are also required to review royalty rates, and we urge you to raise rates and remove loopholes in order to ensure Americans a fair return for our resources. The federal royalty rate should account for the environmental costs of coal production.

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Comment Number: 0000624-1

Organization I:

Commenter I:

Comment Excerpt Text:

The current effective tax rate on each ton of federal coal mined is 39%, including royalties, bonus bids, AML tax and black lung tax.

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Comment Number: 0000628-1

Organization I:

Commenter I:Elizabeth Lindren

Comment Excerpt Text:

I don't see how increasing royalties would increase the taxpayers return on the resource. It seems to me that the result would be the opposite. Increasing royalties would make many marginal reserves uneconomical to mine and therefore there would be no revenue return from those reserves.

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Comment Number: 0000631-1

Organization I:Taxpayers for Common Sense Making Government Work

Commenter I:Jill Lancelot

Comment Excerpt Text:

the current structure lacks transparency and competition, making it difficult to assess the fair market value of federal leases. Between 1990 and 2012, 90 percent of leased tracts received only a single bid, usually from the company that proposed the tract. The public has no idea how much its coal is actually worth or how much revenue it might be losing.

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Comment Number: 0000632-1

Organization I:Bowie Resources

Commenter I:Garrett Atwood

Comment Excerpt Text:

Royalty rates on federal coal and bonus bid payments should be significantly reduced in light of declining coal market conditions

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Comment Number: 0000634\_Veuzke\_20160623-1

Organization I:

Commenter I:Ryan Veuzke

Comment Excerpt Text:

The current federal coal leasing program pays extraordinary dividends to the American people. Further, the value of coal to the American people isn't just royalty revenue - the value of high paying jobs and reliable, affordable energy has to be taken into account as well.

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Comment Number: 0000634\_Veuzke\_20160623-2

Organization I:

Commenter I:Ryan Veuzke

Comment Excerpt Text:

Increases in coal prices induced by higher royalty rates will flow through to the electricity market due to reduced production on federal lands. The states that rely on coal for the bulk of electric generation consistently enjoy

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lower electricity rates. Whatever incremental revenue the Department believes it will obtain from increasing the coal royalty rate will be at the expense of American businesses and families paying higher utility bills.

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Comment Number: 0000749\_Doddings\_20160623-1

Organization I:

Commenter I:G Doddings

Comment Excerpt Text:

Fair Return - In evaluating "fair return" the analysis must consider all components of return and economic benefits from leasing and production of the resource including bonus bid payments, rents, royalties, AML feed, Black-lung taxes, state and local property taxes, sales taxes, employment taxes, local/regional/state/national benefits of low-cost reliable power from coal for businesses and utility rate-payers. Advocates of increasing coal royalties point to the Headwaters Economics Report as support for their contentions, however, information compiled from the Energy Information Administration (EIA) by Senator Ron Wyden (D-Oregon) indicates that coal operators have paid much higher royalties (does not take into account bonus bid and rental payments) than indicated by the Headwaters work. It must be noted that BLM policy includes setting "fair market value" for proposed lease sales.

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Comment Number: 0000749\_Doddings\_20160623-2

Organization I:

Commenter I:G Doddings

Comment Excerpt Text:

Market Conditions - Excessive regulation, discriminatory government policies, artificially low natural gas prices resulting from over-supply, and export barriers have resulted in very weak coal markets. Decreases in coal production, extensive layoffs, coal company bankruptcies, and significant adverse economic and social impacts on affected communities and regions have been the direct consequence of these conditions. These are very real and immediate impacts which must be considered in any objective analysis. The current coal program includes provisions (royalty rate reduction) which can be used to reflect and adjust for adverse geologic, mining, and other conditions. The potential exists to also include market conditions as an adjustment factor.

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Comment Number: 0000750\_Atwood\_20160623-8

Organization I:

Commenter I:Garrett Atwood

Comment Excerpt Text:

If this Programmatic EIS review intends to try to ascribe a per ton "adder" to be paid to reflect a perceived cost of harm to the public from the negative externalities from coal development than an equal effort should be made to acknowledge and assess the benefits afforded to the public from the positive externalities of coal development and use. I believe that the benefits of reliable and affordable energy far outweigh the associated risks and, if anything, trying to value externalities of coal mining should result in a reduction in the cost of leases and royalties.

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Comment Number: 0000753\_Smaldone\_FriendsCoal\_20160623-1

Organization I:Friends of Coal West

Commenter I:David Smaldone

Comment Excerpt Text:

Rates paid on federal coal are excessive. Coal producers pay 40% of the selling price of coal in taxes, fees and royalties, and there is no justification to increase royalty or leasing rates. To increase these rates will leave less revenue for states and communities, fewer jobs, higher energy prices and will hit all Americans in the checkbook.

Education programs, road and public safety will suffer as well.

If the federal government is interested in maximizing the return on investment for taxpayers, it would incentivize development of federal coal by reducing royalties and other fees, making permitting processes more efficient and basing bonus bids on the amount of coal that is actually recoverable.

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Comment Number: 0000755\_Luke\_20160623-1

Organization I:

Commenter I:Forrest Luke

Comment Excerpt Text:

When bonus bids, severance taxes and other fees are factored in with the existing 12.5% royalty rate, coal removed from federal lands is already taxed at a staggering effective rate of 39%.

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Comment Number: 0000755\_Luke\_20160623-2

Organization I:

Commenter I:Forrest Luke

Comment Excerpt Text:

Raising royalty rates to the point that the economic playing field is tilted against coal will not increase revenues available to assist Colorado communities or our school children. Quite to the contrary, the revenue stream will dry up as coal operations cease and Colorado coal field communities are forced to suffer the associated devastation.

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Comment Number: 0000756\_Reece\_Club 20\_20160623-3

Organization I:CLUB 20

Commenter I:Christian Reece

Comment Excerpt Text:

The proposed coal valuation rulemaking would upend the current valuations regulations that have proven to be effective and have provided stable and significant tax and royalty revenue to both state and federal governments. Royalty rate increases are wholly unnecessary as the existing burdens on federal lessees amount to 39% effective tax rate which is significantly higher than what would be seen from private coal production. This royalty rate increase would actually disincentivize federal coal production and cause revenues to decrease.

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Comment Number: 0000769\_Cascade\_Great Old Broads\_20160623-1

Organization I:Great Old Boards for Wilderness

Commenter I:Robyn Cascade

Comment Excerpt Text:

Increase 30-year-old royalty rates and close loopholes so corporations that profit from coal pay the full costs of its impact, rather than taxpayers footing the bill. These costs include the scientifically-proven negative impacts of coal on public health, land, air, water and species.

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Comment Number: 0000770\_Clarke et al (PETITION)\_20160623-5

Organization I:

Commenter I: Petition

Comment Excerpt Text:

Close loopholes, including ending royalty rate reductions, and ensure prices paid to use federal coal are fair and reflect climate, environmental and social costs.

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Comment Number: 0000771\_NoName\_20160621-1

Organization I:

Commenter I:Paul Allen

Other Sections: I

Comment Excerpt Text:

<http://www.seattletimes.com/opinion/stop-selling-off-federal-coal-at-taxpayer-expense/>

• Opinion Stop selling off federal coal at taxpayer expense

By Paul G. Allen and Maria Cantwell

Special to The Times

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Comment Number: 0000772\_Nielsen\_20160623-1

Organization I:

Commenter I:Nicholas Nielsen

Comment Excerpt Text:

By restricting the availability of a lease, mining companies will financially not be able to withstand outages or invest the capital to mine available leases. An increase in royalty rate will force mining companies out of the picture and this will result in no royalty payments, costing return to taxpayers and jobs. On the other hand, if companies were incentivized and a royalty reductions were put in place, mining companies could further maximize reserves by mining challenging areas and provide more return for taxpayers. Is the EIS considering that discounts or reductions would increase the Maximum economic recovery of the coal?

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Comment Number: 0000772\_Nielsen\_20160623-5

Organization I:

Commenter I:Nicholas Nielsen

Comment Excerpt Text:

Is the EIS going to take into consideration the programs, plans, and costs that mining companies have in place to help eliminate environmental concerns or are they just looking to justify an added cost?

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Comment Number: 0000778-1

Organization I:Bowie Resources

Commenter I:Jeff Erickson

Comment Excerpt Text:

I recommend that bonus bids, royalty, state and federal taxes, black lung taxes, etc not be increased. These taxes are already higher/above market level.

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Comment Number: 0000803-1

Organization I:

Commenter I:Jeb Himsl

Comment Excerpt Text:

Any sale of the nations coal reserves must be considerate of the "fair market" value of the resource. Unfortunately the "market value" of coal does not account for the cost of pollution. This pollution, in terms of local source environments climate change or degradation of wildlife, carries a real cost. But without including this cost the "fair market" cannot be determined, therefore, no sale!

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Comment Number: 0000809-2

Organization I:

Commenter I: Beth Blattenberger

Comment Excerpt Text:

Coal royalties are not high enough and there are loopholes. If public lands are to become inaccessible to the general public for recreation, the public needs better compensation.

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Comment Number: 0000813-1

Organization I:

Commenter I:

Comment Excerpt Text:

Without funding from BLM royalties these project would either not exist or would be funded personally by each of us. I would like you to consider the social economic impacts of your decision and the true impact it will make.

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Comment Number: 0000820-1

Organization I:

Commenter I: Jeremiah Armstrong

Comment Excerpt Text:

The current effective tax rate on each ton of federal coal mined is 39% of gross, including royalties, bonus bids, AML tax and black lung tax. In a time when we've seen nearly all of the publicly traded coal companies file for bankruptcy in the face of an onslaught of onerous environmental litigation and regulation from the federal bureaucratic leviathan, which has driven up costs and driven down demand for coal, it is absolutely deceitful for the Interior Department to suggest that coal companies are not paying enough, or that the taxpayers are not receiving a return on their resources. Even without the nearly 40% tax rate, the affordable energy that the poorest among us enjoys is a tremendous benefit to our local, state and national economy. I would suggest that along with the impacts of burning coal on the environment, the positive cumulative impacts for all who utilize electricity for work and leisure be analyzed. Affordable energy is the backbone of our economy, but our current president, does not seem concerned about the citizens of this nation.

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Comment Number: 0000824-2

Organization I:

Commenter I: Garrett Atwood

Comment Excerpt Text:

I believe that current royalty rates are excessive and should be reduced in light of current market conditions.

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Comment Number: 0000827-3

Organization I: National Wildlife Federation

Commenter I: Sarah Bates

Comment Excerpt Text:

No new leases until we are assured of a fair return to taxpayers for the lease of federal coal, transparency in the leasing process, and royalties commensurate with the true costs of leasing federal coal-including mitigating the impacts of mining on wildlife and their habitat.

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Comment Number: 0000828-2

Organization I: Friends of Coal West

Commenter I: David Smaldone



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**Comment Excerpt Text:**

Rates paid on federal coal are excessive. Coal producers pay 40% of the selling price of coal in taxes, fees and royalties, and there is no justification to increase royalty or leasing rates. To increase these rates will leave less revenue for states and communities, fewer jobs, higher energy prices and will hit all Americans in the checkbook. Education programs, road and public safety will suffer as well.

If the federal government is interested in maximizing the return on investment for taxpayers, it would incentivize development of federal coal by reducing royalties and other fees, making permitting processes more efficient and basing bonus bids on the amount of coal that is actually recoverable.

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Comment Number: 0000829-1

Organization I:Utah Citizens Advocating Renewable Energy (UCARE)

Commenter I:Stanley Holmes

**Comment Excerpt Text:**

This PEIS should develop a comprehensive, coal-specific "costs test" analysis tool that would quantify and monetize the full range of damages caused by coal as well as the true "avoided costs" value of renewables when used to replace coal. National coal valuation metrics could be used by state regulators.

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Comment Number: 0000829-3

Organization I:Utah Citizens Advocating Renewable Energy (UCARE)

Commenter I:Stanley Holmes

**Comment Excerpt Text:**

The coal leasing program does not yield a fair return to Americans. It allows the coal industry to shift societal and environmental costs onto the public. It conflicts with program fails to adequately monetize the damages caused by coal taken from federal lands. These externalized expenses should be incorporated into what companies pay for coal.

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Comment Number: 0000832-1

**Comment Excerpt Text:**

Higher royalties will only dampen production, keeping affordable energy off the market and revenue away from taxpayers. So much for taxpayers getting a "fair return."

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Comment Number: 0000840-2

Commenter I:Craig J. Provost

**Comment Excerpt Text:**

The Federal Coal Leasing Program has allowed our public lands to be used for commercial profit at horrendously low prices that have not kept up with the actual value of our land and resources. More importantly the federal lands managed by the Bureau of Land Management should not be used for the benefit of commercial enterprises at the expense of our environment and our health.

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Comment Number: 0001102\_CONSTANTINE\_KingCnty\_20160621-3

Organization I:King County

Commenter I:Dow Constantine

**Comment Excerpt Text:**

The historically low royalty rates are effectively a public subsidy that has widespread negative impacts on our health, air and water quality, traffic, and our economic development. As we've seen from coal export facility

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proposals across the Pacific Northwest, the impacts of coal extraction in places like Powder River Basin do not stop at a county or a state line.

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Comment Number: 0001104\_SLADE\_CongMcDermott\_20160621-1

Organization I:48 Democratic House Members

Commenter I:Lee Slade

Comment Excerpt Text:

The first, the low royalty rate and minimum bid for surface mine coal as well as the lack of competition during the bidding process. The way that the Department of the Interior determines the value of federal coal and the mine, rather than at the point of end use, which shortchanges taxpayers and effectively subsidizes coal production

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Comment Number: 0001106\_CORNELISON\_20160621-1

Organization I:City of Hood River, OR

Commenter I:Peter Cornelison

Other Sections: 11

Comment Excerpt Text:

The City of Hood River urges the Department of Interior to do three things: Update the coal royalty rate for fossil fuels extracted on public lands; number two, help diversify those rural economies and create new jobs and investments where the coal miners will be displaced; and number three, tighten the bonding requirements for coal. As we've heard, there's huge scars on the land. We're not sure the coal companies have the wherewithal financially to recover that. That needs to be inspected.

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Comment Number: 0001111\_VON FLATERN\_WY state senate\_20160621-1

Organization I:Wyoming State Senate

Commenter I:Michael Von Flatern

Comment Excerpt Text:

The Federal Coal Program provides revenues to federal and state governments totalling \$13.8 billion since 2003. So for an example, the Powder River Basin in Wyoming, which produces over 80 percent of the coal reserves on federal lands, local governments and the federal government receive almost 40 cents on every dollar, 12 and a half percent royalty to the federal government, that's 12 and a half percent. That's not 12 and a half cents on a ton.

So the current price is approximately \$11 for a ton of coal. So you take the \$11 and you look at the 40 -- almost 40 percent, and you get \$4.28 of every ton of coal that they produce goes to the government, either the local government or the federal government. The federal government is getting 12 and a half percent or roughly \$1.75 or \$1.50 of that ton, not 12 and a half cents a ton. 12 and a half percent.

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Comment Number: 0001115-1

Organization I:Wyoming Infrastructure Authority

Commenter I:Jason Begger

Comment Excerpt Text:

So I'm going to talk specifically about all the taxes that are paid on a ton of coal. You've got the 12 percent federal royalty, you have 7 percent Wyoming state severance tax, the LBA payments, which somebody said earlier was 12 cents. Well, if you look at the BLM website, they were 1.35 for the Belle Ayr lease a couple years ago, which is ten times the 12 cents that was stated, but at current spot prices last week it was at \$8.80 per ton. That was about a 15 percent tax for the OBA. You got 4.4 percent gross proceeds tax, you got 28 cents per ton abandoned lineman -- abandoned mine lands funds, you also have your property taxes on your equipment,

buildings, facilities, property taxes on production, sales tax on all the equipment and materials, and you know, a 6 percent sales tax on a \$3 million haul truck is a significant amount of sales tax. Altogether coal pays an effective tax rate of over 40 percent. To put that in perspective, when we filed our taxes, look at our own individual effective tax rates, usually it's about 15 percent. So the coal industry pays two and a half to three times more taxes than individuals do. I think that's a pretty good rate of return for the government and taxpayers as a whole throughout all those.

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Comment Number: 0001117\_LANDEN\_WY state senate\_20160621-1

Organization I: Wyoming State Senate

Commenter I: Bill Landen

Comment Excerpt Text:

We have chosen to invest those funds in our future, specifically the future of our kids. Payments -- coal lease bonus payments and all the subsequent tax revenues generated by the coal program are used almost exclusively in my state to help us fund the K through 12 education system. Over the past 15 years Wyoming has invested more than \$3.5 billion in school facilities. As chairman of our school facilities committee, I am proud to say that coal lease bonuses have paid for more than 70 new schools across our state and have assisted in modernizing an additional 35 while maintaining the rest. More than \$815 million in coal lease money has been spent on major maintenance alone over that same time period. Beyond those lease payments the coal industry provides mineral royalty payments and severance and ad valorem taxes, much of which goes to pay the teachers in the operation of those schools. Roughly 16 percent of our K through 12 funding in Wyoming can be attributed to tax revenue derived from the coal program. And of course, the industry provides jobs for moms and dads of the kids who are in those schools. Not just jobs in the mines, but in all the support industries throughout the four-state region. I'm not certain how the federal government spends the revenue derived from coal, but I do know that in Wyoming we have used that money to invest in our future. The school facilities we put on the ground will last for generations to come. I would argue today that we are receiving a fair return for this resource as evidenced by the state of Wyoming. We hope you will reinstate the leasing program

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Comment Number: 0001121-1

Commenter I: Larry Gussin

Comment Excerpt Text:

So the issue for Americans is less fair return on coal and much more developing policies that enhance, not block, U.S. opportunity. Making coal pay its way levels the playing field for energy IT, for solar, even for nuclear. Doing the opposite by continuing to subsidize coal leases will help send this opportunity to other countries.

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Comment Number: 0001129-1

Organization I: Climate Solutions

Commenter I: Beth Doglio

Comment Excerpt Text:

And so the federal government needs to consider coal exports when setting the fair market value of federal coal.

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Comment Number: 0001132-1

Organization I: Sierra Club

Commenter I: Mike O'Brien

Comment Excerpt Text:

When we price this land, we need to account for the habitat, ecological benefit that we lose when we give that over to coal companies. In addition, the cleanup of these lands needs to be borne by the coal companies, and that price needs to be embedded in the price of land.

Comment Number: 0001140-1

Commenter I:Cheri Cornell

Comment Excerpt Text:

The coal industry by paying below-market rates which in no way account for the incredible social costs of burning coal is engaging in the opposite of intergenerational equity. The coal industry is engaged in wholesale generational theft. My federal government should not be complicit in this crime.

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Comment Number: 0001142-1

Organization I:United Steelworkers

Commenter I:Steve Garey

Comment Excerpt Text:

The current coal leasing program is broken and it needs updating. The current program does not reflect modern markets or environmental realities. It is not fair for taxpayers, nor does it account properly for environmental impacts. For these and other reasons I support the decision to pause leasing until a new program is in place.

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Comment Number: 0001148-4

Organization I:Powder River Basin Resource Council

Commenter I:Bob LeResche

Comment Excerpt Text:

Interior must reassess fair return. Fair return to all American citizens who own the coal, of course, but also fair return to those on whose back massive costs are now externalized. We who breathe the air, we who as grandparents raise cattle on grasslands and aquifers mined 40 years ago and not yet reclaimed, we who wait interminably at rail crossings in our small towns and large cities. There must be a new means of assuring competition in bidding, transparent lease valuation, transparent royalty collection stripped of loopholes and unaudited self-reporting.

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Comment Number: 0001160-1

Organization I:Climate Reality Project

Commenter I:Brian Gunn

Comment Excerpt Text:

Now, are we getting a fair price for that coal? Well, Taxpayers for Common Sense says no. The National Resource Defense Council estimates that we may have been cheated by as much as \$30 billion over the last 30 years. You bring in the social cost of burning fossil fuels anywhere in the world and the damage to human health, rising food costs from unproductive fields and property damage from extreme weather events, and the evidence is clear. The American people are getting a raw deal for allowing coal companies to extract our natural resources.

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Comment Number: 0001190-1

Commenter I:Deborah Woolley

Comment Excerpt Text:

I want to raise this matter of fair return. You are charged with ensuring that the coal leasing program provides a, quote, "fair return to taxpayers." I want to plead with you to take that charge very seriously, but more seriously, in fact. I realize, of course, that the phrase "fair return" is commonly understood as a financial return -- a financial term, market value and return on investment.

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Comment Number: 0002009\_CenterBioDiversity\_20160329-4

Organization I: WildEarth Guardians

Commenter I: Jeremy Nichols

Comment Excerpt Text:

With regards to royalty rate reductions, the Bureau of Land Management must be directed to pause consideration of any pending or new royalty rate reduction requests until completion of the programmatic environmental impact statement. With recent media reports indicating royalty rate reductions are enriching coal companies at the expense of the public, these reductions are uncalled for in the near-term

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Comment Number: 0002020\_Enk\_20160623-1

Commenter I: Michael Enk

Comment Excerpt Text:

Taxpayers deserve fair leasing regulations that recognize the true externalized costs of coal extraction and combustion.

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Comment Number: 0002048\_King\_20160620-1

Commenter I: Matt King

Other Sections: 2

Comment Excerpt Text:

Costs to fight fires that result from climate change, as well as other direct and indirect costs incurred by taxpayers and private citizens, should be factored into the cost of coal leases. The BLM should then pass revenue from leasing fees along to public agencies to reimburse them for their costs, and to private citizens who are directly affected.

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Comment Number: 0002059\_Rofcar\_20160619-1

Commenter I: George and Barbara Rofkar

Comment Excerpt Text:

Essentially giving rights away to extract and market coal; so that private companies can unfairly compete with renewable energy is bad public policy in the extreme.

If coal is to be mined at all it must be priced to pay for the massive health and environmental damage being done!

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Comment Number: 0002103\_Phillips\_20160623-2

Commenter I: Thomas Phillips

Other Sections: 2

Comment Excerpt Text:

Raises royalties for coal to a level equal to those collected on federal oil and gas.

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Comment Number: 0002106\_Ramsey\_20160623-1

Commenter I: David Ramsay

Other Sections: 6

Comment Excerpt Text:

Please price coal on public lands at its true value. Climate change is a very real and serious issue.

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Comment Number: 0002106\_Ramsey\_20160623-2

Commenter I: David Ramsay

Comment Excerpt Text:

Continuing to subsidize coal is based on past policies and practices and has no rational or responsible place in our future.

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Comment Number: 0002112\_Sanderson\_20160624\_CoMineAssoc-1

Organization I: Colorado Mining Association

Commenter I: Stuart Sanderson

Comment Excerpt Text:

The current program provides an exceptional return to taxpayers. In fact, the 12.5 percent royalty paid on coal leased from federal land is approximately 40 percent higher than royalty rates paid by coal mined on private land in coal states. Recent investigations by the Government Accountability Office and the Department of the Interior's Inspector General confirm that the public is getting a fair return and often above fair market value for federal coal leases."

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Comment Number: 0002112\_Sanderson\_20160624\_CoMineAssoc-10

Organization I: Colorado Mining Association

Commenter I: Stuart Sanderson

Comment Excerpt Text:

The current lease moratorium and proposals to raise royalty rates will have a chilling effect on rural Colorado and the western United States.

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Comment Number: 0002112\_Sanderson\_20160624\_CoMineAssoc-5

Organization I: Colorado Mining Association

Commenter I: Stuart Sanderson

Comment Excerpt Text:

Through a series of politically orchestrated "listening sessions" throughout different regions, the Department of the Interior seeks to justify its heavy handed moratorium on federal coal leasing applications and seeks, without sufficient justification, to hike royalty payments by coal producers, which pay among the highest rates in the country.

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Comment Number: 0002112\_Sanderson\_20160624\_CoMineAssoc-6

Organization I: Colorado Mining Association

Commenter I: Stuart Sanderson

Comment Excerpt Text:

I appear today to oppose the moratorium and the royalty rate increase.

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Comment Number: 0002112\_Sanderson\_20160624\_CoMineAssoc-9

Organization I: Colorado Mining Association

Commenter I: Stuart Sanderson

Comment Excerpt Text:

Royalties paid by coal producers are returned to the state to support the public school system.

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Comment Number: 0002136\_Hooley\_20160525-2

Commenter I: Kevin Hooley

Comment Excerpt Text:

I am asking for you to please lift the coal lease moratorium and to not raise the royalty rates.

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Comment Number: 0002141\_Squires\_20160627-1

Commenter I: Storey Squires

Comment Excerpt Text:

mining corporations are greatly underpaying for mining rights on federal lands

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Comment Number: 0002145\_Buchanan\_20160513\_IEEFA-1

Organization I: Institute for Energy Economics and Financial Analysis

Commenter I: Tom Sanzillo

Other Sections: 2

Comment Excerpt Text:

IEEFA recommends that DOI eliminate the current fair market value criteria and replace it with a new partnership model between government agencies and private industry, operating under new rules to protect the interest of U.S. taxpayers. The product to be produced from the partnership would be coal, mined for the purpose of domestic consumption principally in the electricity sector.

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Comment Number: 0002145\_Buchanan\_20160513\_IEEFA-2

Organization I: Institute for Energy Economics and Financial Analysis

Commenter I: Tom Sanzillo

Other Sections: 2 8.9

Comment Excerpt Text:

Our proposal for how this program would work is outlined in detail below and contains the following major elements:

- Planning for new coal offerings set by DOI based on accurate analysis of coal reserves and demand.
  - Financing for the coal industry provided by a combination of private sector borrowing, and public sector asset transfers of coal, revenue and market guarantees, and regulatory streamlining.
  - Coal prices set by a committee made by a federal-state coal price Commission, with a pricing structure that takes into account the need to maintain affordable and reliable electricity and to adjust to changing market conditions.
  - Eliminating the self-bonding system for coal mine reclamation, replacing it with a program in which coal producers and the federal government share responsibility for clean-up and in which royalty payments are set aside to cover liabilities (and to provide for pensions for coal miners).
  - Regular bi-annual external audits of the program by the inspector generals of the Department of Energy and the Department of the Interior.
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Comment Number: 0002145\_Buchanan\_20160513\_IEEFA-20

Organization I: Institute for Energy Economics and Financial Analysis

Commenter I: Tom Sanzillo

Comment Excerpt Text:

The “fair market value” design used by the federal government has run its course. And although the type of public-private partnership we recommend here may be controversial, the federal coal lease program is clearly in need of a new paradigm. Proponents and opponents of the public-private model, as well as neutral third parties (16) all agree that sound planning, a skilled public sector negotiating team, good financial advice and openness will be critical elements of success.

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Comment Number: 0002145\_Buchanan\_20160513\_IEEFA-24

Organization I: Institute for Energy Economics and Financial Analysis

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Commenter I: Tom Sanzillo

Comment Excerpt Text:

The program design in place to insure that taxpayers received a fair market value of federal coal on federal land has been weak decades. The program assumed that private sector competition would create a fair price. However, there has been no competition. The program had no oversight for 30 years. Recent reviews found that U.S. taxpayers have lost millions, if not billions, of dollars as a result of low valuations for the leases.

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Comment Number: 0002145\_Buchanan\_20160513\_IEEFA-25

Organization I: Institute for Energy Economics and Financial Analysis

Commenter I: Tom Sanzillo

Comment Excerpt Text:

The current fair market value system places control of the mine selection, timing, extraction process, distribution, sales and price in the hands of coal producers rather than in the hands of the federal owners of the land.

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Comment Number: 0002145\_Buchanan\_20160513\_IEEFA-26

Organization I: Institute for Energy Economics and Financial Analysis

Commenter I: Tom Sanzillo

Comment Excerpt Text:

Despite the substantial findings of the weaknesses in this fair market value process, the coal industry has adopted a position that there are no problems. The PEIS also accurately describes the current state of the nation's coal market and the PRB's role in it. Looking ahead, there will be a declining demand for coal for America's domestic electricity needs. The PRB will nevertheless play an important role in coal production as part of an uncertain, new norm for coal use in the U.S.

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Comment Number: 0002145\_Buchanan\_20160513\_IEEFA-29

Organization I: Institute for Energy Economics and Financial Analysis

Commenter I: Tom Sanzillo

Comment Excerpt Text:

When the current fair market leasing program was first envisioned, policy-makers may have had an honest aspiration that the system would foster a competitive coal market in the West. Public officials essentially turned over the program to the coal industry as a way to address many of the perceived and real complications of more regulated decision-making.

It is time to abandon the pretense that the rules of the fair market lease program are designed to create a fair market return for the taxpayer. Program implementation over the last 30-plus years has resulted in a steady supply of low cost coal provided by relatively healthy coal companies. But the situation has now changed dramatically and the objectives of the program are no longer being achieved.

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Comment Number: 0002145\_Buchanan\_20160513\_IEEFA-8

Organization I: Institute for Energy Economics and Financial Analysis

Commenter I: Tom Sanzillo

Other Sections: 2

Comment Excerpt Text:

Phase Out the Fair Market Leasing Program

Although the fair market value program was supposed to encourage competition, in fact quite the opposite has occurred. (8) In fact, leases under the BLM's program typically have only one bidder. This lack of competitive bidding is evidence that the federal government may not be receiving a fair market value for its coal. In addition,



the fair market equivalent pricing used by BLM is suspect because the price-setting mechanism was not independently reviewed for 30 years. The lack of internal controls is pervasive. When external reviews have finally taken place over the last few years, BLM has adopted a position of “evasive cooperation,” that is, avoiding transparency while appearing to cooperate. The DOI Inspector General concluded in 2013 that the Secretary of the Interior had such limited control over the operations that it was unlikely that needed reforms could be implemented.

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Comment Number: 0002147\_Anderson\_20160621\_BlueGreenAlliance-14

Organization I:BlueGreen Alliance

Commenter I:Kim Glas

Comment Excerpt Text:

Regulatory gaps that allow coal companies to effectively sell coal to themselves for below market values to avoid paying full royalties, allow massive deductions for the processing and transportation of coal, and create effective royalty rate reductions, amount to a form of federally subsidized corporate welfare benefiting a select few companies to the detriment of American taxpayers who must carry this expense.

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Comment Number: 0002147\_Anderson\_20160621\_BlueGreenAlliance-15

Organization I:BlueGreen Alliance

Commenter I:Kim Glas

Comment Excerpt Text:

revenue rightly due from the extraction of public resources must not be left unclaimed. Taxpayers deserve their fair share from any development of coal on public lands.

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Comment Number: 0002147\_Anderson\_20160621\_BlueGreenAlliance-5

Organization I:BlueGreen Alliance

Commenter I:Kim Glas

Comment Excerpt Text:

it has become clear that the decades-old regulations governing the federal coal program have become outdated and do not necessarily reflect modern day market and environmental realities. It is imperative that taxpayers and local communities receive a fair return from any extraction of these publicly owned resources, through a program that is transparent, competitive, and designed to serve the public interest, rather than that of a narrow sub-set of the energy extraction industry.

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Comment Number: 0002147\_Anderson\_20160621\_BlueGreenAlliance-7

Organization I:BlueGreen Alliance

Commenter I:Kim Glas

Comment Excerpt Text:

Coal companies that sell coal to themselves at intentionally depressed prices in order to mathematically reduce the royalties that would otherwise be payable to the federal government are, in effect, receiving a subsidy by having their production costs lowered and simultaneously depriving the public of a source of useful revenue.

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Comment Number: 0002148\_OLaughlin\_20160621\_K2-3

Organization I:K2 Sports

Commenter I:Matt O'Laughlin

Comment Excerpt Text:

There is no “fair price” to pay for this natural resource considering the climate & health impacts it has on our global communities.

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Comment Number: 0002149\_Hewitt\_20160519\_WyLSO-11

Organization I: Wyoming Legislature's Select Federal Natural Resource Management Committee

Commenter I: Ted Hewitt

Comment Excerpt Text:

by simply announcing that the federal government is considering increasing the royalty rate on coal, the federal government has added volatility to the coal market. This threatens the livelihoods of many workers in our state. Maintaining a consistent royalty rate will help return stability to the coal markets and make planning for the future easier for Wyoming families and the state and local governments that serve them.

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Comment Number: 0002149\_Hewitt\_20160519\_WyLSO-3

Organization I: Wyoming Legislature's Select Federal Natural Resource Management Committee

Commenter I: Ted Hewitt

Comment Excerpt Text:

the federally--mandated 12.5% mineral royalty on surface coal provides a fair rate of return to the American taxpayer. Increasing this rate would reduce demand for coal and harm our economy.

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Comment Number: 0002152\_Bruse\_20160518-1

Commenter I: Debbie Bruse

Comment Excerpt Text:

The idea that coal companies are not paying their fair share of taxes, royalties and rentals is simply not true as evidenced by the number of persons citing the myriad of ways that the government (and taxpayers) receive their fair share.

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Comment Number: 0002152\_Bruse\_20160518-15

Commenter I: Debbie Bruse

Comment Excerpt Text:

The current coal lease bidding process has 3 outcomes. Either the bid is rejected because it does not meet fair market value, the bid exactly meets fair market value or the bid exceeds fair market value. Since a coal lease bid has never been spot on fair market value, then the taxpayers are receiving greater than fair market value.

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Comment Number: 0002152\_Bruse\_20160518-8

Organization I:

Commenter I: Debbie Bruse

Comment Excerpt Text:

In summary, the currently broken part of the coal leasing process is that Washington has inserted itself into the process instead of allowing its regional staff to do their jobs. As thoroughly identified during the Casper, WY scoping meeting, royalty rates do not need to be increased on federal coal, and coal lease sales already result in a fair return to taxpayers.

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Comment Number: 0002152\_Bruse\_20160518-9

Organization I:

Commenter I: Debbie Bruse

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**Comment Excerpt Text:**

Royalty rates do not need to be increased on federal coal, and coal lease sales already result in a fair return to taxpayers.

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Comment Number: 0002155\_Krupnick\_20160622-5

Organization I: Center for Energy and Climate Economics Resources for the Future

Commenter I: Alan Krupnick

**Comment Excerpt Text:**

Since the publication of our original report, a number of studies have further explored the issues raised in our research. These include a National Bureau of Economic Research (NBER) working paper on upstream and downstream policy interactions between the Clean Power Plan and a federal coal royalty increase, and modelling on leakage potential from federal coal production to increased coal production on other lands.(2,3)

(2) Gerarden et al. 2016. Federal Coal Program Reform, the Clean Power Plan, and the Interaction of Upstream and Downstream Climate Policies. NBER Working Paper No. 22214. Cambridge, MA: National Bureau of Economic Research.

(3) ICF International. 2016. Federal Coal Leasing Reform Options: Effects on CO2 Emissions and Energy Markets. Prepared for Vulcan Philanthropy | Vulcan, Inc.

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Comment Number: 0002157\_Burger\_SabineCenter\_09132016-4

Organization I: Sabine Center for Climate Change Law

Commenter I: Michael Burger

Other Sections: 7.1

**Comment Excerpt Text:**

Ken Gillingham discussed coal mined from federal lands and the royalties charged for that extraction. He noted that 42% of thermal coal sold in the U.S. is “federal coal” and that such coal had out-competed other sources on price for decades. Gillingham then explained several of the reasons that the Department of Interior is reviewing its coal leasing program and planning to issue a programmatic environmental impact statement to update that program: royalties charged for coal are 1/6th its market price and many times below the Social Cost of Carbon (in contrast to other fossil fuels, for which royalties are closer to what charging the SCC would yield); 90% of auctions have a single bidder because they are generally for continuations rather than new leases; and most bids for those leases are near the (confidential) minimum bid. Gillingham then noted that charging royalties equal to the SCC would effectively keep federal coal in the ground and suggested that charging 20% of the SCC—because royalties are split with states—could provide a revenue stream for programs that ease the pain of a transition away from coal.

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Comment Number: 0002157\_Madder\_20160517\_EnergyPolicyNetwork-3

Organization I: Energy Policy Network

Commenter I: Kelly Mader

**Comment Excerpt Text:**

If the BLM looks to climate change considerations as a basis for determining that taxpayers are not receiving fair market value from the sale of coal, it ignores the regulation of coal combustion as stationary sources under the Clean Air Act. This approach – if taken by the BLM - serves to subject coal as a resource to (1) ever increasing financial requirements upon extraction and (2) ever more stringent air quality regulation upon combustion. The ultimate result is the elimination of coal from the resource mix altogether. No other resource faces the combination of regulatory burdens upon both extraction and combustion in the way that coal does, and thus coal cannot economically compete in resource planning processes or in the organized electricity markets.

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Comment Number: 0002158\_Kasperik\_20160517\_StateRep-1

Organization I:HD 32 Wyoming State Legislature

Commenter I:Norine Kasperik

Other Sections: I

Comment Excerpt Text:

Wyoming produces approximately 40 percent of America's coal, much of which is federally leased. Producers operating in the state have been good corporate citizens, and Wyoming's share of money from coal goes directly toward building schools, as well as other essential services. All counties in the state are beneficiaries, and the claim that taxpayers are in any way short-changed is misleading at best. Please remember that coal currently generates 35% of US electricity production. It provides a stable, reliable mix of electricity sources nationwide. A study by HIS Energy found that coal saves roughly \$93 billion in annual electric bills.

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Comment Number: 0002158\_Kasperik\_20160517\_StateRep-3

Organization I:HD 32 Wyoming State Legislature

Commenter I:Norine Kasperik

Comment Excerpt Text:

The current system provides stable and very significant tax and royalty revenue. In Wyoming, companies pay to lease federal coal, pay royalties on that coal when it is produced, federal income taxes on any profit, as well as severance taxes, ad valorem taxes, sales taxes, and other fees. Federal, state and local governments receive over \$1.2 billion a year from coal production in Wyoming alone.

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Comment Number: 0002159\_smallfry\_20160521-1

Commenter I:Smallfry

Comment Excerpt Text:

Stop government imposed royalty costs!

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Comment Number: 0002160\_Kot\_20160629\_SweetwtrCnty-13

Organization I:Sweetwater County

Commenter I:Wally Johnson

Other Sections: I I

Comment Excerpt Text:

coal is a vital economic driver for the economy of Sweetwater County, and because of this, Sweetwater County strongly opposes the Coal PEIS and its proposals to place economic hardships on our coal industry. These hardships include adding external costs into the fair market value of coal, increasing royalty and bonus payments and increasing the layers of regulations.

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Comment Number: 0002161\_Goode\_20160517-1

Commenter I:RD Goode

Comment Excerpt Text:

The American public gets far more than their fare share when it comes to coal taxes.

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Comment Number: 0002163\_McFarlane\_20160626-2

Commenter I:Kurt McFarlane

Comment Excerpt Text:

And do not raise the royalties.

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Comment Number: 0002171\_Becker\_20160619-1

Organization I: Cloud Peak Energy

Commenter I: Rose Becker

Comment Excerpt Text:

It would seem that the coal industry is already paying more than their fair share of taxes at 39%, no other industry pays this high of a rate. Matter of fact wind and solar are subsidized by the government, how many years have we been subsidizing solar and it still can't reliably provide our electricity. I have to feel that this moratorium is nothing but another way to stop coal production by closed minded people that fail to see the good things that are being done and realizing that there are good people that will be destroyed if the naive "Leave it in the ground" mentality wins. The taxes from coal supports our schools, roads and communities.

---

Comment Number: 0002173\_Quick\_20160622-1

Commenter I: Kendra Quick

Comment Excerpt Text:

There have been some comments that "Taxpayers are not receiving a fair return from the leasing of federal coal". This statement is far from the truth. Rates paid on federal coal are excessive and further increasing taxes and royalties will reduce investment, lower government (federal and state) revenues, and will result in a decreased return on investment for taxpayers.

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Comment Number: 0002173\_Quick\_20160622-2

Commenter I: Kendra Quick

Comment Excerpt Text:

The Federal coal program provides revenues to federal and state governments, totaling \$13.8 billion since 2003. An example of this is in the Powder River Basin (PRB) of Wyoming wherein the BLM controls over 80% of the coal reserves on federal lands. In the PRB the government receives almost \$0.40 on every dollar of coal sold. This represents a tax of approximately 40%.

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Comment Number: 0002173\_Quick\_20160622-5

Commenter I: Kendra Quick

Comment Excerpt Text:

If the Federal government is interested in maximizing the return on investment for taxpayers, it would incentivize development of federal coal by reducing royalties and other fees, improve the permitting processes to be more efficient and base the bonus bid on the amount of coal that is actually recoverable.

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Comment Number: 0002173\_Quick\_20160622-6

Commenter I: Kendra Quick

Comment Excerpt Text:

We have heard many comments that the 12.5% royalty on coal mined is not high enough. Federal coal lessees effectively pay a considerably higher royalty rate than paid on state or private lands because coal companies are required to pay bonus bids. The paying of bonus bids rarely occurs for private coal. When you combine the majority of bonus bids with the royalty rate, the effective rate is 22%.

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Comment Number: 0002183\_Jarstad\_20160619-2

Commenter I: Gene Jarstad

Comment Excerpt Text:

Coal leases should not be sold at below market prices -- period!

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Comment Number: 0002184\_Randolph\_20160619-2

Commenter I: Timothy Randolph

Comment Excerpt Text:

The sweet deals, at taxpayer expense, that provide coal on public lands to private companies at pennies per ton with no accountability for environmental stewardship must end now.

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Comment Number: 0002184\_Randolph\_20160619-3

Commenter I: Timothy Randolph

Comment Excerpt Text:

This taxpayer subsidy (giveaway) is based on outdated economics, it ignores science, and it makes a farce out of the pretext of responsible land and resource management. The BLM must stop these corporate giveaways and revise the coal program to reflect modern energy policy.

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Comment Number: 0002189\_Jozwik\_20160517-10

Commenter I: Darryl Jozwik

Comment Excerpt Text:

THERE'S ALWAYS BEEN A MUCH LARGER RETURN FROM OUR MINING TO THE FEDERAL AND STATE GOVERNMENTS THAN TO OURSELVES AND OUR STOCKHOLDERS.  
> THE TAX AND ROYALTY BURDEN PAID BY US COAL MINES, IS THE HIGHEST OF ANY INDUSTRY I HAVE COME ACROSS BY A LARGE MARGIN.  
> OUR COAL INDUSTRY PAYS THE HIGHEST COMBINED TAXES AND ROYALTY OF ANY FEDERALLY MINERAL MINED NOT ONLY IN WYOMING, BUT EVERYWHERE.  
> THE COMPANIES PAY MORE THAN THEIR FAIR SHARE OF GOVERNMENT IMPOSED TAXES, FEES, AND ROYALTIES.  
> ROYALTIES AND TAXES PAID ON EACH TON OF POWDER RIVER BASIN COAL APPROACHES 40% OF THE SELLING PRICE WHICH INCLUDE THE FEDERAL ROYALTY PAYMENT, ABANDONED MINE LAND FEE, AND ETC.

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Comment Number: 0002189\_Jozwik\_20160517-33

Commenter I: Darryl Jozwik

Comment Excerpt Text:

WITH COAL PRICES AT HISTORIC LOWS, TAXES AND FEES ALONE AT OVER 40% OF THE SELLING PRICE, THERE'S NO ECONOMIC JUSTIFICATION TO INCREASE ROYALTIES OR LEASE RATES.

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Comment Number: 0002189\_Jozwik\_20160517-34

Commenter I: Darryl Jozwik

Comment Excerpt Text:

THERE IS NO JUSTIFICATION FOR INCREASING ROYALTIES AND LEASING RATES.  
> NEITHER THE GOVERNMENT ACCOUNTABILITY OFFICE NOR THE INSPECTOR GENERAL'S DEPARTMENT OF INTERIOR REPORTS ON COAL LEASING, MADE ANY RECOMMENDATIONS THAT MERIT THE LEASING MORATORIUM OR ANY CHANGES TO THE PROGRAM.

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Comment Number: 0002189\_Jozwik\_20160517-7

Commenter I: Darryl Jozwik

Comment Excerpt Text:

ARE THE BONUS BIDS, RENTS, AND ROYALTIES RECEIVED UNDER THE FEDERAL COAL PROGRAM SUCCESSFULLY SECURING A FAIR RETURN TO THE AMERICAN PUBLIC – YES.

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Comment Number: 0002189\_Jozwik\_20160517-8

Commenter I: Darryl Jozwik

Comment Excerpt Text:

HOW SHOULD EACH OF THESE COMPONENTS OF FAIR RETURN BE CALCULATED – CURRENT CALCULATIONS WORK WELL.

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Comment Number: 0002189\_Jozwik\_20160517-9

Commenter I: Darryl Jozwik

Comment Excerpt Text:

SHOULD EXTERNALITIES BE CONSIDERED AS PART OF THE FAIR RETURN CALCULATION? IF SO, WHAT SPECIFICALLY AND HOW – CURRENT SYSTEM WORKS WELL  
> I BELIEVE THE U.S. IS GETTING A VERY FAIR RETURN FOR ITS COAL.

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Comment Number: 0002192\_Befus\_20160518-2

Organization I: University of Wyoming Foundation

Commenter I: Brett Befus

Comment Excerpt Text:

We oppose changes to the current federal coal program, including increased royalty and tax payments.

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Comment Number: 0002193\_Mead\_20160518-1

Organization I: Brake Supply

Commenter I: Scott Mead

Comment Excerpt Text:

According to my research man made CO<sub>2</sub> output is 4% of the global total, in other words 96% is naturally occurring from sources such as volcanos, forest fires, decay of organic material, and breathing. The coal burned in the US is 2/1000 of the global total CO<sub>2</sub> output.

Given the above, increasing the tax on coal or royalty or whatever term you choose for the the price mining companies pay for what they extract, it is basically punitive and evidence of the so called war on coal especially since many leases only have one bidder-there is a reason for that, something about supply and demand I believe.

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Comment Number: 0002197\_Wise\_20160519-2

Organization I: Kiewit Mining Group Inc.

Commenter I: Dirk Wise

Comment Excerpt Text:

Consumers not getting their fair share in royalty payments- I believe that 40% is more than enough in royalty payments, in no other industry is such a high percentage paid.

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Comment Number: 0002199\_Gyncild\_20160626-2

Commenter I: Brie Gyncild

Comment Excerpt Text:

Second, the PEIS must consider the real value of the resources on federal lands, which far exceed the ridiculously low prices federally owned coal has been sold for in recent years. These low prices not only cheat the taxpayer

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of a fair profit (and funds that could be used for global warming mitigation), but also distort the energy market as a whole, reducing the cost of the most polluting energy source and thereby making cleaner energy sources less attractive.

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Comment Number: 0002211\_Russell\_20160620-2

Commenter I: Holly Russell

Comment Excerpt Text:

Proposed increases to coal lease payments will only create a high electricity tax making coal less competitive in the energy market. This tax is ultimately paid by the average citizen. The government already gets its fair share. The BLM's Federal Coal Leasing Program has been very successful.

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Comment Number: 0002211\_Russell\_20160620-4

Commenter I: Holly Russell

Comment Excerpt Text:

The government is getting its fair share. The idea that the taxpayer is being "shortchanged" by the coal leasing program is obviously false. The federal coal lease program creates great value for not only taxpayers who directly benefit from royalties and bonus bids, but for those across America who rely on affordable electricity.

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Comment Number: 0002211\_Russell\_20160620-5

Commenter I: Holly Russell

Comment Excerpt Text:

Please DO NOT increase coal lease payments.

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Comment Number: 0002224\_Miller\_20160511-1

Commenter I: Jacqueline Miller

Comment Excerpt Text:

I want to ensure all leases of public resources to private companies are for full market value, including the cost of environmental degradation.

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Comment Number: 0002228\_Graves\_20160627-1

Commenter I: Royal Graves

Comment Excerpt Text:

The coal leasing program should be changed to better benefit taxpayers and state governments. The royalties paid should be much greater to compensate for the damage done to our personal health and our climate.

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Comment Number: 0002231\_Schwend\_20160620-4

Organization I: Cloud Peak Energy

Commenter I: David Schwend

Other Sections: 11

Comment Excerpt Text:

In 2015 Spring Creek Coal Mine paid \$52Million to the State of Montana for taxes and royalties and approximately \$20Million to the federal government. We exported 3.6 Million tons of coal to Asia in 2015 and lost money. Between Spring Creek Mine and Cloud Peak Energy Logistics, \$82Million were lost in 2015. Cloud Peak Energy CPE) as a whole lost \$204.9Million. CPE pays approximately \$0.39 for every dollar on taxes and royalties. How much more taxes does the government want coal companies to pay? 39% isn't enough?



Comment Number: 0002231\_Schwend\_20160620-6

Organization I: Cloud Peak Energy

Commenter I: David Schwend

Comment Excerpt Text:

Is adding to the taxes and export royalties an additional measure to ensure coal companies are not successful and the Federal Government's portion of the "keep it in the ground" campaign is?

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Comment Number: 0002235\_Russell\_20160619-1

Commenter I: Dave Russell

Comment Excerpt Text:

Please price coal on public lands at its true value. Climate change is real, and continuing to subsidize coal has no rational place in our future!

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Comment Number: 0002237\_Hilden\_20160622-3

Commenter I: Alan Hilden

Comment Excerpt Text:

Extraction industries fail to pay the United States adequate royalties utilizing out moded payment models not updated for decades.

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Comment Number: 0002239\_Baierlein\_20160621-4

Organization I: Conservation Northwest

Commenter I: Jeff Baierlein

Comment Excerpt Text:

We ask the BLM to ensure taxpayers receive fair market value from the sale of coal.

Coal industry royalty rates are dramatically below standards in the oil and gas industry, and should be increased to at least the offshore Federal lease rate and to reflect the full environmental and social costs of coal extraction.

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Comment Number: 0002239\_Baierlein\_20160621-5

Organization I: Conservation Northwest

Commenter I: Jeff Baierlein

Comment Excerpt Text:

The Federal leasing structure should be transparent and truly competitive to ensure that the American taxpayer receives a fair return from Federal coal resources. This will also support the transition to a clean energy economy and opportunities for economic diversification in coal communities.

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Comment Number: 0002257\_Lowande\_20160707-1

Commenter I: Al Lowande

Comment Excerpt Text:

It's long overdue that the coal leasing system represents the public interest rather than those of the coal companies. Lease prices need to reflect the actual value of the coal and must include the environmental costs of extracting and burning it. The huge subsidies the BLM has been providing coal companies have produced untold permanent environmental damage and padded the obscene compensation of coal company executives at the expense of taxpayers.

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Comment Number: 0002260\_Gleich\_20160707-1

Commenter I: Caroline Gleich

Comment Excerpt Text:

Coal mining on public lands is threatening clean air and water, endangering wilderness areas and putting our climate at risk. The lease system fails to look at the many threats coal mining poses. Right now, we're allowing coal companies to mine on our public lands for pennies on the dollar. It's beyond justification to think that coal companies are allowed access to the land that's set aside for you and me – to destroy the land and the surrounding ecosystem, for profit, only to pay a fraction of market value back to the public for it.

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Comment Number: 0002261\_GT\_20160707-1

Commenter I: GT

Comment Excerpt Text:

It's time to stop the subsidies and REVERSE the past free loading.

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Comment Number: 0002263\_Davidheiser\_20160710-3

Organization I: German House

Commenter I: James Davidheiser

Comment Excerpt Text:

3) increase outdated royalty rates

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Comment Number: 0002265\_Sexton\_20160712-1

Commenter I: Sue Sexton

Comment Excerpt Text:

Any lease access and royalty increase at this time or in the future would have relevance if the Colowyo Coal Company and the other Northwest Colorado Coal Companies have been negligent in their responsibility to reclamation, BLM and State regulations, but they have not; as a matter of fact they make the environmental and compliance regulations their number one priority. The additional cost to their operating costs would definitely result in the consumer paying higher utilities.

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Comment Number: 0002265\_Sexton\_20160712-2

Commenter I: Sue Sexton

Comment Excerpt Text:

I ask that the royalty increase be removed, it has been a proven fact that the increase of royalties is passed onto the consumers; such as the natural gas powered generation plants, their operating costs have passed onto the consumer and now senior citizens are having difficulty paying their utility bills. Especially since the increase has more than doubled in areas, which is leading the AARP organization to get involved to help pursue funds to assist the seniors to keep their power on, and considering the environmental conditions across the United States, that increase isn't helping anyone on a fixed/limited income.

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Comment Number: 0002265\_Sexton\_20160712-3

Commenter I: Sue Sexton

Comment Excerpt Text:

I ask that the proposal for the royalty increase be removed, keep electricity affordable for all users.

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Comment Number: 0002266\_Simonson\_20160711-1

Organization I:

Commenter I: David Simonson

Comment Excerpt Text:

Sec. Jewel is seeking to hike coal royalty rates, despite the fact that current royalty rates are above market, and if increased will only result in decreased production and return on investment for taxpayers. Local Coal Miners pay approximately 40% tax rates when all taxes are considered. I think that is adequate if not excessive.

Comment Number: 0002266\_Simonson\_20160711-2

Commenter I: David Simonson

Comment Excerpt Text:

Increased rates will saddle the taxpayer with higher electricity prices and lower return from reduced coal production also, the value of reliable affordable energy has to be taken into account, because if production on federal lands is decreased due to increased royalty rates, consumers will be forced to pay for more expensive forms of power generation such as new wind and solar installations that more than triple the cost of electricity.

Comment Number: 0002266\_Simonson\_20160711-3

Commenter I: David Simonson

Comment Excerpt Text:

Increased energy taxes will kill jobs and state revenues, while everincreasing electricity rates will hit all Americans in the checkbook. The lower fixed income elderly that live in our region can not afford to have their electrical bills triple over the next 5 – 10 years due to regulatory attack and increased taxation on the lowest domestically provided power, existing low Sulphur thermal coal.

Comment Number: 0002269\_Holubec\_20160715-5

Commenter I: Allen Holubec

Comment Excerpt Text:

Rental Rates -

a. Raise the yearly rental rates - \$10 per acre minimum;  $\frac{1}{4}$  to the government general fund,  $\frac{1}{4}$  to the BLM Coal Program, and  $\frac{1}{2}$  to the National Abandoned Mine Reclamation program

Comment Number: 0002269\_Holubec\_20160715-7

Commenter I: Allen Holubec

Comment Excerpt Text:

Royalty Rate Reduction (RRR) –

a. Export coal

i. This is the main direction of coal sold. Not to a holding company elsewhere in the U.S. but where the coal is actually used.

I. Montana coal is sold to a holding company in Ohio; the coal is put on a train in Montana to a port on the west coast for further resale to China.

ii. A Company is not eligible for the RRR if they export more than 25% coal sales yearly

b. Not available if you are or have been habitually late in reporting and paying royalties

c. Not available to companies that have not met present or past reclamation requirements whether private or federal leases

d. Use mainly to allow for Bypass Situations (category 1) and Area Wide (category 5)

i. Allow limited - Extension of Mine Life (category 2) use only in dire emergencies and this goes away year by year until they are at the original rate (max 5 years)

ii. Remove - Financial Test, Unsuccessful Operations (category 3) not because they have acidic water which causes them to use Stainless steel fittings, which has been successfully used to get a royalty deduction.

iii. Remove - Financial Test, Unsuccessful Operations (category 4) maybe they should not be mining

#### 6. Royalties -

- a. How can the royalty rates be equal to offshore Oil & Gas royalty rates, you are comparing apples to oranges (Oil & Gas to Coal)
- b. Raising the rates will shut down mines
  - i. Basic economics - cost jobs and hurt communities
  - c. Royalties charged only when leaving the company as a whole.
  - i. Require the mine to supply a company Table of Organization that shows all relationships between the mine, the parent company and any subsidiary/sister companies. If coal is sold to a sister company within the parent company, that coal must have royalties based upon coal sold outside of the parent company as a whole.
    1. Montana coal is sold to a holding company in Ohio; the coal is put on a train in Montana to a port on the west coast for further resale to China.
    2. This is the oldest game in the book.
    3. A company owns a mine under a separate name / holding company. This mine only sells the coal to a subsidiary of the parent company and pays the royalties on the coal sold. This other company then sells the coal to outside buyers at a higher (normal price) and then saves the difference in royalty payments.
    4. This is happening all over.
      - a. I have personal experience of this, As a Plant Engineer at a private company, we sent out request for bids for coal to burn. One company sent the bid back saying they don't do outside sales. The company only sells to a holding company which handles all coal sales, which is the only company willing to purchase this coal. This holding company pays rock bottom prices for the coal and then resells the coal again overseas for a substantial gain in profits. This Holding company is owned by the same parent company that owns the mine. The company I worked for was offering prices higher than what the holding company was paying the mine for the coal.
      - b. Secondly, the same mine, since they could only sell the coal at or near a loss, they applied for and received Royalty Rate Reductions because of pricing concerns.
    5. The Engineers performing the Inspections and Product Verification will be able to do this work as part of their normal duties and forward the Information to the ONRR.
      - a. The Coal Inspectors can get and verify bills of Lading for the coal being shipped and compare to corporate structure.

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Comment Number: 0002270\_Gerst\_20160715-2

Commenter I: Gery Gerst

Comment Excerpt Text:

I support a stop to subsidies that allow coal companies to profit from climate destroying coal under our federal lands.

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Comment Number: 0002276\_Henderson\_20160715\_350Colorado-I

Organization I: 350 Colorado Board of Directors

Commenter I: Gina Hardin

Comment Excerpt Text:

The federal coal program currently subsidizes the coal industry and production by not including externalities when considering fair market value, by inconsistently appraising coal, and by reductions in minimum bids, bonus bids and royalties. These subsidies to coal producers need to end, to ensure that coal producers and not taxpayers bear the true external costs of mine development and production. The price of coal should reflect its actual costs in the broader energy marketplace, so that renewable energy can compete fairly. The program needs to adopt policies and practices that incorporate and internalize the full, real costs of mining and production and require coal producers to bear costs, without subsidies and externalizing costs to taxpayers, to local communities, and to future generations.

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Comment Number: 0002276\_Henderson\_20160715\_350Colorado-14

Organization I:350 Colorado Board of Directors

Commenter I:Gina Hardin

Comment Excerpt Text:

The coal industry will be increasingly hard pressed if and when a carbon tax is passed; BLM should help to encourage the industry to be more innovative and forward looking to deal with such as scenario, but BLM should not subsidize coal in any way.

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Comment Number: 0002276\_Henderson\_20160715\_350Colorado-2

Organization I:350 Colorado Board of Directors

Commenter I:Gina Hardin

Comment Excerpt Text:

Specific comments on fair market return

- Raise the royalty percentages to reflect environmental costs, particularly the cost of methane emissions, including reparations following extreme weather events due to climate change, using modern economic tools such as the Social Cost of Methane and the Social Cost of Carbon
  - The minimum bid or bonus bids should not be lowered to offset royalty increases as these recompense the U.S. for different components of federal land ownership and leasing
  - Royalties should be based on an index pricing system for coal, like the ones for oil and gas, that reflect the market price of coal
    - o Regulations should have:
      - A built-in mean of adjusting royalty rates at regular intervals to avoid the perception that the adjustments are excessive when, in fact, they are appropriate
      - A built-in means of adjusting the minimum bid, the bonus bid, and royalties for inflation
      - BLM should work closely with the Office of Natural Resources Revenue and Office of Valuation to ensure Fair Market Value and execute systematic, regular, vigorous reviews of valuation
      - Regulation reforms need to stop coal companies from cheating on royalties by gaming the system through “captive” sales to subsidiaries in order to lower the sale price and the amount of royalties owed
      - Reforms should encourage innovation in the capture of methane through significant royalty rebates or reductions based upon the amount of methane captured (The coal industry needs incentives to step up innovation of new technologies to remain competitive)
      - Regulations must place greater scrutiny on any reductions in minimum bids, bonus bids, or royalties
        - o Provide public notification of such reductions and rationale for the reduction
        - o Provide an avenue for public comment on these reductions or create a review process outside BLM, such as with the Office of Valuation
        - o If a reduction is performance related, such as for methane capture, provide documentation of actual plan and accomplishment
- 

Comment Number: 0002278\_Wynn\_20160717-2

Commenter I:Ralph Wynn

Comment Excerpt Text:

Royalties paid by the coal companies are at most twothirds what are being paid by offshore oil companies and well below that paid for gas and oil leases on federal lands. This royalty practice has been unchanged in 30 years! The impacts of using coal from public lands on our health and our environment should be calculated into the royalty rates.

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Comment Number: 0002282\_Bradford\_20160719-2

Commenter I: David Bradford

Comment Excerpt Text:

It seems to me that there is already a fair return on the coal mined on federal lands. As stated in the Notice in the Federal Register, the 4.3 billion tons of coal mined on federal land, from 2006 to 2015 resulted in \$9.55 billion in revenue to the United States. These revenues are also shared with the states and provide significant revenues to those states, the counties and the municipalities in those states. In addition, the coal mines generate significant revenues through property taxes and payroll taxes. These revenues should also be considered in the PEIS. Any decision to increase the cost of operations of the coal mines needs to evaluate the potential loss of revenues to the U.S., affected states, counties and municipalities due to the loss of jobs and property taxes. This is an absolutely critical issue. Here in Delta County, Colorado, the policies that the Obama Administration have implemented for coal mining have caused two of the three coal mines to close with the loss of over 1,000 jobs to our community. This is causing a multiplier effect of reduced economic activity and job losses throughout our community. Any decision to increase the royalty rate needs to analyze the potential impact of decreased revenues to all affected government entities.

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Comment Number: 0002286\_Watts\_20160719-1

Commenter I: Howard Watts

Comment Excerpt Text:

I would simply like to ask that the coal program be restructured to ensure that lease prices are competitive with the market

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Comment Number: 0002287\_Whittemore\_20160714-2

Commenter I: Judy Whitmore

Comment Excerpt Text:

Raising royalty rates also would reduce coal production which means less revenue for pressing public needs. As a country that is in trillions of dollars debt, why would you consider doing something that reduces income to the government and places a larger burden on the people.

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Comment Number: 0002288\_Wallace\_20160712-1

Commenter I: John Wallace

Comment Excerpt Text:

My household relies on affordable, coal generated electricity. By keeping royalty rates affordable to coal producers, you help me keep my rural household affordable.

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Comment Number: 0002293\_Niemi\_20160606-4

Commenter I: Sharman Niemi

Comment Excerpt Text:

I do not support proposed changes to the federal coal royalty rates.

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Comment Number: 0002294\_Lowe\_20160606-1

Commenter I: Wendy Lowe

Comment Excerpt Text:

Studies that purportedly show that an increase in the coal royalty rate and increase in minimum bid requirements would only result in a slight reduction in coal mined and an actual increase in revenues is laughable.

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Comment Number: 0002294\_Lowe\_20160606-3

Commenter I: Wendy Lowe

Comment Excerpt Text:

Royalty rates are already high compared to private reserves and are comparable to other onshore fossil fuel resources. Forty percent of every dollar is paid to a level 9f government for every ton of coal mined.

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Comment Number: 0002295\_Stewart\_20160719-1

Commenter I: Dan Stewart

Comment Excerpt Text:

BLM should not increase coal lease royalties beyond their fair market value

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Comment Number: 0002295\_Stewart\_20160719-4

Commenter I: Dan Stewart

Comment Excerpt Text:

Increasing royalties and adding a so-called social cost of carbon actions would increase the cost of electricity to business and consumers.

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Comment Number: 0002296\_Regan\_20160720-3

Commenter I: David Regan

Comment Excerpt Text:

I support the Department of the Interior taking a much more robust role in the coal leasing process and return to the taxpayer a much higher price, not a giveaway.

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Comment Number: 0002297\_Gordon\_20160720-1

Commenter I: Thomas Gordon

Comment Excerpt Text:

Please evaluate royalties closely in the PEIS.

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Comment Number: 0002304\_McIntosh\_20160720-1

Commenter I: Tom McIntosh

Comment Excerpt Text:

The Federal Gov. needs to get fair royalties for the coal it sells

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Comment Number: 0002309\_Monseu\_20160721\_AmericanCoalCouncil-4

Organization I: American Coal Council

Commenter I: Betsy Monseu

Other Sections: I

Comment Excerpt Text:

changing the royalty rate structure and terms to make it more onerous for coal mining companies will not generate increased revenue for states. The economics are clear. Coal investment would be reduced and the amount of coal mined on federal lands would (Department of , Energy Information Administration, "Today in Energy", March 10, 2015. Available at <http://www.eia.gov/todayinenergy/detail.cfm?id=20292>) decrease. That means fewer federal and state revenue dollars and a lower, not higher, return for taxpayers.

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Comment Number: 0002309\_Monseu\_20160721\_AmericanCoalCouncil-5

Organization I: American Coal Council

Commenter I: Betsy Monseu

Comment Excerpt Text:

raising the coal royalty rate or otherwise increasing the cost of coal production would be a poor policy choice on the part of BLM

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Comment Number: 0002309\_Monseu\_20160721\_AmericanCoalCouncil-7

Organization I: American Coal Council

Commenter I: Betsy Monseu

Comment Excerpt Text:

In consideration of other economic provisions that would be both beneficial and more equitable to coal producers, BLM should consider basing bonus bids on the amount of recoverable coal rather than the amount of coal reserves, and changing the revenue collection for bonus bids from collecting up-front payments associated with

bonus bids over five years to pay-as-you-go bonuses as coal is produced from the reserve.

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Comment Number: 0002309\_Monseu\_20160721\_AmericanCoalCouncil-9

Organization I: American Coal Council

Commenter I: Betsy Monseu

Comment Excerpt Text:

DOI should promptly reinstate the Royalty Policy Committee, engaging a variety of appropriate stakeholders to provide advice and counsel to the Secretary of the Interior.

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Comment Number: 0002315\_Stewart\_UnitedChurchChirst\_20160722-6

Organization I: Creation Justice Ministries

Commenter I: Shantha Alonso

Other Sections: I

Comment Excerpt Text:

Yet, estimates show that from 2008-2012, coal companies underpaid royalties to the federal government by more than \$620 million.(1) In 2013, the Department of Interior Office of the Inspector General found the Bureau of Land Management was not receiving a fair return for coal,(2) and the Government Accountability Office discovered a lack of uniformity in how states price coal.(3)

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Comment Number: 0002316\_Boeschstein\_CoGovernments\_20160722-2

Organization I: City of Grand Junction

Commenter I: Bennett Boeschstein

Comment Excerpt Text:

As a part of the review, we suggest the Department of the Interior (DOI) outline robust guidelines that will make sure taxpayers and communities are getting a fair deal. Right now, coal is being sold well under market value, denying Coloradans billions of dollars in royalties.

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Comment Number: 0002323\_Gordon\_20160722-4

Commenter I: Thomas Gordon

Other Sections: I7

Comment Excerpt Text:



Another man from Conservation Northwest said the royalties for coal should be the same as for oil. He also mentioned that lynx, wolverine, and caribou need snow.

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Comment Number: 0002326\_Moench\_20160724\_UtahPhysicHealthyEnviron-I

Organization I:Utah Physicians for a Healthy Environment

Commenter I:Malin Moench

Comment Excerpt Text:

Federal coal is being leased in non-competitive auctions far below its true market value. This results in drastic subsidies of the price of Federal coal. These subsidies distort U.S. energy markets, over-incentivize the domestic consumption of coal, over-incentivize U.S. coal exports by subsidizing transportation costs, and delay the shift to cleaner sources of energy

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Comment Number: 0002326\_Moench\_20160724\_UtahPhysicHealthyEnviron-I00

Organization I:Utah Physicians for a Healthy Environment

Commenter I:Malin Moench

Comment Excerpt Text:

The program must be reformed to eliminate a mining company's self-dealing with its affiliates and use final sale prices to assess royalties. This would help ensure that taxpayers are receiving a fair return on their publicly-owned resources. The royalty rate for coal leases should be increased to match the 18.75% that is paid by owners of off-shore oil leases. Such reforms would go a long way toward ending the artificial advantage that holders of Federal coal leases have over their private competitors in Appalachia.

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Comment Number: 0002326\_Moench\_20160724\_UtahPhysicHealthyEnviron-I I

Organization I:Utah Physicians for a Healthy Environment

Commenter I:Malin Moench

Other Sections: 8.5

Comment Excerpt Text:

Decertification sidesteps the competitive system mandated by the FCLAA by eliminating the first step on which all the other procedures depend—drawing up a regional leasing plan. This makes the ad hoc LBA system the only system. Under the LBA system, the BLM does not set the level of coal that it leases by taking into account changes in the market, such as the recent decline in domestic demand for coal brought about by the dramatic decline in the price of domestic natural gas, and the increase in the profitability of coal exports. Instead, it receives a request for a lease tract containing the amount of coal desired by the requester. It determines a fair market value floor for the tract currently being requested by identifying the most recent comparable lease and treating the sale price of that lease as a proxy.

The problem with this approach is that the most recent comparable tract that was leased is typically one that was tailored by the bidder to suit its own interests. That sale price, therefore, typically reflects the unsuitability of that tract for any other buyer. The fair market value of a lease determined in this artificial manner is typically a fraction of what the same coal would be worth if it were mined outside of the Powder River Basin. "Fair market value" determined with this downward bias sets the floor for evaluating the acceptability of bids. It therefore imparts a downward bias to the price ultimately paid for leases. The artificially-reduced lease price, in turn, lowers the price that the mining company charges to sell its leased coal to a broker. This reduces the amount of royalties collected, because royalties are calculated as a percentage of the price at which the mining company sells its coal to a broker. Using the price of a lease designed to be non-competitive as a proxy for the fair market value of the subsequent lease results in a rolling sequence of under-market valuations that shortchanges Federal and state governments and the public that they represent

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Comment Number: 0002326\_Moench\_20160724\_UtahPhysicHealthyEnviron-I4

Organization I:Utah Physicians for a Healthy Environment

Commenter I:Malin Moench

Comment Excerpt Text:

Selling coal to captive affiliates has not changed how PRB coal is mined or the markets into which it is sold. It has simply reduced royalties below what the mining company would pay if its first “sale” were a true sale, rather than a shell transaction between the mining company and itself. The shell game has this effect on coal royalties because the ONRR personnel tasked with determining whether a captive transaction was based on an arm’s-length price must make that determination based on complex formulas employing an array of alternative benchmarks, each of which is an imperfect market proxy that is subjectively chosen and is easily manipulated.(9) As a result, in captive transactions, ONRR often ends up basing royalties on prices that are well below the true market price of the coal

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Comment Number: 0002326\_Moench\_20160724\_UtahPhysicHealthyEnviron-I5

Organization I:Utah Physicians for a Healthy Environment

Commenter I:Malin Moench

Comment Excerpt Text:

In determining the value of the coal to which royalties will be applied, the ONRR’s analyst chooses from five alternative benchmarks. These include using comparable sales, the income approach, and “netback pricing.” Netback pricing starts with a price charged downstream (typically the sale by the marketing affiliate) and deducts eligible costs. The ONRR’s process of determining if a sale is an arm’s-length sale or not, and determining whether the contract price reported to the agency is fair when no market transactions exist, is unwieldy and costly to administer, and provides a loophole that can be used to minimize the amount of royalties owed. (Headwaters Economics, 2015, at 9.)

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Comment Number: 0002326\_Moench\_20160724\_UtahPhysicHealthyEnviron-I6

Organization I:Utah Physicians for a Healthy Environment

Commenter I:Malin Moench

Comment Excerpt Text:

If the federal government were to materially alter the method for valuing royalty payments for our non-arms’ length sales, our profitability and cash flows could be materially adversely affected.

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Comment Number: 0002326\_Moench\_20160724\_UtahPhysicHealthyEnviron-I7

Organization I:Utah Physicians for a Healthy Environment

Commenter I:Malin Moench

Comment Excerpt Text:

Extensive reliance on shell transactions with affiliates, and allowing transportation, washing, and similar preparation costs to be deducted from sale prices before calculating royalties are at odds with international commercial norms. Pacific markets, such as Indonesia and Australia, do not allow many of the subsidies currently in place under the U.S. system.

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Comment Number: 0002326\_Moench\_20160724\_UtahPhysicHealthyEnviron-I8

Organization I:Utah Physicians for a Healthy Environment

Commenter I:Malin Moench

Comment Excerpt Text:

The ONRR has proposed reforms that consist of closing the captive transaction loophole. In making this change, ONRR would treat the price of the first arm’s length sale as the true market price of coal, but after

transportation and other eligible costs are deducted. However, that partial reform would still allow non-affiliated brokers to an important role in the PRB coal market. In those instances, the rulemaking would do little to bring royalties up to 12.5% of the true (gross) market price required by the Federal Coal Leasing Act Amendments. To the extent that severed coal needs to be washed and transported to the end-user, these disadvantageous economic characteristics are reflected in the price of the lease by which the mining company obtains the coal in the first place. To use those very same factors to artificially deflate the market value of that severed coal (the value that the end user places on it) before applying the royalty is to credit the mining company twice for the same disadvantageous economic characteristics of the leased coal.

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Comment Number: 0002326\_Moench\_20160724\_UtahPhysicHealthyEnviron-19

Organization I: Utah Physicians for a Healthy Environment

Commenter I: Malin Moench

Comment Excerpt Text:

The role of brokers must change. As Headwaters Economics notes in its whitepaper, the rise of the Powder River Basin (PRB) as the largest supplier of the nation's coal has dramatically increased the role of affiliate and non-affiliate brokers. Its mines are huge and are far from most energy markets so that most of the coal must be shipped by rail to end users. This creates an opportunity for midstream exchanges through brokers. PRB coal is typically sold (and valued) when it is loaded into trains at the mine. Brokers buy coal from these massive mines, and seek out the highest market price. The current regulatory structure bases royalties on the price of the first sale, whether it occurs at the mine mouth or at the doorstep of a distant end user. If the first sale occurs at the mine mouth, the sale price can be far below the price at which coal is sold to end users, such as power plants on the East Coast or in South Asia. If the first sale occurs at the mine mouth, the lease yields much lower royalty collections than if it occurs at the doorstep of a distant end user. (Headwaters Economics, at 10.)

This approach to royalty valuation does not provide a fair return on Federal coal. This approach results in large Federal subsidies of coal lease holders and their customers because it yields royalty collections that are far below the 12.5% of true market value that is required by statute. To end the subsidies that have evolved under the BLM's current leasing approach, it is essential to apply the Federal royalty at the final point of sale to an end user for both domestic and export sales. Otherwise, non-affiliated brokers in the PRB market will still be able to buy coal at the mine mouth at a discounted price that reflects the low royalty payment made by the mining company. Such brokers would still enjoy a cost advantage over a mine that sells its coal directly to an end user and pays royalties on the full price of the sale to the end user. Federal and state royalties avoided are the primary source of the broker's profit and is the broker's primary reason for being. To capture these profits, mining companies in the PRB have established elaborate networks of affiliated brokers.

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Comment Number: 0002326\_Moench\_20160724\_UtahPhysicHealthyEnviron-20

Organization I: Utah Physicians for a Healthy Environment

Commenter I: Malin Moench

Comment Excerpt Text:

Transparency would end the need to rely on proxies and benchmarks to calculate "fair market value." Currently, the Energy Information Agency publicly provides information showing the final sales price for Federal coal. ONRR auditors could use this information to calculate and verify royalty obligations. This would eliminate the need for ONRR analysts to estimate a true market price through subjective analysis of proxies and benchmarks that are inherently inaccurate. Relying on the price of the final sale is the only straightforward and transparent way to determine the true market price at which mining companies sell their coal. This straightforward reform would make the administratively burdensome and inherently unreliable royalty assessments that ONRR currently makes unnecessary. It would also make it more likely that DOI will actually collect the 12.5% royalty on the true market value of coal that the law requires.

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Comment Number: 0002326\_Moench\_20160724\_UtahPhysicHealthyEnviron-27

Organization I:Utah Physicians for a Healthy Environment

Commenter I:Malin Moench

Comment Excerpt Text:

It should be noted that \$15.59 is less than half of the average end-user price of Federally-leased coal (\$34.43). Consequently, the average effective royalty rate for Federally-leased coal (4.9%) is less than half of the rate required by statute (12.5%). The low “sale” price, and low effective royalty rate that is currently collected for Federal coal generally, reflects the fact that most Federal coal revenue is from PRB coal that is “sold” at the mine mouth. PRB coal sells for an average of \$13 a ton. This is one-fifth to one-fourth of the price of privately-sourced Appalachian coal, which is the next largest source of coal in the United States.

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Comment Number: 0002326\_Moench\_20160724\_UtahPhysicHealthyEnviron-28

Organization I:Utah Physicians for a Healthy Environment

Commenter I:Malin Moench

Comment Excerpt Text:

The DOI should level the playing field between mining companies that exploit public coal reserves and those who exploit private coal reserves, and ensure that taxpayers are receiving a fair return on their publicly- owned resources by applying the Federal royalty rate to the true market value of coal at its final point of sale.

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Comment Number: 0002326\_Moench\_20160724\_UtahPhysicHealthyEnviron-29

Organization I:Utah Physicians for a Healthy Environment

Commenter I:Malin Moench

Comment Excerpt Text:

Under the current leasing process, the direct economic costs and benefits of leasing Federal coal are obscured behind a cloak of confidential data and analysis in which ONRR personnel use subjective judgment to select from a set of imperfect proxies or benchmarks for true market value. The necessary first step in estimating the direct economic costs and benefits of leasing Federal coal is to base the estimate on transparent, objective data. Once the direct effects are estimated, they can be balanced with the wider social objectives that the statutory framework says are supposed to guide the use of this public resource. Ironically, the procedural framework for taking this approach is already in place--it just isn't used. The nation's Federal coal leasing laws (MLA and FCLAA) require the BLM to conduct coal leasing within a framework of regional planning. The purpose of that planning is to balance a wide range of social objectives that are affected by the way that the public's mineral resources are used.

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Comment Number: 0002326\_Moench\_20160724\_UtahPhysicHealthyEnviron-5

Organization I:Utah Physicians for a Healthy Environment

Commenter I:Malin Moench

Comment Excerpt Text:

It must also assess royalties based on final sale prices to end-users. The current 12.5% royalty rate for coal is the lowest royalty rate allowed under current law. It is lower than the 18.75% charged for offshore oil and gas production, and lower than the rates charged by many key Western states, including Wyoming, New Mexico, Colorado, and Utah. Although the Bureau of Land Management (BLM) has the statutory authority to increase the royalty rate, it has not done so. It should exercise its authority to bring the royalty rate for coal up to the rate paid by owners of offshore oil leases.

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Comment Number: 0002326\_Moench\_20160724\_UtahPhysicHealthyEnviron-74

Organization I:Utah Physicians for a Healthy Environment

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Commenter I: Malin Moench

Comment Excerpt Text:

BLM officials reduce effective royalties below the statutory rate in three ways:

- 1) The BLM applies royalties to the price that the mining company receives from the first sale of its coal to another entity. It calls this the “first arms-length transaction” and presumes that it is the true market price. If the first sale is to the mining company’s own affiliate/subsidiary, the BLM still treats such a “sale” as having occurred at the true market price if its Office of Natural Resource Revenue (ONRR) finds that the price is the same as it would have been if the sale had been at arm’s length. The first “sale” is often made at the mine-mouth to the mining company’s own affiliate, rather to a power plant or other end user, such as a broker that exports the coal. In most cases, there is no economic or business reason to record a sale before the coal reaches the power plant, except to reduce the nominal price of first “sale” in order to avoid paying the full royalty amount that would have been owed if the sale had been recorded when it was delivered to the end user (the power plant).
- 2) The BLM can reduce the royalty rate to as low as 2 percent of the sale price if a mine becomes unprofitable due to unfavorable conditions—such as limited access to coal or a decrease in its quality.
- 3) Mining companies can deduct transportation and washing costs from the sale price before applying the royalty. This translates into an allowance for the full cost of transporting federal coal from the mine mouth to a remote point of sale or to transport the coal to a distant wash plant.

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Comment Number: 0002326\_Moench\_20160724\_UtahPhysicHealthyEnviron-75

Organization I: Utah Physicians for a Healthy Environment

Commenter I: Malin Moench

Other Sections: I

Comment Excerpt Text:

Shell transactions with affiliates are also used by PRB coal companies when selling coal to foreign buyers. A Reuters investigation in 2012 noted that PRB coal sells for an average of \$13 per ton domestically, but sells for up to 10 times that price in Asian markets. Because royalties currently are applied to “sales” to captive affiliates at \$13 a ton at the mine mouth, and later sold to Asian customers at up to 10 times that price, some PRB coal companies can make four times as much profit when they sell to Asian markets than if they sell the same coal domestically, despite the high cost of transporting coal to Asia. See [.nbcnews.com/news/2012/12/04/15676862-asia-coal-export-boom-brings-no-bonus-for-taxpayers](http://nbcnews.com/news/2012/12/04/15676862-asia-coal-export-boom-brings-no-bonus-for-taxpayers).

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Comment Number: 0002326\_Moench\_20160724\_UtahPhysicHealthyEnviron-76

Organization I: Utah Physicians for a Healthy Environment

Commenter I: Malin Moench

Comment Excerpt Text:

This estimate of the size of the annual Federal subsidy of leased coal is corroborated by a study done in 2012 for the Institute for Energy Economics and Financial Analysis. That study estimated that the Federal coal leasing program has collected \$28.9 billion less in royalties than the law requires over the period 1982-2012 (roughly \$1 billion per year) due to flaws in the current leasing system. (Sanzillo, T., 2013).

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Comment Number: 0002327\_Everdean\_20160724-1

Commenter I: Jo Everdean

Comment Excerpt Text:

please take into consideration how unfair laws like the Baseload Act are. It is unfair and does not guarantee taxpayers receive fair compensation. Additionally, it places a burden on taxpayers that should be absorbed instead by the company that is involved in the energy development.

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Comment Number: 0002333\_Magagna\_20160725\_WyStockgrowers-I

Organization I: Wyoming Stock Growers Association

Commenter I: Jim Magagna

Comment Excerpt Text:

The federal coal leasing program has a track record of providing a fair return to the taxpayer through requiring that no tracts be leased at less than fair market value. At the same time the program has facilitated cost effective mining by allowing mining companies to nominate tracts for bidding that are adjacent to existing mines. In addition, this approach allows mining to be concentrated thereby reducing patchwork surface impacts and facilitating reclamation. Our members derive significant benefits from this approach.

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Comment Number: 0002336\_Cole\_20160725\_MesaCntyCO-I

Organization I: Mesa County Colorado, Board of County Commissioners

Commenter I: Kristen Cole

Comment Excerpt Text:

Coal Leasing Program Revisions: The federal coal leasing program provides for an adequate return to the public on coal that is mined on public lands. Given the current state of the coal industry, increases in lease payments and royalties would ultimately result in more mine closures and less revenue to the public.

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Comment Number: 0002339\_Satterfield\_20160726\_IECA-I

Organization I: Industrial Energy Consumers of America (IECA)

Commenter I: Marnie Satterfield

Comment Excerpt Text:

Existing rates paid on federal coal are excessive and further increases in taxes and royalties will reduce investment, lower government (federal and state) revenues, and result in a decreased return on investment for taxpayers. Given current market conditions of coal, and as a direct and indirect consumer of coal, we do not support increasing the royalty rate.

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Comment Number: 0002339\_Satterfield\_20160726\_IECA-II

Organization I: Industrial Energy Consumers of America (IECA)

Commenter I: Marnie Satterfield

Comment Excerpt Text:

Given current market conditions of coal, IECA does not support an increase in the royalty rate for coal. The coal industry is paying more than its fair share and existing Federal rates are too high given the market conditions.

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Comment Number: 0002348\_Thompson\_20160607-I

Commenter I: Bret Thompson

Comment Excerpt Text:

The Obama administration placed a temporary moratorium on new federal coal leases and Sec. Jewel is seeking to hike coal royalty rates, despite the fact that current royalty rates are at 34% (Wyoming coal mines currently pay over one billion dollars a year in taxes and revenue). This rate is far above the tax rate of any other mineral and far above the rate of other countries, and if increased will result in an increase in electric rates and a decreased in production and a decrease on returns to our state governments, federal government and taxpayers.

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Comment Number: 0002354\_Cherni\_20160721-I

Commenter I: Tio Winter

Comment Excerpt Text:

There has been a complaint with the coal leasing program that we don't pay our fair share for federal leased coal. So what does that mean? In Powder River Basin, we will take an average coal mining sale price of about 11 bucks. So, the lease acquisition tax which we have to bid on for fair market value is usually about a dollar and the federal royalty we pay on top of that after we have already mined it which most of the mines around powder basin pay the full amount of the leased royalty. The federal royalty is about a \$1.38 of that 11 bucks. On top of that, we also have state severance taxes for 58 cents, a county tax for 50 cents, a black lung tax for 55 cents and an AML tax for 28 cents. That AML tax is abandoned mine land tax we have been banking into a fund since 1977 to make sure that tax payers aren't left with the responsibility of the claiming this mining and this is in addition to our own federal lease obligations that we pay each year. So altogether that is about \$4.28 of the \$11, or 39% and I think if you have seen the news lately, you have seen that companies that are going bankrupt and I think that that's enough. We are paying more than our fair share. You can have 10% of something or 20% of nothing if you don't want to let us to mine federal coal anymore.

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Comment Number: 0002364\_Morris\_20160721-1

Commenter I: Eileen Morris

Comment Excerpt Text:

Coal mining will continue for a long time, but the question is, will we the public get a fair share of its value to build better schools and update infrastructure, or will we let the public's fair share go to corporate pockets? Many reputable economists have shown coal mining companies can afford to pay higher amounts in royalties without affecting production or employment.

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Comment Number: 0002380\_O'Hair\_20160721-1

Commenter I: Todd O'Hair

Comment Excerpt Text:

There's actually been a study done on the Headwaters Organization and there's two points that are important. One being is that the individual who wrote these articles on coal saying that the coal companies aren't paying their fair share of revenues, he's not even an economist. He has a Master's in Geography, so he might be able to tell you where the state capitol is of New Hampshire, but he doesn't know anything about coal economics. And so he's been the author of all 4 of these reports. The second thing is Headwaters has been funded in the years 2012 and 2013 by between 87% and 93% comes from major environmental organizations. So Headwaters is not a bipartisan, not a non-biased organization that's done these sorts of studies. So I just wanted to give that study upon the organizations that're funding Headwaters so that you've got that front and center

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Comment Number: 0002382\_Ankney\_20160721-1

Organization I: State of Montana

Commenter I: Duane Ankney

Comment Excerpt Text:

Now this is all about the moratorium on leases because the opposition to these leases says we are giving them away. When you look at coal, it's one of the most taxed minerals in the United States. We have the royalties, we have the gross proceeds, and we have the severance tax on it. In Montana it pays a lot of money. Just the coal going to [Colstrip units] 1 & 2, should 1 & 2 go down, that's a \$3 million drop to revenue. That's huge. Because that \$3 million means that you leverage that \$3 million as actual cash into about \$15 million of federal money that actually goes to pay for mandated federal planning.

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Comment Number: 0002390\_Pfister\_20160721-7

Organization I:Northern Plains Resource Council

Commenter I:Ellen Pfister

Comment Excerpt Text:

BLM also has a responsibility to obtain the best price possible for the coal belonging to the public. It will need to look beyond the various flimsy corporate veils until it finds the first arm's length transaction between the mine operator and the coal buyer. When the coal was being set up for leasing here in the Bulls, the mine president came to the hearing and handed over an armload of financial records to BLM. I wondered which set of books they were. The justification for the lease price was kept totally secret, as were the means by which BLM determined if the price was adequate. Somehow, that did not seem like the way for the public's business to be conducted.

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Comment Number: 0002390\_Pfister\_20160721-9

Organization I:Northern Plains Resource Council

Commenter I:Ellen Pfister

Comment Excerpt Text:

If it were not for the very low Montana severance tax on underground coal, Musselshell County, where most of the coal for Signal Peak is located, would receive nothing back from the Federal coal leasing, since Great Northern Properties, LLC and the Northern Cheyenne Tribe have latched onto the money produced from the federal coal in this area. Under ordinary circumstances, half the lease money would have been paid to the State of Montana, and half of that would have gone to Musselshell County. Today all of it goes to Houston and Lame Deer.

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Comment Number: 0002391-2

Commenter I:Tom Tully

Comment Excerpt Text:

2) Tighten up loopholes that allow coal companies to underpay royalties, in particular, by bookkeeping tricks that allow a company to pay royalties on the price of coal at the mine mouth at a much lower rate than when it is shipped, even when owned by the same parent company.

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Comment Number: 0002391-7

Commenter I:Tom Tully

Comment Excerpt Text:

The BLM should be working to maximize the return to the public rather than giving what is essentially a subsidy to the coal industry.

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Comment Number: 0002392-3

Commenter I:Mary Fitzpatrick

Comment Excerpt Text:

A more transparent and competitive process that adequately assesses the true value and costs of coal, from mine to power plant, is a critical necessity.

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Comment Number: 0002393-3

Commenter I:Mike Penfold

Comment Excerpt Text:



GAO studies indicate federal coal is sold below market values and the public is getting short changed.

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Comment Number: 0002394-1

Commenter I: Barbara Archer

Comment Excerpt Text:

Accounting loopholes need to end. The public has a right to know the true costs vs. benefits of coal. The days of companies using accounting loopholes that allow them to pay royalties for coal at one price to a subsidiary and then sell the same coal into the export market at a much higher rate should be over. The common good should not be forfeited for private gain.

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Comment Number: 0002394-4

Commenter I: Barbara Archer

Comment Excerpt Text:

Fairness to taxpayers and the public in general needs to be considered. It is estimated the public has lost billions over the past 3+ decades that could in part be used to help affected communities to deal with downturns and inevitable transitions and to become more economically diverse.

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Comment Number: 0002395-1

Commenter I: Thomas E. Towe

Comment Excerpt Text:

I am very concerned that the coal companies not be allowed to take advantage of the system. Generally royalties of 12 1/2 % of the mine mouth value of the coal is considered a reasonable royalty, although there are times when a bonus can be added by proper bidding procedures. My concern is that the coal companies should not be allowed to avoid the full payment of the expected royalty by selling to a subsidiary at below market value at the mine site and letting the subsidiary make the profit when the coal is sold later in the process of delivering the coal to the ultimate utility company. As a result some coal companies do not pay anywhere near 12.5% royalty; some have placed the true payment closer to 4%. I call that cheating the system and I say that needs to end.

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Comment Number: 0002395-2

Commenter I: Thomas E. Towe

Comment Excerpt Text:

Third, there is nothing wrong with giving the agency in charge the right to reset the fair market value. The Internal Revenue Service and the State Departments of Revenue do this all the time. In other words, when a taxpayer sells or purchases products from itself, i.e., a subsidiary, it is not an arms' length transaction. If it is not an arm's length transaction, it very likely will not reflect the fair market value. In the tax world, the Internal Revenue Service or the tax agency has full authority to reassess the number when it is not a full arms' length transaction. This same thing must be authorized in the determination of royalty payments.

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Comment Number: 0002405-1

Commenter I: Sandra J. Speerstra

Comment Excerpt Text:

Increased rates will saddle the taxpayer with higher electricity prices and lower return from reduced coal production - also, the value of reliable affordable energy has to be taken into account, because if production on federal lands is decreased due to increased royalty rates, consumers will be forced to pay for more expensive forms of power generation.

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Comment Number: 0002409-1

Commenter I:Greg Gianforte

Comment Excerpt Text:

Half of the federal coal royalties are returned to Montana for our general fund. If the intent of the DOI leasing moratorium is to stop coal production on federal land for an extended time, or even permanently, how do you propose that Montana backfill the revenue we'd be losing?

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Comment Number: 0002409-2

Commenter I:Greg Gianforte

Comment Excerpt Text:

What is the objective of increasing the federal coal royalty rate? It plainly appears the objective is to reduce the amount of federal coal mined in Montana.

Hiking the royalty rate on federal coal will mean that we have less federal coal mined in Montana. Montanans own half a share of that federal coal, so DOI would effectively be stopping Montanans from mining the coal that they own. That has real impacts on our state budget, not to mention jobs. How can you justify stopping mining federal coal when it would have such negative impacts on Montana?

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Comment Number: 0002436-8

Commenter I:Sharon St Joan

Comment Excerpt Text:

there can be no fair return for the destruction of the natural world. The earth, the forests, the rivers, the wildlife corridors, the canyon lands, and especially this incredibly magnificent area in southern Utah are priceless, invaluable treasures. No level of destruction of them should be allowed now or ever in the future, and no compensation could ever possibly be adequate.

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Comment Number: 0002440\_Zwigart\_20160721-2

Commenter I:Donna Zwigart

Comment Excerpt Text:

Tax payers need to get a "fair shake". I found it disturbing that federal coal royalties have not changed in the past 30 years!

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Comment Number: 0002445\_Madson\_20160727-1

Organization I:Mountain Pact

Commenter I:Diana Madson

Other Sections: 6

Comment Excerpt Text:

As western mountain communities, we represent nearly 200,000 permanent residents and millions of annual

visitors. Coal extraction and use as a fuel source poses a number of costs currently unaccounted for in federal coal program. Onsite, these costs include air pollution from exploration, development, and transportation to and from the mine site; fugitive methane emissions; habitat disruption; noise pollution; and water contamination. From the perspective of our mountain communities, the coal's contribution to climate changes poses the greatest cost. Economic, public health, and environmental damages from catastrophic wildfire, floods and reduced snowpack are some of the threats we face.

Failing to account for coal's contribution to these costs in federal coal leases shifts them onto taxpayers -- and in our case, at a time when our towns are shouldering the financial burden of climate impacts and proactive adaptation. In the face of climate change, it is time to modernize the federal coal program to accurately account for its costs to communities, taxpayers and the environment while supporting a transition to a more sustainable and resilient economy.

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Comment Number: 0002446\_Balck\_20160727-2

Organization I:Craig/Moffat Economic Development Partnership

Commenter I:Michelle Balleck

Comment Excerpt Text:

Increased royalty rates will only result in depressed revenue for our schools and roads with little, if any, positive impact on the environment. Increased rates would also have a detrimental effect on our local economy, which would be seen in decreased state revenue, lost jobs and increased electricity prices for consumers.

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Comment Number: 0002448\_FoleyHein\_20160727-1

Organization I:Institute for Policy Integrity

Commenter I:Jayni Foley Hein

Comment Excerpt Text:

The current coal leasing system does not foster the competition needed to earn fair market value. In the Powder River Basin, for example, coal companies minimize competition by nominating coal tracts adjacent to their existing mines. This is why the vast majority of recent coal lease bids have only one bidder. Multiple bids, Huber explained, arise only when two mines expand towards the same tract and both have an economic interest in developing that tract. Huber concluded by explaining that the coal leasing program is susceptible to two problems: (1) incumbency, since the repeat players are often able to engineer the process to their own benefit, and (2) information asymmetry, since coal producers understand prevailing coal market conditions better than federal land and resource appraisers.

Jayni Hein (Policy Director, Institute for Policy Integrity) discussed how fair market value should be understood from a social welfare maximizing perspective, including accounting for the climate, environmental and social costs of coal production. Hein recently published the report *Priorities for Federal Coal Reform*, which highlights recommendations intended to help modernize the program so that it can provide maximum net benefits to American taxpayers. The report details how the programmatic review should identify opportunities to increase revenue, reduce greenhouse gas emissions, and align federal land management with U.S. climate change goals. In effect, the current program subsidizes coal production, as the public bears the burden of mitigating and adapting to many externality costs, including greenhouse gas emissions—the effects of which will continue to be felt decades from now. Given its capacious statutory mandates, including its duty to manage federal resources “in the public interest” and for the benefit of future generations, Interior should conduct a regular strategic planning process every five to eight years, and as a threshold inquiry, do a “net social value” calculation to determine whether leasing any coal tracts would be net socially beneficial. This is akin to how Interior’s Bureau of Ocean Energy Management (BOEM) conducts its five-year program analysis and makes a threshold “net social value” inquiry. Interior should lease coal only when doing so provides net benefits to the public, and ideally, leasing decisions should be calibrated to maximize net benefits. If net social value is positive, leasing may be desirable, but Interior

should set an appropriate royalty rate and use an appropriate base valuation to calculate royalties owed. It should seek to calibrate the royalty rate in order to maximize social welfare. A social welfare-maximizing framework is consistent with 30 years' worth of presidential directives to agencies to maximize the net social benefits of their policy choices. Hein also discussed how the legislative history of the relevant statutes (the Mineral Leasing Act of 1920, Federal Land Policy and Management Act, and Federal Coal Leasing Amendments Act) are consistent with a social welfare-maximizing framework, and that it would be reasonable to raise royalty rates to recoup at least some of the externality costs of coal production, transportation, and consumption. Otherwise, the government prioritizes short-term revenue and coal company profits over long-term public value and welfare.

Nathan Richardson (Assistant Professor of Law, University of South Carolina School of Law; Visiting Fellow, Resources for the Future) concluded the fair market value discussion, focusing on BLM's authority and broad discretion to regulate and govern the leasing process, including its charge to manage resources for "multiple use." Richardson stated that no new legislation is required for most of the reforms that have been suggested, including the ability to use environmental charges (using the Social Cost of Carbon) and/or increasing royalty rates to account for market failures. This authority is strengthened because the federal government is a landowner in the coal leasing process—not simply a regulator.

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Comment Number: 0002448\_FoleyHein\_20160727-2

Organization I: Institute for Policy Integrity

Commenter I: Jayni Foley Hein

Comment Excerpt Text:

Royalty Rate Scenarios and Effects on Production, Revenue, and Emissions

The second panel focused on analyzing royalty rate scenarios and the effects on production, revenue, and emissions.

Mark Haggerty (Headwaters Economics) began by saying that the focus ought to be on the community perspective—how the royalty program affects what happens in coal-producing states and communities. Using a partial equilibrium model, Haggerty and Headwaters Economics found that there is a gap between the net delivered price of cost (the market price minus allowable transportation and washing costs) and the mine mouth price of coal, and if the federal government captured that lost value, it would modestly increase the cost of the coal royalty program to the coal lessee (by about \$0.28 per ton of coal, on average, across the coal program). This would result in revenue gains, but very little increased cost to the producer, and very little impact on federal coal production. Headwaters also analyzed the effect of increasing royalty rates to 16.67% or 18.75%, to make the program consistent with rates used by states and for federal offshore oil and gas leasing. It found that royalty rates could be increased and still have only a small impact on production, and a small impact on substitution between federal and non-federal coal. Finally, Haggerty noted that it would be useful to have more analysis on state utilization of coal revenue; there may be benefits to creating a natural resources trust rather than having annual distributions. In the question and answer session, Haggerty stated that the natural resources trust concept may require legislative action. In prior work, Headwaters also modeled the effect of a royalty rate increase on state severance tax revenue.

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Comment Number: 0002449\_Lyon\_20160727\_NWF-14

Organization I: National Wildlife Federation Action Fund

Commenter I: Jim Lyon

Other Sections: 1 6

Comment Excerpt Text:

A recent study has concluded that introduction of higher royalty rates would reduce carbon dioxide emissions of coal even with demand side policies, like the Clean Power Plan, in place. (127) This would be in part due to the induction of substitution of lower carbon emitting fuel and energy sources for coal. (128) The study finds significant reductions in CO<sub>2</sub> emissions with the imposition of royalty rates that internalized carbon pollution costs by reflecting the social cost of carbon in the royalty rate. (129) While scenarios vary depending on demand side policy, with strong CPP implementation a carbon adder to royalty rates as low as 20% of the SCC could further lower carbon emissions by between 59 and 25 million metric tons in 2020 and by 39 and 10 million metric tons in 2030 depending on CPP implementation schemes. (130) The reason for the larger near term increase in emissions reductions is that the increased costs of coal will speed near term investment in lower carbon fuel sources including renewables. (131) The effects of a royalty rate increase without the CPP is also quite substantial. If the CPP is not implemented, a royalty rate at or equal to 100% of the SCC would result in carbon emission reduction equal to 70% of those that would have been achieved by the CPP as currently designed. (132)

(127) Spencer Reed and James H. Stock, *Federal Coal Leasing Reform Options: Effects on CO<sub>2</sub> Emissions and Energy Markets*, Executive Summary (Feb 2016) at 1, available at [http://www.vulcan.com/MediaLibraries/Vulcan/Documents/FedCoalLeaseModelResults\\_ExecutiveSummary\\_Vulcan\\_FINAL\\_16Feb2016.pdf](http://www.vulcan.com/MediaLibraries/Vulcan/Documents/FedCoalLeaseModelResults_ExecutiveSummary_Vulcan_FINAL_16Feb2016.pdf)

(128) *Id.*

(129) *Id.* at 4.

(130) *Id.* at 4 and 6.

(131) *Id.* at 6.

(132) *Id.* at 8.

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Comment Number: 0002449\_Lyon\_20160727\_NWF-21

Organization I: National Wildlife Federation Action Fund

Commenter I: Jim Lyon

Comment Excerpt Text:

Modernize the federal coal royalty system and increase rates to ensure a fair public return for the publicly held resource. The mineral royalties system is out of date, out of touch, and inequitable. The current rate of 12.5% serves as a below market subsidy that must be ended. It is also inconsistent with what federal offshore mineral royalty rates are set at, 18.75%. In many of the western states that BLM assesses the rate of 12.5% for oil, gas and coal produced on federal land parcels, the states themselves charge significantly higher rates ranging from 16-19% for the energy resources on state parcels. Moreover, due to manipulations of the system, many coal companies are paying effective rates that far below 12.5%. This structure must be modernized and adjusted to match comparative fair market rates and ensure a maximum return of revenue to the taxpayers for the value of their resources. It must also be adjusted to internalize significant costs being borne by the public-at-large. Loopholes allowing companies to escape high royalty rates by manipulating the sale price through less than arms' length transactions need to be closed, as reflected by the recent rule change by the Office of Natural Resources Revenue.

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Comment Number: 0002449\_Lyon\_20160727\_NWF-24

Organization I: National Wildlife Federation Action Fund

Commenter I: Jim Lyon

Comment Excerpt Text:

In addition to likely having to assume high clean-up costs, the public is not getting a fair return for the leasing of this coal, with royalty rates too low and companies able to manipulate the system to get real royalty rates that are even lower. In fact, about 90% of coal lease sales only receive bids for a single bidder and lease modifications and royalty rate reductions can result in effective royalty rates as low as 2%, well below what is required by law. (2) Also, as wildfires increase; drought, flood, warming temperatures and decreased snow pack rapidly alter our

water systems; sea levels rise and begin to inundate coastal habitats; and other impacts of climate change take hold, the high costs of carbon pollution are becoming real. Wildlife suffering from these costs, from declining moose populations in northern states to trout and salmon that are finding it harder to survive in streams to sea turtles that are seeing beaches needed for reproduction wash away.

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Comment Number: 0002449\_Lyon\_20160727\_NWF-27

Organization I: National Wildlife Federation Action Fund

Commenter I: Jim Lyon

Other Sections: I

Comment Excerpt Text:

Meanwhile, the costs of business-as-usual is high and well documented. Numerous reports and audits have found that the revenue system of bonus bids, annual rents, and royalties is not securing a fair return to the taxpayer. Indeed, the American people have been shortchanged by nearly \$30 billion over the past three decades. (9) Current policies are thus depriving the states and taxpayers of much needed revenue to account for these costs and pay for other services, such as the maintenance of our public lands.

(9) Tom Sanzillo, *The Great Giveaway: An analysis of the costly failure of federal coal leasing in the Powder River Basin* (June 2012) at 4, available at [https://docs.google.com/file/d/0B\\_qVWeYLAqoqIv2YyX3hnR25IcXM/edit](https://docs.google.com/file/d/0B_qVWeYLAqoqIv2YyX3hnR25IcXM/edit).

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Comment Number: 0002449\_Lyon\_20160727\_NWF-33

Organization I: National Wildlife Federation Action Fund

Commenter I: Jim Lyon

Other Sections: I

Comment Excerpt Text:

The effect of DOI's insufficient fair market value appraisal process has resulted in a loss of nearly \$30 billion in revenue to the U.S. Treasury from the federal coal program during the preceding 30 years. Outdated federal coal revenue policies also distort U.S. energy markets. In particular, the federal coal leasing program provides an unfair advantage to companies mining Powder River Basin coal resulting in Powder River Basin coal being significantly undervalued. It sells for less than one-third of the price of Appalachian coal, even when accounting for Appalachian coal's higher heat content. (75)

(75) Nidhi Thakar and Michael Madowitz, *Federal Coal Leasing in the Powder River Basin: A Bad Deal for Taxpayers* (Center for American Progress July 29, 2014), available at <https://www.americanprogress.org/issues/green/report/2014/07/29/94204/federal-coal-leasing-in-the-powder-riverbasin/>.

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Comment Number: 0002449\_Lyon\_20160727\_NWF-4

Organization I: National Wildlife Federation Action Fund

Commenter I: Jim Lyon

Comment Excerpt Text:

Due to subsidies and loopholes, coal companies currently pay effective royalty rates of 4.9% (and, as the Secretary's Order notes, as low as 2%), which is well below the 12.5% required by law. (71) This is costing taxpayers about one billion dollars every year in lost revenues. (72)

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Comment Number: 0002449\_Lyon\_20160727\_NWF-57

Organization I: National Wildlife Federation Action Fund

Commenter I: Jim Lyon

Comment Excerpt Text:

Underfunded needs can be helped by adjusting the federal coal royalty rate. The proceeds of royalty rates should

be used to enhance the public lands assets we all value. These include hunting, fishing, recreation and maintenance of our public lands. There are more than 37 million hunters and anglers in America who spend nearly \$50 billion a year in these activities. More broadly, the Outdoor Industry Association reports that the broader outdoor recreation economy generates more than \$600 billion in direct consumer spending and supports more than 6 million jobs. Public lands are treasured and heavily used by hunters, anglers, wildlife watchers, outdoor enthusiasts. Given their importance to national and regional economies, these uses deserve to have their public lands – Americas’ public lands – adequately managed, maintained, and funded.

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Comment Number: 0002449\_Lyon\_20160727\_NWF-6

Organization I: National Wildlife Federation Action Fund

Commenter I: Jim Lyon

Other Sections: I

Comment Excerpt Text:

The FCLAA specifically provides that surface mine leases will be charged a minimum royalty of 12.5% and that the secretary of the interior sets by regulation the royalty rate for underground mine leases. “A lease shall require payment of a royalty in such amount as the Secretary shall determine of not less than 12 1/2 per centum of the value of coal as defined by regulation, except the Secretary may determine a lesser amount in the case of coal recovered by underground mining operations.” 30 U.S.C. § 207(a).

(72) Zimmerman et al., Fair Share at 7, citing Headwaters Economics, *An Assessment of U.S. Federal Coal Royalties: Current Royalty Structure, Effective Royalty Rates, and Reform Options* (2015), available at <http://headwaterseconomics.org/wphw/wp-content/uploads/Report-Coal-Royalty-Valuation.pdf>

(73) Zimmerman, et al., Fair Share, at 7-8, citing Bureau of Land Management, “Coal Operations,” available at [http://www.blm.gov/wo/st/en/prog/energy/coal\\_and\\_non-energy.print.html](http://www.blm.gov/wo/st/en/prog/energy/coal_and_non-energy.print.html) (last accessed August 2015); Headwaters Economics, *An Assessment of U.S. Federal Coal Royalties: Current Royalty Structure, Effective Royalty Rates, and Reform Options*; Claire Moser and others, “Cutting Greenhouse Gas from Fossil-Fuel Extraction on Federal Lands and Waters” (Washington: Center for American Progress, 2015), available at <https://cdn.americanprogress.org/wpcontent/uploads/2015/03/PublicLandsEmissions-brief.pdf>.

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Comment Number: 0002451\_Hibbs\_20160727-1

Organization I: Utah American Energy

Commenter I: David Hibbs

Comment Excerpt Text:

Proposed Royalty Rate Increases Will Reduce Public Returns on Federal Coal Development

Proponents of a royalty rate increase point to reports prepared by the Inspector General’s Office (“IG Report”) and Government Accountability Office (“GAO Report”) examining fair market value returns under the existing Federal Coal Program. They claim that increasing royalty rates will provide state and federal government with additional revenue. To be clear, however, neither report proposes any increase in the current royalty rates. To the contrary, the IG Report confirms that royalties collected at current rates provide “substantial net benefits” to American taxpayers. Neither report suggested that adjusting current royalty rates will further BLM goals of increasing returns or fair market value to the public.

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Comment Number: 0002451\_Hibbs\_20160727-2

Organization I: Utah American Energy

Commenter I: David Hibbs

Comment Excerpt Text:

(a) Reduced Coal Revenues from Decreased Production

There is no empirical evidence to support the notion that increasing federal coal royalty rates will increase federal coal revenues. Further, proponents of a royalty rate increase fail to consider the impact a royalty rate increase will have on other public benefits derived from the federal coal program.

Proponents of a royalty rate increase make the simplistic assumption that federal coal revenues will increase with a royalty rate increase. They assume that coal demand and production will remain constant notwithstanding increasing production costs and greater regulatory burdens. Even if coal demand declines, proponents of a royalty increase claim that higher rates will make up for decreased sales volume. First, this position makes unfounded economic assumptions. In actuality, increasing federal royalty rates will reduce federal coal production. Secondly, this position disregards broader economic and social impacts of federal coal development. Public benefits of federal coal development are not limited to royalty revenues.

Coal production on public lands under existing conditions is experiencing an unprecedented decline. Burdens of increasing royalty rates will deter investment in federal coal reserves by increasing costs of production, further depressing demand, and very likely increasing the price per ton. Without factoring in proposed royalty increases, the Energy Information Administration (“EIA”) projects coal production to decline to levels last seen in the late 1970s, with production in the West hardest hit. Last year coal production fell 22.7%. An estimated 18 GW of electric generating capacity was retired in 2015, more than 80% of the retired capacity was conventional steam coal.” Since reaching a high point in 2008, coal production in the United States has continued to decline. Coal production in 2015 is expected to be 10% lower than 2014, the lowest level since 1986.

Coal production in Utah experienced similar impacts on a statewide basis. In 2015, 78% of Utah’s electric generation was fueled by coal. A large share of Utah’s coal is mined from federal lands. Eighty percent of coal mined in Utah is extracted on public lands under federal leases. Moreover, three-fourths of all coal mined in Utah is consumed in-state primarily for electric power generation. However, recently, Utah has experienced declines in the local market for steam coal due to the impacts of federal environmental regulation. Utah coal producers have already experienced decreased demand due to the early retirement of coal-fired electric generation facilities. EPA’s air quality restrictions on existing coal-fired power plants forced the early closure of the Carbon Plant and the Regional Haze federal implementation plan could retire additional units of coal-fired generation owned by PacifiCorp.

While the market is constrained, mining costs are increasing at underground operations in Central Utah. Several mines in the Carbon/Emery County area are encountering difficult mining conditions and have had to go deeper to recover federal coal reserves. The easy to reach reserves have been exhausted. In this regard, PacifiCorp’s Deer Creek Mine which operated on federal coal leases in Emery County was shut down last year due to geologic and safety conditions. The Deer Creek underground operation provided the mine-mouth supply for Huntington Power Plant. Other mining companies, including UEI have re-evaluated geologic and economic conditions with respect to operations on federal lands. In some cases, reserves of poor quality or those presenting difficult underground mining conditions or safety concerns have caused operators to seek federal lease royalty readjustments below 8%. In other circumstances, UEI and other Utah mining operations are considering relinquishment of federal coal leases due to geologic, safety and poor market conditions.

Given current market conditions, and challenging geologic conditions in the Central Utah coal fields, any increase in federal royalty rates for coal could trigger lease relinquishments or further disinvestment. Increasing the royalty rate will increase the costs of production which may well reduce the development of coal reserves on federal land. As evidenced by a spate of bankruptcies and reorganizations during the past two years, many coal companies are already operating on razor thin margins, walking a fine line between continuing existing operations and shuttering entire mining operations.

Contrary to BLM’s proposal, there is no evidence to suggest that increasing federal royalty rates will not reduce



Utah's coal production. Based on the impacts of current market conditions, it is virtually guaranteed that demand for federal coal reserves will decline if royalty rates are dramatically increased. Moreover, given current price sensitivities in the market, it is likely that increased royalty rates will not make up for lower federal coal production in the future. It is therefore, likely, that royalties generated from federal coal in Utah will actually decrease despite a higher royalty rate.

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Comment Number: 0002451\_Hibbs\_20160727-3

Organization I:Utah American Energy

Commenter I:David Hibbs

Comment Excerpt Text:

Beyond employment, federal coal production gives rise to additional benefits in rural economies. Coal revenues generated by federal royalty payments are split evenly between the state and federal governments. In Utah, federal lease royalty revenues are allocated to infrastructure maintenance and development in rural Utah communities under the Community Impact Fund. Revenues are also allocated to education, rural economic development, and rural community building projects. Reduced federal coal production would reduce the State's share of these funds. Rural communities would not only be forced to confront increasing unemployment, but would also have to find a new source of revenue to fund public works and community development programs.

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Comment Number: 0002451\_Hibbs\_20160727-5

Organization I:Utah American Energy

Commenter I:David Hibbs

Comment Excerpt Text:

2. There is No Rational Basis to Justify Raising the Coal Royalty Rates to the Federal Offshore Oil and Gas Royalty Rate

BLM states that raising federal coal royalty rate to 18.75% would "be consistent with the royalty rate for Federal offshore oil and gas." BLM does not, however, state why consistency is required, or even desired, between two different commodities, produced in different geographic regions, using different technologies, that are sold in two different markets. Moreover, the BLM does not explain how consistency between two divergent commodities promotes coal development consistent with the mandate of the MLA. Moreover, BLM does not indicate how or to what extent 18.75% royalty rate will impact coal production, and by extension, revenues generated by coal royalties allocated to states.

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Comment Number: 0002451\_Hibbs\_20160727-6

Organization I:Utah American Energy

Commenter I:David Hibbs

Comment Excerpt Text:

3. Royalty Rate Reductions are Critical to Federal Coal Development

BLM suggests that royalty reductions may not be necessary, or that royalty reductions, somehow, deprive the American public of a fair rate of return on the federal coal program. BLM points to reduced royalty rates below 8% as evidence of a failure in the Federal Coal Program. UEI contends, however, that royalty rates below 8% are evidence that current royalty rates are too high.

Notwithstanding proposals to increase federal royalty rates, existing royalty rates can render federal coal development uneconomic. As stated above, in the Central Utah coal field, easy to reach coal reserves have been exhausted. Many mining companies, including UEI, are now forced to reevaluate geologic and economic conditions on federal leases. In some circumstances, continuing operations are dependent on reducing the royalty

rate below 8%. In other circumstances, however, mining companies including UEI are forced to consider relinquishment of deferral coal leases due to geologic issues, safety concerns, and poor market conditions.

BLM's decision to allow for royalty rate reductions is critical to ongoing federal coal production. Under 30 U.S.C. §209 the Secretary may reduce royalty fees "whenever in his judgment it is necessary to do so in order to promote development, or whenever in his judgement the lease cannot be successfully operated under the terms provided therein." In this way Congress allowed the Secretary discretion to set reasonable royalty rates that account for specific mine conditions, coal quality, and general market trends to maximize federal coal recovery.

The decision to reduce royalty rates is made on a case by case basis after careful examination of a number of factors including geologic and engineering conditions beyond a federal lessee's control. The lessee is required to demonstrate that a royalty reduction is necessary, and that recovery without a royalty reduction is uneconomic. More importantly, however, the Secretary must determine that a royalty reduction promotes federal coal development or maximum coal recovery. Eliminating royalty reductions in the name of increasing overall coal lease revenues may have the opposite effect. Without royalty reductions a lessee may have no option but to relinquish a federal lease rather than to expand uneconomic operations.

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Comment Number: 0002451\_Hibbs\_20160727-7

Organization I:Utah American Energy

Commenter I:David Hibbs

Comment Excerpt Text:

In sum, there is no justification for royalty rate increases for underground mining operations on federal coal leases. Empirical evidence demonstrates that increasing federal royalty rates will render many underground coal operations uneconomic. Coal producers may be forced to halt production and to relinquish federal leases rather than continue to operate on public lands at a loss. Proposed increases in federal coal royalty rates will have significant impacts on rural communities that have come to depend on jobs and revenue generated by federal coal leases. UEI requests that the BLM consider these impacts and ensure that its assessment is based on objective economic considerations and its mandate to promote federal coal development under the MLA. In this regard, royalties should remain at 8% or less for coal produced by underground mining methods.

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Comment Number: 0002457\_Johnson\_20160728-5

Organization I:Western Slope Conservation Center

Commenter I:Alex Johnson

Comment Excerpt Text:

- Ensure a fair return to the American public for the leasing and mining of our publicly owned mineral resources by evaluating royalty rates and closing loopholes in coal valuation processes.

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Comment Number: 0002458\_Friez\_20160728-4

Organization I:North American Coal Corporation

Commenter I:Christopher Friez

Comment Excerpt Text:

It is very likely in today's marketplace that an increase in federal coal royalty rates could lead to a significant curtailment in federal coal sales and consumption - a net lose-lose scenario, especially in North Dakota where the federal coal tracts will be bypassed and left in the ground forever. In a bypass situation, there are no winners. A valuable resource gets left behind and the impacts to the area are greater because of the added activity to mine around the pocket of federal coal. Where both volumes and the future right-to-mine royalties are lost, both federal and state receipts associated with the leasing program could diminish appreciably. In addition, energy costs would increase in areas where coal remains the dominant fuel source for power generation - particularly

the industrial heartland. It seems imprudent and unwise to saddle American manufacturers with higher energy costs at a time when the economy is still struggling to return to more robust growth. Since it is highly unlikely other nations will adopt policies discouraging the use of their most affordable, reliable, and abundant natural resources, and policy which discourages the use of federal coal reserves will put American citizens and industry at an immediate disadvantage with their competitors around the world.

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Comment Number: 0002458\_Friez\_20160728-6

Organization I:North American Coal Corporation

Commenter I:Christopher Friez

Comment Excerpt Text:

Should the Department decide to reform the federal coal program, we strongly encourage DOI to take steps to make coal leasing and production on public lands more competitive, not less. We encourage the DOI to focus on a Fair Market Value ("FMV") approach to achieve the maximum value for these public resources. Unless abandoning the principles in a free market economy, by focusing on FMV, the BLM will avoid strange results that come from extremes such as extremely high or extremely low value. This value also flows with the coal via the reliable and low cost electricity available to all its businesses, farmers, citizens and visitors.

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Comment Number: 0002461\_breen\_20160728-1

Organization I:The Wilderness Society

Commenter I:Katie Breen

Comment Excerpt Text:

Federal coal operations cost taxpayers, states and local communities millions in lost revenue. Loopholes in policy allow coal companies to get by without paying their full royalties to the government for their use of public lands and federal coal. Royalties were set at 12.5 percent, yet companies often get away with paying as little as 4.9 percent. Loopholes in the government's coal program cost taxpayers and state governments more than \$1 billion a year in lost royalties - money that could be used for local schools and roads. As of 2012, loopholes in our guidelines had cost taxpayers over \$30b.

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Comment Number: 0002462\_Compton\_20160728\_UtahMineAssoc-14

Organization I:Utah Mining Associaton

Commenter I:Mark Compton

Comment Excerpt Text:

the current price per ton of coal in PRB is approximately \$11.00. The 12.5% federal royalty results in a tax on this price at \$1.38. The average price of the lease acquisition fee (bonus bid) adds another \$1.00. Two more federal taxes are levied on this ton of coal, the AML tax of \$0.28 per ton and the Black Lung Excise Tax of \$0.55 per ton. Finally, this ton of coal is also taxed through the state severance tax and the county tax applicable in the PRB, at a rate of 5.3% and 4.5% respectively, adding another \$1.08 in taxes. In total, this amounts to \$4.28 in taxes on every \$11.00 worth of coal sold, an effective tax rate of 39%

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Comment Number: 0002462\_Compton\_20160728\_UtahMineAssoc-4

Organization I:Utah Mining Associaton

Commenter I:Mark Compton

Comment Excerpt Text:

The absence of more bidders for federal coal leases does not reflect that leases are being offered at less than fair market value, but instead reflects the restructuring of the industry and the advanced development of the coal regions within federal lands. There are fewer mines and fewer coal companies today than during the period when the regional leasing process commenced in the 1980s.

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Comment Number: 0002462\_Compton\_20160728\_UtahMineAssoc-9

Organization I: Utah Mining Association

Commenter I: Mark Compton

Comment Excerpt Text:

Claims that federal royalty rates (12.5% surface mines; 8% underground mines) do not provide a fair return are equally inaccurate, and fail to consider that federal rates are substantially (30%-65%) higher than the prevailing rates for private coal in the East.

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Comment Number: 0002464\_Connelly\_20160728\_WyCoaltLocalGov-8

Organization I: Coalition of Local Governments

Commenter I: Kent

Other Sections: I

Comment Excerpt Text:

In 2014, Wyoming's mines produced over 392 million tons of coal that contributed about \$1.14 billion in state and local government revenues. Wyoming Mining Association, *The 2015-16 Concise Guide to Wyoming Coal*, at 2, 4-5, available at <http://www.wyomingmining.org/wp-content/uploads/2015/10/2015-16-Concise-Guide-to-Wyoming-Coal.pdf>. See also Robert Godby et al., University of Wyoming, Center for Energy Economics and Public Policy, *The Impact of the Coal Economy on Wyoming*, at 21-22 (Feb. 2015), available at [http://www.uwyo.edu/cee/\\_files/docs/wia\\_coal\\_full-report.pdf](http://www.uwyo.edu/cee/_files/docs/wia_coal_full-report.pdf) (Reporting about \$1.26 billion in 2012 revenues for Wyoming state and local governments). A large portion of this revenue funds programs, such as water development, highways, and protection of wildlife and natural resources. Godby at 22. A significant share of the coal revenues, about 38 percent, also supports education and the remaining nine percent of the revenue goes to local governments. Id. The largest sources of coal revenue for local governments is ad valorem taxes on production and sales and use tax revenues. Id. at 22-23.

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Comment Number: 0002464\_Connelly\_20160728\_WyCoaltLocalGov-9

Organization I: Coalition of Local Governments

Commenter I: Kent

Comment Excerpt Text:

The revenues brought in from coal production have also fluctuated over time due in large part to changes in abandoned mine lands distributions and coal lease bonus revenues. Id. at 23-24. However, declines in coal lease sale in 2009 and 2010, plus the lack of coal lease sales in 2013 and 2014, the low inventory of federal lands available for leasing, and the recent moratorium on leasing will considerably decline these revenue sources. See id. at 24.

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Comment Number: 0002465\_Burnham\_20160728\_BurnhamCoal-2

Organization I: Burnham Coal, LLC

Commenter I: Bob Burnham

Comment Excerpt Text:

the federal government is well paid for its coal resources. To come to this conclusion one only has to look at the Powder River Basin (PRB) where the vast majority of the coal leasing takes place. Lease bonus payments at the most recent sales amount to ~10% of the sales value of the coal. Royalty payments and other fees paid at the time of mining and sale account for ~20% of the sales price at current market prices. State and county taxes account for 1015% of the price. All told, federal, state and county governments receive ~40% of the value of the coal.

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Comment Number: 0002465\_Burnham\_20160728\_BurnhamCoal-3

Organization I: Burnham Coal, LLC

Commenter I: Bob Burnham

Comment Excerpt Text:

Additional comments refer to more transparency in how the BLM determines fair market value for the coal being leased. Keeping current policy is a no brainer. If the companies bidding on the coal knew how the fair market value is determined, they could submit a minimum bid every time.

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Comment Number: 0002466\_Smith\_20160728\_SELA-4

Organization I: Safe Energy Leadership Alliance

Commenter I: Rachel Smith

Organization 2: City of Hood River

Comment Excerpt Text:

We support the assessment of whether American taxpayers are receiving a fair return from these publicly owned resources. In doing so, BLM should take a big -picture view of “fair return,” and factor in the full range of risks and costs borne by the public. This includes externalities such as the health, traffic, economic, and air and water quality impacts and risks from both rail and barge transport and the end use of coal.

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Comment Number: 0002466\_Smith\_20160728\_SELA-9

Organization I: Safe Energy Leadership Alliance

Commenter I: Rachel Smith

Comment Excerpt Text:

Ensuring that American taxpayers are earning a fair return for the use of their public resources while protecting public safety and the environment is of the utmost importance. Under your leadership, the Department of the Interior (DOI) has taken bold steps in a neffort to address climate change, while also working to bring federal regulations into the 21st Century.

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Comment Number: 0002467\_Fettus\_20160728-23

Organization I: Natural Resources Defense Council

Commenter I: Geoffrey Fettus

Comment Excerpt Text:

The Economics Of Federal Coal Leasing

I. Competition, Fair Market Value, And Fair Return Issues

The final major impact issue that must be addressed in the PEIS is restructuring the lease payment system to more accurately compensate the American taxpayer for the value – and cost – of the coal resources being leased. While it can be accomplished in several ways, as discussed below, in our view the most important element to be added to these payments is incorporating environmental harms caused by the full life-cycle of the GHG emissions associated with leasing. By taking those costs into account, along with other changes, the PEIS provides an opportunity to explore appropriate reforms in the leasing system.

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Comment Number: 0002467\_Fettus\_20160728-28

Organization I: Natural Resources Defense Council

Commenter I: Geoffrey Fettus

Comment Excerpt Text:

As discussed below, the agency’s failure to actually obtain fair market value, combined with reliance on fee reductions, have cost taxpayers billions in revenue. These problems are further exacerbated by the fact that a federal coal lease has an initial term of twenty years, and may be extended for an additional ten years – allowing

up to thirty years of mining based on fee schedules and conditions set decades earlier. See 43 C.F.R. §§ 3475.2, 3425.5.

Moreover, the agency also has not at all endeavored – in the bidding process or the other junctures where the government is compensated for access to federally-owned coal – to account for the numerous external costs associated with coal, such as the cost of carbon emissions associated with coal mining, transportation and combustion. As we will discuss, this is one of the central tasks now faced by the agency.

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Comment Number: 0002467\_Fettus\_20160728-35

Organization I: Natural Resources Defense Council

Commenter I: Geoffrey Fettus

Other Sections: I

Comment Excerpt Text:

Rental rates may be as low as \$3/acre. 43 C.F.R. § 3473.31. Royalties may be as low as 12.5 % for a surface mine, and 8% for a subsurface mine. Id. § 3473.32; 30 U.S.C. § 207(a). In addition, as permitted by the statute, BLM's regulations authorize the agency to "waive, suspend or reduce the rental, or reduce the royalty but not advance royalty on an entire leasehold, or on any deposit, tract or portion thereof," as long as the royalty is not reduced to "zero percent." Id. § 3473.32(e); see 30 U.S.C. § 209 (authorizing rate reductions where the Secretary determines "it is necessary to do so in order to promote development, or whenever in his judgment the lease cannot be successfully operated under the terms provided therein."). As a result of these reductions and other factors, such as the use of subsidiary companies to pay royalties on non-arms-length prices, from 2008-2012 the effective royalty rate was only 4.9 percent. Executive Office of the President, *The Economics of Coal Leasing On Federal Lands: Ensuring A Fair Return To Taxpayers* (2016) (Hereafter "White House Report") at 8 (emphasis added); see also *Headwaters Economics, An Assessment of U.S. Federal Coal Royalties*, Jan. 2015.

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Comment Number: 0002467\_Fettus\_20160728-41

Organization I: Natural Resources Defense Council

Commenter I: Geoffrey Fettus

Comment Excerpt Text:

The final principal problem that must be addressed in the PEIS is the amounts charged for access to exploit federally leased coal. As the CEQ regulations provide, where – as here – a federal agency action has important economic effects, those issues must be thoroughly addressed. 40 C.F.R. §§ 1508.8; 1508.14; 43 C.F.R. § 146.420(d); BLM NEPA Handbook at 54.

Outdated federal coal revenue policies distort U.S. energy markets and undermine the Nation's climate change goals. They do so because the federal coal leasing program provides an unfair advantage to companies mining PRB coal, where more than 85% of all federal coal comes from. Coal from the PRB is significantly undervalued and sells for less than one-third of the price of Appalachian coal, even when accounting for Appalachian coal's higher Btu content.

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Comment Number: 0002467\_Fettus\_20160728-42

Organization I: Natural Resources Defense Council

Commenter I: Geoffrey Fettus

Other Sections: I

Comment Excerpt Text:

Numerous reports and audits have found that the revenue system of bonus bids, annual rents, and royalties is not securing a fair return to the taxpayer; in fact the American people have been shortchanged by nearly \$30 billion over the past three decades. As noted in the Secretarial Order and Scoping Notice, in 2013 both GAO and OIG issued reports raising important concerns about fair return and FMV. 81 Fed. Reg. at 17,723. Numerous other reports have reached similar conclusions, and the PEIS therefore provides a much needed opportunity to

consider and address these issues. (9)

(9) See GAO, Coal Leasing: BLM Could Enhance Appraisal Process, More Explicitly Consider Coal Exports, and Provide More Public Information (GAO 14-140) (Dec. 2013); OIG, Coal Management Program, U.S. Department of the Interior, Report No.: CR-EV-BLM-0001-2012 (June 2013); see also Taxpayers for Common Sense, Federal Coal Leasing: Fair Market Value and a Fair Return for the American Taxpayer (Sept. 2013); Center for American Progress, Modernizing the Federal Coal Program (Dec. 2014); Headwaters Economics, An Assessment of U.S. Federal Coal Royalties (2015); Center for American Progress, Cutting Subsidies and Closing Loopholes in the U.S. Department of the Interior's Coal Program (Jan. 6, 2015); Institute for Policy Integrity, Harmonizing Preservation and Production (June 2015); Institute for Policy Integrity, Illuminating the Hidden Costs of Coal (Dec. 2015).

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Comment Number: 0002467\_Fettus\_20160728-43

Organization I: Natural Resources Defense Council

Commenter I: Geoffrey Fettus

Other Sections: I

Comment Excerpt Text:

To date, BLM has relied on an initial bonus bid, lease rentals, and royalties to comprise what little return on the value of the coal accrues to the taxpayer. The PEIS must explore not only readjusting the amount of compensation for each of these aspects of leasing, but also additional compensation approaches that will not only insure a fair return for federally leased coal, but will also address the environmental externalities – and particularly GHG emissions. Coal lease pricing can also be utilized to properly incentivize the use of coal resources in our Nation's fuel mix, allowing for appropriate levels of coal while insuring that coal emissions do not hinder the Nation's ability to meet its GHG emission reduction goals.

One principal issue the PEIS must address is the fact that, in practice, there is very little competition for coal leases, with almost 90% of lease sales involving only a single bidder – often the operator of the adjacent (or expanding) mine. This lack of competition poses significant challenges to accurately setting FMV and therefore the initial bid cost. However, even in the absence of a competitive market, BLM can create policies and procedures that will return a fairer amount of revenue for the public. Because of the amount of federal coal that is leased, recent government reports have shown that raising bid amounts a mere penny can bring in up to \$7 million of additional revenue in the average Wyoming PRB lease sale. In short, every penny counts.

A second issue concerns the royalty rates for coal production, which do not currently either provide a fair return or cover the myriad externalities of coal production – including GHG emissions. Under existing royalty policies, coal companies also exploit loopholes, and subsidies, deductions, and royalty rate reductions lower the effective royalty rate to approximately 5% overall. In addition, companies are sometimes selling coal to their own subsidiaries, paying a royalty based on this depressed price, and then reselling the coal on the market at higher prices. (10) Moreover, since this coal represents more than 40% of domestic coal production, artificially low royalty rates bring artificially low market prices.

(10) Although the Office of Natural Resources Revenue recently issued new regulations that touch on some of these issues, 81 Fed. Reg. 43,338 (July 1, 2016), the PEIS should explore the extent to which companies can continue to exploit these loopholes. Among other concerns, sales may still be structured to avoid royalty payments.

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Comment Number: 0002467\_Fettus\_20160728-44

Organization I: Natural Resources Defense Council

Commenter I: Geoffrey Fettus

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**Comment Excerpt Text:**

the PEIS must address the transparency issues that have repeatedly arisen in the coal leasing context, where the leasing process, including the determination of Fair Market Value, is all conducted behind closed doors without public input or access. Insuring an open and fair leasing process is a critical step necessary to provide the American people with the necessary confidence that they are being fairly compensated for this public resource.

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Comment Number: 0002467\_Fettus\_20160728-66

Organization I:Natural Resources Defense Council

Commenter I:Geoffrey Fettus

**Comment Excerpt Text:**

As noted, many concerns have been raised about whether BLM is obtaining accurate FMV in leasing federal coal. (28) Although BLM endeavors to determine FMV, numerous reports have demonstrated that the fact that there is often only one bidder for a lease, along with other limiting factors, result in billions of dollars in losses to taxpayers. See, e.g., Tom Sanzillo, *The Great Giveaway: An analysis of the costly failure of federal coal leasing in the Powder River Basin at 9* (stating the U.S. Treasury has lost roughly \$28.9 billion in revenue from coal leasing below FMV).

(28) BLM determines FMV with one of two methods: the comparable sales approach (in which sale prices from similar properties in prior transactions are used to determine value) and the income approach (in which an estimate of annual costs and revenues is used to determine value).

BLM has a statutory mandate to “award leases [through] competitive bidding.” 30 U.S.C. § 201 (emphasis added). The regulatory framework must be modified to achieve this statutory directive.

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Comment Number: 0002467\_Fettus\_20160728-67

Organization I:Natural Resources Defense Council

Commenter I:Geoffrey Fettus

Other Sections: 2

**Comment Excerpt Text:**

As noted, there are several problems with the current royalty rate structure that must be addressed in the PEIS to provide taxpayers with a fair return and to address the economic externalities of federal coal leasing. The PEIS must also explore eliminating the royalty rate reductions, and deductions for transportation and coal washing, that has even further reduced the return on federal coal leases.

As discussed above, royalties may be the most appropriate place to couple leasing prices to the social cost of carbon, since an operator only pays royalties for the coal extracted. As the recent White House Report explained, “royalty reform [can] provide a fair return to taxpayers while simultaneously reducing the environmental effects of coal extraction and combustion.” White House Report at 3.

Because the environmental and social externalities from coal production vary with the amount of coal produced, one sensible approach would be to recoup those costs through royalties that cover: (1) the cost of production-related environmental externalities; (2) the cost of transportation-related externalities, including CO<sub>2</sub> emissions; (3) uncompensated infrastructure demand (e.g., water, power, processing facilities); and (4) any foreseeable “waste” of the resource, such as vented or flared methane associated with coal production. See Hein and Howard at 20.

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Comment Number: 0002467\_Fettus\_20160728-68

Organization I:Natural Resources Defense Council

Commenter I:Geoffrey Fettus

Other Sections: 2



Comment Excerpt Text:

Alternatives To Address Fair Return For American Taxpayers

The alternatives necessary to address fair return overlap with those considered to address climate change impacts, since – particularly in the context of a royalty “adder” – the fees collected will principally compensate the taxpayer for the climate change impact associated with the coal produced. However, additional alternatives to consider include:

a. Basing lease sales on actual FMV

As noted, numerous investigations have documented how BLM fails to obtain FMV for coal leases or otherwise collect coal leasing income commensurate with the value of the coal and its myriad externality costs. Leases with a single bidder, market manipulations, unreasonable deductions, royalty and rent reductions, and other factors have led hundreds of millions, or more, in lost income. For example, one Report found that, had coal valuation actually been based on market value, the royalty collections for just the five year period from 2008 – 2012 would have been \$850 million higher, an average of \$170 million per year.

Under this alternative, to address this concern BLM would make fair return a threshold criterion for when and whether to offer new leases and accept bids. New leases would be offered only when FMV can be achieved and royalty and rent reduction are not required to make the lease economical or commercially viable. Leasing would also only be permitted when the federal coal brought to market will not reduce the price of coal on the national market, will not contribute to overproduction, and will not lead to resource hoarding or speculation. Approaches to consider include:

- Establishing minimum bids for each coal region that take into account regional economic, geologic and engineering variables, and assessing the projected income from each individual lease to be offered based on unique variables.
- Raising the minimum bid to \$1 per ton, the average market price of coal during the Obama Administration. (29)
- Considering the market value for coal based on sale prices of coal with similar characteristics, from both Federal lands and non-Federal lands. White House Report at 18. Where it is difficult to find such comparative prices, prices could alternatively be calculated on an energy-equivalent basis to reflect the fact that the heat rate of the coal is a determinant of its value in the coal power plant. Pricing this way would permit comparisons to the payments collected from Federal leases for natural gas and oil on public lands. (30)

(29) Nidhi Thakar, *Modernizing the Federal Coal Program*, Center for American Progress 5 (December 9, 2014), available at <https://cdn.americanprogress.org/wp-content/uploads/2014/12/FederalCoal.pdf>.

(30) As the recent White House Report on these issues explains:

After adjusting for the heat content of coal, the royalty rate being paid by surface PRB coal is roughly one third of the royalty rate paid for natural gas on Federal lands (on an energy-equivalent basis), even though they are both subject to a 12.5 percent royalty rate on their respective reported sales prices (before deductions). It could be appropriate to adjust the royalty rate directly to reflect an adjustment for heat content, or to include a Btu-adjusted royalty “adder” on top of the base royalty rate. In other words, the royalty owed would be 12.5 percent of the revenues plus an additional payment in dollars per Btu. Similar adjustments would be possible for sulfur content and other characteristics, but the heat content adjustment is likely to be among the most important. White House Report at 19; see also *id.* at 4 (“If royalty payments are based on the price of nearby regional coal on a per-Btu basis, after it is fully phased-in, this would add up to \$290 million more to State and Federal coffers annually. Maximizing royalty payments would bring in as much as \$3 billion more to State and Federal coffers annually once fully phased-in”).

- Creating an inter-lease bidding process in which BLM makes multiple sites available for bidding simultaneously, and then subsequently decides which bids to accept based on site location and the amounts bid.

· Incorporating “option value” into the bid amounts – i.e., the informational value of delay associated with federal leasing. As the D.C. Circuit recently explained in considering option value in another context, “[t]here is therefore a tangible present economic benefit to delaying the decision to drill for fossil fuels to preserve the opportunity to see what new technologies develop and what new information comes to light.” *Center for Sustainable Economy v. Jewell*, 779 F.3d 588 (D.C. Cir. 2015).

As outlined in Hein and Howard, under this approach, at the bidding stage, BLM would be compensated for both the estimated market price of the coal to be leased, as well as the option value of mining coal, as both of these are fixed costs.

The option value of coal leasing includes not only the uncertainties associated with future coal prices, but numerous other factors about which BLM may obtain additional information. As outlined by Hein and Howard, these include:

- o uncertainty about the magnitude of risk from externalities, such as methane emissions, particulate matter emissions, and potential aquifer overdraft; as a recent example, methane leakage from natural gas gathering facilities was recently found to be 8 times higher than prior EPA estimates;
- o uncertainty about the development rate of pollution-prevention technologies, as well as technologies that may better protect worker safety;
- o uncertainty with respect to the cost of externalities, including the social cost of carbon and the social cost of methane;
- o uncertainty about competing uses of federally-owned lands, such as the potential and need for renewable energy siting;
- o uncertainty with respect to coal reserve estimates, which may affect the long-term availability and price of accessible coal; and
- o uncertainty with respect to climate sensitivities, such as climate conditions that may exacerbate the damaging effects of air or water pollution, or consequences for land values near production sites Hein and Howard at 18.

Comment Number: 0002467\_Fettus\_20160728-69

Organization I: Natural Resources Defense Council

Commenter I: Geoffrey Fettus

Other Sections: 2

Comment Excerpt Text:

Setting royalties based on price comparisons

Under this alternative royalty payments would be based on nearby regional coal prices, nationwide coal prices, and the price of natural gas, which is a close substitute for coal in the electricity market. All three prices would be expressed in terms of dollars per one million British Thermal Units (MMBtu) to account for differences in heat rates of different types of coal (and natural gas). See White House Report at 3.

Comment Number: 0002467\_Fettus\_20160728-70

Organization I: Natural Resources Defense Council

Commenter I: Geoffrey Fettus

Other Sections: 2

Comment Excerpt Text:

Setting royalties to maximize revenue

Under BLM’s current scheme the agency charges low royalty rates, and then further reduces royalties as necessary to encourage development. See, e.g. 43 C.F.R. § 3485.2(c)(1) (“The authorized officer may waive, suspend, or reduce the rental on a Federal lease, or reduce the Federal royalty,” where doing so serves “the purpose of encouraging the greatest ultimate recovery of Federal coal . . .”). This approach served an earlier era where the agency’s objective was to maximize the production of federal coal as an energy source.

As the foregoing discussion of climate change impacts demonstrates, this should no longer be an aim of BLM’s

approach to federal coal leasing. To the contrary, royalty rates should be used to both generate maximum income and help align coal development with GHG emissions reduction goals.

Accordingly, under this alternative BLM would explore the maximum royalty rates it could charge in order to obtain the most revenue for taxpayers, and consider the extent to which those rates would reduce GHG emissions. It would also consider eliminating royalty rate reductions. Given that there may be a royalty rate too high to attract coal companies, the rates charged under this alternative are likely to differ from the rates that would apply by simply incorporating all GHG externality costs into a royalty adder.

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Comment Number: 0002467\_Fettus\_20160728-71

Organization I: Natural Resources Defense Council

Commenter I: Geoffrey Fettus

Other Sections: 2

Comment Excerpt Text:

Increasing leasing transparency and public disclosure

As noted, multiple reviews over the years have shown BLM officials leasing federal coal for less than FMV, improperly reducing royalties, and otherwise allowing access to federal coal without full return to taxpayers. Among the structural flaws that allow these problems to occur is the secrecy surrounding these decisions.

BLM should amend its regulations to provide for transparency and public disclosure throughout the leasing process. This would include determining FMV, the bid process itself, and the establishment of rent and royalty rates. By forcing BLM officials to “show their work,” the public will be in a position to both monitor BLM decision-making and insure that the public receives a fair return for coal resources.

#### e. Changing lease terms

Under this alternative, BLM would consider changing lease terms to control the amount of coal produced, by putting annual coal production limits in coal leasing contracts. Like the Carbon Budget alternative, this would allow BLM to control the upper limit of federally leased coal, and therefore to begin to address the GHG emissions associated with the federally leased coal fuel cycle.

BLM would also consider incorporating into coal leases the authority to adjust rental and royalty fees over time, particularly if leases are going to continue to be given for decades-long periods. Providing additional flexibility in pricing would allow BLM to insure that coal leases continue to advance national objectives in the future based on new information that might not be available at the time of the original lease.

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Comment Number: 0002470-1

Organization I: Taxpayer for Common Sense

Commenter I: Ryan Alexander

Other Sections: 8.5

Comment Excerpt Text:

The BLM must use the Programmatic EIS process to design a system of coal leasing that promotes competition among coal companies for federal coal leases. Competition is an essential part of any functioning market; without it, the program must compensate in various ways to achieve fair coal pricing. The lack of competition also leads to public skepticism that the federal coal program is not ensuring a fair return for these resources.

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Comment Number: 0002470-10

Organization I: Taxpayer for Common Sense

Commenter I: Ryan Alexander

## Comment Excerpt Text:

At a minimum, the BLM could improve transparency by collecting data from the field on a monthly basis. Each month, each state office should report the number of royalty rate reduction requests it has received, the number of requests granted and the justifications, and the volume anticipated to be valued at the reduced rate. In the past, the BLM has been reluctant to disclose any data because of lessees' concerns about trade secrets. But these aggregate numbers would not disclose any confidential data about individual mines and should be made publicly available on BLM's website. The data would provide an essential baseline for understanding the impact of royalty rate reductions upon taxpayer revenue, and would be consistent with the Department of the Interior's Extractive Industries Transparency Initiative. The impact of policy decisions regarding rate reductions could then be evaluated based on publicly available data.

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Comment Number: 0002470-12

Organization I: Taxpayer for Common Sense

Commenter I: Ryan Alexander

Other Sections: I

## Comment Excerpt Text:

In its report, the CEA suggests coal valuation could be considered "under a framework analogous to property taxes," in which "the market value for coal should be based on sale prices of coal with similar characteristics, from both Federal lands and non-Federal lands."<sup>13</sup> This concept was proposed at a congressional hearing by Dan Bucks, the former Director of the Montana Department of Revenue: "Interior can address these root causes if it returns to the plain language of the federal Mineral Leasing Act that calls upon Interior to directly value coal—just as a property tax assessor directly values homes and businesses. Instead of following the property tax model called for in the law, Interior has instead delegated initial valuation to companies through an income tax approach that opens the door to abuse and underreporting."<sup>14</sup>

(13) CEA at 18.

(14) Dan R. Bucks, Testimony at the House Committee on Natural Resources - Oversight Hearing "Ensuring Certainty for Royalty Payments on Federal Resource Production," December 8, 2015. Available at: [http://democratsnaturalresources.house.gov/imo/media/doc/testimony\\_bucks.pdf](http://democratsnaturalresources.house.gov/imo/media/doc/testimony_bucks.pdf)

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Comment Number: 0002470-13

Organization I: Taxpayer for Common Sense

Commenter I: Ryan Alexander

Other Sections: I

## Comment Excerpt Text:

The leasing process generally used by the BLM does not obtain fair market value for taxpayers. Competitive bids are seldom generated, and studies indicate that the resulting losses for taxpayers are substantial. Congress enacted the Federal Coal Leasing Amendments Act of 1976 (FCLAA)<sup>1</sup> to require competitive bids and to specify that no bid may be accepted that does not represent fair market value. The act also established diligent development requirements to reduce speculation and to institute minimum royalty rates. BLM's FCLAA implementing regulations<sup>2</sup> require the Secretary to delineate tracts for leasing from among those lands classified for coal leasing. Tracts are to be of a size the Secretary "finds appropriate and in the public interest and which will permit the mining of all coal which can be economically extracted..."<sup>3</sup> Tracts are then offered for lease at sales held either on the motion of the Secretary or upon the request of any qualified applicant. The Secretary must award leases by competitive bidding, except for certain sales expressly authorized to be negotiated sales.

(1) P.L. 94-377 – August 4, 1976

(2) Bureau of Land Management, U.S. Department of the Interior, Final Rulemaking: "Coal Management; Federally Owned Coal," 42 FR 42584 –

July 19, 1979; and Bureau of Land Management, U.S. Department of the Interior, Final Rulemaking: "Coal Management; Federally Owned

Coal; Amendments to Coal Management Program Regulations,” 47 FR 33114 – July 30, 1982  
(3)30 U.S.C. §201(a)(1) – emphasis added

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Comment Number: 0002470-14

Organization I:Taxpayer for Common Sense

Commenter I:Ryan Alexander

Other Sections: I

Comment Excerpt Text:

The Inspector General (IG) examined 45 lease sale modifications since 2000 and concluded that \$60 million had been lost by those adjustments.<sup>8</sup> The BLM faulted that conclusion because the IG had valued the coal in the additional lease areas at the same rate as the main leases to which additional deposits were added. This conflict highlights the need for further review and guidance on valuing coal deposits, both for lease modifications and for maintenance tracts. The BLM argued that the coal should be valued at a lower rate because there was no competitive interest – one choice for valuation. If coal is being added to an existing lease because it is by definition coal for which there is no competitive interest, determining its value to the company requesting it might be appropriate – a second valuation alternative. The IG proposed yet a third alternative-- valuing the coal at the same rate as the lease being modified.

(8) Office of Inspector General, U.S. Department of the Interior, Report No. CR-EV-BLM-0001-2012, “Coal Management Program,” June 2013

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Comment Number: 0002470-18

Organization I:Taxpayer for Common Sense

Commenter I:Ryan Alexander

Other Sections: I

Comment Excerpt Text:

Headwaters Economics estimated that royalty rate reductions have reduced total royalty payments by roughly \$294 million on all leases sold between 1990 and 2013. Their report notes that these leases only accounted for roughly one-third of the amount of coal produced during this period, and that the remainder is from leases sold prior to 1990. If losses from royalty rate reductions are consistent with older leases, the total cost of reduced royalty rates is “closer to \$860 million from 1990 to 2013, or about \$37 million annually (in 2013 dollars).”<sup>26</sup> (26) Headwaters Economics, “An Assessment of U.S. Federal Coal Royalties,” January 2015. Available at: <http://headwaterseconomics.org/energy/coal/coal-royalty-valuation/>

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Comment Number: 0002470-3

Organization I:Taxpayer for Common Sense

Commenter I:Ryan Alexander

Comment Excerpt Text:

During the Programmatic EIS, the BLM should look for mechanisms that will introduce more transparency into the process of determining FMV for lease sales. The BLM should review the process in the State of Montana, which releases its FMV calculations for public review and comment before lease sales.

Because lease modifications and most LBA lease sales are not competitive, it is imperative that the BLM establish the correct Fair Market Value (“FMV”) for federal coal. The process of determining the FMV for a lease tract is shrouded in secrecy. The data and methodology the BLM uses to determine FMV are not publicly available. Bids are sealed. The public has no idea what the coal is worth or how it was valued.

In the absence of a competitive system, accurate determinations of coal values are critical to the revenues realized by the government. “Value” or “fair market value” enters into the lease sale and management processes

at several points, and serves as the basis for evaluating lease sale bids and lease prices paid, which, in turn, influence coal prices and calculations of royalty revenues. Final lease sale values can then be used as comparable for estimating values of new tracts. Thus, when value estimates are low, it is possible to lock in a system of continuing undervalued leases.

The process of developing fair valuations for tracts, especially in a noncompetitive system, can be both difficult and controversial. Regulations, agency guidance, and state office practices affect how value and FMV are determined. Appraisals involve subjective valuations of the elements that comprise the value of a property. There are legitimate problems with attempting to apply the same valuation processes used for competitively bid leases to lease tracts that genuinely lack competitive appeal.

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Comment Number: 0002470-4

Organization I: Taxpayer for Common Sense

Commenter I: Ryan Alexander

Comment Excerpt Text:

In the case of Montana's 2010 lease sale of the state-owned Otter Creek tracts, the Montana Department of Natural Resource Conservation (DNRC) contracted with Norwest Corporation to prepare an appraisal of the FMV of the tracts.<sup>9</sup> Norwest used BLM's Handbook H-3070-1, Economic Evaluation of Coal Properties, to calculate the value of the coal as \$0.0539 per ton, or \$30.8 million using the Comparable Lease Sales Approach. Using the Income Approach, Norwest placed the value at \$0.0652 per ton, or \$37.3 million. Norwest noted that these values were lower than similar federal lease sales because of the lack of existing mining equipment and rail service at Otter Creek. The DNRC released the Norwest valuation to the public and requested public comment in advance of the lease sale. The DNRC then used the appraisal and public comments to design a minimum bid package to secure fair market value for the coal leases. The winning bid by Ark Land Company, a subsidiary of Arch Coal, approved on March 18, 2010, was \$85,845,110 – significantly higher than the initial appraised FMV.<sup>10</sup> Exposing all of this information to public review contributed to the higher bid the state received and certainly provided a more transparent process that could be used as a model for federal lease sales.

(9) Norwest Corporation, "Montana Otter Creek State Coal Valuation," January 30, 2009. Available at:

<http://dnrc.mt.gov/divisions/trust/docs/minerals-management/otter-creek/3823mtottercreekvaluationreport.pdf>

(10) Montana Department of Natural Resource Conservation, "Otter Creek Coal Mine Proposal,"

<http://dnrc.mt.gov/divisions/trust/mineralsmanagement/>

[otter-creek-coal-mine-proposal](http://dnrc.mt.gov/divisions/trust/mineralsmanagement/otter-creek-coal-mine-proposal)

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Comment Number: 0002470-5

Organization I: Taxpayer for Common Sense

Commenter I: Ryan Alexander

Comment Excerpt Text:

During the Programmatic EIS, the BLM should consider increasing the royalty rate to 18.75 percent for federal coal production, as this royalty rate would ensure that the taxpayers are recovering a fair share of the market value of the resource and not favor one energy source over another. The federal government currently charges a royalty rate of 18.75 percent for offshore oil and gas production, and many states charge similar or higher rates for state-owned oil and gas.

The industry has argued at times that the taxes that coal companies pay to local, state, and federal governments should offset the royalties they pay for the right to mine and sell federal coal. Just because the coal industry pays taxes, like every other industry, does not mean it should not pay fair market value for federal coal. Private landowners charge royalties on the market value of private coal, in addition to whatever taxes the companies might pay. Taxpayers, the owners of federal resources, should also charge market-based royalties.

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Comment Number: 0002470-6

Organization I: Taxpayer for Common Sense

Commenter I: Ryan Alexander

Comment Excerpt Text:

The process used to determine the value of federal coal for calculating a royalty is also done in secret, and is largely controlled by industry. The Office of Natural Resource Revenue (ONRR) released its final rule governing the valuation of federal coal on June 30.<sup>11</sup> The updated rule is certainly an improvement, but TCS is disappointed that well documented problems with coal valuation were not eliminated. Numerous studies, including a recent report by the Council of Economic Advisers (CEA),<sup>12</sup> have demonstrated how coal companies manipulate the current valuation system to reduce royalty payments. Valuation of the minerals is a key component of the leasing process.

(11) Office of Natural Resource Revenue, Final Rulemaking: “Consolidated Federal Oil & Gas and Federal & Indian Coal Valuation Reform,” 81 FR 43338 – July 1, 2016

(12) White House Council of Economic Advisers (CEA), “The Economics of Coal Leasing on Federal Lands: Ensuring a Fair Return to Taxpayers,” June 2016

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Comment Number: 0002470-7

Organization I: Taxpayer for Common Sense

Commenter I: Ryan Alexander

Other Sections: I

Comment Excerpt Text:

Here again, more transparency is the answer. TCS recommended ONRR consider an index price system for coal similar to the one used for oil and gas valuation.<sup>15</sup> The CEA suggested possible models using average coal prices, regionally or nationally, to set the value of federal coal. Similarly, transportation deductions, “can be based on easily observable indices of coal transportation costs per rail mile, rather than on self-reported cost numbers according to the CEA report.”<sup>16</sup> TCS also believes the deduction for washing coal should be eliminated. The deduction has proven susceptible to abuse and is generally a cost of doing business that should be borne by industry.

(15) Taxpayers for Common Sense, “Comments to the Office of Natural Resource Revenue (ONRR) on the Consolidated Federal Oil and Gas and Federal and Indian Coal Valuation Reform, Proposed Rule,” May 8, 2015. Available at:

<http://www.taxpayer.net/library/article/tcs-submitscomments-on-onrrs-proposed-coal-valuation-reform-rule>

(16) CEA at 19

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Comment Number: 0002470-9

Organization I: Taxpayer for Common Sense

Commenter I: Ryan Alexander

Comment Excerpt Text:

In practice, the BLM often grants royalty rate reductions. According to data obtained from ONRR, the BLM has often reduced the royalty rates on federal coal leases during the last 25 years. Of 80 federal leases in 9 states, 35 of them (44 percent) recorded royalty rates less than the minimum of 12.5 percent for surface mines and 8 percent for underground mines. More than half (16 of 28) of the royalty rate reductions occurred between 2001 and 2007.

Comment Number: 0002471\_Reed\_20160728-5  
 Organization I: High Country Conservation Advocates  
 Commenter I: Matt Reed  
 Other Sections: I  
 Comment Excerpt Text:

In addition to analysis of phasing out coal leasing on public lands, HCCA encourages the BLM to carefully consider royalty rate structures, abuses and potential adjustments as part of the development of the PEIS. The BLM's PEIS website states that "[t]he review . . . will take a careful look at issues such as . . . how to ensure American taxpayers are earning a fair return for the use of their public resources." Royalty rate abuse at the West Elk Mine in Gunnison County exemplifies the need to examine this issue. The West Elk mine is operated by Mountain Coal Company (MCC), which is a subsidiary of Arch Coal. For years MCC has been the beneficiary of reduced royalty rates for two coal leases at the West Elk mine. MCC is currently seeking the renewal of its royalty reduction from the BLM, a request that would cut by 37.5% the royalties that would otherwise go to federal, state and local taxpayers.<sup>24</sup> This reduction would continue to deprive Gunnison County of money that it would otherwise receive.

<sup>24</sup> Letter of W. Koontz, Mountain Coal Co. to R. Welch, BLM (Sep. 4, 2014).

Despite this request for continued royalty payment reduction, Arch Coal paid its executives \$8 million in bonuses in January, 2016, one business day before Arch declared bankruptcy.<sup>25</sup> That's approximately the same amount that the State estimated in 2012 that Colorado taxpayers would lose under Arch's previous royalty relief request for the same leases.<sup>26</sup> The hypocrisy is staggering: Arch Coal's executives received bonuses one day before bankruptcy that equal the amount of royalty payments that did not remit to taxpayers for the use of a public resource. Arch has the wherewithal to mine these leases without reducing the payments that Gunnison County taxpayers deserve under law. In fact, it's doing so right now.

(25) See B. Hulac & D. Brown, ClimateWire, Arch Coal paid execs \$8M in bonuses on eve of bankruptcy (Mar. 16,

2016). See also J. Panank, Wall St. J., Arch Coal Paid \$29M to Insiders in Year Before Bankruptcy (Mar. 11, 2016), available at <http://www.wsj.com/articles/arch-coal-paid-29m-to-insiders-in-year-before-bankruptcy-1457721786> (last viewed July 28, 2016).

(26) Letter of Gov. J. Hickenlooper to L. Bagley, Colorado BLM (Aug. 10, 2012) ("The estimated loss in revenues to the State of Colorado would be \$1,575,000 each year over the term of this reduction").

Under the current federal coal program, Gunnison County taxpayers were shortchanged to line the pockets of coal executives. This exemplifies the need for federal coal leasing reform, to address and correct abuses of the system. If we are to continue mining coal in Colorado, communities must get their fair share of royalties. Otherwise, mining executives will continue to shortchange our communities and leave us with the difficulties of transition.

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Comment Number: 0002473\_Hornback\_20160728\_WCC-2  
 Organization I: Western Colorado Congress  
 Commenter I: Emily Hornback  
 Comment Excerpt Text:

The Mountain Pact has compiled data from various reports that show small changes to the leasing program, such as increasing royalties by \$2.50/ton, can create \$910 million in additional revenue by 2020 from federal coal resources. In Colorado alone, revenues could rise by \$20 million, half of which can go back to the states where the mining took place to be reinvested in communities, supporting programs such as the Delta County Economic Development group. To the degree possible PEIS must then look for ways to ensure this revenue is reinvested in communities to help us break from the boom and bust cycles of fossil fuel extraction.



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Comment Number: 0002475\_Kustin\_20160728\_CAP-1

Organization I: Center for American Progress

Commenter I: Mary Ellen Kustin

Comment Excerpt Text:

While this rule was a good first step, more needs to be done. We urge the Department to assess and respond to the many ways the coal industry can use loopholes in existing regulations and laws to avoid paying taxpayers a fair return on federally-owned coal. Several of these loopholes and subsidies are described in the White House's Council of Economic Advisers' June 2016 paper.

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Comment Number: 0002475\_Kustin\_20160728\_CAP-2

Organization I: Center for American Progress

Commenter I: Mary Ellen Kustin

Comment Excerpt Text:

The Center for American Progress offered recommendations to modernize how the royalty rates are assessed in a May 2015 paper. We call your attention, in particular, to our recommendation that royalties be assessed on the net delivery price of coal, rather than the so-called mine mouth price. The delivery price of coal more accurately reflects coal's true market value and is easier to independently verify than the mine mouth price. We further recommend that coal companies' transportation deductions be capped at 50 percent of the value of the resource, as is the practice when assessing royalties on oil and gas extracted on federal lands and waters.

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Comment Number: 0002477\_Saul\_20160728\_CBD\_UPHE-65

Organization I: Center for Biological Diversity

Commenter I: Michael Saul

Organization 2: Utah Physicians for a Healthy Environment

Other Sections: I

Comment Excerpt Text:

BLM considers coal exports to a limited extent when developing an estimate of fair market value and generally does not explicitly consider estimates of the total amount of coal in the United States that can be mined economically, known as domestic reserve estimates. In the few state offices that did consider exports, we generally found the same generic statements in appraisal and economic reports that stated in general terms the possibility of future growth in coal exports, and there was limited tracking of exports from specific mines. As a result, BLM may not be factoring specific export information into appraisals or keeping up-to-date with emerging trends.<sup>145</sup>

(145) Government Accountability Office, Coal Leasing: BLM Could Enhance Appraisal Process, More Explicitly Consider Coal Exports, and Provide More Public Information 36 (Dec. 2013), GAO-14-140.

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Comment Number: 0002478\_Haggerty\_20160728\_HeadwaterEcon-11

Organization I: Headwaters Economics

Commenter I: Mark Haggerty

Other Sections: 8.5 | 11

Comment Excerpt Text:

Several recent reports from the Government Accountability Office and the Inspector General of the Interior Department raised concerns about the leasing process, including the social and environmental impacts of the federal coal program, and whether the program was receiving a fair return for taxpayers.<sup>4</sup> Importantly, the federal coal leasing and royalty program has not been reviewed for 30 years.<sup>5</sup>

(4) "Coal Leasing: BLM Could Enhance Appraisal Process, More Explicitly Consider Coal Exports, and Provide

More Public Information, February 2014" U.S. Government Accountability Office

<http://www.gao.gov/products/gao-14-140>; "Coal Management Program, U.S. Department of the Interior, Report No. CR-EV-BLM-0001-2012, June 2013" Office of the Inspector General, U.S. Department of the Interior, <https://www.doioig.gov/reports/coal-management-program-us-departmentinterior>.

(5) The Secretary of the Interior, Order No 3338: Discretionary Programmatic Environmental Impact Statement to Modernize the Federal Coal Program

(Washington, D.C., 2016)

[http://www.blm.gov/style/medialib/blm/wo/Communications\\_Directorate/public\\_affairs/news\\_release\\_attachments.Par.4909.File.dat/SO%203338%20Coal.pdf](http://www.blm.gov/style/medialib/blm/wo/Communications_Directorate/public_affairs/news_release_attachments.Par.4909.File.dat/SO%203338%20Coal.pdf).

Comment Number: 0002478\_Haggerty\_20160728\_HeadwaterEcon-2

Organization I:Headwaters Economics

Commenter I:Mark Haggerty

Other Sections: I

Comment Excerpt Text:

Federal coal is lower value on average compared to non-federal coal. Federal coal makes up more than 43 percent of total U.S. production, but only 20 percent of total coal production value nationally in 2014. The average price of all U.S. coal valued at the mine was \$34.83 per ton in 2014.<sup>18</sup> The average price of federal coal at the mine was only \$17.40 in the same year.<sup>19</sup> Federal coal production value is a relatively smaller share of total U.S. coal production value for several reasons:

-Federal coal on average is of relatively low value (in terms of heat content), sub-bituminous coal, resulting in a lower average price per ton.

-Because of its relatively low heat content, federal coal is disproportionately utilized in domestic electricity generation markets where delivered prices are lower compared to other markets. Of total U.S. coal production, 81 percent is utilized for domestic electricity generation, about 12 percent is exported, and the rest, about 8 percent, is used in a variety of commercial and industrial uses, including steel production. About 98 percent of coal produced in Wyoming, which accounts for the large majority of federal coal, is used in the domestic electricity generation sector.<sup>20</sup>

-The large majority of federal coal mined in the Powder River Basin in Wyoming and Montana is more remote from markets and has higher transportation costs resulting in a discount at the mine and restricted access to higher value markets. For example, international exports of coal used for electricity generation declined between 2002 and 2012 in Wyoming, but increased for the U.S. as a whole from about 10 million tons to more than 50 million tons annually.<sup>21</sup>

-Federal coal mining is relatively efficient compared to non-federal coal resulting in lower mining costs. Lower mining costs have allowed Western coal producers to gain market share by selling coal at lower costs. Montana and Wyoming rank second and first, respectively, in average coal production per employee hour (28 and 17 tons per employee per hour, respectively compared to fewer than 3 tons per hour in Kentucky and West Virginia).<sup>22</sup>

-Federal leasing and royalty policy are also responsible for lower production value. Federal lease sales are uncompetitive, potentially limiting bonus bids received for federal coal and allowing companies to sell coal at lower prices. Through captive transactions at the mine and through "take-or-pay" contracts, companies may be able to further lower the gross value of coal upon which they pay royalties.<sup>23</sup>

(18) "Annual Coal Report, March 23, 2013 - Table 31. Average Sales Price of Coal by State and Coal Rank," U.S. Energy Information Administration, <http://www.eia.gov/coal/annual/>.

(19) "Federal Reported Sales Volume, Sales Value, and Royalty Revenue, Fiscal Years 2003 to 2015 by Sales Year," U.S. Department of the Interior, Office of Natural Resources Revenue, Washington, D.C., <http://statistics.onrr.gov/>.

(20) "Annual Coal Distribution Report, April 8, 2016," Domestic distribution of U.S. coal by origin State, consumer, destination and method of transportation, (thousand short tons), U.S. Energy Information Administration, Washington, D.C., <http://www.eia.gov/coal/distribution/annual/archive.cfm>.

(21) Robert Godby, Roger Coupal, David Taylor, and Tim Considine. The Impact of the Coal Economy on Wyoming (Laramie, WY: University of Wyoming Center for Energy Economics and Public Policy, 2015), [http://www.uwyo.edu/cee/\\_files/docs/wia\\_coal\\_full-report.pdf](http://www.uwyo.edu/cee/_files/docs/wia_coal_full-report.pdf).

(22) "Employment/Production Data Set (Quarterly)," U.S. Department of Labor, Mine Safety and Health Administration, Washington, D.C., <http://arlweb.msha.gov/OpenGovernmentData/OGIMSHA.asp>.

(23) U.S. Council of Economic Advisors, The Economics of Coal Leasing on Federal Lands: Ensuring a Fair Return to Taxpayers (Washington, D.C., 2016), [https://www.whitehouse.gov/sites/default/files/page/files/20160622\\_cea\\_coal\\_leasing.pdf](https://www.whitehouse.gov/sites/default/files/page/files/20160622_cea_coal_leasing.pdf).

Comment Number: 0002478\_Haggerty\_20160728\_HeadwaterEcon-25

Organization I:Headwaters Economics

Commenter I:Mark Haggerty

Other Sections: I

Comment Excerpt Text:

Policy decisions made by states can increase or decrease dependence on coal tax and royalty revenue. State and local governments often utilize fossil fuel revenue, including from coal, to offset (or lower) taxes on individuals and other economic sectors, which has the effect of increasing dependence on fossil fuel revenues. Different policy choices, including investing fossil fuel revenue in permanent funds and limiting the use of volatile fossil fuel revenue on annual governmental operating budgets, can create greater resilience to changes in coal revenue streams.<sup>41</sup>

<sup>41</sup> Haggerty, Mark N., and Julia H. Haggerty, "Energy Development Opportunities and Challenges in the Rural West," in *Bridging the Distance: Common Issues of the Rural West*, ed. David B. Danbom (Salt Lake City: The University of Utah Press, 2015), 161.

Comment Number: 0002478\_Haggerty\_20160728\_HeadwaterEcon-3

Organization I:Headwaters Economics

Commenter I:Mark Haggerty

Comment Excerpt Text:

Demand for coal in domestic electricity generation markets depends on the relative price of coal, natural gas, and renewable energy sources over time. With increased price competition from these other sources, coal utilization has become less predictable from year to year. For example, coal accounted for 33 percent of total generation in 2015, but EIA projects coal could supply between 28 and 40 percent of electricity generation in 2040.<sup>28</sup> Uncertainty about how much coal will be burned in the future-whether more or less than current levels-stems from price competition between coal and natural gas, and the relative volatility of natural gas prices compared to coal.

(28) "Today in Energy: Future power market shares of coal, natural gas generators depend on relative fuel prices," April 23, 2013, U.S. Energy Information Administration, <http://www.eia.gov/todayinenergy/detail.cfm?id=10951>.

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Comment Number: 0002480\_Culver\_20160728\_TWS-1

Organization I:The Wilderness Society

Commenter I:Nada Culver

Comment Excerpt Text:

Recommendations: The BLM should raise royalty rates on federal coal production to ensure the public receives fair market value from its coal. An “adder” could be placed on royalties that applies to externalities from coal production, such as emissions of the GHG methane. The PEIS should fully analyze mechanisms for increasing the royalty rate, such that any subsequent rulemakings to change the rates can rely on this analysis.

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Comment Number: 0002480\_Culver\_20160728\_TWS-2

Organization I:The Wilderness Society

Commenter I:Nada Culver

Comment Excerpt Text:

The BLM should highlight the need for the coal program to provide a fair return to taxpayers and use it as an overarching consideration in the PEIS. BLM should adopt changes that will ensure this goal is met in analyzing each aspect of the program, including as recommended in further detail below. At a minimum, this includes showing fair market value is being achieved for each element of the program. However, since fair market value is a technical standard, we recommend that, overall, the program should ensure there is a fair return to taxpayers.

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Comment Number: 0002480\_Culver\_20160728\_TWS-4

Organization I:The Wilderness Society

Commenter I:Nada Culver

Comment Excerpt Text:

The BLM should carefully analyze bonus bids that are being paid for coal leases and rental rates that are paid on leases in the PEIS and determine how those should be increased to ensure that the government receives fair market value from federal coal production. Bonus bids that have been paid by sole bidders in LBA sales should receive special attention.

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Comment Number: 0002480\_Culver\_20160728\_TWS-60

Organization I:The Wilderness Society

Commenter I:Nada Culver

Other Sections: I

Comment Excerpt Text:

Royalties must be paid on coal that is produced from federal coal leases. 30 U.S.C. § 207(a). Royalty rates are nominally 12.5 percent on coal mined from surface mines and 8 percent from underground mines. Unfortunately, however, the current effective rate of royalty payments is only 4.9 percent of the value of the coal that is mined—just \$ 1.70 per ton. (3) It has been estimated that taxpayers have been shortchanged by nearly \$ 30 billion over the last three decades due to limited royalty, bonus bid, and rental payments from the federal coal program. Part of the reason for these low royalty payments is the availability of subsidies and deductions that lower the royalty rate. In total, because of these problems, Americans are not receiving the fair market value of their coal.

(3) An Assessment of U.S. Federal Coal Royalties. Current Royalty Structure, Effective Royalty Rates, and Reform Options. Headwaters Economics. Jan. 2015.

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Comment Number: 0002480\_Culver\_20160728\_TWS-66

Organization I:The Wilderness Society

Commenter I: Nada Culver

Other Sections: 1 2

Comment Excerpt Text:

The consequences of letting industry set the pace, scale and location of lease sales have been well documented. Numerous independent audits and third party reviews from 1980 to 2014 have found that the program does not provide a fair return to taxpayers, concluding that “There is no evidence that the BLM receives a market price for the coal,” (7) “weaknesses in the current sale process . . . could put the Government at risk of not receiving the full value for the leases,” (8) and the BLM “does not obtain fair market value for taxpayers. It seldom generates competitive bids, and studies indicate that the resulting losses are substantial.” (9)

BLM does not adequately limit lands open to development to appropriate lands. As we outlined in Section IV. B., BLM does not fully consider the full range of multiple-use values during land use planning. An example of this problem in practice is the Buffalo RMP under which “All coal lands are open to exploration, subject to multiple use constraints, resulting in zero acres closed to coal exploration and 4,775,136 acres open to coal leasing. . . .” (10)

(7) Institute for Energy Economics and Financial Analysis, “The Great Giveaway: An analysis of the costly failure of federal coal leasing in the Powder River Basin,” June 2012.

(8) U.S. Department of the Interior Inspector General’s Report, “Coal Management Program, U.S. Department of the Interior,” June 2013.

(9) Taxpayers for Common Sense, “Federal Coal Leasing: Fair Market Value and a Fair Return for the American Taxpayer,” September 2013.

(10) Buffalo Resource Management Plan Final Environmental Impact Statement, 2015, p. 123.

To address these problems, BLM should consider replacing the existing LBA leasing system with a modern approach that creates mechanisms to ensure a fair return, ensures any new leasing is based on a full consideration of other resources, and provides BLM with tools to achieve national policy priorities such as combating climate change.

Comment Number: 0002488\_Sanderson\_20160728-1

Organization I: Colorado Mining Association

Commenter I: Stuart Sanderson

Comment Excerpt Text:

Our members will be impacted both directly and indirectly by any changes made to the federal leasing program.

These changes will also threaten the royalty and other tax revenues that local and state governments receive to support important functions, including funding of the public school system in Colorado. In 2015, these producers paid more than \$40 million in federal and state royalties, much of which is returned to the state.

Comment Number: 0002490\_Emrich\_20160728\_CloudPeakEnergy-1

Organization I: Cloud Peak Energy Inc.

Commenter I: Andrew C. Emrich, P.C.

Comment Excerpt Text:

There is no economic justification for raising royalty rates, lease payments, or any of the other costs or fees related to leasing and developing coal on federal lands. The domestic coal industry is suffering relentless regulatory and administrative attacks from the current administration and fierce competition from other domestic fuel sources coupled with depressed international prices. These regulatory and economic challenges have led to an unprecedented number of coal company bankruptcies. In 2015, Cloud Peak Energy paid over 33% of its gross annual revenue to federal, state, and local governments in royalties, production-related taxes, rents,

and lease payments. At current market prices, these governmental payments on coal production comprise approximately 41% of the sales price for a ton of federal coal. This economic burden is substantially higher than what companies pay to develop non-federal coal in the United States or to develop coal in other countries such as Canada, Australia, India, and China. Under any reasonable metric, coal producers pay much more than their fair share when developing coal from federal lands in the United States.

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Comment Number: 0002490\_Emrich\_20160728\_CloudPeakEnergy-10

Organization I: Cloud Peak Energy Inc.

Commenter I: Andrew C. Emrich, P.C.

Comment Excerpt Text:

Increasing the royalty rate will lead to a decrease in the FMV for lease bonus payments. Although the bonus bid and royalty rate are derived from distinct statutory mandates, each cost directly influences the other. BLM's Coal Evaluation Handbook acknowledges that: (1) the royalty rate of the lease influences the amount of economically recoverable coal within a lease tract; and (2) the amount of economically recoverable coal within a lease tract influences the FMV of the lease. Any increase in the royalty rate will decrease the amount of coal that may be recovered economically and depress the FMV of the proposed lease tract.

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Comment Number: 0002490\_Emrich\_20160728\_CloudPeakEnergy-12

Organization I: Cloud Peak Energy Inc.

Commenter I: Andrew C. Emrich, P.C.

Comment Excerpt Text:

Discouraging coal development is clearly the goal of anti-coal activists. However, this objective is contrary to 100 years of federal mineral policy and there is no statutory support for such a radical change. Any attempt by BLM to increase royalty rates or other leasing costs to further the anti-coal agenda would be a clear violation of federal law and policy. The Department of the Interior is not authorized to impose any new or additional taxes, fees, or penalties on coal production. Any effort to raise the royalty rate with the intention of lowering federal coal production volumes to achieve the administration's climate objectives, or promote renewable energy growth, would violate the law. Such efforts would constitute a new revenue measure, which can only be established by Congress.

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Comment Number: 0002490\_Emrich\_20160728\_CloudPeakEnergy-2

Organization I: Cloud Peak Energy Inc.

Commenter I: Andrew C. Emrich, P.C.

Comment Excerpt Text:

There is no legal support for making federal coal leasing more difficult and costly. The statute that governs federal coal leasing on federal lands—the Mineral Leasing Act (“MLA”)— encourages federal coal leasing and requires BLM and coal producers with federal leases to achieve maximum economic recovery of the underlying coal estate. Any proposal that makes development of federal coal prohibitively expensive, or which limits coal production to advance other non-statutory goals, is unlawful. The current administration's anti-fossil fuel agenda violates the MLA and 100 years of law and policy encouraging a robust federal coal leasing program as a fundamental means of providing inexpensive and reliable energy to Americans.

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Comment Number: 0002490\_Emrich\_20160728\_CloudPeakEnergy-21

Organization I: Cloud Peak Energy Inc.

Commenter I: Andrew C. Emrich, P.C.

Other Sections: I

Comment Excerpt Text:

The Secretary's determination of whether maximum economic recovery will be achieved is based on the economics of developing the particular coal reserve. See 43 C.F.R. §§ 3480.0-5(21), and 3484.1(b). The Secretary must consider the direct costs the lessee incurs in mining the reserve, with consideration given to "existing proven technology; commercially available and economically feasible equipment; coal quality, quantity, and marketability; safety, exploration, operating, processing, and transportation costs." Id. § 3480.0-5(21); see also id. §§ 3482.1(c) and 3487.1(c) (listing the information informing the Secretary's maximum economic recovery determination).

With regard to royalties, the royalty rate of a federal lease is a direct cost the Secretary must consider in making a maximum economic recovery determination. Current regulations governing maximum economic recovery provide that "profitable portions of a leased Federal coal deposit must be mined." Id. § 3480.0-5(21) (emphasis added). The royalty rate on the federal coal directly influences the coal's profitability. BLM's revised Coal Evaluation Handbook recognizes the connection between the royalty rate and maximum economic recovery:

[Maximum economic recovery] is an economic test based on when the direct mining, beneficiation, and royalty and tax costs for producing the next unit of coal into a marketable condition, are equal to the value derived from the sale of the same unit of coal. Said another way, the revenue from the sale of each incremental ton of coal must meet or exceed the direct costs to mine, transport, beneficiate, and pay royalty and taxes incurred to produce the next incremental ton of coal mined. [Maximum economic recovery] is achieved at the point where economically recoverable reserves become uneconomical.

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Comment Number: 0002490\_Emrich\_20160728\_CloudPeakEnergy-36

Organization I: Cloud Peak Energy Inc.

Commenter I: Andrew C. Emrich, P.C.

Comment Excerpt Text:

Neither BLM nor any other entity has provided any factual support for the contention that the federal coal program fails to provide a fair return to the American people. Instead, BLM's review of the federal coal program is driven by the current administration's energy policies and the clamoring of various environmental activists. To be sure, the depressed market conditions and recent bankruptcies filed by coal producers are due in part to the deliberate efforts of the current administration and environmental organizations to shut down the U.S. coal industry. These anti-fossil fuel agendas provide no basis for arbitrarily increasing costs to coal producers under the MLA or any other federal statute.

BLM's programmatic review of the federal coal program should not be used as another weapon in the ongoing assault on the U.S. coal industry. Such an approach does not provide a legally-supported or rational basis for BLM's contemplated increase of costs associated with coal leasing, including bonus payments or royalties. Cloud Peak Energy urges BLM to review the federal coal program and its fair return to the American public based upon objective, reliable data and factual information, not the current agenda to shut down the domestic coal industry. A fair review of BLM's own FMV analyses for recent lease sales in the Southern Powder River Basin will reveal that bonus and royalty payments provide a fair return to the American people.

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Comment Number: 0002490\_Emrich\_20160728\_CloudPeakEnergy-37

Organization I: Cloud Peak Energy Inc.

Commenter I: Andrew C. Emrich, P.C.

Comment Excerpt Text:

Moreover, attempting to determine the FMV of coal reserves that are not economically recoverable leads to unreliable value estimates. According to BLM's Coal Evaluation Handbook, "[a]n income approach analysis predicated on the recovery of coal reserves that are not economically recoverable will yield unreliable estimates of value." Id. BLM must understand that the contemplated changes to the federal coal program (i.e., increased

royalties or other leasing costs) would perpetuate the very problem identified by BLM; accurately determining the FMV of federal coal leases.

Before considering any changes to the federal royalty rate, BLM should first assess whether the newly revised Coal Evaluation Handbook has increased, or at least, more accurately represented the FMV, for federal coal reserves at the leasing stage. The Coal Evaluation Handbook has already implemented new guidance to ensure BLM's receipt of FMV for federal coal leases, including the requirement that BLM take into account current market factors such as "Economic and Domestic Coal Market Data" (i.e., supply and demand, coal prices, market expectations) and "Specific Lease Tract Economic Data" (i.e., markets for specific coal, quality of coal – btu content, sulfur, ash). *Id.* at 3-6 – 3-9. These newly informed FMV analyses may fairly resolve any issues BLM or the auditors found with BLM's FMV determinations and make clear that any increase in the royalty rate or other leasing costs is unwarranted.

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Comment Number: 0002490\_Emrich\_20160728\_CloudPeakEnergy-6

Organization I: Cloud Peak Energy Inc.

Commenter I: Andrew C. Emrich, P.C.

Comment Excerpt Text:

In 2015, Cloud Peak Energy paid over 33% of its total revenue to federal and state governments in the form of bonus payments, production-related taxes, and royalties. Put another way, approximately 41% of the current sales price of each ton of federal coal goes to federal, state, and local governments. This is more than a "fair share" of the coal's economic value; especially when all risks associated with production, marketing, and reclamation are taken by the producer. Any increase in the royalty rate would substantially burden U.S. coal companies and frustrate their ability to develop federal coal reserves.

Not only do coal companies need to manage increased costs of labor, increased costs of regulatory compliance, and increased production costs, but they must constantly use current cash flow to invest in lease bonus payments and mining equipment and facilities to ensure the continuation of their business. In an environment where companies such as Cloud Peak Energy must spend such a high percentage of their total revenue on mandatory payments to the federal, state, and local governments, it is no surprise that there has been a significant number of recent U.S. coal company bankruptcies. Cloud Peak Energy is unaware of any other industry in the United States that is forced to operate under such an economic burden.

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Comment Number: 0002490\_Emrich\_20160728\_CloudPeakEnergy-7

Organization I: Cloud Peak Energy Inc.

Commenter I: Andrew C. Emrich, P.C.

Comment Excerpt Text:

Under the current regulatory regime, BLM always receives FMV for federal coal leases. The existing coal leasing program requires that BLM carefully and confidentially determine the FMV of federal coal leases in advance of each lease sale. Pursuant to federal law, BLM must issue the lease to the highest bidder, as long as the bid meets or exceeds the FMV as established by BLM and the bidder satisfies the other legal criteria for holding a federal coal lease. BLM cannot accept any bid unless it meets or exceeds the predetermined FMV. The current bidding process ensures that BLM will always receive at least FMV for each and every federal coal lease, and the strong probability is that BLM will receive more than FMV for each lease.

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Comment Number: 0002490\_Emrich\_20160728\_CloudPeakEnergy-9

Organization I: Cloud Peak Energy Inc.

Commenter I: Andrew C. Emrich, P.C.

Comment Excerpt Text:

Raising the federal coal royalty rate above 12 1/2 % will discourage leasing and development of federal coal in



favor of state or private coal available at a lower royalty rate. Congress has consistently declared that America's energy policy includes the significant development of domestic coal reserves. Congress sought to "encourage the maximum ultimate recovery of the coal deposits in the leasable lands of the United States," by imposing diligent development and maximum economic recovery requirements. Hearing Before the Subcomm. on Mines and Mining, 94th Cong. 133 (1975). The current royalty rates have been established to encourage greater production volume. Raising the royalty rate to discourage federal coal development directly contravenes the congressional mandate to encourage the maximum economic recovery of federal coal. BLM has no legal authority to consider extraneous issues, such as the social cost of carbon, in its maximum economic recovery determination. If the costs of mining federal coal deposits (including royalty rates, lease payments, etc.) become so high that mining the federal coal reserves becomes uneconomical altogether, federal coal will simply not be mined. Raising the federal coal royalty rate to a level that renders the mining of federal coal uneconomical is wholly inconsistent with Congress' directive to the Secretary of the United States Department of the Interior to manage the federal leasing process in order to achieve maximum economic recovery of federal coal.

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Comment Number: 0002491\_Weiskopf\_20160728\_NextGenClimateAmer-59

Organization I: NextGen Climate America

Commenter I: David Weiskopf

Other Sections: 2 4.5 7.1 1

Comment Excerpt Text:

Alternative C and D: Social Cost of Carbon and Royalty Rate Increases

This alternative would internalize the cost of carbon based on federal social cost of carbon estimates reflecting the "worldwide incremental damage from climatic change brought about by an additional metric ton of CO<sub>2</sub> emissions."<sup>67</sup> This price is sensitive to discount rates. A midrange price for the year 2020 is \$46 per ton of CO<sub>2</sub>.<sup>68</sup> Similarly, BLM may consider royalty rates as a means to reform the federal coal program. Increased royalty rates can also include royalty carbon adders, which "directly incorporates a carbon price into the royalty paid on federal coal sales, reflecting its climate costs."<sup>69</sup> Interior should analyze these decision alternatives and compare them against the criterion of budget compatibility – whether the reformed alternatives are consistent with federal climate change targets, as illustrated by the 450 Scenario.

[67 Id. at 29.]

[68 Alan Krupnick et al., Putting a Carbon Charge on Federal Coal: Legal and Economic Issues, Resources for the Future Discussion Paper at 10574; See U.S. GAO, GAO-14-663, Regulatory Impact Analysis: Development of Social Cost of Carbon Estimates (July 2014).]

[69 Spencer Reed and James H. Stock., Federal Coal Leasing Reform Options: Effects on CO<sub>2</sub> Emissions and Energy Markets – Executive Summary, February 2016 at 2-3.]

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Comment Number: 0002493\_Mead\_20160728\_GovWY-13

Organization I: Office of Governor Matthew H. Mead

Commenter I: MATTHEW H. MEAD

Other Sections: 8.5

Comment Excerpt Text:

Furthermore, as noted above, the existing regulations have been set in place to clearly establish the LBA process as a competitive form of leasing, even if only one company offers a bid. The BLM sets an undisclosed FMV floor price and a company must meet or exceed BLM's valuation in order to receive the lease. Even if only one company submits a bid, they do not automatically receive the lease. There have been several instances that BLM's floor price was not met and a lease was not awarded. Since companies do not know the BLM floor price, it is fair

to assume that acceptable bids exceed the BLM price. In those instances, the American public receives a premium - or more than FMV. As part of this scoping process, the BLM should consider this information and review prior LBA sales to better understand the amount of additional money paid over the years because the accepted bid price exceeded FMV.

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Comment Number: 0002493\_Mead\_20160728\_GovWY-15

Organization I: Office of Governor Matthew H. Mead

Commenter I: MATTHEW H. MEAD

Other Sections: 8.5

Comment Excerpt Text:

Table 1.3.2.1 below provides more complete and correct information as compared to Table 4 in the WEG report because it highlights the tracts for which more than one sale was held as well as sales for which there was more than one bidder. Table 1.3.2.1 illustrates that BLM held more than one sale and therefore, received more than one bid on 11 of the 27 tracts that have been leased since decertification of the PRB in 1990. Of these 11 tracts, 4 (36%) have had more than one bidder on the second sale. One tract had two bidders on the first sale. Therefore, only one bid has been received on 16 of the 27 tracts, or 59% of the tracts offered since decertification as compared to 81.5% of the tracts that received only one or no bid during the period of regional leasing between 1975 and decertification of the PRB in 1990. Further, all bids accepted by the BLM exceeded the FMV determined by the BLM. Clearly, the LBA process has not "severely diminished" competition for federal coal in the PRB.

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Comment Number: 0002493\_Mead\_20160728\_GovWY-16

Organization I: Office of Governor Matthew H. Mead

Commenter I: MATTHEW H. MEAD

Other Sections: 8.5

Comment Excerpt Text:

The 1984 Linowes Commission report identified the complex property ownership patterns in the western U.S. as a major deterrent to having multiple competitors bid on a federal lease tract. (WY0-00258 to 00912). Specifically, the report states that "Due to ownership patterns... the Government seldom reaps the benefit of being able to offer all the mineral and surface rights needed for an entire economic mining unit. Were the Government to do so, it could guarantee to each potential bidder an opportunity to invest in a lease without uncertainty about whether additional private rights could be acquired, and at what cost, after the lease sale. Typically, however, economic mining units consist of private, State or previously leased federal coal interspersed with or adjacent to the federal lease tract. In other instances, the Government may own the coal mineral rights while a private party owns the surface." Linowes Commission 1984 - p. 155; (WY0-00428). Nowhere is this situation more evident than Wyoming's Powder River Basin. The Linowes Commission Report compares regional differences in federal coal and lists the Wyoming PRB as having only 11 percent of its acreage under a federal surface/federal coal ownership pattern. Linowes Commission 1984- p. 158 (Table 3); (WY0-00431). Conversely, 72 percent of the property ownership is non-federal surface/federal coal and 17 percent is non-federal or federal surface/non-federal coal. (See Map 1.3.3.1)

The Green River/Hams Fork Coal Region in southwestern Wyoming has a different surface/mineral ownership pattern with a much larger percentage (52 percent) in federal surface/federal coal ownership pattern with very little (3.5 percent) in non-federal surface/federal coal. According to the Linowes Commission Report, coal tracts offered in the Green River/Hams Fork and Uinta-Southwestern Utah regions had achieved the most bidding competition. See Linowes Commission Report 1984- p. 159; (WY0-00432) and (see also Maps 1.3.3.2 and 1.3.3.3).

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Comment Number: 0002493\_Mead\_20160728\_GovWY-22

Organization I:Office of Governor Matthew H. Mead

Commenter I:MATTHEW H. MEAD

Comment Excerpt Text:

The GAO also expressed concern about some BLM offices not utilizing comparable value valuation methodologies in conjunction with the income approach to estimate FMV of the leases offered. They did however point to the fact that the BLM Wyoming office utilizes both approaches and actually goes a step further to numerically adjust its comparable sales using the results of the income approach. GAO Report, p. 30; (WY0-03646). Wyoming coal mines produce over 80 percent of the federal coal reserves mined in the U.S. Therefore, in the PEIS analysis, BLM must consider that 80 percent of the federal coal being mined in the U.S. is already being valued by BLM Wyoming based on something better than the GAOs recommended valuation methodology. The PEIS reviewing the federal coal program must consider that, upon completion of the GAO and OIG reviews, the BLM took action to resolve the identified concerns. The changes in guidance and policy that were the outcome of the GAO and OIG reviews (listed below) are basically administrative in scope, offering guidance to the BLM for assuring the program's continued effectiveness. The OIG report did NOT conclude the program has resulted in loss of revenue. Instead, it found that updating certain agency policies would minimize certain hypothetical risks for the undervaluation of the resource.

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Comment Number: 0002493\_Mead\_20160728\_GovWY-23

Organization I:Office of Governor Matthew H. Mead

Commenter I:MATTHEW H. MEAD

Comment Excerpt Text:

The Council also refer to "asymmetric information" such as transportation and washing expenses that the Council claims may be inflated because the expenses are self-reported by the coal company. Please note that the federal government, specifically Office of Natural Resources Revenue, contracts with the Wyoming Department of Audit to perform FMR audits of mineral companies including coal companies. These audits verify not only the production volume and sales price of the mineral but also the allowable expenses claimed by the producer for both federal royalties and state severance taxes. Since these asymmetric charges are verified under audit, it is highly unlikely that they could be inflated. Once again, we note that Wyoming produces 80 percent of the coal produced under federal lease. Therefore, a vast majority of the asymmetric costs in the federal coal program are verified under audit.

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Comment Number: 0002493\_Mead\_20160728\_GovWY-24

Organization I:Office of Governor Matthew H. Mead

Commenter I:MATTHEW H. MEAD

Comment Excerpt Text:

The Council recommends assessing royalties based on the "true observable market value" of coal. This sounds like an easily defensible change to valuation of the product, however it ignores the sales of the product that are conducted at the mine mouth such as captive mines where the consumer of the coal (a power plant) is located at the mine mouth. There are no transportation or washing costs at these mines so royalty charges would be significantly less than transported coal. This would provide a competitive advantage for having the power plant adjacent to the mine. Basing royalties on the heat value of coal is not a viable concept as BTU value is already priced by the market. The BLM must consider these facts in its PEIS.

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Comment Number: 0002493\_Mead\_20160728\_GovWY-25

Organization I:Office of Governor Matthew H. Mead

Commenter I:MATTHEW H. MEAD

Comment Excerpt Text:

It can take years from the point a particular tract is nominated for lease to the point where a lease is awarded during the LBA process. For example, the North and South Porcupine LBAs in the Wyoming PRB were nominated for lease in 2006. Despite the fact that these two tracts were simple maintenance tracts designed to extend the life of existing mines-as opposed to being used to start up new mines-the leases were not awarded until six years later in 2012. See Notice of Competitive Coal Lease Sale, Wyoming, 77 Fed. Reg. 22607 (April 16, 2012) (South Porcupine); (WY0-00916 to 00917); Notice of Competitive Coal Lease Sale, Wyoming, 77 Fed. Reg. 31385 (May 25, 2012) (North Porcupine); (WY0-00919 to 00920). Once a lease is awarded, companies must acquire the necessary permits to actually mine the lease in accordance with OSMRE and Wyoming regulations. This process can take an additional four to five years. It is common for a decade to pass from the time in which a lease is nominated until it is permitted and approved to be mined. It is critical for the BLM to consider the impact of changing market prices and environmental regulations and timelines from the time coal is leased until it is actually mined. BLM should also conduct time value of money analyses to determine the true value of the LBA since the money is paid many years prior to actual production, which is when a company would actually receive the first returns on its investments.

Using the Porcupine LBAs as an example, the total cost for lease application processing and the NEPA evaluation was more than \$1.4 million and paid over the years 2007 - 2010. The total bonus bid for the Porcupine South and North federal coal lease tracts was \$1,239,302,175. Of the total, \$744,000,000, or 60 percent had been paid prior to the date the mine received final federal mine plan approval in 2012 and could begin removing coal from the tract, thus generating revenue.

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Comment Number: 0002493\_Mead\_20160728\_GovWY-26

Organization I: Office of Governor Matthew H. Mead

Commenter I: MATTHEW H. MEAD

Comment Excerpt Text:

Figures 2.5.1 and 2.5.2 below compare Wyoming coal prices (nominal) versus Wyoming PRB bonus bids for the period of January 1991 through December 2012. Since the inception of the LBA process in Wyoming in 1991, annual average coal bonus bids have risen from \$0.1364/ton to \$1.19/ton- an increase of 872 percent. During this same period (Jan. 1991 -Dec. 2012) coal market prices increased from \$8.06/ton to \$14.15/ton (8800 BTU product)- an increase of 175 percent. Coal prices dipped to a low point of \$5.40/ton in 1999. The percent increase from this low point to the price for 8800 BTU product as of Dec. 2012 (\$14.15/ton) was 262 percent. This information illustrates the fact that the bonus bids have substantially outpaced the price of coal over the past 20 years. The American public has received substantial value from bonus bids, taxes, royalties and fees from its federal coal and affordable, reliable energy as well.

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Comment Number: 0002493\_Mead\_20160728\_GovWY-59

Organization I: Office of Governor Matthew H. Mead

Commenter I: MATTHEW H. MEAD

Comment Excerpt Text:

In developing estimates for FMV for the federal coal program, it is necessary for the BLM to incorporate into its analysis methods the inescapable fact that international trade does not always operate under free market principles. Market supply and pricing manipulations, as well as currency manipulation; by sovereign governments and sovereign owned/controlled companies, such as current and past actions of the Organization of the Petroleum Exporting Countries and recent dumping of steel by China, exemplify the inability of global markets to be relied upon to operate under free market principles. This reality, over lengthy periods of time during which numerous non-free market manipulations are highly reasonable to be expected, must be incorporated into the BLM's review and consideration of any FMV methodology changes, especially those that diminish national security, economic stability and social wellbeing

Comment Number: 0002493\_Mead\_20160728\_GovWY-71

Organization I:Office of Governor Matthew H. Mead

Commenter I:MATTHEW H. MEAD

Comment Excerpt Text:

"The BLM receives revenue from coal leasing in three ways: (1) a bonus that is paid at the time BLM issues a lease; (2) rental fees; and (2) production royalties. The royalty rates are set by regulation at a fixed 8 percent for underground mines and not less than 12.5 percent for surface mines. All receipts from a lease are shared equally with the state in which the lease is located."

Since 1992, the State of Wyoming and the federal government have been the recipients of substantial revenues due to federal coal bonus bids alone. During the 20 year period from 1992 to the last lease sale in 2012, bonus bids from federal coal leased in Wyoming have totaled more than \$5.4 billion.

Order No. 3338 completely ignores that federal coal bonuses, royalties and rentals are but a portion of the federal, state and local payments by coal companies to the significant benefit of the American public. The BLM must evaluate the total of bonus bids, rents, royalties and taxes imposed regardless of who is collecting those fees in determining whether the American public is receiving a fair return from coal leasing and production. Not only do companies pay federal mineral royalties (FMR), bonus bids and rents to the federal government, they also pay corporate income taxes, state sales and use taxes, ad valorem taxes, Abandoned Mined Land fees and black lung excise taxes. Table 2.1 provides a detailed listing of all federal, state and local taxes, fees and royalties paid by coal operators in Wyoming for 2014 and 2015.

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Comment Number: 0002493\_Mead\_20160728\_GovWY-74

Organization I:Office of Governor Matthew H. Mead

Commenter I:MATTHEW H. MEAD

Comment Excerpt Text:

Current royalty rates are above market, and if increased will only result in decreased production and return on investment for the American public. For example, in the Wyoming PRB which produces 80 percent of federal coal in the U.S., the government (local, state, federal) receives almost \$0.40 for every \$1.00 of coal sold. The following illustration is based on the current price per ton of coal in the PRB which is approximately \$11.00 per ton.

\* 12.5% Federal Mineral Royalty- \$1.38

\* Lease Acquisition Fee (bonus bid)- \$1.00

\* Abandoned Mine Land - \$0.28/ton

\* Black Lung Excise Tax- \$0.55/ton

\* State Severance and Local Ad Valorem Production/Property Taxes (5.3% and 4.5% respectively) - \$1.08

total, this amounts to \$4.29 in royalties, taxes and fees on every ton of coal sold at current rates- an effective rate of 39%.

Further, federal coal leases pay considerably higher royalty rates than paid on private coal. Private royalty rates on coal produced in the Midwestern and Eastern U.S. generally range from 3 to 8 percent and in limited cases may reach 10 percent. Royalties paid for private coal leases in Wyoming are also less than the federal coal royalty rates. Additionally, bonus bids are unique to federal coal leases and are rarely if ever paid on private leases. When the federal bonus bid is combined with the federal royalty rate, the effective royalty rate is 22 percent. BLM must consider the full extent of taxes, royalties and fees levied on federal coal mined in Wyoming. Further, the BLM needs to analyze how royalties, combined with other taxes and fees levied on coal production, have an impact on the profitability of the resource.

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Comment Number: 0002493\_Mead\_20160728\_GovWY-79

Organization I:Office of Governor Matthew H. Mead

Commenter I:MATTHEW H. MEAD

Comment Excerpt Text:

The federal government sets "fair market value" and is guided by the following definition: "Fair market value means that amount in cash, or on terms reasonably equivalent to cash, for which in all probability the coal deposit would be sold or leased by a knowledgeable owner willing but not obligated to sell or lease to a knowledgeable purchaser who desires but is not obligated to buy or lease."

43 C.P.R. § 3400.0-S(n)

The FMV is an undisclosed lease price set by BLM. Both the price and the exact process used to set the price are secret to protect the integrity of the process to ensure the greatest return for the American public. Consider the following comparison which is relevant regardless of whether there is only one bidder or multiple bidders for a federal coal lease tract. If this were Las Vegas, BLM would be the house. BLM has never accepted a bid at or below FMV. That means the American public consistently receives more than FMV. Some are calling for the BLM to give away the house advantage. That is akin to robbing the house, and therefore robbing the American public of fair market returns. Furthermore, if those advocating keeping coal in the ground are successful, the American public receives no return, let alone a FMV. The BLM must consider this in its PEIS.

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Comment Number: 0002493\_Mead\_20160728\_GovWY-86

Organization I: Office of Governor Matthew H. Mead

Commenter I: MATTHEW H. MEAD

Comment Excerpt Text:

In considering what factors to include when evaluating the fair return to the American public, and to include when developing estimates of FMV, it is incumbent upon the BLM as responsible stewards of the American public's assets, to pursue a holistic approach that includes much more than the question, "Are the bonus bids, rents, and royalties received under the Federal coal program successfully securing a fair return to the American public for Federal Coal, and if not what adjustments could be made to provide such compensation?" The BLM has the obligatory responsibility to thoroughly evaluate and consider the net national environmental, economic, security and social impacts and benefits for the numerous ramification outcomes for changes to the federal coal program.

It is therefore essential that the BLM consider all coal-related benefits received by the American public when determining fair return to the American public in its evaluation of the federal coal program. It is also essential for BLM to provide a fair and balanced review of impacts associated with all forms of energy, not just coal.

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Comment Number: 0002495\_Bucks\_20160728-10

Commenter I: Dan Bucks

Comment Excerpt Text:

The PEIS is also an opportunity for Interior to reevaluate the washing deduction in a larger economic and policy context. Washing activities are, in fact, simply the last step in extracting coal and placing the commodity in a marketable condition. There is no clear justification for allowing this deduction. It is a potential source of producer abuses that the CEA report notes is a "poorly observable cost." More importantly, it is inconsistent with valuing coal as a commodity in the marketplace because it takes the point of valuation back to a stage where coal is not yet a commodity.

Once gathered, market price data for different types and quality of coal would be validated to ensure the data reflects arm's length sales and is otherwise reliable. The validated data would then be placed into statistical models used in property valuation contexts to produce market values for coal. Such models applied well are administratively efficient and produce values at a high level of accuracy and reliability. The models also can be used to produce values for coal of a type and quality for which market data is not readily available through adjustments from the value of coal of different type and quality, for which data is available. If necessary, such values can be further tested using other financial and economic analytical methods. Transportation deduction allowances are more likely to be established based on traditional accounting analysis, but statistical techniques may also be applicable in some instances. Interior should test statistical modeling and other analytical techniques using market price data during the PEIS. Ideally, by the latter stages of this process, Interior would have sufficient

tested a direct valuation system to implement it soon after the completion of the PEIS.

The market values for coal and transportation deductions generated under a direct valuation system would be posted publicly as would the lease by lease payments of royalties based on those values, achieving openness and transparency for the royalty process. This is possible, in part, because, as in property tax valuation systems, these publicly established values and payments cannot be considered proprietary. Underlying market price data used in the modeling may, in many cases, be proprietary and would continue to be fully protected from disclosure. Again, this occurs in property tax administration. Confidential data used to value property is protected, but the publicly established values and payments based thereon are fully public. The methods of generating the values of coal do not allow tracing back from the public values to producer financial records. If rare and unique circumstances exist where such might occur, the values in those case could be protected. However, that would be a rare exception and not a general rule.

Direct valuation would equitably and reliably achieve a fair return for the taxpayers based on the true market value of coal adjusted for heat content, quality and location of coal. For the first time ever, the standard of value laid out by (?) the Mineral Leasing Act would be attainable. Undue producer influence over royalty values and payments and distortions of royalties caused by producer inefficiencies and managerial shortcomings would end. Direct valuations would finally enable the public to know what they are being paid in royalties they own. Transparency would operate over time to help ensure the integrity of the royalty process in ways entirely unattainable at present in a system where royalty values and payments are kept secret. Public trust and confidence in the coal royalty system would increase.

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Comment Number: 0002495\_Bucks\_20160728-11

Commenter I: Dan Bucks

Comment Excerpt Text:

The PEIS should consider whether discretionary royalty rate reductions, which subsidize the production of marginal coal that impose external costs on society, is justified. Further, if discretionary rate reductions are allowed, the decision-making surrounding such reductions should be made fully public. The PEIS should be used to evaluate the details of transparency for selective rate reductions if such reductions are not eliminated entirely. There is, as has been noted, a substantial body of work and discussion of increasing royalty rates or adding fees per ton of coal to compensate society for the climate change impacts of coal and potential other public health and environmental effects of coal. The recommendations for a new public coal planning and leasing system and public royalty system establish an infrastructure within which Interior can secure public and expert participation in decision-making processes to adopt and adjust over time royalty rates and fees. Further, the extensive information generated out of the public planning and leasing and public royalty systems will greatly enhance the ability of the public and experts in civil society to engage these issues at a higher level than is possible under the closed systems of administration that need to be replaced. Finally, robust public leasing and royalty systems would prevent the intent of any potential increases in royalty rates or fees to be undermined by greater efforts by producers to reduce standard lease and royalty payments further below fair market value levels to help offset the costs of the higher rates or additional fees.

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Comment Number: 0002495\_Bucks\_20160728-2

Commenter I: Dan Bucks

Comment Excerpt Text:

In the same vein, the PEIS should also prepare for a fundamental change in the royalty system. The current system, administered like an income tax, allows coal producers to self-assess the value of coal for royalty purposes. Historically, some producers have used sophisticated methods to underreport coal values. Recent rules adopted by the Office of Natural Resources Revenue (ONRR) requiring valuation of coal at the first arms-length sale will help reduce producer underreporting of coal values arising from below market sales to captive affiliates. There is no doubt that these new rules represent a major step forward in improving the current royalty process, and Interior is to be commended for making these changes. However, despite those improvements, the

royalty system still does not reliably guarantee a full and fair return to the public. Substantial loopholes remain that allow coal producers to underpay royalties through inflated deductions or exclusions.<sup>3</sup> As long as coal producers are allowed to self-assess coal values, they have a financial incentive to understate those values.

(3) Isaiah Peterson, “Devaluing Coal: Reasons for Restructuring How Federal Coal is Valued,” *Georgetown Journal of Law and Public Policy*, 2015, 13(1): pp 165-180.

The companies will find ready assistance in these efforts from the large industry of experts who help corporations avoid income taxes by shifting profits among national and state taxing jurisdictions through complex transactions and legal structures. Accountants and attorneys well-versed in profit shifting readily translate those methods into royalty avoidance techniques. Indeed, the royalty avoidance through below market coal sales of coal to captive affiliates is a simplified version of methods corporations have long used to shift profits earned in the United States to tax havens overseas—a problem the IRS has failed to solve after 50 years of trying. As long as companies self-assess values for royalties, Interior will never catch up to the ever more creative royalty avoidance strategies that spread from the world of taxation to infect royalty administration. No amount of selective loophole closing will ever overcome the incentives for and ingenuity of companies to avoid full and fair royalty payments. Thus, royalty self-assessment is inherently incapable of guaranteeing the public the fair return on coal required by law. Certainly, audits of royalty returns can correct a number of underreporting problems. But audit resources are often always too scarce and even under the best of circumstances will not correct all the shortcomings in the original reports. Further, audits may come several years after returns are filed, leaving some facts difficult to determine, producing conflicts with producers over ambiguities and resulting in partial settlements. Self-assessment combined with return auditing is “a second best solution” compared to the system recommended in this report.

As long as companies can undercut the proper valuation of coal for royalty purposes, the self-assessment system will prove ill-suited to the goal of adjusting coal production to the realities of climate change. Several experts have proposed raising royalty rates or adding per ton royalty amounts to compensate the public for the cost of climate change and other environmental effects. (5) However, increases in royalty rates will also increase the incentive for coal companies to undervalue coal. Unless the system of self-assessment is replaced with a system that ensures the integrity of the royalty base, the objectives to be served by higher royalty rates or added royalty fees will only be undermined by more aggressive efforts to underreport coal values in the calculation of the royalties. That is true even if higher royalties take the form of physical fees per ton. While these fees might not be avoided directly, they will be undercut indirectly by companies “compensating” themselves for the higher fees through increased underreporting of the “percentage of value” portion of royalties. Any effort to compensate or protect the public for the impacts of climate change or other environmental factors with higher royalties will only be significantly undermined by the system of corporate self-assessment of royalties.

(5) U.S. Council of Economic Advisors, “The Economics of Coal Leasing on Federal Lands: Ensuring a Fair Return to Taxpayers,” Executive Office of the President, June 2016. (Reeder & Stock) (Vulcan Philanthropy) (Hein and Howard) more?

Comment Number: 0002495\_Bucks\_20160728-7

Commenter I: Dan Bucks

Other Sections: 8.5

Comment Excerpt Text:

Transparency and open participation would also connect Interior with the public they are to serve. Coal decisions are made privately with interaction at key points with coal producers whose interest is to minimize payments for the coal itself or for mitigating the external impacts of coal production. The current systems cut off Interior from the public that wants to help secure a fair return from coal and properly mitigate the public costs of its production. These systems are illogical. Privileged access is provided to parties whose interests often conflict with the public interest, while those who want to see the public interest served are kept out of the loop at key stages of decision-making. Adopting open, public processes of decision-making will logically align decision-making with the goals and interests that, under the law, ought be served.

Finally, the public simply has a right to know about the issues and decisions that affect them. Resource



management decisions often have major impacts and typically involve choices among public values. The public should have access to such decisions as they are being made and not after the fact, when the impacts may not be mitigated or their values preserved.

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Comment Number: 0002495\_Bucks\_20160728-9

Commenter I: Dan Bucks

Comment Excerpt Text:

Recommendation 4: Through the PEIS, Interior should adopt a transparent process of setting royalty rates, directly valuing and collecting royalties on coal production, and regular reporting to the public royalty payment by lease in order to achieve a fair return for the public and ensure the integrity and accountability of the royalty process. Further, the PEIS should reevaluate the deduction for coal washing.

As noted earlier, Interior is to be commended for its recent strengthening of coal royalty rules to eliminate some sources of producer underreporting of coal values. However, those rules do not eliminate other sources of underreporting associated with inflated deductions and exclusions from coal value. More importantly the entire structure of the self-assessment system used for royalties—patterned after income taxes—is vulnerable because it encourages companies to underreport royalties and invites continuing efforts to import income tax avoidance strategies into the royalty arena. In addition, the system of self-assessment is secret, so the public is denied knowledge of what it is paid for coal in royalties on each lease and is unable to assist with ensuring that it receives a fair return on federal coal.

All of these problems could be remedied by Interior directly valuing the coal for royalty purposes as the Mineral Leasing Act clearly authorizes. (8) Such a system would be modeled after property tax administration and would not be subject to the kind of defects inherent in the income tax-style, self-assessment system. Moreover, the final values, as established by Interior based on statistical analysis of market price data, would be public, even while proprietary data received from companies would remain confidential.

The Mineral Leasing Act specifies that “a lease shall require payment of a royalty in such amount as the Secretary shall determine of not less than 12 1/2 per centum of the value of coal as defined by regulation.. .” A plain reading of the law is the it charges Interior with the duty and responsibility of determining the value of coal.

A recent report by the Council of Economic Advisors recommends adopting this approach of direct valuation based on market prices and approach and outlines how it would work:

Under a framework analogous to property taxes, the market value for coal should be based on sales prices of coal with similar characteristics, from both Federal lands and non-Federal lands. Under such a framework, the most appropriate price to use would be the market price for coal with similar characteristic in the region of coal extraction. (9) Council of Economic Advisors, June 2016, p 8.

The report further stated: There is strong economic support for setting coal lease royalty terms based on the final delivered price of coal, less adjustments for the heat content, quality, and location of coal. These adjustments are crucial to make sure coal is assessed on its true economic value.

Similarly, establishing lease royalty terms based on relevant (adjusted) market prices for comparable coal or coal substitutes is important to ensure a fair return to the taxpayer. The relevant market price could be the average price of nearby regional coal, the price of nationwide coal, or the price of a substitute in the electricity dispatch orders: natural gas. *Id.*, p 4.

Direct valuation makes it possible to eliminate all underreporting associated with creative accounting by producers—including inflated deductions and exclusions that are not remedied by even the newly adopted ONRR rules. Further, it removes all incentives for producers to continuously explore and employ new accounting methods and legal structures for royalty avoidance purposes. It contains the additional benefit to the coal companies, Interior and the public of not delaying disputes over royalty payments up to eight years down the road long after production occurs. Disputes will be minimized and addressed upfront, soon after the time of production for which current payments are made. That enhances the certainty of the royalty for all parties and yields substantial administrative efficiencies.

David Hayes, former Deputy Secretary of Interior, speaking at the recent New York University Institute for Policy Integrity Federal Coal Workshop on June 29, 2016, expressed support for Interior directly valuing coal,

noting that coal is a commodity and, as such, it should be feasible to determine its value. This idea that the value of coal for royalty purposes should be based on the value of the commodity in the marketplace also reveals a further difference between the direct valuation approach vs. producer self-assessment. Direct valuation yields a value for coal in the market (adjusted to the mine via the transportation deduction). Producer self-assessment yields a value for coal to the producer. As such producer self-assessment, besides all the other problems already cited, makes the royalty values and payments dependent on the managerial performance, market acumen and operational efficiency of the producer. The public should not be shortchanged because producers fail to secure the full value of its coal in the marketplace or use inefficient transportation methods, yet the self-assessment system. From an economic perspective, as reflected in CEA report, direct valuation yields royalty payments that reflect the true value of coal as a commodity in the marketplace—which is the standard of the Mineral Leasing Act.

In terms of securing adequate data for the periodic modeling of market price data, Interior should continue requiring information reporting on coal sales from producers of federal coal. Interior could also gather market data from the Energy Information System and from state sources. In his NYU workshop remarks, Hayes noted state electrical utility commission records contain a wealth data on coal purchase prices that Interior could use in the valuation process. The same is true of state coal severance tax records, especially for non-federal coal. Interior should systematically identify, test and develop key sources of market price data for use in direct valuation during the PEIS. Interior should also create the administrative systems to collecting and validating the data during the PEIS

In a direct valuation system, Interior would also develop the cost of the allowable transportation deductions based on the most efficient means of transport. Again, the PEIS process should be used to identify public and private sources of data, starting with the Surface Transportation and continuing producer reports, for accomplishing this task. Transportation deductions are retained to adjust the value of coal back to the mine and take the location of coal out of the valuation equation as noted by the CEA report.

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Comment Number: 0002499\_Nichols20160728-4

Organization I: WildEarth Guardians

Commenter I: Jeremy Nichols

Other Sections: 4.5 2 8.1 8.5 7.1 8.9 11

Comment Excerpt Text:

## 2. Just Transition Alternative

The “Just Transition Alternative” is meant to both wind down the federal coal program in order to keep fossil fuels in the ground and to ensure an orderly, effective, and fair transition of workers and communities away from coal to more prosperous and sustainable economies. The “Just Transition Alternative” is defined by the following key components:

1. An end to federal coal leasing: Consistent with authorities and discretion under the Mineral Leasing Act, the Just Transition Alternative imposes a permanent pause on the leasing of federal coal. The primary basis for adopting this permanent pause would be to ensure the protection of the public interest and the interests of the United States. Such justification for an end to leasing is clearly supported by the Mineral Leasing Act.

This pause would apply to all competitive leases (including all leases by application, including emergency leases, as defined by 43 C.F.R. § 3425.1-4) and lease modifications. We further believe there is ample justification for applying a permanent pause to other forms of non-competitive leasing, such as preference right lease applications and lease exchanges. With regards to lease exchanges, the BLM has clear authority to reject exchanges that are not in the “public interest.” 43 C.F.R. § 3435.4(a); see also 43 C.F.R. § 3436.0-2(b) (related to alluvial valley floor exchanges) and 43 C.F.R. § 2200.0-6 (generally related to exchanges). With regards to preference right lease applications, the BLM has the authority to reject such applications where there does not exist “commercial quantities” of coal. 43 C.F.R. § 3430.5-1(a)(1). Given the dismal state of the coal industry and the overwhelming climate costs that coal imposes on society, it would be dubious at best to claim that any commercial quantities of coal exist where there are preference right lease applications. Accordingly, the BLM has the authority to reject such applications. (20)

Furthermore, to ensure an orderly end to federal coal leasing, the BLM and the Department of the Interior should issue a rule or guidance requiring that as land management planning is undertaken pursuant to 43 C.F.R. § 1610, et seq., that all lands within a resource management area that are not currently leased for coal, be made unavailable for leasing. The authority to impose such direction is set forth at 43 C.F.R. § 3420.1-4(e), which gives the BLM broad discretion to “eliminate additional coal deposits from consideration to protect other resource values.” 43 C.F.R. § 3420.1-4(e)(3).

(20) The only preference right lease applications that exist are in northwestern New Mexico, where Arch Coal, which is currently bankrupt, has the rights to acquire 21,000 acres of leases. Legislation was introduced in the U.S. House of Representatives that would allow the Secretary to retire these preference right lease applications. See HR-1820, available online at <https://www.congress.gov/bill/114th-congress/house-bill/1820/text>. If this legislation is passed, there would be no additional preference right lease applications requiring action. We support this legislation and urge the Secretary of the Interior to encourage its passage in the U.S. Senate and adoption into law.

Putting a permanent pause on leasing will not destroy the U.S. economy or otherwise endanger our energy security. As a recent report looking at leasing in the Powder River Basin found, existing leased reserves in the Powder River Basin are sufficient to meet demand and effectively contribute to limiting temperature increases.

(21) This report is instructive as the Powder River Basin is the largest coal producing region in the United States and imposes the greatest influence on energy supply and demand in the nation. If an end to federal leasing can be justified in the Powder River Basin, it can be justified for federal leasing elsewhere in the U.S.

21 See Exhibit 11, Fulton, M., D. Koplow, R. Capalino, and A. Grant, “Enough Already: Meeting 20C PRB Coal Demand Without Lifting the Federal Moratorium,” Report Prepared for Energy Transition Advisors, Earth Track, and Carbon Tracker Initiative (July 2016), available online at <http://www.carbontracker.org/report/enough-already-2c-powder-river-basin-coal-demand-federal-moratorium/>.

2. Increased royalty rates and rentals: Coal is exacting a tremendous toll on our nation, costing our society billions in climate damages, adverse health impacts from air pollution, and water contamination. Royalty rates from production on existing coal leases and rentals on existing leases must be increased to begin to recoup the costs of these externalities, which are currently shouldered by the public.

Although royalty rates are normally imposed through new leasing, we recommend that the Interior Department and BLM incorporate higher royalty rates into existing leases as existing leases are readjusted pursuant to 43 C.F.R. § 3451.1. To accomplish this, we urge the amendment of 43 C.F.R. § 3473.3-2(a)(1) and (2) to incorporate increased royalty rates for both surface and underground mining. As leases are readjusted, these royalty rates must be applied to existing leases pursuant to 43 C.F.R. § 3451.1(a)(2).

Increasing royalty rates has been recommended by the White House as both a means to generate revenue and address the costs of environmental externalities, including carbon costs. (22)

(22) See Exhibit 12, Executive Office of the President of the United States, “The Economics of Coal Leasing on Federal Lands: Ensuring a Fair Return to Taxpayers” (June 2016), available online at [https://www.whitehouse.gov/sites/default/files/page/files/20160622\\_cea\\_coal\\_leasing.pdf](https://www.whitehouse.gov/sites/default/files/page/files/20160622_cea_coal_leasing.pdf).

Furthermore, royalty rate reductions should not be approved. Currently, royalty rate reductions are routinely granted as companies claim poverty or difficulty in mining with little apparent scrutiny as to whether the reductions are justified. In Colorado, for example, BLM officials have approved royalty rate reductions to facilitate methane venting and most recently proposed to approve a retroactive royalty rate reduction for a mine that was not even producing coal. (23) See Exhibits 13 and 14.

Similarly, we urge Interior and BLM to amend 43 C.F.R. § 3473.3-1(a) to raise rental rates for federal coal leases. Currently, rental rates are set at \$3.00 per acre, a figure that has not been adjusted since 1979, if not earlier. This rental rate not only has failed to be adjusted to account for inflation, but fails to account for the fact that some leases may be of small acreage, yet yield significant amounts of coal. Rentals should reflect the value of the lease, which depends on the amount of coal a lease contains. In accordance with 43 C.F.R. § 3473.3-1(a), any increased rental rate must be applied to any readjusted coal lease.

3. Existing leases that are not producing must be canceled: Where a lease is not meeting continued operation requirements under 43 C.F.R. § 3483.1(a)(2), it is subject to cancellation pursuant to 43 C.F.R. § 3452.2. Where a

lease is not meeting continued operation requirements, BLM and the Interior Department should make clear that cancellation of the lease must be pursued. To this end, discretionary avenues for avoiding cancellation should be prohibited. Thus, lease suspensions under 43 C.F.R. § 3483.3 and payment of advanced royalties in lieu of continued operation under 43 C.F.R. § 3483.4 should be barred.

The justification for imposing such direction is very clear. Currently, BLM regularly grants lease suspensions and allows payment of royalties in lieu of continued operation with no assessment of whether such actions are appropriate or in the public interest. BLM appears to be under the impression that lease suspensions or advanced royalties are somehow mandated, and that the agency has no choice but to approve company requests. An egregious example of this is with regards to Arch Coal's Carbon Basin Lease in southern Wyoming (No. WYW-139975). Arch acquired this lease with the aim of developing a mine to fuel a proposed coal to liquids facility. However, this coal to liquids facility has never materialized or even shown any promise of materializing. Most recently, the Wyoming Department of Environmental Quality terminated the permit for the proposed facility. (24) Nevertheless, since 2010, Arch has failed to meet continued operation requirements. The BLM has allowed Arch to maintain its lease, however, by routinely allowing the company to pay advanced royalties in lieu of continued operation. (25) These decisions appear to be pro forma in nature, and do not reflect any consideration as to whether it is appropriate or remotely in the public interest to accept advance royalties in lieu of continued operation.

(24) See Exhibit 15, Wyoming Department of Environmental Quality, "Permit Termination, Medicine Bow Fuel and Power Coal to Liquid Project" (June 27, 2016).

(25) See Exhibit 16.

Furthermore, where an existing lease is not producing, yet is part of a producing logical mining unit, BLM and the Interior Department should use their discretion to modify the boundaries of logical mining units to eliminate the non-producing lease and facilitate its cancellation. BLM has such discretion under 43 C.F.R. § 3478.1.

Cancelling leases that are not producing will serve the goal of preventing any potential future development of existing leases and contribute to an orderly end to the federal coal program.

4. Accounting for carbon costs in coal management: It should be made clear, whether through new rules or guidance, that carbon costs must be analyzed, assessed and disclosed as federal coal management decisions are made. Such decisions are most likely to include mining plan modifications issued pursuant to the Mineral Leasing Act, 30 U.S.C. § 207(c), and the Surface Mining Control and Reclamation Act ("SMCRA"), 30 C.F.R. § 746, and lease readjustments. It is imperative that the BLM and Interior maintain close accounting of the carbon emissions and costs resulting from its coal management actions, to ensure full transparency around these emissions and costs, and to meaningfully act to address these emissions and costs. Particularly given that, pursuant to authorities under the Mineral Leasing Act and SMCRA, the Secretary of the Interior has full discretion to disapprove mining plans authorizing the development of leased federal coal, it is imperative that carbon emissions and costs factor into and influence such decisionmaking.

5. Reclamation must be guaranteed: To ensure an orderly end to the federal coal program, full and final reclamation must be guaranteed within a reasonable timeframe. We urge two regulatory changes to ensure this occurs.

First, Interior should amend regulations at 30 C.F.R. §§ 816.100 and 817.100 to provide clarification and specificity around contemporaneous reclamation. Current rules are vague and fail to ensure that reclamation proceeds in a manner that is as "contemporaneously as possible" with mining in accordance with 30 U.S.C. § 1202(e). These regulations should be amended to make clear that the success of contemporaneous reclamation must be measured based on a comparison of Phase III bond release acres, as defined under 30 C.F.R. § 800.40(c)(3), with disturbed acres and ensure that reclamation proceeds at a 1:1 rate, in other words for every acre disturbed, one acre should be fully reclaimed to meet Phase III bond release standards.

Second, just as current BLM rules require diligent development of federal coal, these rules should also require diligent reclamation. To this end, Interior and BLM should consider rule changes to ensure that nonproducing coal leases are fully reclaimed within two years of failing to meet continued operation requirements and set

deadlines for the full reclamation of federal coal leases that are no later than 2035. This reclamation deadline should be established by rule and incorporated into lease terms as leases are readjusted.

Finally, Interior should amend self-bonding regulations at 30 C.F.R. § 800.23, and any other regulations, as appropriate, to prohibit self-bonding whenever publicly owned coal is permitted to be mined. This will ensure that, as coal companies continue their decline, that American public resources are fully protected and fully guaranteed to be cleaned up.

6. Prioritizing transition: Above all, the BLM and Interior must make transition away from coal a foremost goal as the federal coal program comes to an end. To do this, the agencies should not only explicitly commit, to the extent possible, their leadership, resources, and expertise to ensure that workers and communities receive the support and assistance they need to transition to more sustainable and prosperous economies. Among the actions that Interior and BLM can and should undertake to ensure transition:

- Work to secure Congressional authorization to direct increased royalty and rental payments toward worker and community support. Under NEPA, agencies are required to rigorously explore and objectively evaluate reasonable alternatives “not within the jurisdiction of the lead agency.” 40 C.F.R. § 1502.14(c). Here, although BLM and Interior may not be able to direct royalties toward transition support, they can recommend that Congress pass legislation that provides such authorization.

- Establishing an Economic Transition Fund, which would be sustained by an increase in reimbursement fees charged by the Interior Department when processing coal-related applications. Under the Federal Land Policy and Management Act (“FLPMA”), Interior has authority to recover reasonable costs associated with its coal management program and to appropriate and spend such monies. Specifically, FLPMA provides the Secretary of the Interior with authority to “require a deposit of any payments intended to reimburse the United States for reasonable costs with respect to applications,” including coal lease application. See 43 U.S.C. § 1734(b). Such payments are “authorized to be appropriated and made available until expended” by FLPMA. Id. Funds from the Economic Transition Fund should be directed toward transition-oriented initiatives.

- Prioritizing support and assistance to help communities transition. In addition to securing funds and making them available, the Department of the Interior can play a key role in helping direct communities to support, steering resources to support conservation and research projects in or near communities, encouraging renewable energy development on public lands. Such leadership could be conveyed through a Secretarial Order that simply makes it an overarching priority of the Interior Department to advance transition

Overall, the Interior Department and BLM must move to keep our publicly owned coal in the ground. However, keeping coal in the ground should not mean that we turn our backs on the workers and communities that have been dependent on coal for so long. Embracing an alternative that ensures “Just Transition,” in other a fair, compassionate, and orderly transition away from coal, is the most effective way to both protect our climate and help our nation effectively move to more sustainable economies and reliable and affordable means of energy production.

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Comment Number: 0002500\_Sweeney\_20160728-4

Organization I: National Mining Association

Commenter I: Katie Sweeney

Comment Excerpt Text:

A. The LBA Method Achieves the Sale of Coal at Fair Market Value

Critics of the LBA method assume, without any explanation, that in the absence of multiple bidders, lease sales are not capable of producing bonus bids at fair market value. Their premise presumably is that competition among more bidders will bid the transaction value up to what economists may refer to as the fundamental value. This might be true in theory, but in reality many mineral asset and lease sales are successfully transacted for fair market value with a single buyer.

The absence of more bidders for federal coal leases does not reflect that leases are being offered at less than fair market value, but instead reflects the restructuring of the industry and the advanced development of the coal

regions within federal lands. There are fewer mines and fewer coal companies today than during the period when the regional leasing process commenced in the 1980s. As one would expect, interest in leasing now arises primarily from companies with nearby existing operations seeking to replace coal reserves at roughly their depletion rate. The prohibitively high cost of developing new open-pit mines of the scale necessary to be profitable in the Powder River Basin (PRB), where the vast majority of leased federal coal is produced, creates a barrier to market entry that will be unaffected by any change away from the LBA system.

However, this thinner pool of potential bidders has not prevented BLM from identifying accurately the fair market value of coal for a lease sale. The aim of fair market value is finding the transaction price that would most likely be negotiated between a typical buyer and seller each having reasonable but not absolute knowledge of the reserve. Comparable sales produce fair market valuations because they measure transaction values. The comparable sales method is the preferred method of valuation by professionals when reliable market and sales data are available. BLM relies upon peer-reviewed analysis that uses comparative sales. The successful bonus bids under the LBA leasing method have increased at a rate outpacing the increase in coal prices. The most recent bonus bids for coal leases in the Powder River Basin (PRB) are 700 percent higher than those in 1990.

Furthermore, abandoning the LBA method of leasing and returning to centralized or regional lease sales is unlikely to attract more bidders or yield higher bids. The earlier system of scheduling lease sales based upon national and regional demand forecasts failed with many tracts receiving one or no bids. The Department's earlier leasing framework was built around centralized planning whereby leasing targets and schedules were established to match the forecasted demand and production estimates by the Department of Energy. The purpose of the centralized process was to meet the nation's energy needs and foster competition in lease sales.

However, the regional coal leasing experience using an established schedule limiting when coal will be leased depended on perfect foresight in anticipating coal demand and leasing interest and produced dismal results. Because of the great uncertainties surrounding a wide range of factors affecting demand and supply—nationally and regionally—the exercise produced rapidly changing targets year over year. The current structure of the coal industry and advanced development of the coal regions suggests an even lower probability that centralized or regional leasing will yield better results than the LBA method.

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Comment Number: 0002500\_Sweeney\_20160728-5

Organization I: National Mining Association

Commenter I: Katie Sweeney

Comment Excerpt Text:

**B. The Effective Royalty Rate for Federal Coal is Above Market and Should Be Retained or Reduced to Maximize Return for Taxpayers**

Claims that federal royalty rates (12.5% surface mines; 8% underground mines) do not provide a fair return are equally inaccurate, and fail to consider that federal rates are substantially (30%-65%) higher than the prevailing rates for private coal in the East. Moreover, private coal lessees rarely, if ever, pay bonus bids or surface rentals—a fact completely ignored by the groups on whose information DOI relied in imposing for the leasing moratorium. As an example, for the Powder River Basin (PRB) in Wyoming which produces 80% of the coal on federal lands, the government receives almost 40 cents on every dollar of coal sold. To illustrate the above market rate; the current price per ton of coal in PRB is approximately \$11.00. The 12.5% federal royalty results in a tax on this price at \$1.38. The average price of the lease acquisition fee (bonus bid) adds another \$1.00. Two more federal taxes are levied on this ton of coal, the AML tax of \$0.28 per ton and the Black Lung Excise Tax of \$0.55 per ton. Finally, this ton of coal is also taxed through the state severance tax and the county tax applicable in the PRB, at a rate of 5.3% and 4.5% respectively, adding another \$1.08 in taxes. In total, this amounts to \$4.28 in taxes on every \$11.00 worth of coal sold, an effective tax rate of 39%.

Despite this reality, organizations providing the supporting rationale for the coal leasing moratorium misuse data and create deceptive metrics for their claim that coal producers do not pay the royalty on the market value of the coal. The Mineral Leasing Act (MLA) imposes a production royalty on coal, oil, and gas based upon the value as reflected by the sales price of the commodity at the mine or well. Opponents of federal coal leasing use artificial constructs such as “gross market price” or “full value” by adding to the commodity price the transportation costs incurred by buyers. They advocate moving the point of valuation for calculating the royalty from the sales price received by the coal producer to the point of its use by the buyer. The result is not a production royalty on the market price of the commodity, but rather a federal tax on two separate transactions: coal sales by the coal producer and transportation services provided by the railroads to the coal buyer. This artificial construct fundamentally misconstrues what a royalty is in the first place, and if adopted as the metric would only serve to drive down production and deny taxpayers a fair return for the development of public resources.

In the same vein, a royalty rate that would include a so-called “externality adder” for the consideration of nebulous climate change impacts could no longer be considered a royalty. By changing the rate to include a “cost” derived for purported externalities the royalty would no longer reflect a share of a portion of either the minerals or their value which is the very purpose and meaning of a royalty. Oddly, an externality-based adder would decrease the value of the minerals by making them less economic to mine and sell (i.e., less valuable). DOI previously rejected a similar concept when it denied a 2011 petition by WildEarth Guardians to include an ill-conceived externality adder.

#### C. Coal Exports Are Not a Valid Basis for Reevaluating Valuation Regulations or Royalty Rates

As part of the PEIS process, BLM appears to be considering arguments raised by the Center for American Progress (CAP) that current leasing and royalty valuation regulations do not capture the true value of coal exports. This argument suffers from the same fundamental error as its arguments for using the total delivered cost to domestic consumers as the market price of the commodity. CAP asserts that PRB coal sold in the export market sells for five times more than it does domestically. This distortion is premised on ignoring the substantial costs of transporting coal to the terminal, having it loaded on a vessel and shipped overseas, which can be more than six times the mining cost for PRB coal.

Coal exports have never comprised a significant share of coal production from western states with federal coal lands. During the zenith of U.S. coal exports, exports from Colorado, Montana, Utah and Wyoming were 4 percent of the total production in those states. In general, Western U.S. coal is at a significant disadvantage in the seaborne steam coal market. The four largest importers of coal, China, Japan, India, and Korea are substantially closer to the two largest exporters of coal, Australia and Indonesia, both of which enjoy low mining costs. Currently, the vast majority of exports of Western coal must go through Canadian, U.S. Gulf Coast or Great Lakes ports which represent significant transportation and logistics costs, placing the Western mines at a competitive disadvantage. Future Western coal exports are dependent on the development of port capacity on the U.S. West Coast. The development of port capacity on the West Coast would be beneficial to Western coal exports by increasing market access. However, this really is of no moment to the proponents of the moratorium who are actively lobbying against such development efforts because they would prefer to see the coal remain in the ground.

The relatively small portion of western coal exported precludes potential exports from serving as a basis to value new coal leases. The value of increased coal exports would be captured in the royalty which is based upon the price of the coal sold at the mine. Charging federal royalties on the total cost of exporting coal as CAP and others advocate will shift exports to private coal where royalties are paid on the basis of F.O.B. mine price and decrease return for taxpayers on the development of federal coal.

### III. DOI Data Exposes the Contrived Nature of the Reasons Underlying the Moratorium and Show that the Federal Coal Program is Working

The performance of the federal coal leasing program as reflected in DOI's own data exposes the contrived nature of the reasons offered for the leasing moratorium and programmatic review. Previous concerns about speculative holding of leases without production resulting in the enactment of the Federal Coal Leasing Act Amendments (FCLAA) in 1976 have been addressed successfully—the number of leases decreased and coal production increased. Since 1990, both the number of leases and the amount of acreage under lease have decreased substantially (35%).

With the advanced development of the coal regions, coal companies have sought new leases at roughly the rate of depletion of coal at existing operations as predicted by BLM when it shifted to the LBA leasing method. This reflects the reality that market changes and depletion drive the number of bidders for a lease, not the LBA process itself. Also, since 2003, total revenues from federal coal leases (bonus bids, royalties and surface rentals) amount to \$13.8 billion; lease revenues in 2014 were twice the amount in 2003; bonus bids have increased substantially (700 percent in the PRB); coal royalty revenue is 88 percent higher despite coal production increasing by only 2 percent; revenue per acre under lease has increased 40% despite lower coal prices recently. These facts dispose of any notion that the program is not continuing to ensure a fair return for taxpayers.

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Comment Number: 0002503\_Hamman\_20160729-2

Organization I: Lignite Energy Council

Commenter I: Tyler Hamman

Comment Excerpt Text:

I) "Fair return to taxpayers"

As described above, federal coal represents a relatively small proportion of a mine area in North Dakota. While pursuing these comingled parcels is the most efficient way to mine, coal producers do have the option in many cases to simply bypass a federal coal tract if a lease cannot be obtained in a timely manner. The practical effect of bypassing a tract essentially sterilizes that reserve – it would never be feasible to go back and mine. The rate of return to American taxpayers if their resource is left in the ground is and will always remain zero. According to the most recent figures from the State Auditor, North Dakota received over \$1 million in federal coal royalties in 2013. Half of these funds are shared with the three coal-producing counties, all of which have populations under 10,000. In another scenario where it might be difficult to isolate a federally-owned coal tract and an entire area needs to be mined around, the inability to secure a federal coal lease could represent a takings of comingled non-federal coal reserves.

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Comment Number: 0002506\_Nichols\_20160729-3

Organization I: Wild Earth Guardians

Commenter I: Jeremy Nichols

Comment Excerpt Text:

Royalty rates must increase: Coal is exacting a tremendous toll on our nation, costing our society billions in climate damages, adverse health impacts from air pollution, and water contamination. Royalty rates from production on existing coal leases must be increased to begin to recoup the costs of these externalities, which are currently shouldered by the public. Your Interior Department should do everything possible to ensure increased royalty revenue is directed toward helping coal-dependent communities transition from coal.

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Comment Number: 0002507\_Nettleton\_20160801-13

Commenter I: Jerry Nettleton



## Comment Excerpt Text:

Retain royalty adjustment provisions, with modifications to include market considerations and adequate provisions for objective evaluation and transparency.

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Comment Number: 0002507\_Nettleton\_20160801-14

Commenter I: Jerry Nettleton

## Comment Excerpt Text:

Base bonus bids on recoverable reserves rather than total reserves.

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Comment Number: 0002507\_Nettleton\_20160801-15

Commenter I: Jerry Nettleton

## Comment Excerpt Text:

Review and revise approach for determining fair market value to include consideration of mining, regulatory, and market conditions, and to improve transparency.

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Comment Number: 0002507\_Nettleton\_20160801-2

Commenter I: Jerry Nettleton

## Comment Excerpt Text:

Fair Return - in evaluating "fair return", the objective discussion or analysis must consider all components of return and economic benefits from leasing and production of the resource including bonus bid payments, rents, royalties, AML fees, Black-lung taxes, state and local property taxes, sales taxes, employment taxes, local/regional/state/national benefits from mine employment and employee benefits, and the economic benefits of low-cost reliable power from coal for businesses and utility rate-payers. Advocates of increasing coal royalties point to the Headwaters Economics Report as support for their contentions, however, information compiled from the Energy Information Administration (EIA) by Senator Ron Wyden (D-Oregon) indicates that coal operators have paid much higher royalties (does not take into account bonus bid and rental payments) than indicated by the Headwaters work. It must be noted that BLM policy includes setting "fair market value" for proposed lease sales.

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Comment Number: 0002507\_Nettleton\_20160801-6

Commenter I: Jerry Nettleton

## Comment Excerpt Text:

Fair Return - Coal royalty rates and their basis are established by statute, are not subject to BLM discretion, and can be changed only by Congress. The inaccurate assertion by some opponents of coal that current rates do not provide a fair return is based on a very narrow and selective interpretation of "return", and does not take into account the full scope of the economic revenues and benefits generated by coal leasing and production. These include; lease bonus bid payments, production royalties, severance taxes, abandoned mine reclamation funding, property taxes, sales taxes, long-term employee wages and benefits, purchases of goods and services, the associated economic multiplier in coal communities and regions, charitable contributions, and very important but often overlooked, the significant benefits of low-cost, reliable electric power provided by coal for all business and residential utility ratepayers. The suggestion that lease payments should include an "add-on" levy to address related externalities, is disingenuous, ignores the significant and widespread benefits already provided, would increase costs and decrease returns to the government and public, and would potentially drive operations out of business, eliminating ongoing sources of funding for both social and environmental programs.

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Comment Number: 0002508\_Fields\_20160728-1

Commenter I: Marjorie Fields

Comment Excerpt Text:

I strongly object to the fact that federal lands are leased to corporations for coal mining at considerably less than market value, a subsidy to them at tax payers expense and a factor that makes continuing to mine still profitable.

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Comment Number: 0002509\_Iverson\_20160728-2

Commenter I: Kathryn Iverson

Comment Excerpt Text:

It is a program that does not fully compensate taxpayers, as the federal coal program is severely underpriced.

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Comment Number: 0002513\_Lish\_20160707-6

Commenter I: Christopher Lish

Comment Excerpt Text:

Exposing practices by the agency and coal companies that undervalue the cost of coal, which deprive taxpayers of a fair return on public resources;

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Comment Number: 0002942\_Harbine-26

Organization I: Earthjustice

Commenter I: Jenny Harbine

Comment Excerpt Text:

3. The PEIS Should Examine the Environmental and Economic Impacts of Failing to Require Coal Producers to Pay for Coal's True Costs. Structural failures of the federal coal leasing program that undervalue coal and fail to recognize its costs not only are inconsistent with the statutory requirement to garner a fair return for U.S. taxpayers, they unreasonably catalyze the environmental impacts of mining and burning coal where otherwise it may be uneconomic to do so. While BLM should identify a preferred alternative that ends federal coal leasing altogether, the PEIS also should examine opportunities to ensure that coal producers pay adequate royalties and also internalize the environmental consequences of their activities.

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Comment Number: 0002942\_Harbine-27

Organization I: Earthjustice

Commenter I: Jenny Harbine

Comment Excerpt Text:

The PEIS Should Evaluate Options for Ensuring that Royalties are Paid on Coal's Full Value Although ONRR enacted needed reforms to federal coal valuation for purposes of collecting royalties, additional reforms are essential to ensure royalties are paid on coal's full value. Sierra Club and Earthjustice previously urged such changes in comments on ONRR's proposed rule, which are incorporated here by reference. 278 In further reforms applicable to existing coal leases (and to the extent BLM continues leasing, to future coal leases), ONRR should eliminate the royalty distinction between arm's-length and non-arm's-length transactions and instead calculate royalties for all federal coal based either on the final sale price to a power plant or other end user, or applicable market prices. Indeed, the White House acknowledged that it would be appropriate to base the market value of coal on market prices for coal with similar characteristics. 279 This would eliminate disputes over whether initial sales are in fact arm's-length transactions, eliminate the current benchmark approach, and provide industry, ONRR, and the public with greater certainty and clarity around the amount of royalties owed. More fundamentally, basing the valuation on final market prices would ensure that royalties are paid on the full value of all federal coal. By additionally eliminating or limiting transportation deductions and doing away with allowances for coal washing, ONRR can ensure that American taxpayers obtain a fair return on a public resource.

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277 Id. at 43,338. 278 See Sierra Club & Earthjustice, Comments on Proposed ONRR Rule: Consolidated Federal Oil and Gas and Federal and Indian Coal Valuation Reform, Docket No. ONRR-2012-0004 (May 8, 2015), attached as Ex. 51. 279 White House Fair Return Report, at 18. 73

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Comment Number: 0002942\_Harbine-28

Organization I:Earthjustice

Commenter I:Jenny Harbine

Comment Excerpt Text:

The PEIS Should Evaluate Options for Internalizing the Social and Environmental Costs of Coal Mining By Increasing Royalty Payments on Federal Coal. An essential component of ensuring a fair return to American taxpayers for public resources is ensuring that the full social and environmental costs of mining federal coal—currently borne by impacted communities—are paid by coal producers. The June 2016 White House report also recognized the important objective of “addressing unpriced environmental externalities” in generating revenue from the coal leasing program. 280 Such externalities include water pollution, land degradation, and climate-forcing methane pollution from coal mining; emissions from transportation to coal markets; emissions of harmful air pollutants and greenhouse gases from coal combustion; and “severe water pollution” from disposal of coal combustion waste. 281 Incorporating the costs of these externalities in the price of coal not only maximizes public revenues, it discourages the imposition of these unacceptable environmental and social harms by reducing the volume of coal that may be economically mined. The PEIS should evaluate these options.

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Comment Number: 0002942\_Harbine-61

Organization I:Earthjustice

Commenter I:Jenny Harbine

Comment Excerpt Text:

c. The PEIS Should Evaluate Options to Eliminate Royalty Rate Reductions. As discussed, the Secretary of the Interior “may” reduce the royalty for coal leases for the purpose of encouraging the greatest ultimate recovery of federal coal, and in the interest of conservation of federal coal and other resources, whenever it is necessary to promote development, or when the lease cannot be successfully operated under its terms. 43 C.F.R. §§ 3473.3-2(e), 3485.2(c)(1). Because such royalty relief encourages the production of coal that would otherwise not be economic, and thus results in more coal production that would otherwise occur, royalty rate reductions are generally not in the public interest, and we therefore recommend that BLM adopt policy that will eliminate the granting of royalty rate reductions. At a minimum, it is reasonable for BLM to evaluate an alternative that eliminates royalty rate reductions because the Secretary has the discretion under the law to deny every request for such reductions. The Interior Department and BLM have made clear that the agencies intend to address royalty rates through, and even before the completion of, the PEIS process. The PEIS scoping notice recognized that royalty rate reductions were controversial. 283 The notice further directs 280 Id. at 3. 281 Id. at 28. 282 See *infra* Section III.B. 283 Notice of Intent, 81 Fed. Reg. 17,720, 17,724 (Mar. 30, 2016) (“Stakeholders also criticize the Federal coal program for obtaining even lower returns through certain types of leasing actions, such as lease modifications, and through royalty rate reductions, which may result in royalty rates as low as 2 percent.”); see also Secretarial Order 3338, at 4 (Jan. 15, 2016) (making same observation). 74 that the PEIS “will address whether the bonus bids, rents, and royalties received under the Federal coal program are successfully securing a fair return to the American public for Federal coal, and, if not, what adjustments could be made to provide such compensation.”284 “To address concerns about fair returns to taxpayers, the BLM is considering evaluating the following approaches: ... [including] Limit the use of royalty rate reductions.”285 A fact sheet issued contemporaneously with the Secretarial Order directed that BLM would act on royalty reductions before the PEIS was complete: “in the near term, the BLM will issue guidance that ... [c]larifies the process through which the BLM may consider requests for royalty rate reductions.”286 Royalty relief is controversial because it is common, because it has deprived taxpayers of hundreds of millions of dollars, and because its very purpose is to encourage coal mining that might not otherwise occur. Figures from 2014 indicated that BLM had granted royalty

rate reductions on more than one-third of all federal coal leases sold since 1990.<sup>287</sup> A recent report estimated that royalty rate reductions permitted coal companies to retain nearly \$288 million that otherwise taxpayers would have received. <sup>288</sup> The widespread use of royalty rate reduction is in large part responsible for the effective royalty rate in many states being far below the statutory minimum of 12.5% for surface mines and 8% for underground mines. As noted above, the General Accounting Office concluded in 2013 that the effective royalty was 6.9% in Utah and 5.6% in Colorado. <sup>289</sup> “The lower reported rates are largely a function of the rate reductions offered for coal extracted from federal leases in these states.”<sup>290</sup> 284 81 Fed. Reg. at 17,725; Secretarial Order 3338, at 7 (Jan. 15, 2016) (directing that PEIS will address royalties). <sup>285</sup> 81 Fed. Reg. at 17,726. <sup>286</sup> Department of the Interior, Fact Sheet: Modernizing The Federal Coal Program (Jan 16, 2016) at 3, available at [http://www.blm.gov/style/medialib/blm/wo/Communications\\_Directorate/public\\_affairs/news\\_release\\_attachments.Par.47489.File.dat/Coal%20Reform%20Fact%20Sheet%20Final.pdf](http://www.blm.gov/style/medialib/blm/wo/Communications_Directorate/public_affairs/news_release_attachments.Par.47489.File.dat/Coal%20Reform%20Fact%20Sheet%20Final.pdf) (last visited July 28, 2016). <sup>287</sup> M. Haggerty & J. Haggerty, An Assessment of U.S. Federal Coal Royalties, HEADWATERS ECONOMICS (Jan. 2015) at 8 (“Royalty rate reductions occurred on at least 30 out of 83 leases (36 percent of leases) offered for sale since 1990.” (emphasis added)), attached as Ex. 52, and available at <http://headwaterseconomics.org/wphw/wp-content/uploads/Report-Coal-Royalty-Valuation.pdf> (last visited July 28, 2016). <sup>288</sup> See id. at 14 (Figure 4, showing loss of value due to royalty rate reductions); id. at 15, Table 3 (Estimated Value of Royalty Rate Reductions, Federal Coal Leased Since 1990) (estimating nearly \$288 million total in royalties lost due to royalty rate reductions since 1990). <sup>289</sup> General Accounting Office, Coal Leasing: BLM Could Enhance Appraisal Process, More Explicitly Consider Coal Exports, and Provide More Public Information, GAO-12-140 (Dec. 2013) at 24-25 (Ex. 48). <sup>290</sup> M. Haggerty & J. Haggerty, An Assessment of U.S. Federal Coal Royalties (Ex. 52), at 8. <sup>75</sup> Other experts, using a modified definition, concluded that the effective royalty rate was no greater than 8% in some states and may be less than 1% in others, apparently in part due to royalty rate reductions. <sup>291</sup> Analysts have criticized the impacts of royalty rate reductions, alleging that they “distort the energy market by subsidizing coal production, even when it is uneconomical. It is not rational for the federal government to support uneconomical coal production; this runs counter to its ‘fair market value’ mandate.”<sup>292</sup> Others have stated that the “need for royalty reduction is no longer justified” because the original intent of such reductions was to cushion the blow of the 12.5% royalty rate set by Congress in 1976.<sup>293</sup> Two examples from Colorado illustrate how rate reductions can be subject to abuse, reinforcing that BLM must consider eliminating royalty rate reductions in its PEIS. First, in late 2015, BLM’s Colorado State Office proposed approving a royalty rate reduction for a lease on the Oxbow mine. However, the mine was idled and being demolished, so the reduction would be retroactive for coal already mined, and could in no way encourage future mining. It would simply result in a check to Oxbow for coal already mined. The proposed decision was close to final; a draft was forwarded to Colorado’s governor for review. <sup>294</sup> When media reported on the proposed decision, which would have resulted in a significant payout to billionaire mine owner Bill Koch while encouraging no new mining, BLM ultimately (and belatedly) denied Oxbow’s request. <sup>295</sup> Because the royalty rate reduction could not possibly have impacted Oxbow’s then-terminated operations, any award of royalty relief would have violated the law, regulations and policy governing rate reductions. The fact that BLM even considered this request demonstrates how prone to abuse rate reduction requests can be. Second, Colorado BLM is currently weighing and may shortly approve a proposal to reduce the royalty paid by Arch Coal’s West Elk mine on two leases the company is already mining. There is little evidence that Arch cannot operate the mine without the subsidy of a rate <sup>291</sup> Id. at 17, Figure 6 (concluding effective royalty rate for federal coal leases for the years 2008-2012 at between 0.7% and 7.8% depending on the state). <sup>292</sup> J. Hein & P. Howard, Illuminating the Hidden Costs of Coal: How the Interior Department Can Use Economic Tools to Modernize the Federal Coal Program, Institute for Policy Integrity (Dec. 14, 2015) at 8-9, attached as Ex. 53, and available at <http://policyintegrity.org/publications/detail/hidden-costs-of-coal> (last visited July 28, 2016). <sup>293</sup> Taxpayers for Common Sense, Federal Coal Leasing, Fair Market Value and a Fair Return for the American Taxpayer (Sep. 2013) at 16, attached as Ex. 54, and available online at [http://www.taxpayer.net/images/uploads/downloads/TCS\\_Federal\\_Coal\\_Leasing\\_Report\\_-\\_Final\\_-\\_Updated\\_10.4.13.pdf](http://www.taxpayer.net/images/uploads/downloads/TCS_Federal_Coal_Leasing_Report_-_Final_-_Updated_10.4.13.pdf) (last visited July 28, 2016). <sup>294</sup> See letter from R. Welch, Colorado State Director, BLM to Gov. J. Hickenlooper (Dec. 4, 2015), and enclosed Draft Decision, attached as Ex. 55. <sup>295</sup> See P. Rucker, U.S.

taxpayer due to subsidize Koch-controlled mine, Reuters (Jan. 2016), attached as Ex. 56, and available at <http://www.reuters.com/article/usa-koch-coal-idUSL2N14W1JJ20160112> (last visited July 28, 2016). reduction. In fact, Arch has operated the mine for the last 19 months without royalty relief while the request has been pending. 296 Further, Arch Coal has told its shareholders that West Elk is a “lower cost” mine, and the company’s reports indicate that West Elk is among Arch’s most profitable mines when comparing the operating margin per ton of coal mined. 297 Arch also continues to pay its executives millions every year, far in excess of what it is likely to save from gaining a royalty rate reduction, casting further doubt on whether the rate reduction is necessary. 298 All of these are factors that BLM should weigh in evaluating the application for a royalty rate reduction. But there is no evidence that the agency has considered anything other than Arch’s representations that mining in the area is made more difficult by adverse geologic and engineering conditions – conditions that have not, apparently, cut into Arch’s ability to profit from the coal at issue or to pay its executives huge salaries. Colorado BLM’s willingness to entertain such a royalty rate reduction request, apparently without investigating the mine’s or the company’s financial status, further demonstrates that such reductions are prone to abuse and may be awarded even when they are unlikely to not meet the criteria established by law. BLM should address such issues in the PEIS by evaluating whether eliminating royalty rate reductions is appropriate to ensure a fair return on coal mined and that coal is not mined if it is not economic to do so.

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Comment Number: 0002942\_Harbine-63

Organization I: Earthjustice

Commenter I: Jenny Harbine

Comment Excerpt Text:

The PEIS Should Evaluate the Program’s Structural Flaws that Fail to Generate a Fair Economic Return The Mineral Leasing Act authorizes leasing of mineral resources on public lands only where the federal government recovers, at a minimum, the “fair market value” of coal. 30 U.S.C. § 201(a)(1); see also FLPMA, 43 U.S.C. § 1701(a)(9) (requiring that “the United States receive fair market value of the use of the public lands and their resources unless otherwise provided for by statute”). The Department of the Interior and the state where the coal was mined share the revenues from federal coal leasing. 246 These revenues come from two primary sources: a one-time “bonus bid” payment based on the “fair market value” of the coal, and royalties on the sale of coal that is mined. 247 As discussed below, structural flaws in the existing federal coal leasing program with respect to both bonus bids and royalties currently prevent BLM from satisfying its statutory obligation to garner a fair return for American taxpayers. This is particularly true when the full costs, including social and environmental costs, of mining and burning federal coal are properly taken into account. The PEIS must evaluate the environmental impact of current bonus bid and royalty rate structures that fail to internalize social and environmental costs, and, in any alternative BLM studies that allow for future leasing, examine options to meet and exceed the “fair market value” requirement, considering the true costs of coal. 248 I. Bonus Bids Do Not Reflect the True Value or Costs of Federal Coal. 245 Sophia Yan, China plants to cut 1.8 coal and steel jobs supra note 238. In 2013, more than 25 percent of all federal coal produced in Montana and Wyoming was shipped overseas. In 2014, nearly 30 percent of all Montana coal sales were for export; Thomas Power, Comments on the Greenhouse Gas Impacts of Modeling of Coal Flows in the Millennium Bulk Terminals Longview SEPA Draft Environmental Impact Statement, June 2016 (Ex. 46). Increasing the price to reflect its true value in the international marketplace would be an important step toward ensuring that coal companies do not reap windfall profits while preventing the country from meeting its urgent goals. 246 See Bureau of Land Management, Coal Operations, available at [http://www.blm.gov/wo/st/en/prog/energy/coal\\_and\\_non-energy.print.html](http://www.blm.gov/wo/st/en/prog/energy/coal_and_non-energy.print.html) (last visited July 28, 2016). 247 Annual rent of \$3 per acre makes up a negligible portion of federal coal-leasing revenue. See 43 C.F.R. § 3473.3-1. 248 As recognized in the White House in June 2016 report on potential coal royalty reform options, the NEPA “environmental review process can also provide for the consideration of environmental externalities” not currently captured by royalty rates on federal coal. White House Fair Return Report, at 28 n. 16. 67 The first source of revenue from federal coal is a one-time “bonus bid” payment, which as discussed, must equal or exceed the “fair market value” of the coal tract (in dollars per ton), at the time the coal is leased. 43 C.F.R. § 3422.1; see also 30 U.S.C. § 201(a) (“No bid shall be accepted which is less than the fair market value, as

determined by the Secretary, of the coal subject to the lease. Prior to his determination of the fair market value of the coal subject to the lease, the Secretary shall give opportunity for and consideration to public comments on the fair market value.”). BLM uses an appraisal to determine fair market value, which may be based either on an assessment of comparable leases with appropriate adjustments, or financial modeling that accounts for estimated annual revenues and expenses (the so-called “income approach”). 249 In a competitive lease sale, BLM does not disclose the fair market value to bidders. (In fact, BLM has refused to publically disclose the fair market value amounts and supporting analyses even after coal sales, citing FOIA exceptions for trade secrets and deliberative process materials.) Bids below the appraised value must be rejected. In Wyoming, bonus bid payments have ranged in recent years from \$0.85-1.35/ton. 250 Bonus bid payments have been lower in Montana, between \$0.18 and \$0.30/ton. 251 Numerous scholars and critics have observed that BLM has failed to obtain the full measure of revenue required by law by undervaluing the fair market value of the coal at the bonus bid stage. In a 2012 report, Tom Sanzillo argued that BLM’s “fair market value” assessments systematically ignore market forces that should drive a higher price for Powder River Basin coal, including depletion of central Appalachian coal reserves, diminishing accessibility of Powder River Basin coal, and expanded coal export opportunities. 252 This undervaluation of coal resources is perpetuated by over-reliance on the “comparable sales” approach in BLM appraisals. Sanzillo concluded that BLM’s undervaluation of fair market value has translated into below-market bonus bid payments. Further, undervaluing fair market value has the indirect effect of depressing market prices for Powder River Basin coal, which translates into artificially low royalty payments. 249 See Bureau of Land Management, *Economic Evaluation of Coal Properties (H-3070-1)*, available at [http://www.blm.gov/pgdata/etc/medialib/blm/wo/Information\\_Resources\\_Management/policy/blm\\_handbook.Par.29194.File.dat/h3070-1.pdf](http://www.blm.gov/pgdata/etc/medialib/blm/wo/Information_Resources_Management/policy/blm_handbook.Par.29194.File.dat/h3070-1.pdf) (last visited July 11, 2014). 250 See Bureau of Land Management, *Successful Competitive Lease Sales Since 1990, Wyoming*, at [http://www.blm.gov/wy/st/en/programs/energy/Coal\\_Resources/coaltables.html](http://www.blm.gov/wy/st/en/programs/energy/Coal_Resources/coaltables.html) (last visited July 7, 2014). 251 See Bureau of Land Management, *Successful Competitive Lease Sales Since 1990, Montana*, available at <http://www.blm.gov/mt/st/en/prog/energy/coal/tables.html> (last visited July 28, 2016). The lower market value of Montana coal may reflect longer distances to domestic coal plants, higher production costs (i.e. higher strip ratios), and the lower quality of some Montana coal. The upper end of this range was a 2012 bonus bid payment for the Signal Peak Mine near Roundup, Montana, which is an underground mine that is outside of the Powder River Basin. 252 See Tom Sanzillo, *THE GREAT GIVEAWAY: AN ANALYSIS OF THE UNITED STATES’ LONG-TERM TREND OF SELLING FEDERALLY-OWNED COAL FOR LESS THAN FAIR MARKET VALUE* (June 2012), attached as Ex. 47. 68 Many of Sanzillo’s conclusions were repeated and amplified in subsequent reports by GAO. First, GAO noted in a December 2013 report that about 90 percent of coal-lease auctions in recent years involved only a single bidder, thus failing to generate competition that could yield higher bonus bids. 253 In a separate report from June 2013, GAO found that in determining the minimum bid amount that is supposed to reflect the fair market value of leases, “BLM does not fully account for export potential.”<sup>254</sup> The report further cited troubling inconsistencies in BLM’s “fair market value” determinations and recommended that BLM seek an independent peer review of its coal valuation practices. 255 In addition, the report observed that BLM often fails to prepare an appraisal or otherwise document “fair market value” for lease modifications, potentially resulting in a below-market return for this coal. 256 Similarly, GAO criticized the practice of some state BLM offices (not including the Wyoming office) of relying exclusively on comparable lease evaluations in determining fair market value, thereby ignoring market trends. GAO recommended that fair market value estimates account for “small but growing” export activity. Finally, GAO criticized lack of transparency in appraisal process. 257 The Center for American Progress (“CAP”) also has critiqued the lack of competitive leasing practices resulting from the decertification of the Powder River Basin as a coal producing region. 258 CAP argued that “[d]ecertification has effectively given coal companies control over the federal leasing process, allowing them to select which tracts to lease, rather than having to follow a regional leasing plan where the secretary of the interior controls the process ... result[ing] in diminished competition, reduced environmental review of proposed coal leases, and lax oversight.”<sup>259</sup> Undervaluation of federal coal resources is a particularly acute problem in the context of lease modifications. Since 2005, BLM has been authorized to expand coal lease tracts by up to 253 Government Accountability Office, *Coal Leasing: BLM Could Enhance Appraisal Process, More Explicitly Consider Coal*

Exports, and Provide More Public Information, GAO-14-140 (Dec. 2013), attached as Ex. 48. 254 Office of the Inspector General, U.S. Dep't of the Interior, Coal Management Program, Report No. CR-EV-BLM-0001-2012, at 7 (June 2013), attached as Ex. 49. 255 Id. at 9. 256 Id. at 14. 257 Government Accountability Office, Coal Leasing: BLM Could Enhance Appraisal Process (Ex. 48). 258 Center for American Progress, Federal Coal Leasing in the Powder River Basin: A Bad Deal for Taxpayers (July 29, 2014), attached as Ex. 50. 259 Id. at 2. 69 960 acres without a competitive bidding process. See 30 U.S.C. § 203(a)(3)(A). 260 And although regulations direct BLM to lease these tracts for fair market value, 43 C.F.R. § 3432.2(c), coal sold through lease modifications is generally much cheaper than coal sold through competitive bids. For example, BLM's most recent lease sales were sold in 2012 for approximately \$1.10 per ton, and over the past six years, the sale price of competitive coal leases has ranged between \$0.71-1.35 per ton. 261 By contrast, the sale price of Powder River Basin coal lease modifications issued between 2006 and 2012 has ranged between \$0.06-0.10 per ton. 262 The Inspector General has criticized these sales, finding that "BLM might not be obtaining a fair return for lease modifications," and that the 45 lease modifications issued since 2000 may have resulted in as much as \$60 million in lost revenues. 263 For all of these reasons, the Obama administration has conceded that the federal coal leasing program "ha[s] not fostered an efficient, competitive system that provides a fair return to the taxpayers." 264 And these problems are not new. Congress adopted the Federal Coal Leasing Amendments Act of 1976 in part to address concerns at the time that, "[r]ather than initiating a leasing program based on knowledge of existing Federal coal reserves, national energy needs and environmental considerations, the Department normally leased those portions of Federal coal lands for which industry interest was expressed." 265 This resulted in a situation in which "72 percent of these 'competitive' sales had less than two bidders, not really reflective of a competitive environment" and "the public [wa]s being paid a pittance for its coal resources." 266 That underpayment of bonus bids is such an enduring problem likely reflects problems inherent in the coal leasing structure—including "asymmetric information" and a "thin bidding 260 Coal lease modifications can be even larger if the original coal mine is encompasses multiple lease tracts. This was the case in High Country Conservation Advocates, where BLM sought to expand the West Elk coal mine through two separate lease modifications that totaled approximately 1701 acres. 2014 WL 2922751 at \*4; see also Environmental Assessment for the West Elk Coal Lease Modifications Application at 3 (June 2012), available at [http://www.blm.gov/pgdata/etc/medialib/blm/co/information/nepa/uncompahgre\\_field/ufo\\_nepa\\_documents0.Par.96415.File.dat/12-13](http://www.blm.gov/pgdata/etc/medialib/blm/co/information/nepa/uncompahgre_field/ufo_nepa_documents0.Par.96415.File.dat/12-13) (last visited July 28, 2016). 261 Bureau of Land Management, Successful Competitive Lease Sales Since 1990, Powder River Basin, Wyoming (updated Aug. 2013) available at [http://www.blm.gov/style/medialib/blm/wy/programs/energy/coal/comp\\_lease-1990.Par.55365.File.dat/SuccSales080813.pdf](http://www.blm.gov/style/medialib/blm/wy/programs/energy/coal/comp_lease-1990.Par.55365.File.dat/SuccSales080813.pdf) (last visited July 28, 2016). 262 See Letter from Deputy Inspector General M.L. Kendall to U.S. Senator Ron Wyden at 7-9 (Nov. 15, 2013). 263 Office of the Inspector General, U.S. Dep't of the Interior, Coal Management Program, Report No. CR-EV-BLM-0001-2012, at 13 (Ex. 49). 264 White House Fair Return Report, at 2 (emphasis added). 265 H.R. REP. 94-681, 11, 1976 U.S.C.C.A.N. 1943, 1947. 266 H.R. REP. 94-681, 17, 1976 U.S.C.C.A.N. 1943, 1953. 70 pool"—that are not easily overcome. 267 For this reason, as described below, reforms to the manner in which the government collects royalties on coal production, including increasing royalty rates, may be the most appropriate way to garner a fair return to taxpayers and ensure that the federal coal leasing program reflects this Nation's policies demanding decreasing reliance on fossil fuels, particularly coal, for domestic energy production.

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Comment Number: 0002942\_Harbine-8

Organization I: Earthjustice

Commenter I: Jenny Harbine

Other Sections: I

Comment Excerpt Text:

2. Royalties on Coal Production Fail to Generate a Fair Return to Taxpayers. Other than bonus bid payments, the second primary source of federal income from coal leasing is royalties paid on the revenue generated from the sale of the coal, based on the price obtained at the first point of sale. 43 C.F.R. § 3473.3-2.269 Royalties comprise the majority of the revenue from federal coal leases—nearly two-thirds of the total revenue over the period

from fiscal years 2003 to 2012.<sup>270</sup> Minimum royalty payments are 12.5% of the coal value for surface mines and 8% of the coal value for underground mines. 43 C.F.R. § 3473.3-2(a). However, the Secretary of the Interior may reduce the royalty for any given mine “whenever he/she determines it necessary to promote development or finds that the lease cannot be successfully operated under its terms.” Id. § 3473.3-2(e); see also id. § 3485.2(c)(1) (same).<sup>271</sup> In addition, the Secretary may establish a different royalty rate—including a higher rate—at the time a lease is readjusted, id. § 3473.3-2, i.e. after the initial 20-year lease term and every 10 years thereafter, id. § 3451.1(a)(1). The federal coal leasing program fails to generate a fair return for American taxpayers from royalties, just as it fails to do so from bonus bids. The GAO reported that BLM has reduced royalty rates to “enable continued operations in cases where mining conditions may be particularly challenging and costly, or to enable expanded recovery of federal coal.”<sup>272</sup> GAO calculated the effective royalty rates for the top federal coal producing states in 2012 at: 267 White House Fair Return Report, at 11. 268 Id. at 11-12 (recognizing challenges with bonus bid reform, but concluding “royalty payments assessed on the production of coal have the potential to bring the return to the taxpayer” in line with Administration objectives to increase returns to taxpayers). 269 Among the four states with the most production from federal coal leases—Colorado, Montana, Utah, and Wyoming—the average prices for coal originating in these states in 2011 were \$39.88/ton in Colorado, \$16.02/ton in Montana, \$33.80/ton in Utah, and \$13.56/ton in Wyoming. GAO Report, at 14 (citing EIA’s 2011 Annual Coal Report). 270 Government Accountability Office Report, at 23. 271 An application for a royalty reduction “shall contain a detailed statement of expenses and costs of operating the entire mine, the income from the sale of coal, and all facts indicating whether the mine can be successfully operated under the Federal rental and royalty provisions fixed in the Federal lease or why the reduction is necessary to promote development.” 43 C.F.R. § 3485.2(c)(2)(ii). 272 Government Accountability Office Report at 24-25. 71 Wyoming – 12.2%; Montana – 11.6%; Utah – 6.9%; and Colorado – 5.6%. 273 When the average effective royalty rate is calculated based on the average delivered market prices that sellers receive for federal coal, that rate drops to only 4.9%. 274 In addition to low effective royalty rates, other structural flaws have yielded royalty payments that do not reflect the coal’s true value and costs. First, royalties historically have been paid on the coal’s price at the first point of sale, for which the coal is almost certainly undervalued. As the White House recognized in its June 2016 report on the economics of federal coal leasing, “there is an incentive for companies to reduce reported coal sales prices in order to minimize the royalty payments owed and companies have employed several tactics to lower the selling price of coal without losing revenue.”<sup>275</sup> Recognizing problems with its past approach to coal valuation, the Office of Natural Resources Revenue (“ONRR”) in July 2016 finalized reforms to its methodology for valuing coal for purposes of calculating royalty payments, establishing the value based on the first arm’s-length transaction. 276 These adjustments prevent companies from selling coal in captive transactions to subsidiaries at artificially low prices, paying royalties on that initial sale price, and then having the subsidiary re-sell in the open market for much higher prices without an additional royalty. Although ONRR’s reforms closed an important loophole in royalty collections procedures, the rule did not solve the problem of underpayment. First, ONRR did not set the point of valuation at the final sale to a power plant or other end-user of the coal, thus precluding any taxpayer return on the potentially substantial profit garnered after the first point of sale. Second, ONRR allows unlimited allowances for coal washing and transportation, which can significantly diminish the coal’s calculated value. Third, the rule did not modify royalty rates in a manner to account for the environmental externalities of coal production. Thus, as ONRR recognized, its rulemaking “takes steps toward ensuring that the valuation process for Federal and Indian coal resources better reflects the changing energy industry while protecting taxpayers and Indian assets, its scope is not broad enough to address the many concerns the commenters raised. For that and other reasons, the U.S. Department of the Interior (Department) recently launched a comprehensive review to identify and evaluate potential reforms to the [f]ederal coal program in order to ensure that it is properly structured to provide a fair return to taxpayers and reflect its impacts on the environment, while continuing to 273 Government Accountability Office Report, at 25. While most mining in Wyoming and Montana is surface mining that is subject to the 12.5% default minimum royalty, more underground mining occurs on federal leases in Colorado and Utah, which is subject to the 8% default minimum royalty. See id. at 12. 274 White House Fair Return Report, at 8 (citing M. Haggerty and J. Haggerty, Headwaters Economics, An Assessment of U.S. Federal Coal Royalties: Current Royalty Structure, Effective Royalty Rates, and Reform



Options (2015), attached as Ex. 52). 275 White House Fair Return Report, at 2. 276 Office of Natural Resources Revenue, Final Rule, Consolidated Federal Oil & Gas and Federal & Indian Coal Valuation Reform, 81 Fed. Reg. 43,338 (July 1, 2016). 72 help meet our energy needs.”277 In other words, ONRR deferred to this PEIS to evaluate effective reforms to provide a fair return on federal coal.

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Comment Number: 0003002\_Master\_FormB\_CountOnCoalMontana-I

Organization I:Count on Coal Montana

Other Sections: 11

Comment Excerpt Text:

Further, the value of coal to the American people isn't just royalty revenue — the value of high paying jobs and reliable, affordable energy has to be taken into account as well. Increases in coal prices induced by higher royalty rates will flow through to the electricity market due to reduced production on federal lands. The states that rely on coal for the bulk of electric generation consistently enjoy lower electricity rates. Whatever incremental revenue the Department believes it will obtain from increasing the coal royalty rate will be at the expense of American businesses and families paying higher utility bills. The federal coal program has generated tens of billions of dollars of value for the American people in recent decades and additional billions of dollars for Colorado state and local governments and school districts, to the benefit of all the state's citizens. It's simple: I oppose new taxes that will only serve to drive coal further to the edge, will deprive public schools of an important source of revenue from federal leases, and ultimately increase electricity rates for hard working families.

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Comment Number: 0003003\_Master\_FormB2\_CountOnCoalMontana-I

Organization I:Count on Coal Montana

Other Sections: 11

Comment Excerpt Text:

Sec. Jewel is seeking to hike coal royalty rates, despite the fact that current royalty rates are above market, and if increased will only result in decreased production and return on investment for taxpayers. Increased rates will saddle the taxpayer with higher electricity prices and lower return from reduced coal production - also, the value of reliable affordable energy has to be taken into account, because if production on federal lands is decreased due to increased royalty rates, consumers will be forced to pay for more expensive forms of power generation. Increased energy taxes will kill jobs and state revenues, while ever-increasing electricity rates will hit all Americans in the checkbook.

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Comment Number: 0003005\_MasterFormD2\_TheSierraClub-2

Organization I:The Sierra Club

Comment Excerpt Text:

This PEIS must also ensure that taxpayers and local communities are getting a fair return for the coal produced on public lands. Federal policies must be updated to ensure that the costs that coal imposes on the rest of us are taken into account when coal is leased and to ensure that coal producers are not gifted special royalty rate reductions that cheat taxpayers.

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Comment Number: 0003006\_MasterFormE\_TWS-I

Organization I:The Wilderness Society

Other Sections: 6

Comment Excerpt Text:

We already know burning fossil fuels extracted from our public lands account for 21% of all U.S. greenhouse gases. Yet millions of acres of public lands are open to new coal leasing.

To reform the current coal program, the Bureau of Land Management should disclose and reduce the impacts of

mining and burning publicly-owned coal on the climate, our shared public lands and communities as well as ensure taxpayers receive a fair return from the sale of federal coal.

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Comment Number: 0003011\_MasterFormJ\_KeepElecAfford-1

Organization I:Keep Electricity Affordable

Other Sections: 11

Comment Excerpt Text:

An increase in federal coal royalty rates would force consumers like me to pay more for the power we need at home and work. Raising royalty rates also would reduce coal production which means less revenue for pressing public needs.

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Comment Number: 0003014\_MasterFormM1-1

Comment Excerpt Text:

It should be acknowledged that these additional hearings have been precipitated by a small but vocal group that wants to ensure that public coal — in fact that all coal — is left in the ground. It seems their true intention is to effectively stop the mining of coal on federal land which would equate to 0% return to the American taxpayer, not a higher return. In short, their efforts are exclusively focused on climate concerns instead of seeking a fair return on a public asset.

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Comment Number: 0003014\_MasterFormM1-2

Other Sections: 11

Comment Excerpt Text:

an increase in the royalty rate will only create further uncertainty and put additional pressure on communities throughout the West and on essential state programs as well

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Comment Number: 0003015\_MasterFormM2-1

Other Sections: 11

Comment Excerpt Text:

The push by NGOs to "Keep It in the Ground" and seek "Coal Reform" have again caused a huge waste of taxpayer dollars by forcing the Bureau of Land Management to conduct a multi-year Programmatic EIS process and support the effort by the Department of the Interior to increase the cost of coal leasing and royalties. As a result, it will be even more expensive to operate a coal mine and subsequently raise the price of electricity for all consumers. It's a disastrous combination for everyone, from the miners whose jobs have been lost and are in jeopardy, to the ratepayers that will pay more each month for electricity and the communities that will have to go without the vital taxes and royalty dollars generated by coal mining.

The federal coal program has been a tremendous success story that has generated tens of billions of dollars of value for the American people in recent decades. If DOI must take action, we strongly encourage the department to take steps to improve the return to the American public by making coal on public lands more competitive, not less.

I oppose increased coal royalties and new taxes on our electricity.

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Comment Number: 0003016\_MasterFormO\_EarthJustice-4

Comment Excerpt Text:

Requiring coal producers at existing mines to pay royalties on coal production that reflect all of coal's costs

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Comment Number: 0003018\_MasterFormR-I

Comment Excerpt Text:

It is the fiduciary responsibility of the Department of Interior (DOI) under the Mineral Leasing Act to maximize the return on federal coal, and to do so, we need to find policies that keep federal coal competitive in the market place. We have already seen a series of policies over the past several years designed to increase electricity prices and degrade the reliability of the nation's electricity supply by inducting the closure of coal baseload power plants – the backbone of our electric grid. But given these constant attacks on coal from this administration and its allies, we can only conclude that royalty rate increases and expensive leasing reforms have nothing to do with determining a fair share for taxpayers and everything to do with a political agenda.

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Comment Number: 0003019\_MasterFormS-I

Other Sections: I I

Comment Excerpt Text:

I write today to voice my grave concerns with increasing coal royalty rates. Raising taxes on coal will add stress to coal markets and ultimately decrease the revenues accruing to the public. Simply put, a ton of coal never sold due to uncompetitive prices produces no revenue.

Too, American taxpayers are receiving more than owners of private coal. The federal royalty rate is above the prevailing royalty rates for private coal. As compared to private coal leases, federal coal rates are, in many cases, forty percent higher than the prevailing rate for private coal.

Federal lessees pay non-recoupable bonus bids, an additional upfront payment made prior to mining. Bonus bids are rarely if ever included in leases of private coal. Bonus bids are a significant expense. Over the last decade, lessees have paid over \$4.2 billion in bonus bids before any coal is even mined.

States and local communities also benefit from coal leasing and royalties. In 2014 Colorado coal producers paid nearly \$40 million in federal royalties, rents, and bonus payments. Almost half of this comes back to the State and is distributed to local communities, the State Public School Fund, the Higher Education fund, and the Water Conservation Board Construction fund.

The BLM can best carry out its responsibility to ensure that American taxpayers receive a fair return on the coal resources managed by the federal government by encouraging the growth of the coal industry and removing impediments to leasing coal.

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Comment Number: 0003020\_MasterFormT-I

Other Sections: I I

Comment Excerpt Text:

It concerns me that the DOI is modifying the current coal leasing program, including increasing the royalty rate on federal coal. While, on the surface, this may seem like a plan to increase revenue, it is obvious that it will in fact have the opposite effect and be harmful to our economy.

As royalties increase, so will the price of coal. An industry such as this is very dependent on the price of the product, so as the prices increase, the amount of coal being sold will decrease due to market factors. Eventually this will trickle down to less coal being mined and less revenue going to the taxpayers and back into our communities. Not only will this damage local economies, but the increased energy prices will stress the lower and middle class nationwide.

It is obvious to me that the ultimate goal of raising royalty rates on federal coal is not to increase revenue, but to instead put more stress on the already burdened coal industry.

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Comment Number: 0003029\_Arrington\_J\_06032016-4

Organization I: Keep Electricity Affordable

Commenter I: Patrick Arrington

Comment Excerpt Text:

Raising royalty rates also would reduce coal production which means less revenue for pressing public needs.

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Comment Number: 0003044\_Hinkemeyer\_J\_06112016-1

Organization I:Keep Electricity Affordable

Commenter I:Stephen Hinkemeyer

Other Sections: 11

Comment Excerpt Text:

Raising royalty rates also would reduce coal production which means less revenue for pressing public (Federal and State) needs. Less funding would be available for DOLA grants as well that really help small communities.

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Comment Number: 0003300\_MasterFormU\_WVP-1

Organization I:Western Values Project

Comment Excerpt Text:

Close loopholes, including ending royalty rate reductions, and ensure prices paid to use federal coal are fair and reflect all associated costs.

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Comment Number: 000761\_Bucks\_20160623-3

Commenter I:Dan Bucks

Comment Excerpt Text:

In considering changes in royalty rates, Interior should first eliminate all loopholes in the royalty base. Otherwise, expected revenues will only be undercut by some companies gaming the royalty system at the expense of others that play by the rules.

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Comment Number: 0020008\_Hoem\_20160712-2

Commenter I:Harold Hoem

Comment Excerpt Text:

For decades the American taxpayer has been short-changed in the process of setting royalty rates that were extremely low and stuck in the past. The only way to begin to compensate for this so that the American taxpayers earn a fair return for the use of their public resources would be to adjust current royalty rates substantially upward for any future leases, should they occur.

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Comment Number: 0020015\_Rial\_20160712-1

Commenter I:Charles Rial

Comment Excerpt Text:

Please close the loopholes with coal leasing program so that coal companies pay the full royalties.

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Comment Number: 0020016\_Willims\_20160712-1

Commenter I:Raymond Willims

Comment Excerpt Text:

It should make certain that taxpayers are getting fair market value from leasing.

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Comment Number: 0020018\_Risho\_20160712-1

Commenter I:Ray Risho

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## Comment Excerpt Text:

The BLM needs to insure that we taxpayers receive fair market value for federal coal

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Comment Number: 0020020\_LaPorte\_20160712-1

Commenter I: Mary LaPorte

## Comment Excerpt Text:

Taxpayers should get their fair market value.

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Comment Number: 0020023\_Baer\_20160712-2

Commenter I: Carl Baer

## Comment Excerpt Text:

This process should be changed so the taxpayer owners are getting a fair price for the coal.

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Comment Number: 0020027\_Harris\_20160722-2

Commenter I: Mark Harris

## Comment Excerpt Text:

Also, prior to 2016, this leasing program compelled the DOI sell publicly owned coal for pennies on the dollar.

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Comment Number: 0020031\_Parkins\_20160722-10

## Comment Excerpt Text:

The price used in determining royalty payments must continue to be determined at the mine loading point. This process gives appropriate consideration to geography and the location of BLM coal lands with respect to the market for the coal. The net back price at the coal load out correctly values the coal no matter where or how the product is used. There have been many comments in the press about the price received for coal exported. This value must be reduced by the cost to transport the coal to the port and port charges as a minimum before the price upon which royalties are calculated is determined. Many times the transportation and port charges are greater than the price received at the mine by a mining company.

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Comment Number: 0020031\_Parkins\_20160722-11

Other Sections: 2

## Comment Excerpt Text:

The current method to determine fair market value is in need of improvement. In circumstances where there is more than one adjacent active mining operation one method is used, and in circumstances where there is not another likely bidder, a different process is used.

First, the circumstance where there is more than one adjacent mining operation provides the best definition of a Competitive Bid that I can imagine, and the process to determine fair market value in addition to an open bid process seems redundant at best. In the fairest definition possible the fair market value is determined by the value that these operators or another party might be willing to bid. The only concern the BLM should have in this circumstance is whether there is risk of default on the payments. When this is the case a Fair Market Analysis should not be required at all.

In the circumstance where there is only one adjacent active mining operation, the BLM implements a different process. A study is conducted to estimate the mining cost, realization and capital expenditures for the mine to complete mining in their existing reserves and this is used as a "BASE CASE" analysis from which an incremental analysis is conducted estimating the mining cost, realization and capital required to develop into the proposed

lease. All of the advertised reserves are assumed to be mined, and an "ALTERNATIVE CASE" is developed. An incremental analysis is conducted with a discount rate of 10% and the amount of the "fair market value" of the Bonus Bid is determined by the amount that will result in an NPV(IO) of zero.

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Comment Number: 0020031\_Parkins\_20160722-8

Other Sections: 2

Comment Excerpt Text:

Keeping the process for a mining company to request a royalty reduction when unforeseen geologic circumstances are encountered or reserves are in deep cover is important to reduce the risk to the operator when these conditions are encountered and incent the recovery of BLM coal. Were this not the case operators would be less likely to attempt to mine areas with geologic risks or deep cover which would in turn reduce payments to taxpayers.

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Comment Number: 0020031\_Parkins\_20160722-9

Comment Excerpt Text:

I work in the underground mining industry and have found that as a general rule the BLM rates are higher than can be negotiated with private owners. Some rates with private owners have been as low as 4% or less without any "Bonus Bid". In Utah SITLA leases lands at the same rate as the BLM, but generally allows a "pay as you go" Bonus Bid which is reduced if the estimated reserves are not present.

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Comment Number: 0020033\_Werny\_20160722-1

Commenter I:lsa Werny

Comment Excerpt Text:

It is time we charge the coal companies for the actual cost of the coal. This includes fair market value

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Comment Number: 0020039-3

Commenter I:Bonnie Miller

Comment Excerpt Text:

Royalty rates must be more than the current give-aways to coal producers

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Comment Number: 0020043-1

Organization I:Unitarian Church

Commenter I:Barbara Davenport

Comment Excerpt Text:

Coal leases should be at fair market value.

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Comment Number: 0020052-4

Organization I:Tri-State Generation and Transmission Association, Inc.

Commenter I:Barbara A. Walz

Comment Excerpt Text:

The true cost to mine federal coal, including state and federal royalty payments, all bonus bids, ad valorem property taxes, ad valorem production taxes, sales and use taxes, severance taxes, black lung taxes, AML fees, and the cost of compliance with the many laws, orders and regulations that govern federal coal production.

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Comment Number: 0020056-2

Organization I: Bowie Resource Partners, LLC

Commenter I: Gene DiClaudio

Comment Excerpt Text:

Equally importantly, the Secretary's stated concerns about fair return and fair value are at odds with an overly-constrained federal coal supply. Although it is pure window-dressing when cited by environmental activists, competition does play a key role in ensuring efficient energy markets and value to the nation's industrial coal consumers, electricity users, and ratepayers. Adequate supply means not only that there is adequate supply in each of the coal sub-markets, but also adequate supply to a reasonable range of coal mining companies. A coal sub-market cannot be competitive if all the coal of a particular type is in the hands of one or two suppliers. Thus, blanket statements about the aggregate amount of coal under lease are misleading if they do not account for how leasing is distributed among coal types, regions, and suppliers.

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Comment Number: 002362\_Charter\_20160721-1

Commenter I: Steve Charter

Comment Excerpt Text:

There are over a dozen reports have documented a long litany of problems with the management of federal coal. It's high time that the taxpayers got a fair price publicly on coal.

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Comment Number: Dvorak\_DvorakRaftingFishing\_20160623-3

Organization I: Dvorak Rafting and Fishing Expeditions

Commenter I: Bill Dvorak

Comment Excerpt Text:

The federal royalty on coal is currently 12.5% well below the 18.5% assessed for offshore publically owned fossil fuels. It's estimated that U.S. taxpayers have lost over \$30 million in revenue in the last 30 years.

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Comment Number: WO\_CoalPEIS\_0002437\_Downing\_20160727\_WyMineAssoc-16

Organization I: Wyoming Mining Association

Commenter I: Jonathan Downing

Comment Excerpt Text:

Under today's market conditions, WMA does not believe that an increase to the royalty rate is justified. In addition to data or analyses that justify a change to the royalty rate, BLM must also consider information that justifies no change to the royalty rate. As part of the scoping process, consider that duplications, redundancies and delays in the current leasing process, as described earlier are all very costly and serve to erode the return to the American taxpayer. BLM should evaluate how the true cost of the typical ten-year leasing/permitting process compares to the return from royalties, bonus bids and taxes.

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Comment Number: WO\_CoalPEIS\_0002437\_Downing\_20160727\_WyMineAssoc-18

Organization I: Wyoming Mining Association

Commenter I: Jonathan Downing

Comment Excerpt Text:

As an additional consideration, any increase in royalty rate further reduces competitiveness for the American coal industry.

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Comment Number: WO\_CoalPEIS\_0002437\_Downing\_20160727\_WyMineAssoc-19

Organization I: Wyoming Mining Association

Commenter I: Jonathan Downing

Other Sections: 2

Comment Excerpt Text:

WMA believes calculation of Fair Market Value (FMV) should reflect the current market for the commodity given the realities of the economic conditions. Pre-sale FMV should allow for extraction costs so that the final cost for the generation of electricity is reasonable and affordable. FMV should also be calculated with the goal of ultimately finding a qualified lessee for the coal tract. Artificially increasing the FMV and raising costs above what is economical to mine is counter-productive and contrary to the Agency's charge of managing the responsible development of the resource as mandated by the Mineral Leasing Act.

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Comment Number: WO\_CoalPEIS\_0002437\_Downing\_20160727\_WyMineAssoc-21

Organization I: Wyoming Mining Association

Commenter I: Jonathan Downing

Other Sections: 2

Comment Excerpt Text:

WMA supports efforts to increase transparency in the calculation process, and encourages the Agency to draw on the considerable experience and expertise of Wyoming State BLM office staff in studying all of the factors relevant to a FMV determination.

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Comment Number: WO\_CoalPEIS\_0002437\_Downing\_20160727\_WyMineAssoc-5

Organization I: Wyoming Mining Association

Commenter I: Jonathan Downing

Comment Excerpt Text:

BLM rules require the agency to develop fair market value estimates prior to each proposed lease sale. Over nearly three decades the fair market value was not challenged as being deficient until certain organizations determined that coal mining and use were no longer acceptable to them. Because the true fair market value figures are held confidential by the agency, it is curious that some organizations can claim that fair market value has been too low and that they can actually calculate how much the American taxpayer has been short-changed. These claims are clearly based on assumptions and should not be interpreted by the BLM to be factual.

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Comment Number: WO\_CoalPEIS\_0002437\_Downing\_20160727\_WyMineAssoc-9

Organization I: Wyoming Mining Association

Commenter I: Jonathan Downing

Comment Excerpt Text:

BLM's scoping evaluation must reveal that the claim made by detractors that the fair market value is not providing an adequate return on the resource, cannot be substantiated. The results of the evaluation will verify that the fair market value issue needs to be put to rest. And the rules do not need to be fixed.

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Comment Number: WO\_CoalPEIS\_0003061\_Post\_N\_20160707-3

Commenter I: Charlie Post

Comment Excerpt Text:

Examining the royalty schedule to more accurately compensate the American public's coal resources (regardless of the so called "bankruptcy" of coal companies),

Comment Number: 000001202\_Meinhart\_20160623-1



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Organization I:Office of Congressman Scott Tipton

Commenter I:Brian Meinhart

Comment Excerpt Text:

I want to start off with the first concern, whether or not the public is receiving a fair return on public resources. When the Department conducted its listening sessions back last August, we agreed then, and we still agree, that that's a fair question to ask on its face. But, we do disagree that the premise with which DOI is asking this question. We, we think that that's definitely misguided. Much of the conversation surrounding this question seems to imply that the coal industry is raking in record profits while Joe Taxpayer is left with nothing more than a token return. Last March, the Secretary gave a speech in which she said that, "most Americans would be surprised to know that coal companies can make a winning bid for about \$1 a ton to mine taxpayer-owned coal". Now, surely that -- it sounds like that can't be fair. And you know, naturally that would be why she later suggested raising the royalty rate might be an option. Even the Interior Office of the Inspector General and the Government Accountability Office agree that the Federal Coal Program needs reform. Right? We're going to take a look at the accuracy of the Secretary's statements in that. First, Secretary Jewell's statement does not indicate what the market value for a ton of coal is. If coal is worth \$1,000 a ton, then yeah, a return of \$1 would surely be a giveaway. But, the recent spot price for a ton of Wyoming's Powder River Basin coal, which we've already seen is over 80 percent of the Federal coal resources, is \$8.80.

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Comment Number: 000001202\_Meinhart\_20160623-2

Organization I:Office of Congressman Scott Tipton

Commenter I:Brian Meinhart

Comment Excerpt Text:

Second, the bonus payments received for [indiscernible] which the Secretary was referring, represent only one portion of the revenues generated by Federal coal production. And it's a smaller proportion of that. In Federal -- in fiscal year 2015, bonus payments for all Federal coal leases totaled just over \$454 million. The royalties, on the other hand, totaled over \$757 million for that same period. While those revenues do return to the Federal Treasury, the Secretary did not mention those. And it doesn't end there. You also have to include the State royalties and severance taxes. There is applicable County taxes. They're often in the form of an ad valorem or property tax. There are other Federal taxes, like the abandoned land mines tax, the black lung excise tax. Those are 2.8 percent and 5.5 percent respectively. If we were to take kind of a Colorado or local illustration here, we could say that maybe the spot price for a ton of coal is about \$20. Most of the mines here locally are underground. So, we would say that the royalty rate is currently -- would be 8 percent. You can have the State severance tax, which in Colorado would be about 3.8 percent. You've got the EML. You have the excise tax. The actual tax rate is actually closer to 20 percent. And then, you add the local taxes on top of that. Those are used for K through 12 education, road and bridge departments, other [indiscernible] infrastructure, healthcare facilities. The list goes on and on. In Colorado, those payments totaled \$16.6 million in 2014. And we can throw the rental payments, which were \$1.35 million, on top of that. So, it becomes very clear that the actual return to the public is much higher than \$1 per ton. So, when you view the Secretary's statements in that context, they start to look a little bit misleading.

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Comment Number: 000001203\_Holappa\_20160623-1

Commenter I: Holappa

Comment Excerpt Text:

It's important that we make sure the coal leasing program provides taxpayers with appropriate compensation for our public resources.

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Comment Number: 000001211\_BENG\_20160623-1

Organization I:Northern Plains Resource Council

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Commenter I: Susan Beng

Commenter Type: Organization (nonprofit/citizens group)

Comment Excerpt Text:

Public coal on BLM lands need to be managed as a finite resource that it is. Management by BLM must take into consideration the entire cycle of coal development. This includes returning a fair profit on the coal mined for taxpayers, reclamation of disturbed lands to put them back into production.

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Comment Number: 000001216\_ VAN WEST \_20160623-1

Organization I: Western Colorado Congress

Commenter I: Rein Van West

Comment Excerpt Text:

Yes, this program needs to be brought into the 21st century for a more fair return to the American public. Greater transparency in the leasing and royalty mechanisms and absolutely balanced protections for air, land, and water resources, as well as the global climate.

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Comment Number: 000001220\_ WELT \_20160623-1

Organization I: Mount Coal Company

Commenter I: Kathy Welt

Comment Excerpt Text:

The American taxpayer and the Federal government must take steps now to support coal communities' transition to new economies, independent of the antiquated fuel source. I ask you to ensure that taxpayers collect a fair return on coal and reflect the cost of climate change in the pricing of the Federal Coal Program. It is time to modernize Western economies and increase their resiliency to climate change. Thank you so much.

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Comment Number: 000001223\_ MADSON \_20160623-1

Organization I: Mountain Pact

Commenter I: Diana Madison

Comment Excerpt Text:

In the fact of climate change, it's time to modernize the Federal Coal Program to accurately account for its cost to communities, taxpayers, and the environment, while supporting a transition to a more sustainable and resilient economy for coal communities. With new revenues from increased royalty rates, the Federal government, State, and communities can invest in climate preparedness practices.

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Comment Number: 000001224\_ POULOS \_20160623-1

Commenter I: John Poulos

Other Sections: I

Comment Excerpt Text:

I believe the coal industry is providing more than their fair share to the return to the American public. Leave the coal lease system alone. We all know that lower taxes would help bring production up; and, therefore, increase the dollars flowing into the government coffers. That's what we're here to talk about. Right? The current system includes consideration for the, for the environment. NEPA is used to evaluate the climate change issues. This has been decided in several court cases. See *Wild Earth Guardians v. Salizar* [phonetic], *Wild Earth Guardians v. Forest Service*, *Western Organization of Resource Council v. Jewell* [phonetic].

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Comment Number: 000001231\_ GRAVES \_20160623-1

Commenter I: Ben Graves

## Comment Excerpt Text:

Federal lease coal revenues need to return to the communities where these miners live.

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Comment Number: 000001233\_ MILLER \_20160623-1

Organization I: West Elk Mine

Commenter I: Jim Miller

## Comment Excerpt Text:

Simply put, an increase in the royalty rate will only further create uncertainty and put additional pressure on communities through increased electricity rate and decreased government revenue for critical State programs. So, if the Department believes that the changes to the Federal Coal Program must be made, let's protect the many benefit generated from this valuable resource and make coal mined on public lands more competitive, not less.

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Comment Number: 000001236\_ O'CONNOR \_20160623-1

Commenter I: Jim O'Connor

## Comment Excerpt Text:

Using a more conservative method -- using more of a conservative method to determine the fair market value will enhance the likelihood that the mine operator will be able to continue operations, continue to pay royalties to the BLM, wages to the persons employed at the mine, property taxes to the surrounding counties, and other taxes and fees that are normal cost -- that are the normal cost of mining.

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Comment Number: 000001239\_ RECKLE \_20160623-1

Commenter I: Eric Reckle

## Comment Excerpt Text:

the actual royalty program has to be reevaluated.

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Comment Number: 000001240\_ SLOCUM \_20160623-2

Commenter I: Tyson Slocum

Commenter Type: Individual

Classification: Substantive

Comment Category:

Current Task: Analyze Assigned/Due:

Other Sections: I

## Comment Excerpt Text:

So, the question at hand here is whether or not reforms are necessary to the royalty program, particularly from a taxpayer perspective? And I've heard some folks talk about, you know, there's a 12.5 percent royalty rate; and that seems to be adequate. Of course, nobody pays a 12.5 percent royalty rate. There are deductions and subtractions from that. And the actual affective royalty rate is closer to 5 percent. Some of those deductions are absolutely valid. But, some of them are engineered specifically to avoid paying the royalty rate. And an analysis by the Council of Economic Advisors that came out just this week, showed that there are ways to get at some of those clear, uneconomic, avoidance schemes. Like captive transactions where we see 42 percent of sales in the Wyoming Powder River Basin, for example, are between affiliates at below market rates that are conducted specifically to avoid paying the affective royalty rate due to taxpayers. Or take it and pay contracts that are designed with utilities. And so, I think we can reform the royalty system in a way that will raise at least another \$300 million in revenue while not depressing the current coal industry.

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Comment Number: 000001242\_ SANDERSON\_ Colorado Mining Association \_2016062-1

Organization I: Colorado Mining Association

Commenter I: Stuart Sanderson

Other Sections: 8.3

Comment Excerpt Text:

I'm also appearing today as part of a coalition of 17 organizations of local governments and other groups throughout Colorado, which are really concerned and are in opposition to the Department of the Interior's efforts to impose a leasing moratorium, as well as to hike royalty rates. This is not only not in the interests of Colorado, or in the interest of the economy. But, it will jeopardize our nation's long-term interest in securing an affordable, reliable, and yes clean, source of energy.

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Comment Number: 000001243\_ COMPTON \_Utah Mining Association \_20160623-6

Organization I: Utah Mining Association

Commenter I: Mark Compton

Comment Excerpt Text:

One of the stated reasons for the moratorium is to make sure the public receives a fair return for coal resources developed on Federal lands. But, the policies are, in fact, designed to simply keep coal in the ground. It doesn't take a rocket scientist to figure out that imposing more burdens on Federal coal production will yield less, not more, revenue to Federal, State, and local governments. If we really want to have an open and honest conversation about the Federal Coal Leasing Program and what's in the public interest, we need to consider lowering Federal coal royalty rates; thereby, lowering energy bills for homes and businesses.

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Comment Number: 000001255\_ Nettleton \_20160623-2

Organization I: Twenty Mile Coal

Commenter I: Jerry Nettleton

Comment Excerpt Text:

Fair return. In evaluating fair return, any discussion or analysis, you must consider all components of return and economic benefits from leasing and production of the resource, including bonus bid payments, rents, royalties, State and local property taxes, sales taxes, employment taxes, employee benefits, and low-cost reliable power from coal for businesses and utility rate payers.

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Comment Number: 000001262\_ Eaton \_20160623-2

Organization I: The Wilderness Society

Commenter I: Pam Eaton

Comment Excerpt Text:

And the BLM should begin by making -- taking steps to raise the royalty rate for coal. Royalties aren't taxes. They're the share of the revenue sale of the public's coal that we all own. And that's our share, and we should be making sure we're getting it.

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Comment Number: 000001265\_ SmithC \_20160623-1

Commenter I: Casey Smith

Comment Excerpt Text:

Unfortunately most major coal companies are already in Chapter 11 bankruptcy proceedings. My question for you is how can an increase in a royalty percentages possibly ensure that Federal coal leases are being utilized at the benefit of the taxpayers? Which brings me to number 2 is wouldn't it make more sense to consider lowering royalty rates to a level in which Federal coal remains competitive with the private lease market? A comparative pricing market will generate more revenue in the form of sales, bonus bids, for the taxpayers; rather than driving

the market price to private leases and unfortunately abroad. Number 3 is BLM should reassess the efficiency and streamline the Federal Coal Leasing Program and remove any unwarranted delays in the leasing process that are financially hurting the return to the taxpayers. And then, number 4, BLM should reorganize and reconvene the Royalty Policy Committee that was disbanded so long ago and include a group represented by the public and private sector.

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Comment Number: 000001266\_Spehar\_20160623-1

Commenter I: Jim Spehar

Comment Excerpt Text:

My recommendation should there be a royalty increase is that these new funds be earmarked to assist coal communities in the inevitable transition of their economies.

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Comment Number: 000001293\_Porter\_20160623-1

Commenter I: Aaron Porter

Comment Excerpt Text:

Basically you're here to talk about the [indiscernible] and royalties. The fact is is that you're getting plenty of money that way. This isn't free money. We worked our tails off to that coal out of the ground and you're getting 8 percent on -- yeah, 8 percent off of that.

That's a lot of money; billions of dollars. And we make a lot of investment. It costs a lot of money to run a mine. And I don't think that raising the rate is going to do you any good, because most of us will go out of business. There's no way we'll be able to pay you and pay our vendors and pay everybody else and pay our taxes. And you know, it just won't happen.

---

Comment Number: 000001294\_Peterson\_20160623-1

Organization I: GCC Energy

Commenter I: Trent Peterson

Comment Excerpt Text:

Timing of coal lease sales to be condition of market fluctuations. Coal mine resource planning, including the long-range capital plans and orderly development of reserves cannot be accommodated within the relatively short cycles of overall economic markets.

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Comment Number: 000001294\_Peterson\_20160623-2

Organization I: GCC Energy

Commenter I: Trent Peterson

Comment Excerpt Text:

We've heard a lot about matching coal royalties to gas royalties. The current general royalty structure recognizes the vastly different cost structures between the two industries and should not be tinkered with.

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Comment Number: 000001296\_Gawler\_20160623-1

Commenter I: Maddy Gawler

Comment Excerpt Text:

The price that these companies are getting this land for is preposterous. The average price per ton for those coal leases was only \$1.03. Yet a ton of publically- owned coal leased during the past eight years will cause damages estimated at \$237 on average. That is one 237<sup>th</sup> of what we should be getting paid. The carbon pollution from publically-owned coal leased during the past eight years will cause damages estimated at up to \$530 billion. Yet, the amount of revenue generated from the lease sales was only [indiscernible].

Comment Number: 00001267\_Mork\_20160623-1

Organization I: Interfairh worker Justice

Commenter I: Doug Mork

Comment Excerpt Text:

We call on the Bureau of Land Management to take bold action and investigate whether workers, taxpayers, and local communities are getting a fair return from these resources

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Comment Number: 00001269\_Post\_20160623-1

Commenter I: Charlie Post

Comment Excerpt Text:

I think it's necessary for, for the lease program to at least recoup the cost that we're talking about when we're extracting the resource. Very often we see that, yes, there are royalties paid. But, are we seeing the full cost recovered for the taxpayer? I, I think it's only fair that not only do they pay the royalties, they also pay the administrative costs.

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Comment Number: 00001273\_Grange\_20160623-2

Commenter I: Jordan Grange

Comment Excerpt Text:

One of the stated reasons for implementing a moratorium on Federal Coal Leasing Program was to determine if the U.S. taxpayer was receiving a fair return on the resource. According to the Office of Natural Resource Revenue, in the last 10 years, the BLM had generated nearly \$10 billion from Federal co-leases, via lease bonuses, rental fees, and royalties. Coal has paid the Federal Government more, more royalties, lease bonuses, and rental fees, than another other type of electrical generation. Thus, producing more of a return to the U.S. taxpayer than solar, wind, nuclear, geo-thermal, biomass, and hydro-electric, combined.

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Comment Number: 00001273\_Grange\_20160623-3

Commenter I: Jordan Grange

Comment Excerpt Text:

According to the Energy Information Administration, in 2014, alone, the government subsidized wind energy with \$5.9 billion, solar with \$5.3 billion, natural gas with \$2.3 billion, nuclear with \$1.6 billion, and coal with \$1 billion. Now, compare that to the percent of electricity generated from each industry. Again, according to the Energy Information Administration, in 2014, coal generated 40 percent of the nation's power, natural gas 26 percent, nuclear 26 percent. Wind, wind and solar generated a whopping combined total of 3.3 percent of the nation's power. Yet, wind and solar spent \$11.2 billion in subsidies and generated very little in royalties, lease bonuses, and rental fees. How is it that any self-respecting, intelligent individual, corporation, or entity can say coal royalties do not generate a fair return to you as taxpayers

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Comment Number: 00001275\_Earl\_20160623-1

Commenter I: Taylor Earl

Comment Excerpt Text:

According to the U.S. Energy Information Administration, or EIA, \$13.2 billion dollars in government subsidies were spent on wind and solar from 2010 to 2013. All of this, and wind and solar power still only accounts for less than 5 percent of America's total energy production. How is this a fair return for taxpayer's money? One the other hand, there's been nine and a half billion in revenue collected by the United States since 2016, from the Coal Leasing Program.

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Comment Number: 00001279\_Phillips\_20160623-2

Commenter I: Tom Phillips

Comment Excerpt Text:

Here in Colorado, the Federal royalty on coal is just \$0.23 per ton. Whereas, the sales price was over \$30 per ton in 2014. If the Federal royalties on coal were on a par with Federal oil and gas, the royalty would be almost \$4 per ton, not \$0.23. This low royalty rate is a subsidy, or give-away, to the coal industry. Given the current and future poor economics of coal, it is highly unlikely that further coal company bankruptcies will occur.

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Comment Number: 00001279\_Phillips\_20160623-4

Commenter I: Tom Phillips

Comment Excerpt Text:

Royalties for coal should also be right to a level equal of those collected on [indiscernible]. Taxpayers should not be subsidizing one of the highest carbon fuels in the world

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Comment Number: 00001292\_Grako\_20160623-2

Organization I: Bowie Resources

Commenter I: Lou Grako

Comment Excerpt Text:

The bid we currently use, taxpayers get the most out of it. The royalty rate of 8 percent should be reduced to four to which it will encourage operations to invest.

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Comment Number: 0001266\_Reed\_20160623-2

Organization I: High County Conservation Advocates

Commenter I: Matt Reed

Comment Excerpt Text:

If we're going to continue to have coal mining in Colorado, we need communities to get their fair share of royalties. Otherwise, mining executives in St. Louis will have shortchanged the communities and left them with the difficulties of transition.

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Comment Number: 0003300\_MasterFormU\_WVP-I

Organization I: Western Values Project

Comment Excerpt Text:

Close loopholes, including ending royalty rate reductions, and ensure prices paid to use federal coal are fair and reflect all associated costs.

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Comment Number: 0000279\_Shaw\_20160628-1

Commenter I: Eddie Shaw

Comment Excerpt Text:

12.5 percent is way to little for coal companies to pay (if they pay) for use of federal lands given the following: Duke Energy's coal ash spill of 60,000 tons into the DAN River in N. Carolina  
Mountain top removal and resulting damage to streams and rivers, Strip mining damage to spil structure despite companies having to return land to "original condition", Continuing acid mine drainage from 50-70 yrs of deep mines in west PA.

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Comment Number: 0000842\_Mantell\_WildernessSociety-2

Organization I: The Wilderness Society

Commenter I: Joshua Mantell

Comment Excerpt Text:

Two, federal taxpayers are not receiving their fair share for the use of their land and resources. Right now coal companies are paying effective royalty rate of 4.9 percent according to one study, and 90 percent of coal leases have a single bidder since 1990. We need to raise the royalty rate for surface mined coal, and raise the minimum bid so that we are receiving what is due.

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Comment Number: 0000843\_Seltweiger\_PennFuture-3

Organization I: Penn Future

Commenter I: Larry Seltweiger

Comment Excerpt Text:

Government and independent investigators say American taxpayers are being short-changed because of the Federal Coal Program's flaws. These include inconsistencies in estimating coals, fair market value and failure to consider value of exporting the coal. A 2012 independent report estimates that U.S. Taxpayers have lost nearly 30 billion in revenue over the last 30 years because BLM has failed to get fair market value in the coal mined just in the Powder River Basin.

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Comment Number: 0000844\_Hanna\_TCS-1

Organization I: Tax Payers for Common Sense

Commenter I: Autumn Hanna

Comment Excerpt Text:

Coal is a central part of our nation's energy mix and over the last decade, the BLM managed leases that produced approximately 4.3 billion tons of coal, resulting in \$9.5 billion in revenue collections by the United States. These funds are an important source of revenue for the country. And while the Department of Interior is legally required to provide a fair return to taxpayers for the development of the coal we all own, the leasing program has been plagued with problems. Further, it fails to meet the goals set forth during the last review under the Reagan Administration. In 2013 my organization released a study on fair market value of federal coal. We found that the current coal program was in need of significant reform and responsible for billions in taxpayer losses. For example, by supplanting the competitive system envisioned by Congress more than 40 years ago, the current Lease by Application system has failed taxpayers. The system improperly distorts the valuation of lease tracts, brings in significantly reduced bids, and shrouds crucial information in secrecy.

There's little, if any, competition under the leasing program. Incredibly, the Government Accountability Office found that 90 percent of lease sales in the Powder River Basin from 1990 to 2013 has only one bidder. The game is essentially rigged: under the current system, individual companies often draw the tracts for leasing themselves. In the absence of competition, the BLM must accurately calculate the fair market value of federal coal. Here, too, the BLM has failed.

Before determining the fair market value, the Secretary of Interior must provide an opportunity for public comments. But it is impossible to provide feedback when the BLM refuses to share its valuation data or methodology. Final lease sale numbers are often undervalued and can be used as comparables for new tracts, locking in a rolling system undervalued leases and taxpayer losses.

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Comment Number: 0000844\_Hanna\_TCS-3

Organization I: Tax Payers for Common Sense

Commenter I: Autumn Hanna

Comment Excerpt Text:



Finally, changes in the marketplace must be considered when calculating fair market value since coal exports to foreign markets have more than doubled in the last ten years. As we detailed in our comments to DOI last year, coal valuation at the initial point of sale may not truly capture the value of the taxpayers' resource.

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Comment Number: 0000851\_Greuter\_CenterCoalfieldJustice-2

Organization I:Center for Coalfield Justice

Commenter I:Patrick Greuter

Comment Excerpt Text:

If we do decide to continue coal leasing, there must be increased royalties. Coal companies should have to pay the full cost of their activities

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Comment Number: 0000854\_Doyon\_20160628-2

Commenter I:Michelle Doyon

Comment Excerpt Text:

Taxpayer protection reforms are needed. Federal coal royalty rates are far below the 18.5 percent from offshore oil and gas and have not changed in 30 years. BLM should raise royalty rates and close loopholes that allow companies to avoid paying agreed upon royalty rates. Artificially low coal leases directly affect energy production competition and this low cost is undercutting renewable resource development

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Comment Number: 0000864\_Szollosi-2

Organization I:National Wildlife Federation

Commenter I:Frank Szollosi

Comment Excerpt Text:

We are here for coal reform. Taxpayers should not bail out the coal companies. Raise the royalty rate. Raise the minimum bid. It's a drag on our economy, not to mention the climate impacts for coal leasing impacts on public lands. We urgently need reform

### **ISSUE 5.8 - COAL EXPORTS**

Total Number of Submissions: 51

Total Number of Comments: 72

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Comment Number: 0000010\_Swingle\_20160526\_Oral-6

Commenter I:Rocky Swingle

Comment Excerpt Text:

Evaluating whether exporting coal - if effect shipping carbon emissions overseas - is in the public's interest

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Comment Number: 00000183\_MCKAY\_20160517-2

Commenter I:Don McKay

Comment Excerpt Text:

Two, if coal is to be shipped out of this country, out of my mine U.S.A., an additional royalty should be attached.

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Comment Number: 00000285\_Alexander\_TaxCommonSense\_20160519-1

Organization I:Taxpayers for Common Sense

Commenter I:Ryan Alexander

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**Comment Excerpt Text:**

Investigations in 2012 when exports were high found that coal companies in Wyoming and Montana underpaid for federal coal by \$40 million, using the domestic price calculated royalties for the coal they exported instead of the much higher price in Asia. It is critical that BLM consider the role of export markets as an element of determining fair market valuation for federal coal.

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Comment Number: 00000345 \_ Miller \_20160519-1

Organization I:Valley Resources Canyon Fuel

Commenter I:Casey Miller

**Comment Excerpt Text:**

I believe the BLM would actually benefit from not only using it here but also looking at exporting it. What about using some of our coal, not only locally, but also for the benefit of mankind all over? This resource we have can be used in all aspects of life. As technology advances, we can harvest the energy even more efficiently.

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Comment Number: 0000520 \_Barrasso\_ US Senate\_20160517-4

Organization I:United States Senate

Commenter I:John Barrasso

**Comment Excerpt Text:**

The Administration should also help coal producers access international markets. Three proposed coal export terminals in Oregon and Washington await federal permits. Last week, the Army Corps of Engineers brazenly rejected a coal export terminal without even determining the impacts of the project and whether these impacts could be mitigated.

If the Administration wants a greater return on federal coal, it should reverse the Corps' decision immediately. It should also ensure that the permitting process for coal export terminals is completed in a timely manner. These facilities would allow producers to export federal coal to Asia and offset declining sales in the United States.

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Comment Number: 0000602-2

Commenter I:Sundipta Rao

**Comment Excerpt Text:**

It is also our responsibility to regulate our export of coal to ensure that we are not (illegible) to the problem by enabling other countries to generate energy irresponsibly

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Comment Number: 0000603 \_Williams-Derry\_ Sightline Institute\_20160621-1

Organization I:Sightline Institute

Commenter I:Clark Williams-Derry

Other Sections: I

**Comment Excerpt Text:**

Attached please find a report on exports of federal coal. The report details the dynamics of export economics since 2009: the inflation of the coal export bubble in 2009; the massive and highly profitable exports of federal coal during the height of the international coal boom; and the deflation of that bubble. The report argues that BLM must consider export economics when renewing the federal coal leasing program. (see attached report "Unfair Market Value II: Coal Exports and the Value of Federal Coal")

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Comment Number: 0000603 \_Williams-Derry\_ Sightline Institute\_20160621-2

Organization I:Sightline Institute

Commenter I:Clark Williams-Derry

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## Comment Excerpt Text:

First, the first comment is that for the most part, the Bureau of Land Management has ignored the unique dynamics of coal export markets when setting federal coal prices. There is a very different dynamic that you find in the U.S. market and domestic markets, and even though there's ample evidence that -- that coal companies highly value the ability to export coal, the BLM has not paid attention to those values and that economic value when setting the coal prices

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Comment Number: 0000603\_Williams-Derry\_Sightline Institute\_20160621-3

Organization I:Sightline Institute

Commenter I:Clark Williams-Derry

## Comment Excerpt Text:

The second major conclusion of this report is that coal exports have gone through a boom period from 2010 through 2014. During that time the states of Colorado, Wyoming, Utah, and Montana exported roughly 100 million tons of coal combined. Much of that was from specific identifiable export-oriented coal mines, many of which rely either exclusively or heavily on federal coal.

And even in the middle of that boom, the Bureau of Land Management did not pay attention to the unique dynamics of coal exports and the fact that the federal coal that was exported could receive far higher profits on export markets than it could in domestic markets

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Comment Number: 0000603\_Williams-Derry\_Sightline Institute\_20160621-4

Organization I:Sightline Institute

Commenter I:Clark Williams-Derry

## Comment Excerpt Text:

And the last major point is that that boom period has ended and that we are now in a period when coal companies are retrenching and pulling back from exports. The -- still there are financial economic techniques hinging on what's called the real options valuation, which is described in the report, which can help set a value on federal coal and it's higher than coal's been leased for in the past.

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Comment Number: 0000772\_Nielsen\_20160623-2

Commenter I:Nicholas Nielsen

## Comment Excerpt Text:

In section 3.8 of BLM handbook 3073 it addresses the evaluation of export potential for coal in the fair market valuation. It states that specific requirements must be evaluated and considered in issuing coal leases. Why would this EIS need to evaluate the export potential in regards to fair market valuation when this section states that the BLM does this each lease sale?

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Comment Number: 0001102\_CONSTANTINE\_KingCnty\_20160621-4

Organization I:King County

Commenter I:Dow Constantine

## Comment Excerpt Text:

Ultimately, the burning of our coal in Asia comes back to us in the form of pollutants here on the West Coast while more than canceling out all of our state and local efforts to reduce climate pollution.

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Comment Number: 0001129-2

Organization I:Climate Solutions

Commenter I:Beth Doglio

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**Comment Excerpt Text:**

As you review the Federal Coal Program, you should consider the unique dynamics of coal exports, including the option value of potential future coal exports when determining the fair market value of federal coal leases. Coal companies have paid tons of money just to keep their export options open.

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Comment Number: 0001162-1

Organization I:Sierra Club

Commenter I:Richard Vogel

**Comment Excerpt Text:**

And the current proposal to ship coal to Asia has nothing to do with domestic energy security. So in essence, we're helping other countries meet their energy needs.

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Comment Number: 0002115\_Schaefer\_20160623-2

Commenter I:C. Thomas Shaefer

**Comment Excerpt Text:**

Especially onerous is the practice of mining coal from U.S. land and exporting it for combustion abroad. Though the U.S. government cannot make energy policy for other nations, it can deny those nations access coal from our public lands. Some argue that international buyers who are unable to buy U.S. coal will simply buy from other nations, allowing those nations to reap profits that might have been ours. Of course, the same rationalization can be applied to commerce in illegal drugs or nuclear weapons. Sometimes we must make decisions on the basis of what is right, rather than what generates the most short-term profit.

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Comment Number: 0002116\_Sharp\_20160626-1

Commenter I:Margaret Sharp

**Comment Excerpt Text:**

Exporting coal is not worth the risk that coal trains and export terminals will cause.

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Comment Number: 0002137\_Zeigler\_20160607-8

Commenter I:Bob Ziegler

**Comment Excerpt Text:**

Impacts of coal export. This last two years, two coal export facilities were planned for Washington State.

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Comment Number: 0002149\_Hewitt\_20160519\_WyLSO-4

Organization I:Wyoming Legislature's Select Federal Natural Resource Management Committee

**Comment Excerpt Text:**

given the demand on the international coal market and the competitive price of Wyoming coal, increasing exports could provide a boon to our state's coal industry.

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Comment Number: 0002149\_Hewitt\_20160519\_WyLSO-5

Organization I:Wyoming Legislature's Select Federal Natural Resource Management Committee

Commenter I:Ted Hewitt

**Comment Excerpt Text:**

The Longview site in Washington State proposed by Millennium Bulk Terminals could allow for the annual export of 44 million tons of coal.

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Comment Number: 0002154\_Riordan\_20160627-3

Commenter I: Michael Riordan

Comment Excerpt Text:

In order to maintain profits and jobs, the coal industry has been attempting to pivot its coal sales to Asian exports from West Coast ports, mainly via Canada. There is no reason to continue these subsidies for such exports and thus deprive US taxpayers of the rightful income our nation should expect for use of these publicly owned resources. Thus appropriate changes are required in the federal coal-leasing program.

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Comment Number: 0002155\_Krupnick\_20160622-2

Organization I: Center for Energy and Climate Economics Resources for the Future

Commenter I: Alan Krupnick

Other Sections: I

Comment Excerpt Text:

Our economic analysis concluded the following:

- Potential leakage from federal to private, state, or international coal supplies should be studied (Gerarden et al, 2016), as well as interactions with several significant downstream policies. For the latter, two major policies affecting coal power plants (and therefore the market for coal) may be finalized/resolved during the study and moratorium time period: the Mercury and Air Toxics Standards ruling and the Clean Power Plan (see our Comments at

<http://www.rff.org/files/sharepoint/WorkImages/Download/RFF-Rpt-CPPComments.pdf>

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Comment Number: 0002158\_Kasperik\_20160517\_StateRep-4

Organization I: HD 32 Wyoming State Legislature

Commenter I: Norine Kasperik

Comment Excerpt Text:

And there are emerging, energy-starved markets in Asia that are desperate for the cheap, clean, and affordable coal we produce in our state.

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Comment Number: 0002167\_Baumgartner\_20160629-1

Commenter I: Laura Baumgartner

Other Sections: 8.I 8.II

Comment Excerpt Text:

I am writing to oppose further development of coal resources in the US, oppose transport of mined coal through western states and especially cities to our ports and oppose export of coal for use in other parts of the world.

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Comment Number: 0002170\_Garber\_20160622-5

Organization I: Utah Physicians for a Healthy Environment (UPHE)

Commenter I: Howie Garber

Comment Excerpt Text:

Subsidizing coal on public land allows it to be shipped to countries that are already struggling with air pollution crises. It ruins US credibility as far as our efforts to improve the climate crisis

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Comment Number: 0002173\_Quick\_20160622-12

Commenter I: Kendra Quick

Comment Excerpt Text:

Federal coal produced in Wyoming is used almost exclusively for domestic energy production, with exports amounting to less than 2% of total production. Assertions that revenue is being lost on exports are simply wrong.

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Comment Number: 0002175\_Woodcock\_20160627-6

Organization I:MSU Department of American Studies

Commenter I:Jennifer Woodcock-Medicine Horse

Comment Excerpt Text:

eliminate the coal pipeline to China.

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Comment Number: 0002189\_Jozwik\_20160517-23

Commenter I:Darryl Jozwik

Comment Excerpt Text:

WHETHER AND, IF SO, HOW SHOULD, LEASING DECISIONS CONSIDER ACTUAL AND/OR PROJECTED EXPORTS OF DOMESTIC COAL FROM ANY GIVEN TRACT – CURRENT PROGRAM HANDLES WELL. NO CHANGES NEEDED.

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Comment Number: 0002189\_Jozwik\_20160517-24

Commenter I:Darryl Jozwik

Comment Excerpt Text:

WHAT POTENTIAL MECHANISMS COULD BE USED TO APPROPRIATELY EVALUATE EXPORT POTENTIAL – CURRENT PROGRAM HANDLES WELL. NO CHANGES NEEDED.

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Comment Number: 0002194\_Knebluk\_20160518-1

Commenter I:Terry Knebluk

Comment Excerpt Text:

Keep coal in America and stop shipping it overseas.

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Comment Number: 0002197\_Wise\_20160519-5

Organization I:Kiewit Mining Group Inc.

Commenter I:Dirk Wise

Comment Excerpt Text:

Consider whether coal from a federal tract would be for domestic or export use- What does it matter if it's for domestic or export use, if it's generating revenue for this country then it's a good thing.

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Comment Number: 0002212\_Hawk\_20160621-1

Commenter I:Ronald Hawk

Comment Excerpt Text:

The “export or die” strategy embarked by some coal producers is also doomed to failure. The international coal market is oversupplied and global coal producers will continue to face unsustainable low prices and tight margins. J.P. Morgan concluded it is “no longer economical to export coal.” This will not change as China’s need for coal imports continues to diminish and India implements its new policy of decreasing its coal imports to zero. If Japan and South Korea go forward with controversial plans to increase their reliance on coal fired power plants, coal producers in Australia, Indonesia, Russia, South Africa and even perhaps China will easily meet the demand at lower prices than coal exported from the U.S.

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Comment Number: 0002264\_Jacobson\_20160712-1

Commenter I: SueAnn Jacobson

Comment Excerpt Text:

Montana coal is the cleanest coal.  
It should be exported world wide.

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Comment Number: 0002271\_Dafoe\_20160714\_WAITC-2

Organization I: Wyoming Agriculture in the Classroom

Commenter I: Jessie Dafoe

Comment Excerpt Text:

Federal coal produced in Wyoming is used almost exclusively for domestic energy production, with exports amounting to less than 2% of total.

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Comment Number: 0002282\_Bradford\_20160719-6

Commenter I: David Bradford

Comment Excerpt Text:

There should be no restriction on the export of coal mined from federal lands. Export markets provide another market for U.S. coal companies. The coal resources are just as important to the citizens of foreign countries as they are to the citizens of the U.S.

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Comment Number: 0002326\_Moench\_20160724\_UtahPhysicHealthyEnviron-13

Organization I: Utah Physicians for a Healthy Environment

Commenter I: Malin Moench

Comment Excerpt Text:

The reports by both the Inspector General, and the GAO note the recent rise in exports of PRB coal to Asia and its growth potential. Both reports have concluded that in making fair market value determinations, it is essential that the BLM consider not just the domestic demand for thermal coal (which is currently flat, due to the competition of low-priced domestic natural gas), but the robust demand and the substantially higher prices that can be obtained for PRB coal sold in the Asian market. (GAO Report, 2013 at 7; IG Report at 7.) UPHE agrees that legitimate assessments of the fair market value of 20-year leases of PRB coal cannot be made without factoring in the dominant factor that will drive future demand—the potential for export, and the growth of that potential, that can be expected over the life of such leases

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Comment Number: 0002326\_Moench\_20160724\_UtahPhysicHealthyEnviron-21

Organization I: Utah Physicians for a Healthy Environment

Commenter I: Malin Moench

Comment Excerpt Text:

Fair Market Value should be the final price paid by the end user, particularly for exported coal. Basing the calculation of royalties on the final price to the end user would have its most beneficial effect if applied to exports of PRB coal to Asia because that is where the price paid by the end user (between \$70 and \$135 per ton) can be as much as ten times the mine-mouth price (\$13 per ton).

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Comment Number: 0002326\_Moench\_20160724\_UtahPhysicHealthyEnviron-22

Organization I: Utah Physicians for a Healthy Environment

Commenter I: Malin Moench

Other Sections: 7.4

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## Comment Excerpt Text:

The PRB mining companies are now laying the groundwork for massive coal exports to Asia to take advantage of the huge subsidy of PRB coal taking place under the current Federal coal leasing program. If DOI does not take steps to eliminate that subsidy, the consequence will be additional CO<sub>2</sub> emissions in Asia that more than offset all the emission reductions that the Obama Clean Power Plan is struggling to achieve domestically. It will not only doom the Obama Administration's climate mitigation goals within the United States to failure, but could undo commitments made by 190 nations at the Paris climate summit last December to mitigate climate change.

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Comment Number: 0002326\_Moench\_20160724\_UtahPhysicHealthyEnviron-24

Organization I: Utah Physicians for a Healthy Environment

Commenter I: Malin Moench

## Comment Excerpt Text:

Taking into account the sensitivity of both demand (11) and supply to price, he finds that these exports would lower the delivered cost of coal by about 12 percent and ultimately lead coal consumption to increase by about 15 percent. As a result, he estimates, China's coal consumption would rise by 98 million tons. That is, about 70 percent of the PRB coal exports would represent net additional coal consumption and GHG emissions. Only 30 percent of the PRB exports were estimated to displace other sources of coal. The 98-million-ton increase in annual coal consumption would emit about 183 million tons of CO<sub>2</sub>. (Power, T.M., 2013, at 3-4).

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Comment Number: 0002326\_Moench\_20160724\_UtahPhysicHealthyEnviron-25

Organization I: Utah Physicians for a Healthy Environment

Commenter I: Malin Moench

## Comment Excerpt Text:

Dr. Power warns that the decisions that the Northwest coastal communities and the BLM make now will impact Chinese energy habits for the next half-century. The below-market export prices that current Federal coal leasing rules make possible will encourage China and India to choose coal over renewable energy options that otherwise would be price competitive, and will retard the investments in energy efficiency that China has already planned.

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Comment Number: 0002326\_Moench\_20160724\_UtahPhysicHealthyEnviron-3

Organization I: Utah Physicians for a Healthy Environment

Commenter I: Malin Moench

## Comment Excerpt Text:

Most alarmingly, subsidizing the price of Federal coal incentivizes speculation in coal leases whereby private mining companies seek to obtain 20-year lock-ins of the current subsidized price for purposes of exporting it to the countries of South Asia. Those speculators can reasonably expect to sell PRB coal for from five- to ten-times the current subsidized price. Shipping massive amounts of subsidized Federal coal to the Asian market can be expected to artificially drive down the price of coal from all suppliers to that market.

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Comment Number: 0002326\_Moench\_20160724\_UtahPhysicHealthyEnviron-38

Organization I: Utah Physicians for a Healthy Environment

Commenter I: Malin Moench

Other Sections: 7.4

## Comment Excerpt Text:

As noted earlier, continuing to subsidize PRB coal has the potential to alter the economics of exporting coal to South Asia. Subsidizing the price of PRB coal will artificially make exporting this coal to China and India profitable where it would not otherwise be. If China and India can count on a long-run supply of underpriced coal from the United States, it will increase their use of coal to generate electric power and raise the odds that they will rely on



coal rather than renewable forms of energy as both of these countries race to industrialize. This would undermine the commitment that the Administration secured from China in 2015 to cap its reliance on coal after the year 2020.

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Comment Number: 0002326\_Moench\_20160724\_UtahPhysicHealthyEnviron-73

Organization I:Utah Physicians for a Healthy Environment

Commenter I:Malin Moench

Other Sections: I

Comment Excerpt Text:

(8) Economists Thomas M. Power and Donovan S. Power estimate that with this new infrastructure in place, the projected delivery cost of PRB coal to China will be approximately \$77.16 per ton. (Power,M., et al, 2013 at 22.) The price of thermal coal shipped to the industrial southeastern region of China has fluctuated between roughly \$70 and \$135 per ton over last five years. Id. at 20, Table I.

Taking into account transportation costs and other fees and charges, the mine-mouth price of PRB coal could be as high as \$53.93 per ton--a fourfold increase from the current price—and still be competitive with benchmark delivery prices in China and various Asian markets. While international coal prices have declined in recent years, the completion of ports along the American West Coast would still make PRB coal exports viable at all but the lowest recent prices of coal in southern China. See Center for American Progress, 5 Things You Should Know about Powder River Basin Coal Exports, August 18, 2014, available at <http://www.scribd.com/doc/237152057/5-Things-You-Should-Know-About-Powder-River-Basin-Coal-Exports>.

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Comment Number: 0002354\_Chermi\_20160721-2

Commenter I:Tio Winter

Comment Excerpt Text:

As we mentioned before, the export market, I work for one of the few coal companies that has port availability that we aren't using because we cannot compete on an international market. As we have heard from these gentlemen up here, China, Korea, Japan, lead coal importers are going to burn coal. It's better for the environment and the US if they burn our coal.

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Comment Number: 0002382\_Ankney\_20160721-2

Organization I:State of Montana

Commenter I:Duane Ankney

Comment Excerpt Text:

We have to be behind coal – the mining of coal, the burning of coal and what we can do to keep coal flowing not only in the United States but the export of coal. They are going to burn coal from somewhere. I was fortunate to be at a dinner in Helena a year ago this past February. Where ambassador to China Max Baucus was. He said it's like a world in parody to send this clean burning Powder River Basin coal to the Pacific Rim because how wise can it be buying coal from Indonesia, Australia. And that coal does have effects on people. It's dirty. Powder River Basin coal is clean burning coal.

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Comment Number: 0002384\_Keane\_20160721-1

Commenter I:Jim Keane

Comment Excerpt Text:

Japan is building, under construction 37 coal fired power plants. South Korea is building 7 more. Now they are going to buy – they are not going to build those power plants and let them sit idle. Now Montana and Wyoming and the United States can benefit from the jobs in the fields

of moving and shipping the coal to those plants at a competitive basis or we can let somebody else do it. We are always talking about jobs for this country – here is a great opportunity. Somebody is going to supply coal to those power plants that are going to continue to run. They are the cleanest ones being built right now, why don't we get on that band wagon instead of just saying, "Hey, let's stop the coal, its bad."

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Comment Number: 0002443\_Koontz\_20160727\_BowieResources-14

Organization I: Bowie Resource Partners, LLC

Commenter I: Gene DiClaudio

Comment Excerpt Text:

although the impact of major federal actions on conditions outside the United States is generally excluded from NEPA, it is worth noting that the export of federal coal saves lives and promotes human welfare. Federal coal, especially coal that is attractive for export, is often of substantially higher quality and lower ash and sulfur than alternative coals that overseas facilities might consume. Developing nations typically cannot afford the sophisticated and expensive pollution controls required of U.S. facilities, and thus burning cleaner coal can produce immediate and dramatic improvements in emissions. In addition, U.S. coal mines are far safer than many overseas mines. For its part, Bowie has an outstanding safety record. To the extent Bowie (and other operators) export federal coal, lives are saved

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Comment Number: 0002443\_Koontz\_20160727\_BowieResources-6

Organization I: Bowie Resource Partners, LLC

Commenter I: Gene DiClaudio

Comment Excerpt Text:

NMA correctly observes that the export of coal is a tiny fraction of total U.S. production, and is a vanishingly small fraction of worldwide coal consumption. Even if U.S. exports were aggressively expanded, they would have no material effect on overall federal coal production or no detectible effect whatsoever on worldwide consumption. Exports do not provide a rationale to undertake significant revisions to the federal coal program.

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Comment Number: 0002467\_Fettus\_20160728-24

Organization I: Natural Resources Defense Council

Commenter I: Geoffrey Fettus

Other Sections: I

Comment Excerpt Text:

Coal exports

With domestic demand for coal shrinking because of aging coal plants, concerns about air pollution and the global climate, and low natural gas prices, the coal industry is eyeing Asian power markets as a way to dramatically boost their bottom lines. The very companies that BLM is selling our coal to – Peabody, Arch, and Cloud Peak – are developing export terminals with the intent to export more and more federal coal to U.S. competitors like China and India.

The EIS should disclose impacts associated with exporting federal coal. This includes increased rail traffic and corresponding traffic congestion impacts (with associated costs to local communities), the necessary building of port facilities, and the corresponding impacts those facilities create. The BLM should also assess the financial impacts of coal exports, including increases in energy costs for domestic consumers and depletion of strategic federal energy reserves.

The PEIS should also consider the environmental and socio-economic impacts that come with exporting federal coal. For example, exporting millions of tons of coal from the Powder River Basin, or even a small fraction of that

amount, would necessitate massive export infrastructure – such as ports in Washington and Oregon if destined for Asian markets. Those impacts, which have never been incorporated or analyzed by the BLM, must be examined in the PEIS. See letters from Washington and Oregon (raising these concerns).

In addition, the dozens of coal trains needed to haul federal coal from federally supplied mines to ports would have dramatic and costly impacts on local traffic and infrastructure. The cost to communities in mitigating those coal trains congestion and public safety impacts easily adds up to hundreds of millions.

The GAO report "Freight Transportation: Developing National Strategy Would Benefit from Added Focus on Community Congestion Impacts," (September 2014) found that freight related traffic congestion in communities resulted in delays and congested road conditions for passenger and emergency response vehicles. Addressing those problems is costly and federal funding that is currently allocated for state and local transportation agencies does not align with those needs. Communities are left on their own to foot the bill for costly rail congestion related infrastructure. (See attachments).

Coal trains hauling export coal also put other commodity shippers and passenger rail at a competitive disadvantage as detailed in Heavy Traffic Still Ahead (attachments). In terms of alternatives, the principal alternative to be considered here is whether BLM should ban or otherwise dis-incentivize the export of federally leased coal.

he PEIS should also consider whether allowing coal development for export is consistent with BLM's often stated objective to sell federal coal to private companies "to meet the nation's energy needs." (31) Allowing leasing for export contradicts this purpose and need, by sending our domestic energy supply overseas.

(31) See Final Environmental Statement for the Wright Area Coal Lease Applications at I-17; see also Record of Decision for the North Porcupine Coal Lease Application at I0 (stating the federal coal program "provides a reliable, continuous supply of stable and affordable energy for consumers throughout the country" and helps to "reduce our nation's dependence on foreign energy supplies").

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Comment Number: 0002469-1

Commenter I: Eugenie (Oogie) McGuire

Comment Excerpt Text:

We should also not allow any energy, whether coal, oil, natural gas or other sources, to be sold overseas. Our public lands and the energy resources in them belong to the American public and must be reserved strictly for our use, not to feather the nests of corporations.

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Comment Number: 0002477\_Saul\_20160728\_CBD\_UPHE-13

Organization I: Center for Biological Diversity

Commenter I: Michael Saul

Other Sections: I

Comment Excerpt Text:

As coal consumption for power generation declines domestically, facilitating schemes for coal export threatens to undermine climate policy by discouraging efficiency and renewable energy development abroad. As domestic coal consumption has declined, exports of Montana federal coal have increased greatly in 2013 and 2014.<sup>143</sup> One study found that "[p]roposed coal export facilities in the Northwest will result in more coal consumption in Asia and undermine China's progress towards more efficient power generation and usage. Decisions the Northwest makes now will impact Chinese energy habits for the next half-century; the lower coal prices afforded by Northwest coal exports encourage burning coal and discourage the investments in energy efficiency that China has already undertaken."<sup>144</sup>

(143) Williams-Derry, Clark, Unfair Market Value II: Coal Exports and the Value of Federal Coal, Sightline Institute (2016).

(144) Thomas M. Power, "The Greenhouse Gas Impact of Exporting Coal from the West Coast: An Economic Analysis" (July 2011).

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Comment Number: 0002477\_Saul\_20160728\_CBD\_UPHE-14

Organization I: Center for Biological Diversity

Commenter I: Michael Saul

Other Sections: I

Comment Excerpt Text:

The PEIS process provides BLM both an obligation and an opportunity to make an informed and conscious decision as to whether it is consistent with its statutory obligations to subsidize increased coal consumption in China by committing to the long-term availability of relatively inexpensive Powder River Basin coal for export purposes. The most detailed study to date of the market, consumption, and resulting greenhouse gas consequences of Powder River Basin coal export to China assessed the interaction of coal prices, Chinese demand and capacity, combustion and transportation impacts, and concluded that PRB coal exports to China would (a) lower coal costs for southeastern China coastal markets, increasing the incentive for long-term investment in coal-fired generation, and (b) discourage Chinese investment in efficiency and low-carbon energy sources.<sup>146</sup> The Power export study also noted that, because clean energy technologies are a growing market, and coal mining and shipping mature industries with relatively low employment potential, a policy of subsidizing raw coal export undermines U.S. investment and economic advantage in less carbon-intensive and more employment-intensive clean energy technologies.<sup>147</sup>

(146) Thomas M. Power & Donovan S. Power, "The Impact of Powder River Basin Coal Exports on Global Greenhouse Gas Emissions" 60 (May 2013).

(147) *Id.* at 64-70.

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Comment Number: 0002481\_Brady\_20160728\_EmergencyCntyUT-1

Organization I: Emery County Commissioner

Commenter I: Keith Brady

Comment Excerpt Text:

The focus, nationally, should be on implementation of reasonable measures that make the impact of coal less over time. Over the decades Emery County power plants have implemented measures on emissions that has resulted in emissions being reduced to less than 1%. The US is the leading innovator in more efficient utilization of coal resources, and will continue to be in the future. The federal government should partner with industry to enhance the efficiency. For instance, creating a market atmosphere friendly to coal fired electrical generation here means the resource is used here in the US where it is considerably more efficient (cleaner, greener) than in other nations that are entirely less efficient in their practices.

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Comment Number: 0002481\_Brady\_20160728\_EmergencyCntyUT-2

Organization I: Emery County Commissioner

Commenter I: Keith Brady

Comment Excerpt Text:

Exportation of a legal commodity is a function of national and international commerce and is not subject to any authority the Department of the Interior may choose to exercise that inhibits or disrupts the exportation of that commodity.

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Comment Number: 0002488\_Sanderson\_20160728-19

Organization I:Colorado Mining Association

Commenter I:Stuart Sanderson

Comment Excerpt Text:

The Notice indicates that the PEIS will address concerns made by stakeholders concerning whether leasing decisions should consider actual and/or projected exports of domestic coal, if so, how; and the mechanisms needed to evaluate export potential (81 FR 17726). This proposal is out of touch and fails to consider that export of coal is very low and costly for operators. The amount of coal exported is so low that the value would not yield valid statistical results of potential export. Therefore, until better shipping infrastructure is developed for coal producers in the West, thereby increasing export potential, further analysis regarding export forecasts or the appropriateness of export considerations in leasing decisions should be eliminated from detailed analysis.

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Comment Number: 0002490\_Emrich\_20160728\_CloudPeakEnergy-43

Organization I:Cloud Peak Energy Inc.

Commenter I:Andrew C. Emrich, P.C.

Other Sections: I

Comment Excerpt Text:

As part of its PEIS review, BLM proposes to evaluate the extent to which actual and projected coal exports should be considered when making coal leasing decisions. Given the unpredictable nature of American coal exports, it is hard to see how BLM could at the leasing stage meaningfully predict the nature and terms of any export arrangement and how that information would be useful in making a decision on whether to lease any particular tract of federal coal. For example, at the leasing stage, BLM lacks the ability to accurately value future coal exports. Even BLM itself has recognized this fundamental limitation: “During the coal leasing EIS process, it is uncertain who might purchase future PRB coal, how it would be used, and where the coal might be transported to.” West Antelope II EIS, at 4-105 (2009).

The factors that influence coal export potential are highly complex and dynamic. The GAO Report and IG Report provide a useful example of one such factor: the fluctuating demand for coal exports. Both reports, published in 2013, discuss the need to consider the increase of exports as part of BLM’s FMV determination. See IG Report at 7-8; GAO Report at 36-39. The IG Report provided that 125 million tons of coal was exported in 2012, which represented a 100% increase in coal exports since 2007. IG Report at 7-8. Similarly, the GAO Report provides that “coal exports have increased in recent years—particularly exports to Asia and Europe . . .” GAO Report at 2-3. And in 2012, the United States saw an increase in coal exports of 54% over 2010 exports. *Id.* at 3.

And while the IG Report and GAO Report propose to increase the significance on coal exports in BLM’s FMV determination, more recent trends demonstrate why such a proposal would be ill-advised. In January of 2016, the U.S. EIA estimated that total coal exports for 2015 dipped down to 77 million tons of coal, which would represent a 21% decline from the previous year. Attachment 9, U.S. EIA, “Coal Production and Prices Decline in 2015,” (Jan. 8, 2016). Moreover, since coal exports peaked in the second quarter of 2012, coal exports have steadily declined. Attachment 10, U.S. EIA, “Quarterly Coal Report” (June 15, 2016). In fact, coal exports have declined for twelve quarters in a row. *Id.* The recent downturn in coal exports due to unpredictable international factors is a prime example as to the risk of trying to meaningfully evaluate the coal export potential at the leasing stage—especially when calculating FMV—given that BLM may make a leasing decision 5-10 years before coal is produced and sold from the lease parcel.

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Comment Number: 0002490\_Emrich\_20160728\_CloudPeakEnergy-44

Organization I:Cloud Peak Energy Inc.

Commenter I:Andrew C. Emrich, P.C.

Comment Excerpt Text:

BLM should not consider environmental impacts associated with coal exports in its review of the federal coal program. For instance, BLM lacks certainty regarding the international demand for federal coal, the availability of adequate transportation to global markets, and the sophistication of emissions controls. To be sure, there is far less information available concerning the environmental impacts from coal exports than is known about the environmental impacts from domestic coal transportation and combustion. BLM should not account for any potential federal coal exports in its analysis of the environmental impacts associated with the federal coal program.

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Comment Number: 0002490\_Emrich\_20160728\_CloudPeakEnergy-45

Organization I: Cloud Peak Energy Inc.

Commenter I: Andrew C. Emrich, P.C.

Other Sections: I

Comment Excerpt Text:

Courts have recognized that fees or taxes that apply to the sale of coal into export markets violate the Export Clause. See *Consolidation Coal Co. v. United States*, 528 F.3d 1344, 1347 (Fed. Cir. 2008) (finding that if the Surface Mining Control and Reclamation Act reclamation fee was calculated based on the extraction and sale of coal, such that it applied to coal exports, it would be an unconstitutional violation of the Export Clause as a tax on exports); see also *Ranger Fuel Corp. v. United States*, 33 F. Supp. 2d 466, 467, 469 (E.D. Va. 1998) (holding an IRS-imposed coal excise tax unconstitutional and in violation of the Export Clause).

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Comment Number: 0002493\_Mead\_20160728\_GovWY-39

Organization I: Office of Governor Matthew H. Mead

Commenter I: MATTHEW H. MEAD

Comment Excerpt Text:

Coal is a fungible commodity, and its value is based upon the location, class and quality. This is no different than other commodities such as oil, wheat, gold or cotton. The price of commodities are based upon the physical location of the particular grade. Therefore the international coal index, the Newcastle price, is based upon bituminous coal located in Newcastle, Australia and the PRB 8800 price is based upon 8,800 BTU subbituminous coal located in the PRB. For the purposes of royalties and taxation, federally leased coal value should be based upon its physical location. Two rail cars of PRB coal at the mine are indistinguishable and should be valued the same, regardless of whether or not it is destined for a customer in Illinois or South Korea. The BLM does not apply a different valuation for natural gas that is destined for an international market. The BLM needs to consider how it values other federally owned minerals and apply the same standard to coal.

The BLM needs to factor in all of the costs incurred to transport coal to location. Coal sales are consummated at the point at which the coal is loaded into the transport vehicle. This is known as Freight on Board sales. For most domestic coal sales, this occurs when the coal is loaded into the train at the mine. For export sales, the sale occurs when the coal is loaded into the ship at a terminal. Therefore, coal companies must pay for and incur all of the various costs to transport the coal to the shipping location. These costs include paying the railroad to ship the coal, terminal fees for the company to pay the terminal to unload the trains and load the ship, sales agent fees, and demurrage if a ship is delayed in loading, vessel surveys, and export customs fees. Similar to other commodities, discounts for quality and distance are applied. Since sub-bituminous coal is less energy intensive than bituminous, you cannot ship as many BTU's on the same ship, so a subbituminous discount is applied. There is also a discount for the increased shipping distance called the Indonesian Shipping Delta. Coal companies are also subject to "take or pay" contracts. This means that if a company is unable to use all of its contracted capacity with the terminals or the railroads, they are subject to pay for the costs anyway. Either the company "takes" the capacity or "pays" the costs. As the BLM looks at the export prices, they need to consider all costs. The difference in export versus domestic prices is created by transporting coal, not any changes to or difference in the quality of the coal itself.

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Comment Number: 0002493\_Mead\_20160728\_GovWY-40

Organization I: Office of Governor Matthew H. Mead

Commenter I: MATTHEW H. MEAD

Comment Excerpt Text:

3. Coal importing countries such as Japan commonly pay premiums above the market price to ensure a long-term supply of energy. Hume, E.T., Japan's annual coal benchmark influence on the wane, Financial Times (April 8, 2016); [18] (WY0-02158 to 02162). The final price paid is not always based upon market factors, but could include political considerations, such as the need for a stable supply to ensure electricity supply reliability. The BLM needs to consider how political and energy security factors impact the final price paid for coal. These externalities should not impact the valuation of the commodity itself.

4. The BLM needs to consider how much federally owned coal is exported as a percentage of total coal production. Using 2015 figures, this is less than 1% and may be statistically insignificant to warrant a separate valuation process.

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Comment Number: 0002493\_Mead\_20160728\_GovWY-73

Organization I: Office of Governor Matthew H. Mead

Commenter I: MATTHEW H. MEAD

Comment Excerpt Text:

The Wyoming Infrastructure Authority supported by the DOE National Energy Technology Laboratory (NETL), conducted a GHG LCA for coal exports from the PRB to Japan, South Korea and Taiwan. The NETL study was performed using an attributional approach to compare the next marginal megawatt-hour (MWh) of electricity produced from PRB subbituminous coals exported to Japan, South Korea and Taiwan versus coals supplied from Australia and Indonesia. Preliminary results of the NETL study are presented in Figures 3.2.1 and 3.2.2 that includes a carbon capture pre-commercial option for Japan that uses conventional CO<sub>2</sub> capture, CO<sub>2</sub> pipeline and underground storage technologies. For the carbon capture option shown in Figure 3.2.2, the kilograms of CO<sub>2</sub> equivalent emissions per megawatt-hour (kgCO<sub>2</sub>e/MWh) for use of PRB subbituminous coal in Japan for power generation drop from 864 kgCO<sub>2</sub>e/MWh to 111 kgCO<sub>2</sub>e/MWh.

During review of the draft NETL report a number of significant limitations with the available GHG LCA models and data were identified and should be taken into account by BLM in its PEIS review of the federal coal program. Many of these limitations were not resolvable before completion of the NETL study and are highlighted within the NETL draft report [9] results presentation. (WY0-01558 to 01582). Resolving these limitations is considered essential in order for BLM to study both negative and beneficial impacts and to comprehensively and accurately determine NCCIBs for the federal coal program.

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Comment Number: 0002499\_Nichols20160728-9

Organization I: WildEarth Guardians

Commenter I: Jeremy Nichols

Other Sections: 8.11

Comment Excerpt Text:

iv. Coal Exports

As the notice of intent to prepare the PEIS emphasizes, the impacts of coal exports are of great concern. To this end, the PEIS must fully analyze and assess the reasonably foreseeable impacts of coal exports that may occur as a result of future coal management. These impacts include, but are not limited to, the following:

- Rail-related impacts: The impacts of hauling coal from mines to ports must be analyzed and assessed. The impacts that must be addressed include, but are not limited to, the air quality impacts of rail traffic, noise impacts of rail traffic, fish and wildlife impacts of rail traffic, and water quality impacts. Such an analysis must take into account the potential for spills and/or derailments and the impacts such events may have on land, water, fish,

wildlife, and air.

- Port-related impacts: The impacts of unloading coal from trains, loading coal onto barges and/or ships, constructing and/or maintaining port facilities, and the impacts of port operations, including ship, locomotive, and/or truck operations must be analyzed and assessed. The impacts that must be addressed include, but are not limited to, the air quality impacts of all port operations, including ship, locomotive, and truck emissions, water quality impacts (including wetland impacts), and fish and wildlife impacts.
- Shipping impacts: The impacts of shipping coal, both within waters of the United States and through international waters must be addressed. The impacts that must be analyzed and assessed include air quality impacts, impacts to water quality (particularly through discharge from ships), and impacts to river and ocean species, especially species listed as threatened or endangered under the Endangered Species Act.
- Coal unloading impacts at international ports: Just as coal unloading and loading at American ports must be addressed, the impacts of unloading coal from ships and loading coal onto trains and/or trucks at international ports must be analyzed and assessed.
- Inland coal transport abroad: The impacts of transporting coal from international ports to facilities must be analyzed and assessed. Such an analysis must analyze and assess whether the coal is hauled by rail or by truck, and analyze and assess the attendant impacts.
- Coal combustion abroad: Finally, the impacts of combusting coal abroad must be analyzed and assessed. Such an analysis must include, but not be limited to, an analysis of the air quality impacts of coal combustion (including greenhouse gas emission impacts), water quality impacts, coal ash disposal impacts, fish and wildlife impacts, and impacts to lands.

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Comment Number: 0002942\_Harbine-60

Organization I:Earthjustice

Commenter I:Jenny Harbine

Comment Excerpt Text:

BLM Should Analyze the Direct And Indirect Impacts of Exporting Federal Coal. The activities associated with coal leasing dramatically increase air emissions, hazard risk and negative impacts to health. Exporting coal exacerbates these affects because export demands more transport, involves greater distances, requires expanded infrastructure (e.g., ports), and increases emissions due to often softened regulations overseas related to transport and combustion, compared to domestic emissions. The PEIS must analyze the direct, indirect and cumulative impacts from these activities. At minimum, the PEIS should analyze the following: Rail-related impacts: The cumulative and indirect impacts to wildlife and human health of coal traffic due to exports along the entire route from federal lands to existing and contemplated coal ports. Coal can be transported more than a thousand miles by rail just to reach this first stop before being shipped overseas. Impacts to analyze include, but are not limited to: the air quality impacts of rail traffic, noise impacts of rail traffic, fish and wildlife impacts of rail traffic, and water quality impacts. Such an analysis must take into account the potential for spills and/or derailments and the impacts such events may have on land, water, fish, wildlife, and air. Port-related impacts: The PEIS should analyze the impacts from unloading coal from trains, loading coal onto barges and/or ships, constructing and/or maintaining port facilities, and the impacts of port operations, including ship, locomotive, and/or truck operations. Specifically, the PEIS must address the air quality impacts of all port operations at each of the US coal ports, including ship, locomotive, and truck emissions, water quality impacts (including wetland impacts), and fish and wildlife impacts, and impacts to human health and safety. Exporting coal also increases vessel traffic. The PEIS should include an analysis of this impact. The PEIS should consider the impacts of foreseeable (proposed) export terminals as 64 well as analyze the potential for continued or expanded federal coal leasing to induce construction of new coal export terminals, particularly on the West Coast. Shipping impacts: The PEIS should analyze the impacts of shipping coal both within US waters and through international waters. Specifically, the analysis must include air quality impacts, impacts to water quality (particularly through discharge from ships), and impacts to river and ocean species, especially species listed as threatened or endangered under the Endangered Species Act. Coal unloading impacts at overseas ports: The EIS should analyze the impacts of unloading coal from ships and loading coal onto trains and/or trucks at Asian, South American and European ports, and wherever else



coal is exported. Coal transport overseas: The PEIS should analyze the impacts of transporting coal from ports in Asia, Europe and Latin America to facilities on those continents. This analysis must include impacts of transport by rail or truck. Coal combustion overseas: The PEIS must analyze the impacts of processing and combusting coal from federal lands. This includes but is not limited to analyzing the air quality impacts of coal combustion (including greenhouse gas emission impacts), water quality impacts, coal ash disposal impacts, fish and wildlife impacts, impacts to human health and safety, and impacts to lands. The PEIS should analyze the impacts described above but should by no means be limited to these impacts. NEPA requires agencies to gather necessary information relevant to reasonably foreseeable impacts unless the cost of obtaining the data is exorbitant. To this end, the agency must make every effort to analyze and assess these impacts.

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Comment Number: 0002942\_Harbine-62

Organization I: Earthjustice

Commenter I: Jenny Harbine

Comment Excerpt Text:

BLM should consider exports in valuing/pricing leases and in deciding whether to issue leases intended for export. Coal exports undermine our efforts both to reign in greenhouse gas emissions and to reduce pollution and hazards simply by extending and intensifying the coal lifecycle. Scenarios involving higher export volumes have correspondingly higher projected greenhouse gas emissions. 233 Offering cheap federal coal leases further frustrates efforts to realize national and international climate goals, degrades our shared environment and erodes our health; low coal prices can increase demand and with it, consumption. 234 The PEIS should analyze how exporting coal will influence demand, and hence coal consumption both in the U.S. and overseas. 232 See 40 C.F.R. § 1502.22(a). See Synapse Energy Economics, Analysis of the Tongue River Railroad Draft Environmental Impact Statement (Sept. 23, 2015), at 15-17, attached as Ex. 43. 234 See id. at 3 (“a new source of coal that has a less expensive delivered price than some other coals currently being purchased should ‘shift the supply curve’ for coal”). 65 The coal leasing program also breathes life into a declining and damaging industry. 235 As one report summarizes, “Coal export is part of the last chance bailout strategy for an industry that is in a state of permanent, structural decline.” 236 Coal export prices to Asia, and the associated profits, have declined each year for the past five years. 237 Over the past four years, since 2012, the amount of coal producers have exported has dropped by half, from 125 million tons of coal to an estimated 72.3 million tons. 238 The market is suffering from oversupply. 239 In addition to oversupply, cheap leases can induce overbuild. Industry has proposed numerous West Coast export infrastructure projects over the past few years that would allow for a doubling or tripling of some states’ GHG emissions. 240 At the same time, many of the nations that producers seek as export partners are transitioning away from coal. For instance, the Indian government, which currently imports coal, has announced a policy to reduce its imports to zero. 241 China has been reducing coal production over the past few years and has recently announced further steps to shrink its coal industry. These plans include closing 1,000 coal mines in 2016 alone, while transitioning as many as 1.8 million workers out of the coal and steel industries and into other fields. 242 It plans to convert to a greater share of natural gas. And other nations in Asia have the capacity to shift from coal to natural gas. 244 These shifts are needed for the world to meet the GHG mandate to keep 80 percent of all fossil fuels unburned. A decision by BLM to buoy approaches that spur coal burning, by offering an abundance of cheap coal for export, steers us away from our joint 235 Testimony of Tom Sanzillo, City of Oakland, City Council Hearing, Institute for Energy Economics and Financial Analysis (Sept. 2015), at 3, attached as Ex. 44. 236 Id. at 5. 237 Williams-Derry, Clark, Unfair Market Value II: Coal Exports and the Value of Federal Coal, SIGHTLINE, June 2016, at 5, attached as Ex. 45. 238 Testimony of Tom Sanzillo (Ex. 44) at 11. 239 Id. at 7, 13. 240 See, e.g., Columbia Riverkeeper, et al. Comments on Draft Environmental Impact Statement for Millennium Bulk Terminals Longview, at 69. 241 Testimony of Tom Sanzillo (Ex. 44) at 11. 242 Sophia Yan, China plans to cut 1.8 million coal and steel jobs, CNN Money, February, 29, 2016, available at <http://money.cnn.com/2016/02/29/news/economy/china-steel-coal-jobs/> (last visited July 28, 2016) 243 Thomas Power, et al., Comments on the Greenhouse Gas Impacts of Modeling of Coal Flows in the Millennium Bulk Terminals Longview SEPA Draft Environmental Impact Statement (June 2016), attached as Ex. 46. 244 Id. 66

commitments. 245 The PEIS must evaluate these environmental and economic impacts of coal exports, as well as options for limiting export of federal coal.

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Comment Number: 0003048\_McBride\_J\_07122016-1

Organization I:Keep Electricity Affordable

Commenter I:William McBride

Comment Excerpt Text:

Tho you are doing a good job of multi use of BLM lands and making a little money too, old timers need to recognize modern methods of mineral extraction and Wyoming low sulfur coal could help other countries too.

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Comment Number: 0020012\_Holmes\_UCARE\_20160712-14

Organization I:Utah Citizens Advocating Renewable Energy

Commenter I:Stanley Holmes

Comment Excerpt Text:

UCARE urges the BLM to analyze and quantify all costs associated with the export of federal coal. These costs include environmental contamination caused during transportation via train and cargo ship. The impacts of diesel and bunker fuels combustion should be aggregated with effluents from combustion of the coal itself. Recognizing that coal has global impacts wherever it is burned, the PEIS should consider requiring that federal coal shipped abroad can only be burned at facilities that meet U.S. environmental standards for emissions reduction.

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Comment Number: 0020031\_Parkins\_20160722-16

Commenter I:438596

Other Sections: 11

Comment Excerpt Text:

It is in the country's best interest to incent the export of coal from BLM coal lands. When coal is economically viable as an export commodity these exports provide a positive contribution to the nation's taxpayers in a number of ways:

- 1) The taxpayer is paid a royalty on the coal mined and sold as well as a Bonus Bid when new coal lands are leased. This income reduces the tax burden on individuals for the same level of services from government which enhances our standard of living or lowers the public debt. As mentioned before the basis for royalty needs to continue to be the net back price at the mine loading point to account for the costs to transport the coal to the port and port charges along with other costs to move the coal to the market. This method recognizes the geographic impacts due to the reserve location.
- 2) The sale of coal to other countries increases the demand for coal mined in the United States, which creates high quality jobs in the United States along with the income taxes from those jobs and jobs in the support industries associated with this production. This reduces the amount of taxpayer money paid out in unemployment or indigent support payments reducing the tax burden on individuals and enhancing our standard of living.
- 3) Export sales improve the balance of payments for the United States and put the nation in a stronger position financially.
- 4) Generally speaking the types of coal that are exported by the United States tend to be higher quality than those in the countries where it is imported. This has the potential to reduce emissions in those countries.
- 5) Energy produced by the United States and shipped to our allies provides a stable and reliable source of energy to those countries and can reduce their dependence on politically less stable sources. (Specifically Europe and the potential to reduce their exposure to gas produced in Russia).
- 6) Coal mines in the United States have safety records that are the envy of the world. With few exceptions coal mined in the United States results in fewer injuries and fatalities than coal mined in countries that import coal. Incenting the export of coal from the United States might displace coal mined with greater numbers of injuries or

death. (Specifically China although the comment applies to other countries as well.)

7) The United States requires all coal mining operations to meet very high standards with respect to reclamation, much more rigorous than many of the nations that import coal. Coal exports from the United States might displace coal production from other countries that have less stringent reclamation standards thus netting cleaner air and water than the alternative.

8) Export of coal from the United States to other countries enables them to increase the number of households that have electrical power available to them. IEA reported recently that 1.2 billion people do not have access to electricity, and that 2.7 billion people do not have access to clean cooking facilities. Coal exports from the United States enables countries to expand their electric generation capacity to more households. The World Bank indicates that households with access to electricity and clean cooking facilities have longer life spans, so incentivizing coal exports from the United States can result in improving standards of living in countries where imports occur and increase life spans.

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Comment Number: 0020056-17

Organization I: Bowie Resource Partners, LLC

Commenter I: Gene DiClaudio

Comment Excerpt Text:

NMA correctly observes that the export of coal is a tiny fraction of total U.S. production, and is a vanishingly small fraction of worldwide coal consumption. Even if U.S. exports were aggressively expanded, they would have no material effect on overall federal coal production or no detectible effect whatsoever on worldwide consumption. Exports do not provide a rationale to undertake significant revisions to the federal coal program.

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Comment Number: 0020056-3

Organization I: Bowie Resource Partners, LLC

Commenter I: Gene DiClaudio

Comment Excerpt Text:

Finally, although the impact of major federal actions on conditions outside the United States is generally excluded from NEPA, it is worth noting that the export of federal coal saves lives and promotes human welfare. Federal coal, especially coal that is attractive for export, is often of substantially higher quality and lower ash and sulfur than alternative coals that overseas facilities might consume. Developing nations typically cannot afford the sophisticated and expensive pollution controls required of U.S. facilities, and thus burning cleaner coal can produce immediate and dramatic improvements in emissions. In addition, U.S. coal mines are far safer than many overseas mines. For its part, Bowie has an outstanding safety record. To the extent Bowie (and other operators) export federal coal, lives are saved.

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Comment Number: 002501\_Ring\_20160728-5

Organization I: Climate911

Commenter I: Wendy Ring

Comment Excerpt Text:

The US should have enough clean energy in 20 years that domestic coal is no longer needed. We should not endanger our lands and people to export coal to other countries.

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Comment Number: WO\_CoalPEIS\_0002437\_Downing\_20160727\_WyMineAssoc-25

Organization I: Wyoming Mining Association

Commenter I: Jonathan Downing

Comment Excerpt Text:

In the event that conditions improve and increased export capacity becomes available, WMA believes that federal

coal mined and sold to international buyers should be treated similarly to domestic buyers. In Wyoming, coal producers pay an average of 40% of the sales price of coal in taxes, fees and royalties. Revenue generated from these amount to over \$1 billion annually to state and local governments. Expanded markets for federal coal mined in Wyoming are in the financial interest of the state, as well as the federal government pursuant to the Mineral Leasing Act. Exported coal historically demands a higher sales price because it includes the transportation costs which are paid by the producer. This is different than the situation for coal sold domestically where transportation costs are paid by the customer. For the coal producer, these higher sales prices do not necessarily translate to higher profits on exported coal. WMA encourages the agency to avoid measures that would act as a disincentive to exporting federal coal to include raising costs, regulatory barriers or implementing arbitrary "social costs of carbon" standards. These actions would be contrary to the agency's charge of responsible management of the resource.

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Comment Number: 000001294\_Peterson\_20160623-4

Organization I:GCC Energy

Commenter I:Trent Peterson

Comment Excerpt Text:

Leasing decisions based on export potential. This is really a social responsibility topic. U.S. coal mines are the safest, most efficient, and most environmentally sensitive coal mines in the world. Limiting export potential is a clear statement that we're not interested in the social welfare anywhere but in the U.S. It's an [indiscernible] at its worst. And if anything, is a good argument for increasing U.S. export potential.

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Comment Number: 0000870\_erickson\_CitizesCoalCouncil-I

Organization I:Citizens Coal Council

Commenter I:Aimee Erickson

Other Sections: 6

Comment Excerpt Text:

Even though the coal industry has seen a significant decline over the last decade, we can't ignore the reality of the United States is the fourth largest source of coal exports in the world. Of those exports, the majority of our coal is headed to Asia. Joby Warrick in a Washington Post article put it most aptly: "Each shipment highlights what critics describe as a hypocrisy, underlining U.S. climate policy: While boasting of pollution cuts at home, the United States is facilitating the sale of large quantities of government-owned coal abroad." To make it abundantly clear, continuing the mining and export of government owned coal is making a statement to the world where our priorities lie and most importantly it goes against President Obama's Climate Action Plan. By the Bureau of Land Management not taking into account the effects of coal exports on global warming, you are undermining global efforts to address climate change. In yesterday's USA Today article on the West Virginia floods, it stated that climate change may have added to this disaster. According to the National Climate Assessment, the part of the U.S. that includes West Virginia has seen a 71 percent increase in extreme precipitation since 1958. We are exporting our pollution and that pollution is not only still contributing to global climate change, but its local effects are impacting poor and vulnerable populations. Now is the time to take a serious stance on climate change and protect the most vulnerable.

#### **ISSUE 5.9 - COAL RECLAMATION**

Total Number of Submissions: 90

Total Number of Comments: 107

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Comment Number: 00000104\_Lindlief Hal\_National Wildlife Association\_ 20160517-2

Organization I:National Wildlife Federation

Commenter I:Brenda Lindlief Hal

Comment Excerpt Text:

Coal companies have promised to be good stewards and reclaim public lands but have left taxpayers facing the prospect of having to pick up the tab for reclamation, have left workers without jobs and benefits and have left wildlife habitats fragmented and uninhabitable.

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Comment Number: 00000110\_Goran\_ 20160517-2

Commenter I:Sarah Goran

Comment Excerpt Text:

A significant percentage of mine land has not yet met full reclamation requirements.

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Comment Number: 00000117\_Clem\_Cambell\_County\_20160517-1

Commenter I:Scott Clem

Comment Excerpt Text:

For those who slam our reclamation and claim that coal mining hurts wildlife and pollutes our environment, you're relying upon environmental propaganda. Come and experience it yourself. Come to Gillette, Wyoming.

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Comment Number: 00000139\_Craft\_ 20160517-2

Organization I:Wyoming Coal Company

Commenter I:Lecia Craft

Comment Excerpt Text:

The statement that the mines are not completing the required reclamation is completely false. Black Thunder has approximately half of all their disturbed land in permanent reclamation. The reclaimed land is being grazed by local ranchers and are more productive than native lands. Wildlife is abundant including a herd of elk frequently seen grazing on the reclamation. Black Thunder and many other mines have been recognized for outstanding reclamation achievements by a number of agencies including the Office of Surface Mining and the State of Wyoming.

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Comment Number: 00000143\_Short\_20160517-3

Commenter I:Robert Short

Comment Excerpt Text:

Apparently, very little effort has been made to evaluate the positive aspect of mining lands that are reclaimed to an improved state, which provides outstanding wildlife habitat, recreation activities, and agricultural benefit

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Comment Number: 0000068\_Smitherman\_20160517-5

Organization I:The Wilderness Society

Commenter I:Dan Smitherman

Comment Excerpt Text:

We also need to make sure that companies reclaim their past mines before getting the opportunity to open up new mines. Cleaning up lands should not be the responsibility of the American people and reclamation means more jobs.

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Comment Number: 0000078\_Neal\_20160517-1

Commenter I:Dan Neal

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**Comment Excerpt Text:**

I hope you'll consider regulations that will hold the lessees responsible for conducting full reclamation so these lands are restored to use for the state and its residents into the future and to do what you can to find ways to make certain that companies meet their obligations, pension and healthcare obligations to the people who worked for them so long

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Comment Number: 0000085\_Kresich\_20160517-1

Organization I: Yellowstone Bend Citizens Council

Commenter I: Joan Kresich

Comment Excerpt Text:

The costs to taxpayers for the broken leasing program are \$1 billion a year in lost revenues. What could that one billion do? Many of us feel that it should fund a strong program for coal communities to identify what will help them thrive as the coal markets continue to decline. We also feel that one billion needs to fully fund reclamation which is currently way behind and the good dependable jobs that go with reclamation. That one billion can help mitigate the growing effects of climate change that we're all suffering.

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Comment Number: 0000086\_Bean\_20160517-1

Organization I: Northern Plains Resource Council

Commenter I: Larry Bean

Comment Excerpt Text:

First, new leasing should not be allowed until there's catch-up on the existing reclamation needed. This may sound like a drastic idea, but there are 20 years left in the ground to mine, and it's a good opportunity to hire a lot of good-paying jobs in reclaiming that resource.

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Comment Number: 0000086\_Bean\_20160517-3

Organization I: Northern Plains Resource Council

Commenter I: Larry Bean

Comment Excerpt Text:

There should also be a requirement that reclamation planning begin in earnest at the time of the lease and even designs of the extraction be considered in a way that reclamation can begin as soon as any portion of the lease is completed, not waiting for the whole lease to complete and then start a phase.

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Comment Number: 0000093\_Barteaux\_20160517-2

Commenter I: Wendy Barteaux

Other Sections: 8.6

Comment Excerpt Text:

Institute a minimum bid. Don't allow self-bonding and require coal companies to reclaim old and current leases before buying new leases. Promising to pay for reclamation currently disturbed lands with future supposed profits constitutes a Ponzi scheme.

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Comment Number: 0000099\_Wilbert\_20160517-6

Commenter I: Kim Wilbert

Comment Excerpt Text:

Unfortunately, coal companies have been permitted to self-bond rather than paying for real insurance that would cover reclamation costs after mining was complete, which now means that taxpayers will likely have to pay hundreds of millions of dollars to restore these mine lands to a usable condition for wildlife and ranching.

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Comment Number: 0000500\_Williams\_20160517-1

Commenter I: Tom Williams

Comment Excerpt Text:

Winning bids should also put up the money necessary for reclamation so that we are not forced to clean up after these companies

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Comment Number: 0000511\_Pfister\_WesternOrg of Resource Councils\_20160517-2

Organization I: Northern Plains Resource Council

Commenter I: Ellen Pfister

Comment Excerpt Text:

Successful reclamation, of course, includes success with water, something that has been very elusive, and something BLM has not wanted to consider when it proposed land for leasing and mining. Montana will have something resembling its previous surface, but Wyoming may have immense holes in the ground, either dry pits or slowly filling versions of Butte's Berkley Pit.

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Comment Number: 0000511\_Pfister\_WesternOrg of Resource Councils\_20160517-3

Organization I: Northern Plains Resource Council

Commenter I: Ellen Pfister

Comment Excerpt Text:

Some of the mine plans when regarded from a more sober time show disregard of when reclamation would take place---in some cases many years. I do not know how those plans met the standard of contemporaneous reclamation.

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Comment Number: 0000511\_Pfister\_WesternOrg of Resource Councils\_20160517-7

Organization I: Northern Plains Resource Council

Commenter I: Ellen Pfister

Comment Excerpt Text:

Perhaps BLM should collect some costs to carry on reclamation at the end of the lease, since it appears that companies can swindle the states with impunity, and if the states decide not to attempt reclamation, BLM could wind up with the big holes in the ground and no recompense. BLM is already on the hook with its current leases

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Comment Number: 0000511\_Pfister\_WesternOrg of Resource Councils\_20160517-8

Organization I: Northern Plains Resource Council

Commenter I: Ellen Pfister

Comment Excerpt Text:

BLM should not grant any more coal leases until the reclamation is caught up on the leases that are outstanding

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Comment Number: 0000543-2

Commenter I: Dianna Moesh

Comment Excerpt Text:

Require coal companies to provide adequate funds for cleanup of toxic sites

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Comment Number: 0000552-2

Commenter I: Thomas Gordon

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## Comment Excerpt Text:

Also, the leaser is supposed to have funds set aside to restore the land when finished. These funds need to be put in place and untouchable by the coal company when the lease is awarded.

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Comment Number: 0000609-1

Organization I: Nothern Plains Resource Council

Commenter I: Beth Kaeding

## Comment Excerpt Text:

Despite federal and state laws that mandate reclamation following coal strip mining, it is not happening. There is a woeful lack of evidence of contemporaneous reclamation and/or reclamation success as measured by bond release throughout the West. Coal strip mines have been operating in Montana for more than 40 years. But as of September 2015, of the 41,005 acres that have been disturbed by coal strip mining operations, only 20,290 acres have achieved Phase I reclamation and bond release (backfilling, re-grading, topsoil replacement, re-contouring, and drainage control) and, even worse, only 491 acres in all of Montana have achieved final Phase IV bond release. By the way, bond amounts are woefully inadequate, and in this time of coal company bankruptcy, the lack of proper bonding - or even worse, the practice in some states of self-bonding - means that the taxpayer could once again be stuck with cleaning up the messes left by corporations who take their profits and run.

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Comment Number: 0000611\_Leahy\_NMWF-5

Organization I: New Mexico Wildlife Federation

Commenter I: Todd Leahy

## Comment Excerpt Text:

It is worthy of note that the diversity of plant species, an important indicator of wildlife habitat, on reclaimed land is significantly less than on untouched lands. Additionally, plant areas that are reestablished have more invasive and non-native species than undisturbed lands. For example, a study of undisturbed sagebrush steppe lands found 100 to 130 unique species in 24 sample plots of 50x10 meters. In contrast, the mining and reclamation plan for Cloud Peak's Antelope Mine in Wyoming covered only 30 species in its regeneration seed mixes. BLM must consider that native sagebrush-grassland steppe plant communities can require up to 60 years for natural development

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Comment Number: 0000770\_Clarke et al (PETITION)\_20160623-6

Commenter I: Petition

## Comment Excerpt Text:

Ensure coal companies with current leases fully comply with all environmental standards, including full and concurrent reclamation compliance, before they are allowed to lease again.

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Comment Number: 0000827-1

Organization I: National Wildlife Federation

Commenter I: Sarah Bates

## Comment Excerpt Text:

No new leases until coal companies are held accountable for complete reclamation of federal lands they have mined.

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Comment Number: 0001181-2

Organization I: Green Peace

Commenter I: Britten Cleveland



## Comment Excerpt Text:

We need to put in place reforms that hold coal companies accountable for cleaning up mine sites so that the significant reclamation cost and responsibility isn't left to taxpayers. This should include denying any future lease applications for coal companies that have failed to reclaim mine sites and/or taking back undeveloped leases if applicable -- applicable and if they fail to make it on their reclamation commitments.

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Comment Number: 0002142\_Briggs\_20160602-4

Organization I: Converse County Auto Repair

Commenter I: Mike Briggs

Comment Excerpt Text:

I have personally hunted on lands next to mine sites, area of mine sites that been reclaimed, in and around oil fields and even next to oil pump jacks. These lands have been either owned by the B.L.M. or personal property. Never have I personally witnessed any major impact on wildlife or habitat.

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Comment Number: 0002145\_Buchanan\_20160513\_IEEFA-2

Organization I: Institute for Energy Economics and Financial Analysis

Commenter I: Tom Sanzillo

Other Sections: 2 8.7

Comment Excerpt Text:

Our proposal for how this program would work is outlined in detail below and contains the following major elements:

- Planning for new coal offerings set by DOI based on accurate analysis of coal reserves and demand.
- Financing for the coal industry provided by a combination of private sector borrowing, and public sector asset transfers of coal, revenue and market guarantees, and regulatory streamlining.
- Coal prices set by a committee made by a federal-state coal price Commission, with a pricing structure that takes into account the need to maintain affordable and reliable electricity and to adjust to changing market conditions.
- Eliminating the self-bonding system for coal mine reclamation, replacing it with a program in which coal producers and the federal government share responsibility for clean-up and in which royalty payments are set aside to cover liabilities (and to provide for pensions for coal miners).
- Regular bi-annual external audits of the program by the inspector generals of the Department of Energy and the Department of the Interior.

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Comment Number: 0002147\_Anderson\_20160621\_BlueGreenAlliance-3

Organization I: BlueGreen Alliance

Commenter I: Kim Glas

Comment Excerpt Text:

It is also imperative that coal companies reclaim public lands that they have developed to mitigate the land and water impacts of coal mines and to assist communities in transition through the jobs which reclamation work provides.

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Comment Number: 0002150\_Nagle\_20160629-2

Organization I: Carnegie Mellon University

Commenter I: John Nagle

Comment Excerpt Text:

As a citizen who wants coal users to pay for the public resources they extract, I believe that this program has been a give-away to coal companies, especially because they have often not reclaimed the land.

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Comment Number: 0002152\_Bruse\_20160518-3

Commenter I:Debbie Bruse

Comment Excerpt Text:

The idea that the mining companies are not completing their reclamation is simply not true. It is in the best interest of the mining companies to complete reclamation as closely behind mining as possible. Direct hauling topsoil from the pit advance directly to the backfill avoids re-handling costs. It is the Wyoming Land Quality Division's responsibility for verifying that all mines are meeting their reclamation commitments in their permit document. Not meeting the requirements would result in a notice of violation.

---

Comment Number: 0002152\_Bruse\_20160518-4

Commenter I:Debbie Bruse

Comment Excerpt Text:

While bond release acres may be low, it takes many years after final reseeding of topsoil to meet bond release requirements. I would not be far off to estimate a 10 year period. During that time the grasses need to reestablish themselves enough to support livestock grazing, and the reclamation must meet diversity and shrub requirements. Vegetation monitoring will have occurred several times and supplemental seeding may have to occur to meet requirements. Supplemental seeding essentially restarts the clock. Getting final bond release is not an easy process to succeed at. But that does not mean that reclamation is not occurring. Changes to the self-bonding program will surely encourage coal companies to pursue more bond release.

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Comment Number: 0002157\_Burger\_SabineCenter\_09132016-8

Organization I:Sabine Center for Climate Change Law

Commenter I:Michael Burger

Comment Excerpt Text:

Brian Resnick discussed how financial obligations related to reclamation are treated in bankruptcy proceedings. He noted that the ranking of these obligations are not specified in bankruptcy law, but generally speaking, reclamation does not have priority as compared with other debts (particularly debts to secured creditors and others with collateral). That said, most buyers will consider reclamation obligations when coming up with a purchase price for the company. Resnick also discussed the types of investors that are now buying coal companies or stakes in coal companies that have gone bankrupt. He noted there is a good deal of variation in terms of the types of companies (e.g., privately owned vs. publicly owned) and their reasons for investing in this sector.

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Comment Number: 0002160\_Kot\_20160629\_SweetwtrCnty-14

Organization I:Sweetwater County

Commenter I:Wally Johnson

Comment Excerpt Text:

Sweetwater County Coal Mines and Power Plant - Good Community Neighbors:

Within Sweetwater County, the Jim Bridger and Black Butte Coal Mines and the Jim Bridger Power Plant have consistently been good community neighbors. These industries have excellent environmental compliance records, have worked within the Sweetwater County Planning and Zoning permitting processes and have been leaders in the industry in regards to reclamation and environmental compliance.

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Comment Number: 0002173\_Quick\_20160622-13

Commenter I:Kendra Quick

Comment Excerpt Text:

Many opponents claim that mines are not being reclaimed. This cannot be further from the truth. Mine reclamation in the PRB is an ongoing process that takes place simultaneous with mining activities.

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Comment Number: 0002189\_Jozwik\_20160517-30

Commenter I: Darryl Jozwik

Comment Excerpt Text:

WE HAVE DONE A TREMENDOUS JOB OF RECLAIMING THE LAND AND HAVE WON MANY AWARDS FOR IT. THIS IS A NON ISSUE.

> THERE HAVE BEEN COMMENTS THAT THERE ARE LOOP HOLES AND LACK OF TRANSPARENCY, BUT AS THE DOI KNOWS, THE AUDITING PRACTICE IS OPEN AND TRANSPARENT.

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Comment Number: 0002220\_Andersen\_20160601-3

Commenter I: Nicole Andersen

Comment Excerpt Text:

Make the coal companies pay per ton towards reclamation (use a model similar to unemployment insurance).

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Comment Number: 0002239\_Baierlein\_20160621-6

Organization I: Conservation Northwest

Commenter I: Jeff Baierlein

Comment Excerpt Text:

The coal program should positively ensure mining firms conduct and pay for environmental restoration, rather than passing on cleanup expenses to taxpayers.

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Comment Number: 0002254\_Simmons\_20160707-1

Commenter I: Patricia Simmons

Comment Excerpt Text:

Reclamation of already mined lands is woefully inadequate and clean up must be required of any company wanting to bid on market prices of coal.

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Comment Number: 0002269\_Holubec\_20160715-10

Commenter I: Allen Holubec

Comment Excerpt Text:

The operator must spray for invasive weeds during entire time of reclamation

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Comment Number: 0002269\_Holubec\_20160715-6

Commenter I: Allen Holubec

Comment Excerpt Text:

Reclamation –

- a. How do you quantify compensation for externalities such as the environmental damage?
- b. Companies must reclaim to the Approximate Original Contours using native vegetation
- c. Companies must include weed spraying in reclamation calculations

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Comment Number: 0002271\_Dafoe\_20160714\_WAITC-4

Organization I: Wyoming Agriculture in the Classroom

Commenter I: Jessie Dafoe

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Comment Excerpt Text:

Once mining begins, reclamation begins as well. It starts with the careful stockpiling of topsoil, a critical Wyoming resource. As the coal is removed, the resulting void is then backfilled with overburden and contoured in accordance with the approved reclamation plan. Topsoil is replaced and approved seed mixtures are then sowed. Unique and critical wildlife habitat, productive grazing and pastureland, and valuable stream and aquatic resources are created and restored in the process.

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Comment Number: 0002276\_Henderson\_20160715\_350Colorado-5

Organization I: 350 Colorado Board of Directors

Commenter I: Gina Hardin

Comment Excerpt Text:

Reforms need to ensure that coal producers are required to fully cover costs of land reclamation and environmental remediation. Additionally, irresponsible producers should pay a substantial penalty (in addition to the full cost) if land reclamation and environmental remediation is not undertaken within reasonable time, is not effective or is not completed. Costs of land reclamation and environmental remediation should not be transferred to taxpayers and to future generations. The program's policies and guidelines need to be crafted with the coal industry's history of environmental damage and avoidance in mind to protect against continuation of these practices by current and future coal producers.

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Comment Number: 0002293\_Niemi\_20160606-2

Commenter I: Sharman Niemi

Comment Excerpt Text:

The Bureau of Land Management is (or should be) well aware of the commendable manner in which mined areas in the west are reclaimed following coal extraction to support regrowth of natural vegetation and wildlife.

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Comment Number: 0002296\_Regan\_20160720-2

Commenter I: David Regan

Comment Excerpt Text:

Coal companies need to be held to account for cleaning up the land after it is mined out

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Comment Number: 0002316\_Boeschstein\_CoGovernments\_20160722-3

Organization I: City of Grand Junction

Commenter I: Bennett Boeschstein

However, our concern is about more than revenue, it's about the businesses and Coloradans who have contributed to our thriving \$13.2 billion outdoor recreation economy. Visitors from across the country and around the world come to see our public land. The review should ensure that mines get cleaned up, lands are returned to original conditions and any future mining does not threaten wildlife habitat, our air, our water resources.

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Comment Number: 0002323\_Gordon\_20160722-2

Commenter I: Thomas Gordon

Other Sections: 17

Comment Excerpt Text:

At the PEIS hearing in Seattle, June 21, 2016, several people spoke.

A spokesman for NW Steelheaders said 80% of the oysters larvae die in Netarts Bay and only 10% of the coal-mined land in Wyoming is reclaimed.

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Comment Number: 0002333\_Magagna\_20160725\_WyStockgrowers-3

Organization I: Wyoming Stock Growers Association

Commenter I: Jim Magagna

Comment Excerpt Text:

While our ranching lands undergo significant disturbance during mining, they are often made more productive by the careful reclamation undertaken by the mining companies.

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Comment Number: 0002386\_Cherni\_20160721-1

Commenter I: Brian Cherni

Comment Excerpt Text:

Cloud Peak Energy is actively reclaiming mined lands on a continual basis. Preserving, protecting, and reclaiming the environment is as much of our day to day business as sending a coal train down the track. In fact, part of our permit that allows the mine to operate is an approved reclamation plan complete with plans to retopsoil, revegetate, and return the land to what it was before. Our permit also requires a reclamation bond to guarantee the financial liability of the reclamation process. The reclamation process goes through four stages of bond release. Phase 4 bond release for final reclamation can not be granted until all mining activities are complete within the entire designated drainage basin.

Today at Spring Creek, approximately 25% of the land at the mine is used for facilities and will not be reclaimed until the end of mine life. About 50% of the land is within the active mining area, and approximately 25% of the land at Spring Creek is under reclamation. That accounts for over 1200 acres of reclaimed mine land, one third of which has been issued Phase III bond release, the first in the state of MT.

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Comment Number: 0002387\_Wolff-Bowen\_20160721-1

Commenter I: Linda Wolff-Bowen

Comment Excerpt Text:

after living in Rosebud/Treasure Counties all of my life is that the coal companies have done an outstanding job of reclaim. They've even cleaned-up the Foley Brothers' Coal Company's messes. Nee: the pits east of Colstrip. Nee: In the 50's, 60's and 70's, Colstrip kids did have the cleanest, safest fishing hole in all of eastern Montana.

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Comment Number: 0002390\_Pfister\_20160721-4

Organization I: Northern Plains Resource Council

Commenter I: Ellen Pfister

Comment Excerpt Text:

In point of fact, if strip mining is the proposed method of removal, the surface owner in that case really should not expect to either get his land back within his lifetime or even see it with bond released for successful reclamation. Successful reclamation, of course, includes success with water, something that has been very elusive, and something BLM has not wanted to consider when it proposed land for leasing and mining. Montana will have something resembling its previous surface, but Wyoming may have immense holes in the ground, either dry pits or slowly filling versions of Butte's Berkley Pit.

I believe BLM could have had quite a bit of control on how mine plans were laid out even before leasing the coal reserve, so that reclamation could have proceeded in a much more contemporaneous manner with mining. When many of these mine plans were presented to Montana and Wyoming, there was a sense of hysteria in the air to catch the money on the fly.

Thoughts of planning for reclamation were as elusive as butterflies.

Some of the mine plans when regarded from a more sober time show disregard of when reclamation would take place---in some cases many years. I do not know how those plans met the standard of contemporaneous reclamation. The states were overwhelmed and over impressed by guys in suits with slide rules and calculators.

With the bankruptcies currently floating through the coal industry, BLM may be getting some of the biggest holes in the world back into its possession. It will be a cold day determining multiple use for some of the pits.

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Comment Number: 0002390\_Pfister\_20160721-6

Organization I:Northern Plains Resource Council

Commenter I:Ellen Pfister

Comment Excerpt Text:

The funds to reclaim the mines should be available, but apparently they are not. Companies that had the best reputations are offering the states a few cents on the dollar for the reclamation costs incurred. Perhaps BLM should collect some costs to carry on reclamation at the end of the lease, since it appears that companies can swindle the states with impunity, and if the states decide not to attempt reclamation, BLM could wind up with the big holes in the ground and no recompense. BLM is already on the hook with its current leases.

BLM should not grant any more coal leases until the reclamation is caught up on the leases that are outstanding. The mines across the West are far from the standard of contemporaneous. This one standard alone would raise a howl of outrage from the industry, but the outstanding question is what has become of the money that should have been being spent on reclamation thus far? BLM needs to find out. I suspect it is not a pretty story.

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Comment Number: 0002393-5

Commenter I:Mike Penfold

Comment Excerpt Text:

There is also the large back log of destroyed land and water that must be restored. Only 14% of mined land has been restored. Mine plans must be scrutinized to ensure timely reclamation.

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Comment Number: 0002438-1

Commenter I:Kathy Heffernan

Comment Excerpt Text:

coal companies must be required to fully reclaim the land they mine.

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Comment Number: 0002449\_Lyon\_20160727\_NWF-17

Organization I:National Wildlife Federation Action Fund

Commenter I:Jim Lyon

Comment Excerpt Text:

Indeed, due to challenges of restoring native habitat in the arid west, no mined areas have been able to reclaim pre-mining conditions – topography is gentler, shrub density lighter, and water balance is changed. (163) Soil

storage is often a problem, with nutrients leaking from soils and/or becoming deposited within nutrient hot spots on soil storage sites. The result is that when soil is reapplied to mining sites, areas are either too nutrient rich or too nutrient poor to support native vegetation, and the vegetation fails. (164) Non-natives and invasions are often primed to outcompete native plants, and weeds will quickly establish themselves on mined areas. Even in areas where natives are planted and take hold, the overall diversity of plants do not match pre mining conditions, lessening habitat quality. (165)

(163) Id. at 25

(164) Id. at 26-28.

(165) Id. at 28-29.

Water balance on sites is also extremely difficult to reclaim. Groundwater tables are often disturbed and lowered, impacting stream flow and timing, drying up wetland areas, and reducing water availability for plants. Coal mining also can cause long term water pollution and sediment issues. (166) With climate change altering hydrological cycles and resulting in conditions favorable for invasives, the challenge of establishing pre-mining conditions gets steeper.

Comment Number: 0002449\_Lyon\_20160727\_NWF-34

Organization I: National Wildlife Federation Action Fund

Commenter I: Jim Lyon

Other Sections: I

Comment Excerpt Text:

Coal leasing on federal land has high external costs that are not being borne by the industry. Major areas of failure include basic compliance with environmental safeguards, particularly reclaiming mined land that serves as important habitat for wildlife; protecting the public through adequate bonds that are third party backed and keep clean-up costs from being passed on to the public; and failure to account for the high and increasing costs of carbon pollution associated with every life-cycle phase of federal coal mining.

As a particularly apt example, a recent report has found that reclamation – a basic requirement of mining – suffers from chronic failure, particularly in the west where the vast majority of federally leased coal is mined. (76) The report finds that coal companies in the west are not fully reclaiming mines to final standards, and the public faces increasing long-term liability for massive reclamation costs of up to \$2 billion and damage to landscapes, wildlife and crucial water supplies. More specifically, after decades of mining, of the 450 square miles of disturbed mined land in Montana, North Dakota, and Wyoming, only 46 square miles has met the final reclamation requirements for final phase III and IV bond release. (77) This calls into question the industry's prospects and capabilities of successfully reclaiming the harsh, brittle and arid ecosystems of western states.

(76) Alexis Bonogofsky, Amanda Jahshan, Hillary Yu, Dan Cohn, Margie MacDonald, *Undermined Promise II* (National Wildlife Federation and Natural Resources Defense Council 2015), available at <http://www.underminedpromise.org/UnderminedPromisell.pdf>.

Comment Number: 0002449\_Lyon\_20160727\_NWF-45

Organization I: National Wildlife Federation Action Fund

Commenter I: Jim Lyon

Comment Excerpt Text:

Surface coal mining is an extraordinarily destructive process. Although SMCRA requires that land be reclaimed contemporaneously with mining, the alarmingly weak financial state of coal companies mining federal coal raises serious questions about the companies' capacity to fulfill reclamation requirements. Currently, in nine states, reclamation self-bonds can be secured by assurances or assets that may not be available in the event of a reclamation claim.

Even for reclaimed sites, the true value of these lands compared to pre-mining conditions is questionable. While some sites may achieve vegetation coverage – the type of vegetation needed that is essential to support pre-mining – native habitats may take decades to become re established. For example, reclaiming mined lands to

sagebrush habitat for sage grouse may take between 15-60 years to develop native shrub communities comparable to pre-mining conditions. (162)

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Comment Number: 0002449\_Lyon\_20160727\_NWF-55

Organization I: National Wildlife Federation Action Fund

Commenter I: Jim Lyon

Other Sections: I

Comment Excerpt Text:

Federal law and related state laws require reclamation to begin as contemporaneously as practicable. (154)

Contemporaneous reclamation promotes environmental protection of land and water resources by: minimizing the length of time lands are disturbed, maintaining stable, non eroding mine sites; reducing fugitive dust from unvegetated areas; and helping to achieve productive post-mining land uses. (155) Specific requirements vary from state to state, but are generally similar to the federal law outlining the phases of bond release.

(154) 30 C.F.R. § 816.100.

(155) Western Organization of Resource Councils, Coal Mine Reclamation and Bonding Fact Sheet (May 2011), available at [http://www.worc.org/userfiles/file/Coal/Coal\\_Mine\\_Reclamation\\_&\\_Bonding.pdf](http://www.worc.org/userfiles/file/Coal/Coal_Mine_Reclamation_&_Bonding.pdf).

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Comment Number: 0002450\_Trainor\_20160727-2

Organization I: Cloud Peak Energy

Commenter I: Michael Trainor

Comment Excerpt Text:

With regards to the environment impacts of mining, consideration must be given to how reclamation is currently regulated. Through the issuance of bonds and the diligence of mining companies, reclaimed lands are often more productive and have less invasive species than before being mined. Mining companies understand that reclamation is a critical part of their license to mine.

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Comment Number: 0002457\_Johnson\_20160728-3

Organization I: Western Slope Conservation Center

Commenter I: Alex Johnson

Comment Excerpt Text:

- Require the highest degree of reclamation standards, full bonding (not self-bonding) for future reclamation activities, requiring thorough analysis of all impacts to air, water and wildlife prior to issuing new leases.

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Comment Number: 0002459\_Ball\_20160728-3

Organization I:

Commenter I: Connie Ball

Comment Excerpt Text:

Surface mining destroys the environment for wildlife and reclamation, if done, still takes decades if not longer for the restoration to come close to the original flora and fauna.

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Comment Number: 0002467\_Fettus\_20160728-15

Organization I: Natural Resources Defense Council

Commenter I: Geoffrey Fettus

Other Sections: I

Comment Excerpt Text:

Every year, OSMRE prepares oversight reports on state programs implementing SMCRA which analyze state-



wide trends regarding contemporaneous reclamation. OSMRE evaluates the effectiveness of a state program achieving reclamation success based on the number of acres that meet the standards for phases of bond release and acres that have been released from bond. BLM should fully consider these reports in the scope of its PEIS and solicit additional information from OSMRE as necessary to disclose the current reclamation status of mines with federal coal leases.

Specifically, the reports on the Wyoming program, where the largest amount of federal coal is being mined, show that contemporaneous reclamation requirements are not being met because of a growing gap between disturbed and reclaimed acreages, delays in reclamation activities, failure to achieve bond release, and operational emphasis on production over reclamation. These reports affirmatively demonstrate that, on average, the rate of land disturbance is much greater than the rate of reclamation for PRB coal mines. OSMRE has stated that “the data shows that the State program may not be fully effective in its goal of having all disturbed lands reclaimed to the approved post-mining land use as contemporaneously as possible.” Annual Evaluation Summary Report For The Wyoming Regulatory Program (OSMRE 2009) at 9. OSMRE concludes that “...there could be delays in backfilling and grading or permanent seeding operations due to the mines’ operational emphasis on coal production over reclamation.” Id.

The risks and impacts associated with the failure to complete these reclamation obligations must be thoroughly examined in the PEIS. The PEIS should also disclose the reclamation and bond release status of all mining operations. BLM must also assess how long land uses will be impacted (e.g. what is the expected time frame for reclamation and the area to re-gain access for grazing, hunting, and recreational purposes?). These impact analyses should be site-specific and cumulative on a regional basis. (23)

(23) As identified by BLM’s sister agency, OSMRE, bond release status is the most objective measure of reclamation success. For example, in Wyoming bond release is tied to restoration progress, and the operator is not eligible for final bond release until re-vegetation standards have been met, pre-mining productivity has been re-established, and pre-mining surface and groundwater quality and quantity (including groundwater recharge capacity) have been restored. See Wyo. Land Quality Regulations Ch. 15 § 5.

Assessing the status of reclamation is fundamental to BLM’s responsibilities to limit coal leasing to those circumstances that are in the public interest. 30 U.S.C. § 201. Federal law makes contemporaneous reclamation a pre-requisite to coal leasing. Leasing and the right to mine coal that it conveys is allowed only where reclamation can and does occur. 30 U.S.C. § 1202(c) (purpose of SMCRA is to “assure that surface mining operations are not conducted where reclamation as required by this Act is not feasible.”). The success and failure of coal companies to reclaim land previously mined is a critical factor in BLM’s determination whether to lease more coal.

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Comment Number: 0002467\_Fettus\_20160728-31

Organization I: Natural Resources Defense Council

Commenter I: Geoffrey Fettus

Comment Excerpt Text:

It is critical that before new leasing, BLM ensure that previously leased lands fully comply with SMCRA, the Clean Water Act, the Clean Air Act, and other environmental requirements governing coal mining and development. However, beyond these legal requirements more often met by EPA, OSMRE, and state agencies, BLM has an independent duty to assess impacts and corresponding mitigation measures pursuant to its mandates under the MLA, FLPMA, and other statutes. This is especially true for areas mining federal coal, where SMCRA and FCLAA has given the Department of Interior special management obligations under federal mining plans and resource recovery and protection plans (R2P2s). In sum, the new federal coal leasing regulatory framework must minimize and mitigate adverse environmental impacts of mining federal coal reserves.

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Comment Number: 0002467\_Fettus\_20160728-58

Organization I:Natural Resources Defense Council

Commenter I:Geoffrey Fettus

Comment Excerpt Text:

Timely and effective reclamation practices are essential to protecting land and water resources, minimizing the length of time lands are disturbed, maintaining stable non-eroding mine sites, reducing fugitive dust from unvegetated areas, and achieving productive end land uses. Inadequate reclamation has substantial adverse impacts, including the spread of noxious weeds, decreased air quality as a result of a larger area of disturbance, less water restoration, and a longer loss of livestock and wildlife pastureland. Absent ensured contemporaneous reclamation, land may not be able to be restored “to a condition equal to or greater than the ‘highest previous use’” as required by Federal and state laws.

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Comment Number: 0002467\_Fettus\_20160728-63

Organization I:Natural Resources Defense Council

Commenter I:Geoffrey Fettus

Other Sections: 2

Comment Excerpt Text:

Facilitating reclamation

As noted, NEPA requires agencies to consider appropriate mitigation measures, which include “[r]ectifying the impact by repairing, rehabilitating, or restoring the affected environment,” “[r]educing or eliminating the impact over time by preservation and maintenance operations during the life of the action; and/or “[c]ompensating for the impact by replacing or providing substitute resources or environments. 40 C.F.R. § 1508.20.

Certain mining sites are more difficult to successfully remediate, and a tract’s design is critical to facilitating successful remediation. To fulfill mitigation requirements under NEPA and other statutes, under this alternative BLM would consider establishing additional unsuitability criteria focused on insuring that remediation can be adequately completed, and additional design criteria to ensure that tract design best aligns with remediation objectives.

BLM would also consider subjecting lease tract design to public comment, including from neighboring landowners, allowing the public the opportunity to weigh in on whether lease design could be improved to ensure reclamation timeliness and success.

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Comment Number: 0002470-15

Organization I:Taxpayer for Common Sense

Commenter I:Ryan Alexander

Comment Excerpt Text:

The BLM must review its bonding regulations and practices to determine whether current arrangements will adequately cover reclamation costs in the event of default. Reclamation costs must be reviewed to keep pace with current development costs. And BLM must change self-bonding practices to ensure that companies have assets adequate to cover all unreclaimed leases.

The Surface Mining Control and Reclamation Act of 1977 (SMCRA) requires coal mining operators to restore all land affected by their operations and to post a bond to cover reclamation costs if they fail to restore the land.<sup>17</sup> With many coal companies financially stressed, the ability of BLM to implement the law’s bonding requirements, particularly in allowing “self-bonding,” is questionable.

(17) P.L. 95-87 - August 3, 1977, Section 509(c)

Comment Number: 0002480\_Culver\_20160728\_TWS-53

Organization I: The Wilderness Society

Commenter I: Nada Culver

Other Sections: | | |

Comment Excerpt Text:

Develop a program to hire mine workers for restoration and rehabilitation beyond the mine site. BLM should also propose a program to employ the skills of mine workers in restoration and rehabilitation of public lands, aimed at both improving resilience of public lands in the face of climate change and their ability to mitigate climate change through biological sequestration.

Over the last several decades, the federal government has invested in programs to address job losses and improve environmental conditions in local areas. BLM should look to, learn from, and improve upon past examples like the watershed restoration and the “Jobs-in-the-Woods Program” from the 1990s and its contemporary incarnations. (69)

(69) Christopher E. DeForest, 1999. Watershed restoration, jobs-in-the woods, and community assistance: Redwood National Park and the Northwest Forest Plan. Gen. Tech. Rep. PNW-GTR-449. Portland, OR: U.S. Department of Agriculture, Forest Service, Pacific Northwest Research Station. 31 p. [http://www.fs.fed.us/pnw/pubs/pnw\\_gtr449.pdf](http://www.fs.fed.us/pnw/pubs/pnw_gtr449.pdf). Last accessed, July 26, 2016. See also, Ecotrust, “Investing in natural assets for the benefit of communities and salmon” brochure, <http://www.ecotrust.org/media/WWRI-Restoration-Economy-Brochure.pdf> describing current economic benefits of restoration for Oregon communities.

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Comment Number: 0002480\_Culver\_20160728\_TWS-6

Organization I: The Wilderness Society

Commenter I: Nada Culver

Comment Excerpt Text:

The BLM should strengthen requirements for companies bidding on leases to ensure that they have sufficient financial resources and technical expertise, have not been cited for violations of environmental regulations in connection with other operations, and have been fulfilling reclamation obligations in connection with other operations. Further, BLM should not issue leases to companies that already have ten or more years of reserves.

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Comment Number: 0002480\_Culver\_20160728\_TWS-7

Organization I: The Wilderness Society

Commenter I: Nada Culver

Comment Excerpt Text:

No new mining should be permitted if there is not a reasonable likelihood reclamation needs and requirements will be met in a reasonable amount of time. The public should not have to wait for generations for its lands to be reclaimed. As provided for by SMCRA, reclamation should occur contemporaneously with mining, and this should be required by BLM-issued documents, as well.

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Comment Number: 0002480\_Culver\_20160728\_TWS-8

Organization I: The Wilderness Society

Commenter I: Nada Culver

Comment Excerpt Text:

Achieving successful, contemporaneous reclamation of lands disturbed by coal mining is a central feature of SMCRA and it should therefore be central to the analysis in the PEIS. The MLA and the BLM’s coal mining regulations also call for ensuring successful reclamation. The PEIS should therefore ensure that strong

reclamation requirements are in place for the federal coal mining program, by rulemaking if necessary. The BLM should seek to meet a goal of restoring the land to the condition it was in prior to mining. As mentioned in the recommendation above, the BLM should prohibit self-bonding as a means to meet coal mining reclamation obligations on the federal mineral estate.

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Comment Number: 0002493\_Mead\_20160728\_GovWY-43

Organization I: Office of Governor Matthew H. Mead

Commenter I: MATTHEW H. MEAD

Other Sections: 17

Comment Excerpt Text:

Coal mining in Wyoming has a temporary impact on livestock and wildlife grazing and management. Wyoming surface coal operators reclaim lands in a timely manner and in compliance with the permitted mine and reclamation plans. Wyoming has primacy from the OSMRE for regulating compliance of these mining operations. Mine and reclamation acres for coal operations in Wyoming as of January 1, 2016 are: 169,639 disturbed acres, 90,214 acres (53%) in active mining/facilities or partially reclaimed; 79,425 acres (47%) reclaimed through final seeding; and 38,000 acres (22%) in agricultural or hay production. Wyoming operators have received national recognition for their excellence in reclamation in 7 out of the past 10 years and range from shrub establishment to stream channel design and function. Wyoming has been and continues to be a national leader in reclamation of disturbed lands and places high importance on returning reclamation to livestock grazing, agricultural production and wildlife habitat in a timely manner.

Successful reclamation in Wyoming is at least two times more productive than pre-mine native rangeland and provides a valuable mechanism for carbon capture and sequestration which must be evaluated by BLM in the PEIS. See Wick, et al., Aggregate and organic matter dynamics in reclaimed soils as indicated by stable carbon isotopes, *Soil Biology and Chemistry*, pp. 1-9 (2008); (WY0-02814 to 02822); and Stahl, et al., Accumulation of organic carbon in reclaimed coal mine soils of Wyoming (2003); (WY0-02824 to 02836). Reclamation of surface mines can provide an avenue for atmospheric CO<sub>2</sub> to be captured as organic carbon in the soil and vegetative community. See Ganjgunte, et al., Accumulation and composition of total organic carbon in reclaimed coal mine lands, *Land Degradation and Development*, 20: 156-175 (2008); (WY0-02838 to 02857); and Miyamoto, et al., Long-term effects of mechanical renovation of a mixed-grass prairie: II. Carbon and Nitrogen Balance, *Arid Land Research and Management*, 18:141-151 (2004); (WY0-02869 to 02880). Reclaimed surface mine soils not only capture significant levels of carbon but also provide higher levels of organic nutrient storage, and thus vegetative biomass, allowing for additional carbon capture. These factors show the importance and benefits reclamation, and subsequent management of soil and vegetation has on the carbon cycle. Id.; (WY0-02869 to 02880); McDermott c, Elavarthi S., Rangelands as carbon sinks to mitigate climate change: A review, *Earth science & climate change*, 5:8 1-12 (2014); (WY0-02882 to 02893); and Rhoades et al., Carbon Sequestration of Surface Mine Lands, Department of Forestry, University of Kentucky, Department of Soil Science, North Carolina State University; (WY0-02895 to 02916).

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Comment Number: 0002499\_Nichols20160728-4

Organization I: WildEarth Guardians

Commenter I: Jeremy Nichols

Other Sections: 4.5 2 8.1 8.7 8.5 7.1 11

Comment Excerpt Text:

2. Just Transition Alternative

The “Just Transition Alternative” is meant to both wind down the federal coal program in order to keep fossil fuels in the ground and to ensure an orderly, effective, and fair transition of workers and communities away from coal to more prosperous and sustainable economies. The “Just Transition Alternative” is defined by the following key components:

1. An end to federal coal leasing: Consistent with authorities and discretion under the Mineral Leasing Act, the

Just Transition Alternative imposes a permanent pause on the leasing of federal coal. The primary basis for adopting this permanent pause would be to ensure the protection of the public interest and the interests of the United States. Such justification for an end to leasing is clearly supported by the Mineral Leasing Act.

This pause would apply to all competitive leases (including all leases by application, including emergency leases, as defined by 43 C.F.R. § 3425.1-4) and lease modifications. We further believe there is ample justification for applying a permanent pause to other forms of non-competitive leasing, such as preference right lease applications and lease exchanges. With regards to lease exchanges, the BLM has clear authority to reject exchanges that are not in the “public interest.” 43 C.F.R. § 3435.4(a); see also 43 C.F.R. § 3436.0-2(b) (related to alluvial valley floor exchanges) and 43 C.F.R. § 2200.0-6 (generally related to exchanges). With regards to preference right lease applications, the BLM has the authority to reject such applications where there does not exist “commercial quantities” of coal. 43 C.F.R. § 3430.5-1(a)(1). Given the dismal state of the coal industry and the overwhelming climate costs that coal imposes on society, it would be dubious at best to claim that any commercial quantities of coal exist where there are preference right lease applications. Accordingly, the BLM has the authority to reject such applications. (20)

Furthermore, to ensure an orderly end to federal coal leasing, the BLM and the Department of the Interior should issue a rule or guidance requiring that as land management planning is undertaken pursuant to 43 C.F.R. § 1610, et seq., that all lands within a resource management area that are not currently leased for coal, be made unavailable for leasing. The authority to impose such direction is set forth at 43 C.F.R. § 3420.1-4(e), which gives the BLM broad discretion to “eliminate additional coal deposits from consideration to protect other resource values.” 43 C.F.R. § 3420.1-4(e)(3).

(20) The only preference right lease applications that exist are in northwestern New Mexico, where Arch Coal, which is currently bankrupt, has the rights to acquire 21,000 acres of leases. Legislation was introduced in the U.S. House of Representatives that would allow the Secretary to retire these preference right lease applications. See HR-1820, available online at <https://www.congress.gov/bill/114th-congress/house-bill/1820/text>. If this legislation is passed, there would be no additional preference right lease applications requiring action. We support this legislation and urge the Secretary of the Interior to encourage its passage in the U.S. Senate and adoption into law.

Putting a permanent pause on leasing will not destroy the U.S. economy or otherwise endanger our energy security. As a recent report looking at leasing in the Powder River Basin found, existing leased reserves in the Powder River Basin are sufficient to meet demand and effectively contribute to limiting temperature increases.

(21) This report is instructive as the Powder River Basin is the largest coal producing region in the United States and imposes the greatest influence on energy supply and demand in the nation. If an end to federal leasing can be justified in the Powder River Basin, it can be justified for federal leasing elsewhere in the U.S.

21 See Exhibit 11, Fulton, M., D. Koplow, R. Capalino, and A. Grant, “Enough Already: Meeting 20C PRB Coal Demand Without Lifting the Federal Moratorium,” Report Prepared for Energy Transition Advisors, Earth Track, and Carbon Tracker Initiative (July 2016), available online at <http://www.carbontracker.org/report/enough-already-2c-powder-river-basin-coal-demand-federal-moratorium/>.

2. Increased royalty rates and rentals: Coal is exacting a tremendous toll on our nation, costing our society billions in climate damages, adverse health impacts from air pollution, and water contamination. Royalty rates from production on existing coal leases and rentals on existing leases must be increased to begin to recoup the costs of these externalities, which are currently shouldered by the public.

Although royalty rates are normally imposed through new leasing, we recommend that the Interior Department and BLM incorporate higher royalty rates into existing leases as existing leases are readjusted pursuant to 43 C.F.R. § 3451.1. To accomplish this, we urge the amendment of 43 C.F.R. § 3473.3-2(a)(1) and (2) to incorporate increased royalty rates for both surface and underground mining. As leases are readjusted, these royalty rates must be applied to existing leases pursuant to 43 C.F.R. § 3451.1(a)(2).

Increasing royalty rates has been recommended by the White House as both a means to generate revenue and address the costs of environmental externalities, including carbon costs. (22)

(22) See Exhibit 12, Executive Office of the President of the United States, “The Economics of Coal Leasing on Federal Lands: Ensuring a Fair Return to Taxpayers” (June 2016), available online at

[https://www.whitehouse.gov/sites/default/files/page/files/20160622\\_cea\\_coal\\_leasing.pdf](https://www.whitehouse.gov/sites/default/files/page/files/20160622_cea_coal_leasing.pdf).

Furthermore, royalty rate reductions should not be approved. Currently, royalty rate reductions are routinely granted as companies claim poverty or difficulty in mining with little apparent scrutiny as to whether the reductions are justified. In Colorado, for example, BLM officials have approved royalty rate reductions to facilitate methane venting and most recently proposed to approve a retroactive royalty rate reduction for a mine that was not even producing coal. (23) See Exhibits 13 and 14.

Similarly, we urge Interior and BLM to amend 43 C.F.R. § 3473.3-1(a) to raise rental rates for federal coal leases. Currently, rental rates are set at \$3.00 per acre, a figure that has not been adjusted since 1979, if not earlier. This rental rate not only has failed to be adjusted to account for inflation, but fails to account for the fact that some leases may be of small acreage, yet yield significant amounts of coal. Rentals should reflect the value of the lease, which depends on the amount of coal a lease contains. In accordance with 43 C.F.R. § 3473.3-1(a), any increased rental rate must be applied to any readjusted coal lease.

3. Existing leases that are not producing must be canceled: Where a lease is not meeting continued operation requirements under 43 C.F.R. § 3483.1(a)(2), it is subject to cancellation pursuant to 43 C.F.R. § 3452.2. Where a lease is not meeting continued operation requirements, BLM and the Interior Department should make clear that cancellation of the lease must be pursued. To this end, discretionary avenues for avoiding cancellation should be prohibited. Thus, lease suspensions under 43 C.F.R. § 3483.3 and payment of advanced royalties in lieu of continued operation under 43 C.F.R. § 3483.4 should be barred.

The justification for imposing such direction is very clear. Currently, BLM regularly grants lease suspensions and allows payment of royalties in lieu of continued operation with no assessment of whether such actions are appropriate or in the public interest. BLM appears to be under the impression that lease suspensions or advanced royalties are somehow mandated, and that the agency has no choice but to approve company requests. An egregious example of this is with regards to Arch Coal's Carbon Basin Lease in southern Wyoming (No. WYW-139975). Arch acquired this lease with the aim of developing a mine to fuel a proposed coal to liquids facility. However, this coal to liquids facility has never materialized or even shown any promise of materializing. Most recently, the Wyoming Department of Environmental Quality terminated the permit for the proposed facility. (24) Nevertheless, since 2010, Arch has failed to meet continued operation requirements. The BLM has allowed Arch to maintain its lease, however, by routinely allowing the company to pay advanced royalties in lieu of continued operation. (25) These decisions appear to be pro forma in nature, and do not reflect any consideration as to whether it is appropriate or remotely in the public interest to accept advance royalties in lieu of continued operation.

(24) See Exhibit 15, Wyoming Department of Environmental Quality, "Permit Termination, Medicine Bow Fuel and Power Coal to Liquid Project" (June 27, 2016).

(25) See Exhibit 16.

Furthermore, where an existing lease is not producing, yet is part of a producing logical mining unit, BLM and the Interior Department should use their discretion to modify the boundaries of logical mining units to eliminate the non-producing lease and facilitate its cancellation. BLM has such discretion under 43 C.F.R. § 3478.1.

Cancelling leases that are not producing will serve the goal of preventing any potential future development of existing leases and contribute to an orderly end to the federal coal program.

4. Accounting for carbon costs in coal management: It should be made clear, whether through new rules or guidance, that carbon costs must be analyzed, assessed and disclosed as federal coal management decisions are made. Such decisions are most likely to include mining plan modifications issued pursuant to the Mineral Leasing Act, 30 U.S.C. § 207(c), and the Surface Mining Control and Reclamation Act ("SMCRA"), 30 C.F.R. § 746, and lease readjustments. It is imperative that the BLM and Interior maintain close accounting of the carbon emissions and costs resulting from its coal management actions, to ensure full transparency around these emissions and costs, and to meaningfully act to address these emissions and costs. Particularly given that, pursuant to authorities under the Mineral Leasing Act and SMCRA, the Secretary of the Interior has full discretion to disapprove mining plans authorizing the development of leased federal coal, it is imperative that carbon emissions and costs factor into and influence such decisionmaking.

5. Reclamation must be guaranteed: To ensure an orderly end to the federal coal program, full and final reclamation must be guaranteed within a reasonable timeframe. We urge two regulatory changes to ensure this occurs.

First, Interior should amend regulations at 30 C.F.R. §§ 816.100 and 817.100 to provide clarification and specificity around contemporaneous reclamation. Current rules are vague and fail to ensure that reclamation proceeds in a manner that is as “contemporaneously as possible” with mining in accordance with 30 U.S.C. § 1202(e). These regulations should be amended to make clear that the success of contemporaneous reclamation must be measured based on a comparison of Phase III bond release acres, as defined under 30 C.F.R.

§ 800.40(c)(3), with disturbed acres and ensure that reclamation proceeds at a 1:1 rate, in other words for every acre disturbed, one acre should be fully reclaimed to meet Phase III bond release standards.

Second, just as current BLM rules require diligent development of federal coal, these rules should also require diligent reclamation. To this end, Interior and BLM should consider rule changes to ensure that nonproducing coal leases are fully reclaimed within two years of failing to meet continued operation requirements and set deadlines for the full reclamation of federal coal leases that are no later than 2035. This reclamation deadline should be established by rule and incorporated into lease terms as leases are readjusted.

Finally, Interior should amend self-bonding regulations at 30 C.F.R. § 800.23, and any other regulations, as appropriate, to prohibit self-bonding whenever publicly owned coal is permitted to be mined. This will ensure that, as coal companies continue their decline, that American public resources are fully protected and fully guaranteed to be cleaned up.

6. Prioritizing transition: Above all, the BLM and Interior must make transition away from coal a foremost goal as the federal coal program comes to an end. To do this, the agencies should not only explicitly commit, to the extent possible, their leadership, resources, and expertise to ensure that workers and communities receive the support and assistance they need to transition to more sustainable and prosperous economies. Among the actions that Interior and BLM can and should undertake to ensure transition:

-Work to secure Congressional authorization to direct increased royalty and rental payments toward worker and community support. Under NEPA, agencies are required to rigorously explore and objectively evaluate reasonable alternatives “not within the jurisdiction of the lead agency.” 40 C.F.R. § 1502.14(c). Here, although BLM and Interior may not be able to direct royalties toward transition support, they can recommend that Congress pass legislation that provides such authorization.

-Establishing an Economic Transition Fund, which would be sustained by an increase in reimbursement fees charged by the Interior Department when processing coal-related applications. Under the Federal Land Policy and Management Act (“FLPMA”), Interior has authority to recover reasonable costs associated with its coal management program and to appropriate and spend such monies. Specifically, FLPMA provides the Secretary of the Interior with authority to “require a deposit of any payments intended to reimburse the United States for reasonable costs with respect to applications,” including coal lease application. See 43 U.S.C. § 1734(b). Such payments are “authorized to be appropriated and made available until expended” by FLPMA. Id. Funds from the Economic Transition Fund should be directed toward transition-oriented initiatives.

-Prioritizing support and assistance to help communities transition. In addition to securing funds and making them available, the Department of the Interior can play a key role in helping direct communities to support, steering resources to support conservation and research projects in or near communities, encouraging renewable energy development on public lands. Such leadership could be conveyed through a Secretarial Order that simply makes it an overarching priority of the Interior Department to advance transition

Overall, the Interior Department and BLM must move to keep our publicly owned coal in the ground. However, keeping coal in the ground should not mean that we turn our backs on the workers and communities that have been dependent on coal for so long. Embracing an alternative that ensures “Just Transition,” in other a fair, compassionate, and orderly transition away from coal, is the most effective way to both protect our climate and help our nation effectively move to more sustainable economies and reliable and affordable means of energy production.

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Comment Number: 0002506\_Nichols\_20160729-5

Organization I: Wild Earth Guardians

Commenter I: Jeremy Nichols

Comment Excerpt Text:

Reclamation must be guaranteed: Your Interior Department must not only ensure that coal companies can pay for the reclamation of their mines, but also accomplish reclamation where they are mining publicly owned coal. We urge you to ensure deadlines for full and final reclamation are established and enforced to ensure that as the federal coal program winds down, effective clean up does not lag behind.

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Comment Number: 0002513\_Lish\_20160707-2

Organization I:

Commenter I: Christopher Lish

Comment Excerpt Text:

A comprehensive review of the federal coal program must ensure that coal companies clean up their pollution caused by mining and coal ash disposal. Despite the low lease fees, coal companies are in debt and relying on self-insurance. They are then walking away from the remaining pollution when they go bankrupt. Even worse, as some of the world's largest coal companies file for bankruptcy protection, coal executives are reaping millions of dollars' worth of compensation packages while laying off coal workers and dumping the costs of clean-up and reclamation on taxpayers.

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Comment Number: 0002942\_Harbine-9

Organization I: Earthjustice

Commenter I: Jenny Harbine

Comment Excerpt Text:

The PEIS Should Evaluate Unmet Reclamation Obligations The PEIS also must examine the impacts of federal coal leasing in light of the coal industry's general failure to meet obligations to reclaim mined land. The Surface Mining Control and Reclamation Act ("SMCRA"), 30 U.S.C. §§1201-1328, establishes minimum federal standards for the regulation of coal mining. Pursuant to SMCRA, most states have primary coal-mine permitting authority under state regulatory programs that satisfy those minimum standards. One key component of an application for a permit to mine is the "reclamation plan." Id. § 1258. SMCRA requires the operator to restore the affected land to a condition capable of supporting the uses it could support before mining, or to "higher or better uses." Id. § 1265(b)(2). The operator must also: restore the approximate original contour of the land by backfilling, grading, and compacting; minimize disturbances to the hydrologic system by avoiding acid mine drainage and preventing additional contributions of suspended solids to nearby streams and other water bodies; "insure that all reclamation efforts proceed in an 217 Id. at 8-13. 218 See id. at 13-18. 219 Id. at 18. 60 environmentally sound manner and as contemporaneously as practicable with the surface coal mining operations;" and establish a permanent vegetative cover in the affected area. Id. § 1265(b). In addition, "after a surface coal mining and reclamation permit application has been approved but before such a permit is issued," the operator must furnish a bond for the area of land on which mining will occur during the five-year permit term. Id. § 1259(a). "The amount of the bond required for each bonded area shall depend upon the reclamation requirements of the approved permit; shall reflect the probable difficulty of reclamation giving consideration to such factors as topography, geology of the site, hydrology, and revegetation potential, and shall be determined by the regulatory authority." Id. The Secretary of the Interior may approve state programs that authorize "self-bonding" where "the applicant demonstrates to the satisfaction of the regulatory authority ... a history of financial solvency and continuous operation sufficient for authorization to self-insure or bond such amount or in lieu of the establishment of a bonding program." Id. § 1259(c). Eighteen states currently allow self-bonding. 220 Coal-mine operators almost universally fail to meet SMCRA's reclamation standards, and increasingly fall short of their bonding obligations. The National Wildlife Federation, Western Organization of Resource Councils, and Natural



Resources Defense Council published a report in 2015, “Undermined Promise II,” documenting reclamation and enforcement failures under SMCRA. 221 Of 287,442 acres of disturbed land in Montana, North Dakota and Wyoming, only 29,673 acres have achieved Phase III bond release, demonstrating successful establishment of vegetation and soils to satisfy permit requirements for post mining land uses. 222 257,769 acres—or more than 400 square miles—remain unreclaimed by federal standards. In addition, reclamation that is accomplished often is inadequate to restore pre-mining conditions, particularly hydrologic and habitat conditions. “Mining always alters the ecosystem – topography is gentler, shrub density is lighter, water balance is altered. The long term and cumulative impacts of coal mining and reclamation are significant and often permanent.”<sup>223</sup> While reclamation of mined land historically has been inadequate, the problem is exacerbated by the dismal state of current coal markets and financial insolvency of coal producers. According to the most recent data reported by the States, outstanding self-bond obligations total approximately \$3.86 billion. Of that total, \$2.4 billion is held by coal companies currently or recently in bankruptcy. 224 As OSMRE observed, this raises “a concern about whether disturbed coal mines will be reclaimed by the bankrupt companies; whether the 220 Office of Surface Mining Reclamation and Enforcement, Notice of availability of petition to initiate rulemaking and request for comments on the petition, 81 Fed. Reg. 31,880 (May 20, 2016). 221 National Wildlife Federation et al., UNDERMINED PROMISE II (June 2015), attached as Ex.40. 222 UNDERMINED PROMISE, at 7 223 Id. at 25. 224 Office of Surface Mining Reclamation and Enforcement, Notice of availability, 81 Fed. Reg. at 31,880. 61 bankrupt companies will abandon their legal obligations to restore impacted lands and waters; whether the costs to restore the land and water will be shifted to taxpayers; and, whether the existing regulations are adequate to protect people, communities, and the environment as envisioned by Congress when it enacted SMCRA.”<sup>225</sup> Further, because coal companies have been allowed to self-bond so many acres of disturbed land, they have acquired significant leverage over state regulators desperate to avoid permit forfeitures and the associated transfer of reclamation liability to the state. BLM echoed these concerns in the NOI, observing that given the state of the coal market, many stakeholders have expressed concern over the practice of “self-bonding” and noted that the combination of depressed market conditions and reluctant enforcement of existing regulations threaten to put states and taxpayers on the hook for coal companies’ unfunded reclamation obligations. 226 In response, BLM specifically sought input as part of the PEIS process on whether it should “[p]rohibit or otherwise limit leasing to entities that are not meeting their environmental responsibilities, such as ... Entities that have not met their reclamation or bonding (including bond release) requirements.”<sup>227</sup> Consistent with BLM’s NEPA obligation to take a hard look at the economic and environmental consequences of its proposals, BLM must acknowledge the current state of the market—and the hundreds of millions of dollars of under-funded “self-bonds” held by companies currently in bankruptcy—and explain how BLM’s proposals could impact the economic effects of its considered alternatives, particularly the risks to taxpayers and states of continued reliance on self-bonding practices for coal mines situated on federal lands. Further, the PEIS must examine the environmental impacts of mining federal coal in light of the coal industry’s overall failure to meet SMCRA’s reclamation standards—a situation that is worsened by the proliferation of self-bonding and financial instability of the coal industry. The Secretary of Interior should take action to prohibit financially vulnerable companies from utilizing “self-bonds,” including those that emerge from the recent spate of coal company bankruptcies. In the short term, however, OSMRE need not tie its action to the federal coal leasing PEIS process. On July 20, 2016, Sierra Club, Earthjustice, and nine other organizations submitted extensive comments to OSMRE in response to a call for public comments on a petition to initiate changes to existing self-bonding regulations. 228 Additionally, Sierra Club and more than thirty other organizations submitted similar comments on the same rulemaking on July 14, 2016.<sup>229</sup> As explained in those comments, extensive reliance on self-bonding puts taxpayers in an unnecessary and dangerous position. OSMRE should step in to correct this situation by 225 Id. at 31,881. 226 Notice of Intent, 81 Fed. Reg. 17,724. 227 Id. at 17,727. 228 Letter from Sierra Club et. al to Office of Surface Mining Reclamation and Enforcement (July 20, 2016), attached as Ex. 41. 229 Letter from Powder River Basin Resource Council et. al to Office of Surface Mining Reclamation and Enforcement (July 14, 2016), attached as Ex. 42. 62 taking immediate action under the existing regulations to transition self-bonded mine operators towards surety bonds or other financial instruments held by third parties. The federal SMCRA statute authorizes self-bonds, but only where the regulator determines that there is “a history of financial solvency and continuous operation

sufficient for authorization to self-insure or bond such amount.” 30 U.S.C. § 1259(c). The statute’s emphasis on the regulator’s discretion means that self-bonding may be authorized, but it is not mandatory. Furthermore, self-bonding should be available only in limited circumstances. The federal bonding regulations underscore this point by emphasizing that a “regulatory authority may accept a self-bond from an applicant for a permit if all of the [specified] conditions are met by the applicant or its parent corporation guarantor.” 30 C.F.R. § 800.23 (emphasis added). Like the enabling statute, the regulations are clear that even where a mine operator or its guarantor satisfies all of the enumerated financial conditions, the regulator nonetheless retains the discretion to deny an application for a new or renewed self-bond and require the use of a different form of bond. SMCRA and its implementing regulations provide the regulatory authority with “case-by-case discretion to consider factors particular to a case which may indicate, for instance, that even though the applicant meets the general qualifications of the self-bonding rules, past behavior tending to undercut the soundness of the applicant, or other factors, may dictate refusal.” 48 Fed. Reg. at 36,420. OSMRE should immediately release additional guidance to state regulators clarifying that due to the extremely high risk of insolvency within the coal mining industry at this time, self-bonding is not appropriate, even for companies that satisfy the 30 C.F.R. § 800.23(b)(3) criteria. In particular, OSMRE should emphasize that operators who have emerged from bankruptcy within the last five years are not eligible for self-bonding, even if they—or a separate guarantor—otherwise satisfy the specified criteria. Insolvency and bankruptcy represent precisely the sort of “past behavior” that OSMRE has determined should render an operator ineligible for self-bonding. In the longer term, among other changes, OSMRE should revise its existing regulations to ensure that the financial fitness tests are strong enough to ensure that only truly sound companies qualify for the practice. 230 As explained in that letter, “recent history clearly demonstrates the financial fitness metrics in the current regulations do not properly ensure that only healthy, stable companies with low risk of bankruptcy can self-bond. The regulatory financial fitness tests should be thoroughly rewritten to ensure that self-bonded companies are financially sound enough to live up to their cleanup commitments.”<sup>231</sup> While OSMRE is responsible for ensuring that coal companies meet their reclamation obligations under SMCRA, BLM must consider the implications of the coal industry’s enduring 230 Sierra Club et. al letter to Office of Surface Mining Reclamation and Enforcement at 5 (July 20, 2016) (Ex. 41). 231 Id. 63 failure to satisfy those obligations—a failure likely exacerbated by the industry’s financial instability—in its analysis of the environmental consequences of the federal coal program. F. The EIS Must Analyze the Impacts of Federal Coal Exports and the Implications of Under-Valued Coal Federal coal leasing affects the environment at each stage of the coal lifecycle, from exploration, extraction, and transport, to processing and use. Coal export expands and intensifies this lifecycle. Exports can also effect coal price and increase coal consumption. NEPA requires that federal agencies consider the reasonably foreseeable direct and indirect impacts of their actions, even if the extent of these impacts is not known. See 42 U.S.C. § 4332(2)(C), 40 C.F.R. § 1508.8; see also *Mid States Coal. for Progress*, 345 F.3d at 549-550 (finding that the agency should examine the rail project’s reasonably foreseeable effect of increasing coal consumption). Consequently, the PEIS should analyze the impacts of allowing federal coal export, consider exports in its coal-price valuation, and, given the adverse impacts of coal exports, consider whether to lease federal land where the coal is likely bound for international markets.

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Comment Number: 0003007\_MasterFormF\_WEG-3

Organization I: WildEarth Guardians

Comment Excerpt Text:

Ensuring the industry pays: Reforms need to hold coal companies fully accountable to expeditiously cleaning up their mining operations, ensure companies pay their fair share to the American public while they wind down their operations, and eliminate any and all loopholes or breaks that let the likes of Arch and Peabody put the cost of coal on American taxpayers.

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Comment Number: 0003008\_MasterFormG\_NWF-I

Organization I: National Wildlife Federation

Comment Excerpt Text:

Coal mining on our public lands involves huge risks and harm to wildlife and other resources. Coal companies haven't been paying their fair share or living up to their responsibility to clean up their messes. Now coal companies are using bankruptcy to walk away from their promises to reclaim our public lands. They're walking away from wildlife protections.

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Comment Number: 0003010\_MasterFormI\_PhysiciansSocialRespon-6

Organization I: Physicians for Social Responsibility

Comment Excerpt Text:

In addition, a comprehensive review of the federal coal program must ensure that coal companies clean up their pollution caused by mining and coal ash disposal. Despite the low lease fees, coal companies are in debt and relying on self-insurance. They are then walking away from the remaining pollution when they go bankrupt.

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Comment Number: 0003015\_MasterFormN2\_WORC-3

Organization I: Western Organization of Resource Councils

Comment Excerpt Text:

Holding mining companies accountable to clean up what they've already mined before giving them any more public coal.

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Comment Number: 0003050\_Heath\_20160729-1

Commenter I: Soulin Heath

Comment Excerpt Text:

The coal mining process in of itself is destructive to the surrounding areas not just limited only to the mine site. The burdensome costs related to the mass cleanup of coal and other mines historically has all too often ended up on the shoulders of the tax paying public while the profits have been gained by just a few. Then to add insult to injury, when the 'public' land's lease is up, the land is usually not useable by the owners (the public) and is dangerous, and polluted. Oftentimes mines have had hazardous pollutants leach into or drain into public and municipal waterways and not only is the mine site on said 'public' land rendered hazardous it can and probably will negatively affect surrounding areas by emitting toxic runoff (and may be gasses into air also) into waterways. further Furthermore, the public's liability and future usability of the land after the lease is up should be far more considered when deciding any land lease, particularly for any extractive uses.

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Comment Number: 0003051\_Taylor\_20160729-2

Organization I:

Commenter I: Bruce Taylor

Comment Excerpt Text:

The coal companies are all under major financial stress due to low commodity prices. Their business plan will be to mine the coal, take the money, and leave the cost of clean up to the tax payers.

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Comment Number: 0003300\_MasterFormU\_WVP-2

Organization I: Western Values Project

Comment Excerpt Text:

Ensure coal companies with current leases fully comply with standards for full and concurrent reclamation compliance, before they are allowed to lease again.

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Comment Number: 0020001\_Murnion\_20160712-1

Organization I:

Commenter I: David Murnion

Comment Excerpt Text:

The present methods of reclamation of strip mines land is inadequate.

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Comment Number: 0020008\_Hoem\_20160712-4

Commenter I: Harold Hoem

Comment Excerpt Text:

Reclamation. The BLM should consider and evaluate what a company's history has been in reclaiming land. The company should not be given any new leases until reclamation of already mined land has been completed. The industry's record on reclamation, particularly regarding water, is dismal. The reclamation record has not been contemporaneous, and damage is not being effectively ameliorated.

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Comment Number: 0020013\_Hyndman\_20160712-4

Commenter I: Donald Hyndman

Comment Excerpt Text:

In addition, MT mining companies reclamation record is dismal and not keeping up with their mining.

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Comment Number: 0020014\_Coppager\_20160712-1

Commenter I: R. Coppager

Comment Excerpt Text:

It is evident that the Powder River Basin coal mine operators are not performing their required amount of mined lands reclamation

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Comment Number: 0020016\_Willims\_20160712-5

Commenter I: Raymond Willims

Other Sections: 2

Comment Excerpt Text:

Leases should not be granted to companies who have failed in reclamation of prior leases.

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Comment Number: 0020017\_Devlin\_20160712-1

Commenter I: Juliane Devlin

Comment Excerpt Text:

Cleanup and reclamation must be monitored and completed

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Comment Number: 0020023\_Baer\_20160712-4

Commenter I: Carl Baer

Comment Excerpt Text:

Reclamation lags way behind mining and like other extraction industries they drag it out as long as they can if they do it at all.

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Comment Number: 0020031\_Parkins\_20160722-12

Commenter I: 438596

Comment Excerpt Text:

The BLM should not have any responsibility with regards to determining the operator's position with respect to reclamation. This is covered by the mining permit. Mining permit oversight is conducted by individual State

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agencies with OSM oversight. Within existing regulations mining companies are required to maintain contemporaneous reclamation and can be forced to curtail operations should they fail to achieve acceptable reclamation within specific timelines.

Additional stipulations or regulations by the BLM in this area would only add confusion to the process that already exists to address reclamation and in my mind would result in lawsuit after lawsuit to clarify the differences that would undoubtedly result from a duplicate set of regulations in this area.

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Comment Number: 0020043-2

Organization I:Unitarian Church

Commenter I:Barbara Davenport

Comment Excerpt Text:

Coal companies should be responsible for clean up and remediation.

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Comment Number: 0020052-10

Organization I:Tri-State Generation and Transmission Association, Inc.

Commenter I:Barbara A. Walz

Comment Excerpt Text:

The long term benefits that coal mining can have for the environment, specifically the reinvigoration of wildlife habitats which may be in decline or of poor quality to start.

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Comment Number: Dvorak\_DvorakRaftingFishing\_20160623-1

Organization I:Dvorak Rafting and Fishing Expeditions

Commenter I:Bill Dvorak

Comment Excerpt Text:

Where I live in central Colorado between Buena Vista and Salida we have also seen the ramifications of mining companies not being responsible for reclamation and cleanup. We had a toxic plume on the Arkansas in 1985 that makes the recent plume on the Animas near Durango seem almost inconsequential. It killed everything. Invertebrates, fish, aquatic plants, everything!  
It's taken over 20 years and many millions of taxpayers' dollars to get it right and continues to need more millions every year to maintain it'd current status.

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Comment Number: WO\_CoalPEIS\_0002437\_Downing\_20160727\_WyMineAssoc-22

Organization I:Wyoming Mining Association

Commenter I:Jonathan Downing

Other Sections: 2

Comment Excerpt Text:

Direct reclamation oversight is rightly provided by state officials of the Wyoming Department of Environmental Quality (DEQ), and accounting for reclamation in the BLM leasing process is unnecessary. Reclamation progress is painstakingly monitored by the DEQ and is guided by mine plans and staff review. Annual reports are exhaustive and comply with state and federal requirements. Proper state, federal and producer communication should be the avenue to determine if responsibilities have been met. There should be no questions or obstacles to the BLM checking on reclamation activities with the state.

BLM should consult the State DEQ's reclamation records to determine the success of the State's reclamation program.

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Comment Number: WO\_CoalPEIS\_0002437\_Downing\_20160727\_WyMineAssoc-23

Organization I: Wyoming Mining Association

Commenter I: Jonathan Downing

Comment Excerpt Text:

In fact, reclamation in Wyoming has been recognized at both the federal and state levels as arguably the best and most successful efforts in the nation since the enactment of the Surface Mining and Reclamation Act. Wyoming has been managing this effort for 45 years. Now is not the time to invent yet another duplicative regulatory program at the public's expense.

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Comment Number: WO\_CoalPEIS\_0003061\_Post\_N\_20160707-2

Commenter I: Charlie Post

Other Sections: 8.6

Comment Excerpt Text:

Requiring adequate bonding to FULLY cover the costs of remediation,

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Comment Number: 000001208\_Grobe\_20160623-1

Organization I: Moffat County

Commenter I: Chuck Grobe

Comment Excerpt Text:

Is, number 1, the reclamation efforts made during the mining of the coal improved land quality immensely. We have at Trapper Mine, through the reclamation, we have a lot more animal species in the, in the community, a lot better habitat for them. It's also happening at Colowyo and [indiscernible]. And it's also with Colowyo. The same thing with the reclamation efforts. One rancher has said that his family has had the least -- at Trapper Mine since the '20s and since the reclamation, they're getting three times the output of hay and wheat and, and being able to put more animals on that property.

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Comment Number: 000001226\_TYSON\_20160623-1

Organization I: Colorado Wildlife Federation

Commenter I: James Tyson

Comment Excerpt Text:

The BLM and coal extraction [indiscernible] must be held accountable when reclamation planning or implementation fails to restore, to the extent possible, wildlife and habitat that has been displaced. If handled properly, this accountability can be extremely positive step forward for leasees and the BLM while bolstering Colorado's economy through direct job creation and remediation and sustaining or augmenting the substantial outdoor recreation segment of the economy.

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Comment Number: 000001228\_BASTABLE\_20160623-1

Organization I: National Wildlife Federation

Commenter I: Clare Bastable

Other Sections: 17

Comment Excerpt Text:

Out of a total of 450 square miles of mined lands across Wyoming, Montana, and North Dakota alone, only 46 square miles, or around 10 percent of these lands, have been fully reclaimed. Lack of adequate reclamation presents significant threats to the 300 species in the [indiscernible] and the future of our backcountry experiences and those of future generations. Second, related to this, OSM needs to end self-bonding practices. Recent bankruptcies have left behind \$3.6 billion in self-bonding liability to taxpayers. Communities simply cannot

afford to take on this liability. And third, the royalty rate needs to be modernized; and a portion of funds from royalty rates should be used to mitigate impacts of mining on wildlife and its habitat. The BLM has no easy task, as it sets out to appropriately modernize its Coal Leasing Program.

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Comment Number: 000001256\_Best\_20160623-2

Organization I:Greenpeace

Commenter I:Diana Best

Comment Excerpt Text:

The second

reform is coal companies must be held fully accountable for the cleaning up of their mine site, so the significant reclamation cost and responsibility isn't left to taxpayers. This could include denying any and future -- any future coal leases for coal companies that have failed to reclaim mine sites and/or taking back undeveloped leases if companies have failed to make good on reclamation commitments. Dozens of coal companies that we've heard today have already filed for bankruptcy, including three of the four large Powder River Basin companies. Yet these same companies are continuing to pursue lease applications and new modification. I believe this is unacceptable. If you can't cover the existing cost, you can't continue to grow your operation banking on a public bailout.

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Comment Number: 000001257\_Petersen\_20160623-5

Organization I:Associated Governments of Northwest Colorado

Commenter I:Bonnie Petersen

Comment Excerpt Text:

Reclamation

on these coal mines. People come to Colorado and love our land. Oftentimes don't realize that they kill their first [indiscernible] or get their first fish off of reclaimed coal mines. Reclamation is one of the major improvements to habitats that we get in, in Colorado, particularly Western Colorado

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Comment Number: 000001258\_Inouye\_20160623-5

Organization I:

Commenter I:David Inouye

Comment Excerpt Text:

You also need to make sure that restoration will occur. It can be successful. But, how will bankrupt companies follow through with that restoration? So, these ecological impacts can be minimized if we minimize future Federal coal resources.

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Comment Number: 000001261\_Beebe\_20160623-2

Organization I:Utah Sierra Club

Commenter I:Lindsay Beebe

Comment Excerpt Text:

We must also ensure that sufficient funds are secured from the coal industry and are -- and not the taxpayer, to reclaim the sacrifice zones coal mines leave behind, so that we don't end up leaving our children with another version of the Gold King Mine spill, for example.

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Comment Number: 00001269\_Post\_20160623-3

Organization I:

Commenter I:Charlie Post

## Comment Excerpt Text:

The reclamation process. I attended another meeting. And it said that seven to 10 years out that some of these areas are still not being reclaimed. And I -- I'm dumbfounded at why that's being allowed. Two to five years, that should be the amount of time that we're talking about for them to be done on all public lands. The lease doesn't cover them for an indeterminate period of time.

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Comment Number: 0003300\_MasterFormU\_WVP-2

Organization I:Western Values Project

## Comment Excerpt Text:

Ensure coal companies with current leases fully comply with standards for full and concurrent reclamation compliance, before they are allowed to lease again.

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Comment Number: 0000842\_Mantell\_WildernessSociety-4

Organization I:The Wilderness Society

Commenter I:Joshua Mantell

## Comment Excerpt Text:

And four, there is a terrible record of reclaiming old mines. We should not be leasing to companies that have a poor track record of cleaning up land

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Comment Number: 0000845\_Lyon\_NWF-3

Organization I:Naitonal Wildlife Federation

Commenter I:Jim Lyon

## Comment Excerpt Text:

Our report recently found that of the 450 square miles of mined land in the Powder River Basin, only 46 square miles have been fully reclaimed to final bond to these standards. It's doubtful these lands are going to be fully reclaimed because of damaged water. How far reclamation has lagged behind performance and company's financial health is in trouble. This is not ultimate use, this is permanent damage. As you know, the majority of these, federal coal lies under prairies, fragile habitat that's home to imperiled sage grouse, mule deer, elk, pronghorn and 300 other species. Can take decades to reclaim these mines to pre-mining conditions. Another recent study we did of wildlife herds in and outside of fossil fuel extraction zones of the Powder River showed that only one out of 8 mule deer herds and only 3 out of 11 pronghorn herds are healthy. So the coal leasing must not result in permanent damage to public lands and water. It must include repercussions for wildlife.

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Comment Number: 0000849\_Perry\_20160628-1

Organization I:NWF

Commenter I:Ed Perry

## Comment Excerpt Text:

And here in Pennsylvania coal companies going out of business are infamous for not cleaning up after themselves. And as a result, we have thousands of miles of streams that are devoid of aquatic life that we will have to bear the cost of restoring.

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Comment Number: 0000854\_Doyon\_20160628-3

Commenter I:Michelle Doyon

## Comment Excerpt Text:

We need reclamation and bonding reforms. In my communities that I live in, Scottdale and Mt. Pleasant,



Pennsylvania, there are many locations that are adversely affected by old, abandoned, unreclaimed coal mines, processing sites and dumps

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Comment Number: 0000865\_Wasser-I

Commenter I: Justin Wasser

Comment Excerpt Text:

The process on any land of reclamation is an absolute failure. It's a failure to the communities on the terms of quality of life and to their health. Where I grow up or grew up, one of my family lives there, there are higher rates of cancer, of heart disease, of issues that scientific consensus shows, they may not say it's a direct correlation, but definitely the lack of cleaning up after mining, after burning and transporting coal contributes to it.

### **ISSUE 5.10 - COAL MITIGATION**

Total Number of Submissions: 14

Total Number of Comments: 35

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Comment Number: 00000355\_Thomas\_20160519-I

Commenter I: Ann Thomas

Comment Excerpt Text:

I also question whether mitigation efforts that go along with mining can truly compensate for what is lost in the course of that destruction.

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Comment Number: 0000809-3

Commenter I: Beth Blattenberger

Comment Excerpt Text:

No guarantee of mitigation: Companies may go bankrupt and mitigation does not happen. Then there is a sudden disappearance of jobs and the public is left with the clean-up. Companies need to have good mitigation plans before they do any coal removal, and there needs to be a solid guarantee that funds will be available.

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Comment Number: 0002158\_Burger\_SabineCenter\_9132016-2

Organization I: Sabine Center for Climate Change Law

Commenter I: Michael Burger

Other Sections: 6 2

Comment Excerpt Text:

The federal government has a duty to mitigate climate impacts from downstream GHG emissions associated with the coal leasing program. There are at least four potential non-statutory sources of the federal government's affirmative duty to mitigate greenhouse gas emissions and associated climate impacts from federal coal: the principles of international law and the requirements set forth under the United Nations Framework Convention on Climate Change; the public trust doctrine; the federal common law of public nuisance; and private nuisance under state common law. Although it is plausible that none of these sources would result in an affirmative court decision holding the government liable for a breach of its duty, that shortfall does not negate the existence of the duty itself. The statutes and regulations that govern Interior's management of public lands provide other, and potentially even more forceful, sources for a duty to mitigate upstream and downstream greenhouse gas emissions and associated climate change impacts arising from the federal coal leasing program. Pursuant to the Federal Land Policy and Management Act (FLPMA), the Mineral Leasing Act (MLA) and NEPA, BLM has a duty to

analyze and implement mitigation measures for the adverse environmental, social and public health impacts attributable to its management of fossil fuels on public lands.

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Comment Number: 0002158\_Burger\_SabineCenter\_9132016-3

Organization I: Sabine Center for Climate Change Law

Commenter I: Michael Burger

Other Sections: 2 6

Comment Excerpt Text:

Federal statutes, regulations and policy provide Interior and BLM with ample authority to adopt a fee as a form of compensatory mitigation

BLM has recognized that compensatory mitigation for unavoidable or residual climate change impacts arising from agency decisions is fully consistent with its mission and its multiple use mandate and that it possesses the discretion to require it, and has clarified that doing so is in fact the agency's policy. A climate change impacts fee for downstream GHG emissions fits within the agency's NEPA obligations and its compensatory mitigation policy. The climate change impacts at issue in this paper are those that occur as a result of GHG emissions both at the coal mine and downstream, when the extracted coal is transported and eventually combusted for its end use. These downstream GHG emissions are considered "indirect effects" under NEPA, and the climate change impacts associated with those emissions are unavoidable or "residual" impacts. In undertaking the Programmatic EIS, Interior has recognized that NEPA requires it to analyze downstream emissions – a conclusion that comports with the current trajectory of courts' interpretations of NEPA. Under NEPA, then, the agency must also identify and assess appropriate mitigation measures for these emissions, including compensatory mitigation measures. The mitigation measures discussed in the Programmatic EIS should follow the "mitigation hierarchy," and should include both a "net zero" emissions offset program as well as a climate change impacts fee. A climate change impacts fee would be consistent with recent directives, including the Presidential Memorandum Mitigating Impacts on Natural Resources from Development and Encouraging Related Private Investment; Secretarial Order 3330, Improving Mitigation Policies and Practices of the Department of the Interior; and "Landscape-Scale Mitigation Policy," a new chapter in its Departmental Manual, which effectively operationalizes Order 3330. The sum total of the White House and Interior guidance is that BLM can and should assess and potentially implement mitigation measures, which might operate through any number of mechanisms, including lease stipulations and chargeable fees, among other things. The mitigation measure should first seek to avoid GHG emissions and their climate impacts; second, seek to minimize emissions and impacts; and third, compensate for unavoidable impacts, as through a climate change impacts fee.

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Comment Number: 0002158\_Burger\_SabineCenter\_9132016-4

Organization I: Sabine Center for Climate Change Law

Commenter I: Michael Burger

Other Sections: 2

Comment Excerpt Text:

There are a number of key questions to address in developing a mitigation framework in any context: 1) whether to mitigate; 2) when to mitigate; 3) what mitigation should be required; 4) technical issues surrounding how to mitigate. The question of whether to mitigate was addressed above. The question of when to mitigate is one of practical consequence: advance mitigation in this context, based on acreage or projected production, might result in overcharging lessees and so basing mitigation on actual production would seem to be a more reasonable approach. The questions of what mitigation should be required and what technical issues the agency will necessarily confront are more complex they are. They are treated in summary form below.

a. What mitigation should be required The Presidential Memorandum Mitigating Impacts from Natural Resource Development identifies three types or categories of resources: irreplaceable resources; resources that are important, scarce or sensitive; and other resources managed consistent with an agency's mission and objectives. There is an argument to be made that the climate in which human civilization took shape and in which we continue to exist constitutes an irreplaceable resource, and that the appropriate mitigation measure for continued GHG emissions and climate change impacts is avoidance. If BLM concludes that the climate is not an irreplaceable resource warranting avoidance to the maximum extent practicable the agency must conclude that it is nonetheless an important and sensitive resource, and that the appropriate mitigation standard is a minimum of no net loss, and preferably a net benefit. Such mitigation could be pursued on a number of different scales: planetary, national or regional.

b. How to calculate a climate change impacts fee

The question of what the proper amount to charge for federal coal has been the subject of several economic analyses, and this paper does not seek to answer it. Rather, the paper identifies a number of fee-related issues Interior and BLM should consider in the environmental review. These include: whether to use the Social Cost of Carbon and the Social Cost of Methane or other metrics; how to account for intervening actors; how to account for regulations on power plants and other coal users; how to account for the different carbon intensity of coal; whether and how to account for historic emissions; whether and how to account for historic costs; and how to account for the impacts different prices will have on different companies, industry sectors, states, tribes, and local communities. The paper also looks at different mechanisms for compensatory mitigation—such as in lieu fees, mitigation banks and permittee-responsible measures.

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Comment Number: 0002158\_Burger\_SabineCenter\_9132016-6

Organization I: Sabine Center for Climate Change Law

Commenter I: Michael Burger

Other Sections: 2 6

Comment Excerpt Text:

The federal government has the discretion to mitigate climate impacts from downstream GHG emissions associated with the coal leasing program

Even if the duty to mitigate is of uncertain scope or enforceability, FLPMA, the MLA and NEPA all confer a definite discretion to mitigate climate change impacts. The multiple use mandate and unnecessary and undue degradation prohibition of FLPMA, the public interest requirements of the MLA and the ambitious goals and specific analytical requirements of NEPA individually and taken together grant the agencies broad discretion to mitigate foreseeable impacts, and to require compensation for impacts that cannot be avoided or minimized.

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Comment Number: 0002158\_Burger\_SabineCenter\_9132016-8

Organization I: Sabine Center for Climate Change Law

Commenter I: Michael Burger

Other Sections: 2

Comment Excerpt Text:

A Sample Framework for Developing a National Compensatory Mitigation Strategy for the Federal Coal Leasing Program

In considering employing a climate change impacts fee as a compensatory mitigation strategy for the federal coal leasing program BLM will not be starting from scratch. The paper uses the bureau's Regional Mitigation Strategies for Solar Development as a template to develop an analytic framework for the coal leasing program. Accordingly, the paper offers one set of possible responses that result in establishment of a climate change impacts fee as a compensatory mitigation strategy.

Comment Number: 0002189\_Jozwik\_20160517-13

Commenter I: Darryl Jozwik

Comment Excerpt Text:

HOW MAY BLM BEST ENSURE NO UNNECESSARY AND UNDUE DEGRADATION OF PUBLIC LANDS FROM CLIMATE CHANGE IMPACTS -- THIS IS NOT PART OF THE ACT AND SHOULD NOT BE TAKEN INTO CONSIDERATION IN THIS PROGRAM.

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Comment Number: 0002189\_Jozwik\_20160517-14

Commenter I: Darryl Jozwik

Comment Excerpt Text:

HOW DO WE MITIGATE, ACCOUNT FOR, OR OTHERWISE ADDRESS THOSE IMPACTS -- THIS IS NOT PART OF THE ACT AND SHOULD NOT BE TAKEN INTO CONSIDERATION IN THIS PROGRAM.

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Comment Number: 0002189\_Jozwik\_20160517-17

Commenter I: Darryl Jozwik

Comment Excerpt Text:

WHAT ARE THE EFFECTS OF FEDERAL COAL PRODUCTION ON WATER RESOURCES, AIR QUALITY, WILDLIFE, AND OTHER LAND USES SUCH AS GRAZING AND RECREATION – ALL ADDRESSED AND MITIGATED IN PERMITTING AND OTHER FEDERAL PROGRAMS.

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Comment Number: 0002189\_Jozwik\_20160517-18

Commenter I: Darryl Jozwik

Comment Excerpt Text:

ARE IMPACTS FROM MINING AND COMBUSTING FEDERAL COAL ADEQUATELY MITIGATED – YES.

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Comment Number: 0002189\_Jozwik\_20160517-19

Commenter I: Darryl Jozwik

Comment Excerpt Text:

SHOULD STANDARD MITIGATION AT THE PROGRAMMATIC LEVEL BE REQUIRED, IN ADDITION TO ON A PROJECT-BY-PROJECT BASIS – NO.

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Comment Number: 0002318\_Gordon\_20160722-3

Commenter I: Diana L. Gordon

Other Sections: 5

Comment Excerpt Text:

Of course, we can take some mitigation measures. However, there is just no way to mitigate the quantity of GHG produced by the mining of coal with huge machines in open pit mines and the transport of the coal to plants in this country or possibly across the ocean to Asia. Further, that coal will be burned in plants that may or may not have effective pollution control devices.

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Comment Number: 0002467\_Fettus\_20160728-27

Organization I: Natural Resources Defense Council

Commenter I: Geoffrey Fettus

Comment Excerpt Text:

Of vital importance for this PEIS, for each of these effects, the EIS must also grapple with “[e]nergy requirements and conservation potential of various alternatives and mitigation measures.” *Id.* §1502.16(e). Such mitigation

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measures may include:

- (a) Avoiding the impact altogether by not taking a certain action or parts of an action.
- (b) Minimizing impacts by limiting the degree or magnitude of the action and its implementation.
- (c) Rectifying the impact by repairing, rehabilitating, or restoring the affected environment.
- (d) Reducing or eliminating the impact over time by preservation and maintenance operations during the life of the action.
- (e) Compensating for the impact by replacing or providing substitute resources or environments.

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Comment Number: 0002474\_Trice\_20160728\_EPA-2

Organization I: U.S. Environmental Protection Agency

Commenter I: Jessica Trice

Other Sections: 8.12

Comment Excerpt Text:

EPA recommends that the Draft PEIS estimate the direct and indirect GHG emissions caused by the various future coal use scenarios, including emissions associated with end use combustion of coal. It may be appropriate to employ the social cost of carbon and social cost of methane to estimate the economic value of impacts associated with the proposal's net change in CO<sub>2</sub> and CH<sub>4</sub> to contextualize the potential emissions and compare alternatives. EPA recommends that the Draft PEIS describe measures to reduce GHG emissions, including reasonable alternatives and practicable mitigation opportunities, and disclose the estimated GHG reductions. Such measures should include technologies used to mitigate coal mine methane that is currently vented to the atmosphere. Given the likelihood of advancements in GHG mitigation technologies during the timeframe considered, we recommend the Draft PEIS discuss how the BLM can encourage adoption of those technologies in future lease sales.

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Comment Number: 0002477\_Saul\_20160728\_CBD\_UPHE-31

Organization I: Center for Biological Diversity

Commenter I: Michael Saul

Other Sections: 2.1.17

Comment Excerpt Text:

To date, restoration and mitigation efforts have largely failed when it comes to protecting water quality and species. For this reason, we ask BLM to focus on protection of essential habitat areas and waterways first, and to rely on mitigation only in certain limited situations – i.e., when ESA-listed or proposed species or designated critical habitats are not present downstream or in the mine site area, and it can be shown with sufficient evidence that the functions and values of the impacted streams and native ecosystems can be fully restored.

Numerous studies document the failure of restoration to protect water quality, species, and local communities from the impacts of coal mining. These studies are too numerous for us to list in total so we provide relevant excerpts of scientific conclusions:

-“Overall, the data show that mitigation efforts being implemented in southern Appalachia for coal mining are not meeting the objectives of the Clean Water Act to replace lost or degraded streams ecosystems and their functions”<sup>269</sup>

-“Mitigation actions being undertaken are primarily geomorphic projects to enhance perennial streams yet the majority of streams impacted are intermittent and fewer linear feet of stream have been restored than impacted. Compliance is primarily based on visual habitat assessments performed by the mining company or their consultants which typically report marginal or suboptimal habitat status post restoration. Projects were not required to meet specified biological or water quality standards yet for the projects that reported such data, most were impaired.”<sup>270</sup>

-“The disturbance caused by MTR/VF is drastically changing the central Appalachian landscape, compromising the natural ecological and functional state of both terrestrial and aquatic environments. The reclamation process, emphasizing soil compaction and the establishment of non-native herbaceous species, has hindered the establishment of native tree species on MTR sites (Zipper et al., 2011). These terrestrial impacts in combination with changes in water chemistry and stream geomorphology lead to long-lasting changes to terrestrial and aquatic ecosystem function (Simmons et al., 2008). Full recovery of species diversity in streams impacted by MTR/VF has not been documented”<sup>271</sup>

-“Indeed, the MTR/VF streams had, on average, 75% less forest cover than control streams”<sup>272</sup>

-“Reclaimed mine sites have soils containing unweathered rock that is heavily compacted to reduce erosion, resulting in altered water tables and disturbed flow paths (Bonta et al., 1992; Bernhardt and Palmer, 2011). In particular, compacted soils lead to high rates of storm water runoff. Negley and Eshleman (2006) and Ferrari et al. (2009) found that MTR/VF streams had tripled storm runoff and doubled flow rates compared to reference catchments.”

-“The extent to which these constructed channels provide important ecosystem services lost by burial of natural headwater streams as a result of mining is not well known. Fritz et al. (2010) reported significantly lower rates of litter breakdown and higher levels of iron, manganese, sulfate, and conductivity in constructed channels draining VF watersheds than in natural channels draining forested watersheds. Petty et al. (2013) observed lower organic matter (OM) decomposition rates and higher levels of conductivity, dissolved solids, and dissolved organic carbon (DOC) in West Virginia MTR/ VF constructed channels than in nearby reference channels. Based on their database containing descriptions of 38,000 stream and river restoration projects, Bernhardt and Palmer (2011) stated that they did not know of a single case where a constructed channel recreated the hydrology or ecological functions of natural streams.”<sup>273</sup>

As these examples illustrate, mitigation of coal mining activities has failed to reclaim the functions and values of impacted waterways. In particular, it has failed in Appalachia to restore water quality and fish, wildlife, and other species. Moreover, as discussed above coal mining has been one of several threats that has led to the need to protect species under the ESA, indicating that mitigation efforts have not been successful in protecting species, and should not be relied on by BLM to protect the environment.

Therefore, in light of the record before it, it is critical that BLM ensure that waterways affected by proposed mines with ramifications for species listed or proposed for listing under the ESA and their critical habitat are protected, rather than rely on mitigation plans to justify destruction of these important habitat areas, since restoration plans may not adequately address impacts to imperiled species and their habitat.<sup>274</sup>

(269) Palmer, M. A., & Hondula, K. L. (2014). Restoration as mitigation: analysis of stream mitigation for coal mining impacts in southern Appalachia. *Environmental science & technology*, 48(18), 10552-10560.

(270) Id.

(271) Brenee’L, M., Price, S. J., Bonner, S. J., & Barton, C. D. (2014). Mountaintop removal mining reduces stream salamander occupancy and richness in southeastern Kentucky (USA). *Biological Conservation*, 180, 115-121.

(272) Id.

(273) Burke, R. A., Fritz, K. M., Barton, C. D., Johnson, B. R., Fulton, S., Hardy, D., ... & Jack, J. D. (2014). Impacts of mountaintop removal and valley fill coal mining on C and N processing in terrestrial soils and headwater streams. *Water, Air, & Soil Pollution*, 225(8), 1-17.

(274) According to the DOI Energy and Climate Change Task Force, avoidance should be the first goal: “If a project can reasonably be sited so as to have no negative impacts to resources of concern then that is generally the most defensible approach. By avoiding adverse impacts in the first place, there is no need to take further

action to minimize or offset such impact.” See *A Strategy for Improving the Mitigation Policies and Practices of The Department of the Interior* at 2 (April, 2014).

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Comment Number: 0002477\_Saul\_20160728\_CBD\_UPHE-32

Organization I: Center for Biological Diversity

Commenter I: Michael Saul

Other Sections: 2 1

Comment Excerpt Text:

If BLM will continue to rely on mitigation for the coal program, a new mitigation protocol must be developed. The Department of the Interior has been revising its mitigation policies in recent years, and has in fact declared that it is “necessary to successfully shift from project-by project management to consistent, landscape-scale, science-based management of the lands and resources for which the Department is responsible.”<sup>275</sup> DOI has further stated that “in the mitigation context, the landscape approach dictates that it is not sufficient to look narrowly at impacts at the scale of the project; it is necessary to account for impacts to resource values throughout the relevant range of the resource that is being impacted.”<sup>276</sup>

It does not appear that the current mitigation regime for BLMs coal program is meeting the goals set forth by DOI. Mitigation is done piecemeal, without the comprehensive, industry-wide analysis that is necessary for landscape-scale mitigation, resulting in the environmental harm discussed herein. As DOI even admits, “mitigation experts have noted, “[T]he way mitigation is currently applied does not capture cumulative impacts associated with development; it does not provide a structured decision-making framework to determine when projects can proceed or should be avoided; and it does not harness the full potential of offsets (conservation actions applied away from the development site).”<sup>277</sup>

To rectify this, DOI has provided guiding principles for landscape-scale mitigation. These include that an agency, “[a]t the outset of the project planning process, [should] incorporate mitigation and landscape objectives into the design and development of projects that are likely to impact natural or cultural resources.” DOI further urges bureaus to “[i]dentify and promote mitigation efforts that improve the resilience of our nation’s resources in a rapidly changing climate,” and to “[p]romote transparency and consistency in the development of mitigation measures.” Therefore, we urge BLM to undertake, concurrent with this programmatic EIS, an analysis of the various alternatives to mitigation for coal mining, and to thereby develop protocols to establish a mitigation program on a landscape-scale.<sup>278</sup> This should be done in consultation with FWS and NMFS for mitigation that has the potential to affect listed species.<sup>279</sup>

(275) *The Energy and Climate Change Task Force, A Strategy for Improving the Mitigation Policies and Practices of The Department of the Interior* at 1 (April, 2014).

(276) *Id.* at 11.

(277) *Id.* at 8 (citing Kiesecker, Joseph M., Holly E. Copeland, Bruce A. McKenney, Amy Pocerwicz, and Kevin E. Doherty. 2011. *Energy by Design: Making Mitigation Work for Conservation and Development*. Chapter 9 in: David E. Naugle (Ed.), *Energy Development and Wildlife Conservation in Western North America*. pp. 159-181).

(278) *Id.* at 13. DOI has provided a process to follow for this analysis, which includes four steps: 1) identifying key landscape-scale attributes, and the conditions, trends, and baselines that characterize these attributes; 2) developing landscape-scale goals and strategies; 3) developing efficient and effective compensatory mitigation programs for impacts that cannot be avoided or minimized; and 4) monitoring and evaluating progress and making adjustments, as necessary, to ensure that mitigation is effective despite changing conditions.

(279) See *id.* at 12 (directing bureaus to “Coordinate with other federal and state agencies, tribes, and stakeholders in conducting assessments of existing and projected resource conditions, forming mitigation strategies, and developing compensatory mitigation programs.”).

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Comment Number: 0002477\_Saul\_20160728\_CBD\_UPHE-71

Organization I:Center for Biological Diversity

Commenter I:Michael Saul

Other Sections: I

Comment Excerpt Text:

It is readily apparent that mitigation for the impacts of coal mining has been woefully inadequate. As discussed herein, the existing regulatory program has proven to be insufficient, resulting in the wanton destruction of habitat areas across the country. For example, the Powder River Basin in Montana and Wyoming is well known as a sacrifice zone that pumps out coal for domestic and foreign use. Once home to wide ranging elk herds, pronghorn, mule deer, prairie falcons, bobcats, mountains lions, and greater sage-grouse – as well as providing habitat for hundreds of migratory birds – today the region is largely dotted with coal mines, roads, and other coal-related facilities. While wildlife still hang on the brink of extirpation in a few areas in this region, the basin evidences how environmental laws have failed to strike a balance of protecting environmental values while authorizing coal production, and that harm is not being mitigated.

Although the majority of federal coal leasing occurs in the interior west (and primarily the Powder River Basin of Wyoming and Montana), federal coal leasing also occurs in Appalachia, where biodiversity and human health are being devastated for coal production.<sup>258</sup>

(258) See, e.g., BLM and USFS, Environmental Assessment, Bledsoe Coal Lease, KYES-53865 (Oct. 2012), available at

[http://www.blm.gov/style/medialib/blm/es/minerals/coal/coal\\_lease\\_sales\\_nepa.Par.46357.File.dat/BledsoeCoalLease.EA.12Oct2012.LowResolu.pdf](http://www.blm.gov/style/medialib/blm/es/minerals/coal/coal_lease_sales_nepa.Par.46357.File.dat/BledsoeCoalLease.EA.12Oct2012.LowResolu.pdf) ; see generally BLM, BLM Eastern States Coal Sales,<http://www.blm.gov/es/st/en/prog/minerals/coal.html>.

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Comment Number: 0002480\_Culver\_20160728\_TWS-16

Organization I:The Wilderness Society

Commenter I:Nada Culver

Comment Excerpt Text:

BLM has ample authority to apply needed mitigation measures and other environmental protections on existing leases, not only at the time of renewal, modification or transfer, but also for ongoing approvals of development. BLM can also provide for shorter readjustment periods than those in the current regulations, and should initiate any required rulemaking.

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Comment Number: 0002480\_Culver\_20160728\_TWS-23

Organization I:The Wilderness Society

Commenter I:Nada Culver

Comment Excerpt Text:

The BLM must ensure that the mitigation components of the PEIS are consistent with all relevant laws and policies, including current mitigation guidance. This includes the use of a landscape-scale approach, an emphasis on a net benefit outcome, the importance of preservation as a mitigation action, and the use of Regional Mitigation Strategies and Plans to support the PEIS. A Regional Mitigation Strategy for the Coal PEIS would set an important framework to guide additional Regional Mitigation Strategies and Regional Mitigation Plans. Mitigation should be analyzed at both the land use planning stage and at the regional coal leasing stage via NEPA-based EISs that adopt the required mitigation policies. The mitigation policy should be made applicable to existing mines and areas in the vicinity of existing mines that are proposed for mining, as well as to new areas that might be open for mining consideration.



Comment Number: 0002480\_Culver\_20160728\_TWS-41

Organization I: The Wilderness Society

Commenter I: Nada Culver

Other Sections: 2 1

Comment Excerpt Text:

For unavoidable climate change impacts associated with leasing and development of coal resources, BLM should develop a framework in the PEIS that can be used for the entire program. We will be releasing a longer whitepaper going into greater detail on key design considerations and operational elements in August 2016 and will provide as supplemental comment. In the meantime, this letter spells out the basic framework.

To establish this framework, BLM must quantify through the PEIS the GHG emissions using the tools described in Section VI.C, and analyze the climate impacts associated with these GHG emissions using the tools described in Section VI.D.

The BLM should establish in the Record of Decision as a matter of policy that the agency will require compensatory mitigation to offset the climate impacts of federal coal leasing and production. The same tools should be required to be used for future lease-level analysis with guidance for field staff on how to apply them. The estimated impacts resulting from the analysis represent unavoidable climate impacts that should be addressed through compensatory mitigation.

As part of the compensatory mitigation policy, the BLM should initiate a regional mitigation strategy/plan for key coal leasing areas that addresses all impacts include climate. BLM should consider several key design features that should be spelled out in the ROD:

- BLM should consider compensatory mitigation actions that offset the climate impacts associated with the emissions attributable to the leased coal in question, and that offset the carbon emissions themselves.

Quantifying impacts is becoming increasingly more practical, and the science connecting impacts to temperature changes increasingly more precise. The practice of arriving at a mitigation fee at a lease level can be challenging, but real harm will be felt by human and natural communities. Compensatory mitigation funds can be directed at enhancing the adaptive capacity of human and natural communities in the affected landscape to improve their health and resilience in the face of expected change. Offsetting actions can include investments in land protection, restoration or rehabilitation. They can also include payments to communities to assist with a transition away from coal-dependent regional economy.

Significant opportunity also exists to offset the GHG emissions themselves. EPA has repeatedly urged land management agencies to assess carbon offsets in EAs and EISs as a way to reduce climate change impacts of agency actions. EPA has specifically noted that offsets are a reasonable alternative to lessen the impacts of coal mine methane emissions. In a 2007 letter concerning a proposal to permit MDWs at the West Elk Mine, EPA specifically rejected the Forest Service's assertion that a carbon offset alternative was not reasonable: "[I]t is reasonable to consider offset mitigation for the release of methane, as appropriate. Acquiring offsets to counter the greenhouse gas impacts of a particular project is something that thousands of organizations, including private corporations, are doing today." (45) EPA specifically recommended that the Forest Service's Lease Modifications EIS "acknowledge that revenues for carbon credits are available via several existing markets." (46) Similarly, EPA has recommended that a Forest Service NEPA analysis of a forest health project "discuss reasonable alternatives and/or potential means to mitigate or offset the GHG emissions from the action." (47) Numerous state agencies already use offsets to control GHG emissions. (48) Offsets can include participation in third-party offset markets or renewable energy credits.

(45) Letter of L. Svoboda, EPA to C. Richmond, Forest Service (Aug. 7, 2007) at 7 (emphasis added).

(46) EPA July 2012 Comment Letter (Ex. 29) at 5 (identifying four U.S. carbon exchanges creating a market for

carbon credits).

(47) Letter of L. Svoboda, EPA, to T. Malecek, USFS, at 8 (Oct. 27, 2010).

(48) See, e.g., Settlement Agreement, ConocoPhillips and California (Sept. 10, 2007) (California agency requiring offsets as a condition of approving a project), attached as Ex. 46; Minn. Stat. § 216H.03 subd. 4(b) (Minnesota law requiring offsets for certain new coal-fired power plants); Me. Rev. Stat. Ann. tit. 38, § 580-B(4)(c) (Maine law establishing greenhouse gas initiative that includes the use of carbon offsets).

The potential for federal participation in an offsets program is well demonstrated by actions that have been taken relative to emissions from the Navajo Generating Station in Arizona to comply with Clean Air Act requirements pursuant to EPA's regional haze rules. There, in agreement with state, federal, tribal and NGO participants, the DOI has committed to reduce or offset federal carbon dioxide emissions by three percent annually for a total of 11.3 million metric tons of emissions reductions by the end of 2031. (49) This is intended to reduce carbon dioxide emissions and demonstrate the workability of a credit-based system to achieve carbon dioxide emission reductions. In addition, the DOI has committed to facilitating development of Clean Energy Projects intended to achieve eighty percent generation of clean energy for the federal share at the Navajo Generating Station by 2035 by securing over twenty-six million megawatt hours in Clean Energy Development Credits. (50)

(49) See [https://www.doi.gov/sites/doi.gov/files/migrated/upload/7-25-2013-NGS-TWG-Agreement-FINAL\\_Executed.pdf](https://www.doi.gov/sites/doi.gov/files/migrated/upload/7-25-2013-NGS-TWG-Agreement-FINAL_Executed.pdf) (presenting the Technical Work Group Agreement Related to Navajo Generating Station (NGS)).

Comment Number: 0002480\_Culver\_20160728\_TWS-42

Organization I: The Wilderness Society

Commenter I: Nada Culver

Comment Excerpt Text:

BLM should attempt to address the full scope of lifecycle emissions through compensatory mitigation – that is, production, transport and combustion.

Comment Number: 0002480\_Culver\_20160728\_TWS-43

Organization I: The Wilderness Society

Commenter I: Nada Culver

Comment Excerpt Text:

BLM should specify whether compensatory mitigation should be paid on an annual basis or paid up front.

Comment Number: 0002480\_Culver\_20160728\_TWS-44

Organization I: The Wilderness Society

Commenter I: Nada Culver

Comment Excerpt Text:

In lieu fees collected for compensatory mitigation are often paid in lump sum at the beginning of a project's operational life. In the case of climate impacts, it may make more sense to consider an annual payment on the basis of production, or an annualized payment schedule based on expected production with corrections on a semi-annual basis. By spreading payments over the life of the project (and tying them to when the impacts actually occur), the system should be both fairer to producers and truer to the spirit of mitigation.

- BLM must ensure mitigation actions are additional—that is, result in actions that add real, verifiable carbon savings or other benefit—and durable—that is, the conservation benefit lasts for at least a period of time commensurate with the duration of the impact itself.

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Comment Number: 0002480\_Culver\_20160728\_TWS-48

Organization I: The Wilderness Society

Commenter I: Nada Culver

Other Sections: 7.4 8.12

Comment Excerpt Text:

Recommendations: The BLM should examine and advance regulations to reduce the emissions of methane and other greenhouse gases from coal mining operations, both underground and surface operations. Unless and until those regulations are complete, the BLM should immediately consider other options to offset these emissions or otherwise address the associated climate impacts.

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Comment Number: 0002480\_Culver\_20160728\_TWS-74

Organization I: The Wilderness Society

Commenter I: Nada Culver

Other Sections: 2

Comment Excerpt Text:

More recent guidance in the form of the Presidential Memorandum: Mitigating Impacts on Natural Resources from Development and Encouraging Related Private Investment (2015) and the Department of the Interior's Landscape-Scape Mitigation Manual (2015) also emphasize the importance of mitigation in BLM planning and decision-making. Key elements of these policies are summarized below and should be incorporated into BLM's approach to mitigation in the PEIS:

- Landscape-scale approach: land use planning for conservation and energy development as well as analysis of proposed development and consideration of mitigation must use a landscape-scale approach to focus development in low-conflict areas and prioritize conservation in areas with important and sensitive resources and values.
- "Irreplaceable resources": avoidance is the most appropriate tool for addressing "irreplaceable resources," "resources recognized through existing legal authorities as requiring particular protection from impacts and that because of their high value or function and unique character, cannot be restored or replaced."
- No net loss of important resources and values: mitigation must achieve a goal of no net loss of important resources and values, with a net benefit goal as required or appropriate.
- Climate change impacts and resilience: agencies must identify and promote mitigation measures that help address climate change impacts and resilience.
- Compensatory mitigation standards: compensatory mitigation (generally comprised of acquisition, restoration or preservation of resources and values) must be:
  - o Durable: protected against non-conforming uses like development and lasting as long as the impacts;
  - o Additional: demonstrably new conservation benefits that would not occur without mitigation;
  - o Be developed based on the best available science: including for determining equivalency of impacts and mitigation benefits;
  - o Provide for public transparency: including tracking locations of impacts and mitigation actions; and
  - o Include monitoring and adaptive management.

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Comment Number: 0002480\_Culver\_20160728\_TWS-86

Organization I: The Wilderness Society

Commenter I: Nada Culver

Other Sections: 1

Comment Excerpt Text:

In addition to the legal and policy direction that requires mitigation for climate impacts from the federal coal program and provide the agency with ample discretion to require mitigation, it is important to underscore that as a land manager, the federal government is facing huge and rapidly escalating costs to address the impacts caused

by fossil-fuel driven climate change. Forest fires, widespread drought, rising sea levels, spread of invasive species and spread of disease already result in significant costs to the federal government, and each new coal lease the BLM authorizes increases these problems and the associated costs. Research from the University of Vermont's Gund Institute for Ecological Economics and The Wilderness Society suggests that total costs in degraded ecosystem services could exceed \$14.5 billion annually under a 2-degreeC warming scenario. (42) These costs are ultimately borne by all American taxpayers, and BLM has a responsibility to recoup these costs when it makes decisions authorizing activities that directly cause these impacts and associated costs.

(42) See Esposito, Valerie; Phillips, Spencer; Boumans, Roelof; Moulart, Azur; Boggs, Jennifer. 2011. "Climate change and ecosystem services: The contribution of and impacts on federal public lands in the United States." In: Watson, Alan; Murrieta-Saldivar, Joaquin; McBride, Brooke, comps. Science and stewardship to protect and sustain wilderness values: Ninth World Wilderness Congress symposium; November 6-13, 2009; Merida, Yucatan, Mexico. Proceedings RMRS-P-64. Fort Collins, CO: U.S. Department of Agriculture, Forest Service, Rocky Mountain Research Station. p. 155-164. Available at [http://www.fs.fed.us/rm/pubs/rmrs\\_p064.pdf](http://www.fs.fed.us/rm/pubs/rmrs_p064.pdf) (accessed July 23, 2016).

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Comment Number: 0002488\_Sanderson\_20160728-20

Organization I: Colorado Mining Association

Commenter I: Stuart Sanderson

Comment Excerpt Text:

First, if BLM promulgates the proposed land use planning rules described in the BLM Planning 2.0 initiative, the mitigation hierarchy will be formally adopted at the land use planning level-negating the need for analysis in the PEIS. (7)

(7) CMA opposes the inclusion of the mitigation hierarchy at the land use planning level, and incorporate by reference the AEMA comments related to the BLM Planning 2.0 Initiative (incorporated by reference and attached hereto).

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Comment Number: 0002493\_Mead\_20160728\_GovWY-29

Organization I: Office of Governor Matthew H. Mead

Commenter I: MATTHEW H. MEAD

Comment Excerpt Text:

The avoided use of federal lands (and other lands) enabled by energy dense coal power plants retains federal lands for other purposes, including climate change mitigation measures such as growing trees, grasses and managing rangelands to remove carbon dioxide (CO<sub>2</sub>) from the atmosphere and providing public recreation areas.

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Comment Number: 0002493\_Mead\_20160728\_GovWY-55

Organization I: Office of Governor Matthew H. Mead

Commenter I: MATTHEW H. MEAD

Comment Excerpt Text:

Should mitigation be attempted at the programmatic level, estimates of potential impacts may be used that are highly speculative and may never come to fruition at the project level. Additionally, without project specific details it would be difficult, if not impossible, for the BLM to prescribe mitigation within the jurisdiction of the BLM at the programmatic level.

Specifically, any air quality impact assessment is speculative at the programmatic level, would not result in informed decisions and lacks technical justification. A more appropriate action would be for the BLM to work with state agencies that have regulatory authority for air quality to develop an agreement that defines how and when an air quality impact assessment should be performed and appropriate air quality mitigation within the

jurisdiction of the BLM.

BLM must acknowledge and analyze the role and responsibilities of states and the regulatory control of Wyoming and state environmental agencies generally and specifically in any consideration of air quality and air resources. BLM must also acknowledge its jurisdictional limits in the PEIS.

Comment Number: 0002493\_Mead\_20160728\_GovWY-56

Organization I: Office of Governor Matthew H. Mead

Commenter I: MATTHEW H. MEAD

Comment Excerpt Text:

In the past, if there was potential for unforeseen impacts, Wyoming DEQ, LQD and WGFD worked to minimize them through avoidance, minimization and compensatory mitigation during the permitting process. Wyoming will continue to address impacts in this fashion. BLM is developing a Mitigation Framework for all resources which will also support reduced impacts.

WGFD recommends that continued wildlife monitoring and re-vegetation occur as administered by DEQ, LQD and reviewed by WGFD.

Comment Number: 0002504\_Lefton\_20160729-3

Organization I: Climate Advisors

Commenter I: Rebecca Lefton

Comment Excerpt Text:

Requiring Lessees to Obtain Offsets for GHG Emissions from Coal Produced from their Lease Could Achieve the Largest GHG Emissions Reductions at Lowest Cost

Offsets are a well-established mechanism in environmental regulation to reduce the impacts of an activity. Offsets are intended to achieve particular environmental objectives at a lower cost and/or to achieve additional environmental objectives without raising compliance costs. Offsets are accepted United States, including under the Clean Air Act.[8] State and regional GHG programs (such as California's GHG regulations and the Regional Greenhouse Gas Initiative among Northeastern states) include offsets to encourage greater emissions reductions at lower costs. The American Clean Energy and Security Act, which passed in the House of Representatives in 2009, included offsets as a component of achieving greater emissions reductions. BLM's Notice of Intent for the PEIS explicitly noted that it would assess "whether and how to mitigate, account for, or otherwise address [climate impacts] through the structure and management of the coal program, including, as appropriate, land use planning, adjustments to the scale and pace of leasing, adjustments to royalties or other means of internalizing externalities, mitigation through greenhouse gas reductions elsewhere, information disclosure, and other approaches." [9]

Offsets from the land sector offer low-priced GHG abatement opportunities. There is significant potential for reducing emissions in the U.S. land sector.[10] Obtaining some portion of offsets internationally from actions taken in developing countries offers additional affordable abatement. Emissions reductions from projects and policies to manage land use in developing countries are among the lowest cost GHG abatement opportunities in the world.[11] In 2014, reducing one ton of CO<sub>2</sub> emission from international land use projects cost approximately \$7.50 on average.[12] Estimates for reducing emissions in the U.S. power sector (by switching from coal generation to non-emitting generating sources) are many times that amount.[13]

By including scenario(s) that require offsets in its integrated modeling, BLM can most comprehensively explore options for achieving maximum emissions reductions at lowest cost. Some commenters advocate for complete cessation of federal coal leasing. Others advocate for including a price on carbon as part of the leases (either as part of a royalty payment, rent, or otherwise). These options should be assessed in the modeling to determine the relative emissions reductions that can be obtained (and the cost of those emissions reductions). Excluding

scenarios with offsets arbitrarily would limit the insights that can be gained from the assessment, and may overlook options that can achieve the greatest GHG reductions at lowest cost.

Including the option for lessees to obtain international offsets would support U.S. climate leadership. As noted above, ensuring that all major federal policies are consistent with the U.S. emissions reductions goals will enable the United States to continue to exercise international leadership. The United States, collectively with other developed countries, has committed to mobilizing \$100 billion per year by 2020 in public and private finance to support adaptation and mitigation in developing countries.[14] Allowing lessees to obtain offsets internationally would not only potentially allow lessees to reduce emissions most cost-effectively, but would also support the United States' climate finance commitment. The projects that generate offsets in developing countries also have many co-benefits, including improved biodiversity and economic development for local populations.[15]

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Comment Number: 0002504\_Lefton\_20160729-4

Organization I:Climate Advisors

Commenter I:Rebecca Lefton

Comment Excerpt Text:

Interior Has the Authority to Require Lessees to Acquire GHG Offsets as a Condition of Their Lease

The Mineral Leasing Act (MLA) grants Interior broad authority to place terms and conditions in a coal lease, providing: "The lease shall include such other terms and conditions as the Secretary shall determine." [16] The MLA further provides that effects on the environment are among the factors Interior shall consider before granting a lease.[17] Finally, the MLA provides that even after a lease is granted, the lessee cannot take any action that might cause significant disturbance of the environment until the lessee submits an operation and reclamation plan for Interior's approval.[18]

This broad discretion to the Secretary, and the directive to consider environmental impacts in considering a lease, has resulted in Interior including conditions in BLM's model lease that direct the lessee to carry out operations in a way that avoids damage or degradation to "any land, air, water, cultural, biological, visual, and other resources, ... Lessee must take measures deemed necessary by lessor to accomplish the intent of this lease term." [19] It has long been recognized that additional specific or general mitigation provisions to protect the environment can be included in lease conditions or stipulations. This includes mitigation provisions beyond those specifically mandated by statute and mitigation provisions that protect resources beyond the mine site.[20] A 1984 report to Congress noted:

Mitigation techniques can be specific or generic, and can address either sites specific or cumulative impacts. They can be designed to accommodate uncertainties about potential impacts or tailored to cover well-understood mining and reclamation situations. Requirements for impact mitigation included in a lease or mining permit might reiterate requirements of current laws and regulations, or they may impose higher standards. They usually apply to lease tracts, but may cover offsite locations affected in some manner by the mining and reclamation operations.

Thus, not only is there statutory authority for broad discretion in determining lease terms and conditions, but the agency already exercises that authority to enact environmental protections. Using this authority to address the climate impacts of allowing a coal lease, including by requiring offsets for the full life-cycle emissions of the coal, is consistent with the MLA.

In addition to the MLA, coal-leasing decisions are affected by Interior's broader mandates to be the caretaker of federal lands under the Federal Land Policy and Management Act (FLPMA). FLPMA directs Interior to manage federal lands so that they are "utilized in the combination that will best meet the present and future needs of the American people;...a combination of balanced and diverse resource uses that takes into account the long-term

needs of future generations for renewable and non- renewable resources” (emphasis added).[21] FLPMA further provides that the public lands will be managed “in a manner that will protect the quality of scientific, scenic, historical, ecological, environmental, air and atmospheric, water resource, and archeological values...”[22]

These provisions require Interior to take full account of the life-cycle emissions from coal produced on federal lands. Climate change driven by GHG emissions will have profound impacts on the United States, including on the federal lands managed by Interior. Changing precipitation patterns and growing seasons, increasing heat waves, droughts, and greater risks of wildfires will fundamentally alter federal lands in the coming decades. Including terms and conditions in federal coal leases, requiring lessees to obtain offsets for emissions from the combustion of coal from those lands, is a direct way for Interior to balance the present and future needs of the American people in avoiding the worst impacts of climate change, including their future use and enjoyment of federal lands.

Exercising its authority to impose terms and conditions in leases to address environmental concerns is fully consistent with Interior’s mandate to manage public lands “in a manner which recognizes the Nation’s need for domestic sources of minerals”[23] and the Federal Government policy of fostering “economically sound” domestic mining and “orderly and economic development of domestic mineral resources . . . to help assure satisfaction of industrial, security, and environmental needs.”[24]

Climate Advisers believes Interior has the discretion under FLPMA and the MLA to impose changes on coal leasing practices up to an indefinite moratorium. If further federal coal leasing is to be allowed, however, requiring lessees to obtain offsets may represent a cost-effective way to maximize total GHG emissions reductions.

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Comment Number: 0020012\_Holmes\_UCARE\_20160712-12

Organization I:Utah Citizens Advocating Renewable Energy

Commenter I:Stanley Holmes

Comment Excerpt Text:

The PEIS should consider establishment of a mitigation fund, financed through coal lease payments, to insure remediation of spoiled land and relief for economically displaced citizens.

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Comment Number: 0020039-1

Commenter I:Bonnie Miller

Comment Excerpt Text:

Costs of clean up of spills, mining, accidents should be required of all lease-holders

### **ISSUE 5.11 - COAL TRANSPORTATION/ROWS**

Total Number of Submissions: 15

Total Number of Comments: 17

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Comment Number: 0001102\_CONSTANTINE\_KingCnty\_20160621-1

Organization I:King County

Commenter I:Dow Constantine

Comment Excerpt Text:

Movement of coal by rail in mile-and-a-half-long trains delays rail transport of our agricultural and manufactured products. It snarls traffic at at-grade crossings, it burdens hundreds of communities with coal dust and other impacts.

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Comment Number: 0001118\_PETERSON\_WY state rep\_20160621-1

Organization I: 21st District

Commenter I: Strom Peterson

Comment Excerpt Text:

We are looking at an increasing numbers of trains throughout the system, and that delay in getting onto a ferry system is important to local jobs and important to our local economy, and I think that's something that this impact statement really needs to look at. Edmonds is not alone in that. There are communities throughout Washington and I think throughout the region, from the Powder Basin on that would have these effects with increasing numbers of coal trains. I think we also have to look at the, you know, economic effects when it comes to local health. I think this is something that the EIS has been looking at, but as we look where these trains load and unload, where these trains travel through, I think it especially affects communities of color that are already showing severe health, negative health effects from the coal dust as well as just from the pollution of these incredibly long trains. These are trains that are a mile long that go through -- incredibly slowly through our towns. And finally, I think that the EIS also has to look at some of the public safety aspects, not only the force of derailment of one of these trains, as we just saw in Oregon, whether it's an oil train or a coal train, these have incredible public safety aspects.

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Comment Number: 0002167\_Baumgartner\_20160629-1

Commenter I: Laura Baumgartner

Other Sections: 8.1 8.8

Comment Excerpt Text:

I am writing to oppose further development of coal resources in the US, oppose transport of mined coal through western states and especially cities to our ports and oppose export of coal for use in other parts of the world.

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Comment Number: 0002173\_Quick\_20160622-16

Commenter I: Kendra Quick

Comment Excerpt Text:

Wyoming coal is shipped to 30 states across the nation as an abundant source of affordable and reliable fuel for electricity generation. Those states that rely on coal for the bulk of their electric generation consistently enjoy lower energy rates.

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Comment Number: 0002194\_Knebluk\_20160518-2

Commenter I: Terry Knebluk

Comment Excerpt Text:

Mine for coal in America wherever coal is located and build storage facilities and transportation hubs accordingly.

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Comment Number: 0002223\_HigbeeSudyka\_20160531-2

Commenter I: Debra HigbeeSudyka

Comment Excerpt Text:

Coal trains (today) are 120–125 cars long, and each car holds 115 tons of coal. [NOTE: Coal trains are transitioning to 150 cars in length.] At the lower level of coal exports studied in the report, Oregon would likely see at least 30 more coal trains each day (15 loaded going west and 15 empty returning to the coal fields) – in addition to all the train traffic we currently experience. And, if all the West Coast ports were built or expanded and the high-end coal company projections are met, Oregon could potentially experience as many as 64 more coal trains (total east and west) each day.

There will be health, safety, quality of life, as well as actual financial costs to Oregon citizens and communities



from this increase in coal train traffic. Oregon cities along the train routes will be most affected by this increase in the number of coal trains.

The increased number of trains in Oregon will mean more noise, a greater potential that emergency responders will be delayed in reaching residents when there is a medical emergency (or a fire or the need for police), and a greater potential for vehicle collisions with trains and for pedestrian accidents. These issues must be addressed, analyzed, and their consequences fully considered in the EIS being prepared.

More trains in Oregon will mean an increase in the amount of airborne pollutants (particulate matter) from diesel engines as well as from coal dust. Medical studies have shown a clear link between both diesel air pollutants and coal dust and disease. Additionally, more trains will mean more vehicles idling at train crossings when trains are passing – and adding their exhaust (containing particulate matter and other pollutants) into the air. While those with chronic disease, the elderly, young children, and pregnant women are most at risk, the health effects from particulate matter exposure may occur years later, so even healthy individuals need to be concerned. These issues must be addressed, analyzed, and their consequences fully considered in the EIS being prepared.

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Comment Number: 0002271\_Dafoe\_20160714\_WAITC-1

Organization I: Wyoming Agriculture in the Classroom

Commenter I: Jessie Dafoe

Comment Excerpt Text:

Wyoming coal is shipped to 30 states across the nation as an abundant source of affordable and reliable fuel for electricity generation.

- Those states that rely on coal for the bulk of their electric generation consistently enjoy lower energy rates.

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Comment Number: 0002466\_Smith\_20160728\_SELA-2

Organization I: Safe Energy Leadership Alliance

Commenter I: Rachel Smith

Comment Excerpt Text:

Movement of coal by rail in mile-and-a-half long trains delays rail transport of agricultural and manufactured products, snarls traffic at at-grade crossings, and burdens hundreds of communities with coal dust.

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Comment Number: 0002467\_Fettus\_20160728-18

Organization I: Natural Resources Defense Council

Commenter I: Geoffrey Fettus

Other Sections: I

Comment Excerpt Text:

Coal Transportation Impacts

Downstream impacts on air quality must also be considered. For example, trains used to transport federal coal run on fossil fuels – in particular diesel – which produce a variety of air pollutants, including nitrogen oxide, soot, sulfur dioxide<sup>22</sup>, and carcinogens. In 2006, U.S. diesel trains released approximately a million tons of ozone forming oxides of nitrogen and 32,000 tons of PM<sub>2.5</sub>, causing 3,400 deaths and 290,000 lost work days. Hein and Howard at A4. Assuming that 40% of U.S. trains are freight and 40% of freight is coal, one study estimated the approximate cost of air pollution from U.S. coal transport to be \$4 per ton of coal in 2015 USD. Id. at A13.

Coal trains also emit dust from the exposed coal in the train cars. Even with surfactant sprayed over coal train cars, over 100 pounds of coal dust per train car, or about 12,500 pounds per train, blows off the trains as they move from the mines to their final destination. See, e.g., Ashley Ahearn, What Coal Train Dust Means for Human Health, Earthfix, June 21, 2016, available at <http://www.opb.org/news/article/coal-dust-a-closer-look/>. Over 160

doctors in Washington expressed public health concerns about increased coal train traffic, and resulting air pollution from diesel emissions and coal dust. See Whatcom Docs, Position Statement on the Proposed Cherry Point Coal Terminal, available at <http://www.coaltrainfacts.org/whatcom-docs-position-statement-and-appendices>.

Rail transportation also poses risks to public health due to accidents, noise and congestion. Transportation of federal coal can also burden traffic patterns in towns with rail lines, causing impacts to emergency services and daily commuting. If communities wish to avoid these impacts, they must invest in expensive infrastructure projects, such as bypasses and overpasses.

Increased coal train traffic can also displace other rail users, such as agricultural freight trains, leading to impacts for those economic sectors. Limited rail capacity means that freight, agricultural shippers, and passenger trains, risk delays and higher rates as they are bumped by coal, which often takes priority on the tracks. See, e.g., Terry Whiteside, et al., Heavy Traffic Ahead and Heavy Traffic Still Ahead, available at [www.heavytrafficahead.org](http://www.heavytrafficahead.org). Timely deliveries are particularly important with agricultural products. At least one significant agricultural business has been closed in recent years due to being pushed off the rails by coal train traffic. See Steve Wilhelm, Coal Trains Kill Cold Trains: Fruit delivery service shuts down as rail congestion heats up, Puget Sound Business Journal, Aug. 8, 2014, available at <http://www.bizjournals.com/seattle/news/2014/08/07/coal-trains-kill-cold-trains-fruit-delivery.html>.

All of these impacts should be considered cumulatively across all federal coal leasing, and the PEIS should guide how they will be considered in site-specific EISs.

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Comment Number: 0002467\_Fettus\_20160728-9

Organization I:Natural Resources Defense Council

Commenter I:Geoffrey Fettus

Comment Excerpt Text:

Coal Transportation Impacts: Coal rail lines scar lands capes and create coal dust pollution along the tracks. Trains also can create traffic congestion at road intersections near mines and across the Nation

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Comment Number: 0002474\_Trice\_20160728\_EPA-1

Organization I:U.S. Environmental Protection Agency

Commenter I:Jessica Trice

Comment Excerpt Text:

EPA recommends that this analysis include potential impacts along the routes associated with transportation of coal to market for both domestic use and for exports. That evaluation would appropriately include potential fugitive coal dust and diesel emission impacts that may accompany rail traffic, and their potential human health impacts to communities along reasonably foreseeable routes, together with potential environmental impacts.

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Comment Number: 0002499\_Nichols20160728-8

Organization I:WildEarth Guardians

Commenter I:Jeremy Nichols

Comment Excerpt Text:

. Coal Transportation Impacts

The PEIS must fully analyze and assess impacts related to coal transport, including, but not limited to, the impacts of rail transport of coal, local and regional trucking of coal, and any conveying of coal from mines to power plants. Transport-related impacts are likely to include air impacts, impacts related ongoing rail maintenance and possible expansions, water quality impacts related to roads and railways, and fish and wildlife impacts. The PEIS must provide a detailed analysis and assessment of how federal coal is transported from mines to the source of consumption, and provide the public with information and analysis on what the impacts of this transport are likely

to be. See Attached for Graphic - Coal from the Powder River Basin being hauled by rail through downtown Denver.

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Comment Number: 0002499\_Nichols20160728-9

Organization I: WildEarth Guardians

Commenter I: Jeremy Nichols

Other Sections: 8.8

Comment Excerpt Text:

iv. Coal Exports

As the notice of intent to prepare the PEIS emphasizes, the impacts of coal exports are of great concern. To this end, the PEIS must fully analyze and assess the reasonably foreseeable impacts of coal exports that may occur as a result of future coal management. These impacts include, but are not limited to, the following:

- Rail-related impacts: The impacts of hauling coal from mines to ports must be analyzed and assessed. The impacts that must be addressed include, but are not limited to, the air quality impacts of rail traffic, noise impacts of rail traffic, fish and wildlife impacts of rail traffic, and water quality impacts. Such an analysis must take into account the potential for spills and/or derailments and the impacts such events may have on land, water, fish, wildlife, and air.
- Port-related impacts: The impacts of unloading coal from trains, loading coal onto barges and/or ships, constructing and/or maintaining port facilities, and the impacts of port operations, including ship, locomotive, and/or truck operations must be analyzed and assessed. The impacts that must be addressed include, but are not limited to, the air quality impacts of all port operations, including ship, locomotive, and truck emissions, water quality impacts (including wetland impacts), and fish and wildlife impacts.
- Shipping impacts: The impacts of shipping coal, both within waters of the United States and through international waters must be addressed. The impacts that must be analyzed and assessed include air quality impacts, impacts to water quality (particularly through discharge from ships), and impacts to river and ocean species, especially species listed as threatened or endangered under the Endangered Species Act.
- Coal unloading impacts at international ports: Just as coal unloading and loading at American ports must be addressed, the impacts of unloading coal from ships and loading coal onto trains and/or trucks at international ports must be analyzed and assessed.
- Inland coal transport abroad: The impacts of transporting coal from international ports to facilities must be analyzed and assessed. Such an analysis must analyze and assess whether the coal is hauled by rail or by truck, and analyze and assess the attendant impacts.
- Coal combustion abroad: Finally, the impacts of combusting coal abroad must be analyzed and assessed. Such an analysis must include, but not be limited to, an analysis of the air quality impacts of coal combustion (including greenhouse gas emission impacts), water quality impacts, coal ash disposal impacts, fish and wildlife impacts, and impacts to lands.

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Comment Number: 0002942\_Harbine-48

Organization I: Earthjustice

Commenter I: Jenny Harbine

Other Sections: 10

Comment Excerpt Text:

The PEIS should analyze the impact of accidents caused by federal coal transport and storage. The PEIS should include a meaningful analysis of the potential safety, human and environmental risks of rail accidents, both those involving, and those proximately caused by, coal trains. Rail accidents can release coal into the surface waters and water supply causing significant impacts. Moreover, coal is very difficult to clean up. This affects downstream communities as coal released into water supply can degrade agricultural communities and municipal water supplies in addition to harming fish and other aquatic life. The blast zone for coal trains is within one mile of the train tracks. These explosions disproportionately impact low income communities and communities of color—

because these often are the communities that live near railroad tracks. 202 This impact should be analyzed as an indirect and cumulative impact, especially in light of other hazards these communities are exposed to. 203 Coal trains, which weigh far more than other types of trains, also deposit coal dust on the tracks and in the track ballast. The additional stress on the tracks increases the probability of accidents. 204 Coal dust is highly combustible and causes risks from explosions and fire. The federal Surface Transportation Board has concluded that coal dust can impair track stability lead to train derailment. 205 Consequently, coal trains are a proximate cause of rail accidents. 206 200 Id. at 20. 201 Id. at 9. 202 “Crude Injustice on the Rails,” Communities for a Better Environment and Forest Ethics, (June 2015) at 3 (80 percent of the 5.5 million Californians with homes in the blast zone live in low income communities and communities of color). 203 Id. at 11. 204 Id. at 10. 205 Surface Transportation Board Decision, Arkansas Electric Cooperative Corporation – Decision on Petition for Declaratory Order, Docket No. FD 35305 (Mar. 3, 2011); available at [http://stb.dot.gov/Decisions/readingroom.nsf/UNID/79B5382AE20F7930852578480053111F/\\$file/40436.pdf](http://stb.dot.gov/Decisions/readingroom.nsf/UNID/79B5382AE20F7930852578480053111F/$file/40436.pdf) (last visited July 28, 2016). 56 Spills are not uncommon during bunkering (or fueling), and spills into environmentally sensitive waters. The PEIS should evaluate this spill risk for both offshore bunkering— throughout the route— and onshore at port.

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Comment Number: 0020030\_Griffin\_20160722-1

Commenter I: Nancy Griffin

Comment Excerpt Text:

Coal and coal trains are a real problem. Traffic delays impact travel and emergency services.

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Comment Number: 0020042-1

Commenter I: Margaret

Comment Excerpt Text:

In Seattle and elsewhere, we're protesting coal trains moving through our cities

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Comment Number: 00001270\_Smyth\_20160623-3

Commenter I: Joe Smyth

Other Sections: 11

Comment Excerpt Text:

And transporting coal disrupts communities with mile-long trains

### **ISSUE 5.12 - METHANE CAPTURE**

Total Number of Submissions: 9

Total Number of Comments: 11

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Comment Number: 00000118\_Lapis\_20160517-1

Commenter I: Ted Lapis

Comment Excerpt Text:

We have between two and ten times the value of all the energy in oil, coal, and gas combined in methane hydrates, and that is produced in Alaska by a Conoco-Japanese consortium by pushing CO<sub>2</sub> in and capturing the methane on the way out.

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Comment Number: 0002009\_CenterBioDiversity\_20160329-5

Organization I: WildEarth Guardians

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Commenter I: Jeremy Nichols

Comment Excerpt Text:

On waste mine methane, the Interior Department must be directed to pause approval of any coal lease or mining plan that would lead to underground mining activities requiring degasification systems (i.e., systems that vent methane other than normal ventilation air systems) pending completion of Bureau of Land Management regulations meant to address coal mine methane

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Comment Number: 0002269\_Holubec\_20160715-8

Commenter I: Allen Holubec

Comment Excerpt Text:

Methane –

- a. Major Greenhouse gas
- b. Methane in a coal mine is a hazardous gas that is exhausted directly to the atmosphere
- c. Have to change some laws
  - i. Gas companies lease the gas in a coal bed, but not the coal
  - ii. Mining companies have to get rid of it. The mining companies cannot capture it and sell the gas, it belongs to the gas company, the gas company won't capture it because it's not cost justifiable to drill coal bed wells to drain the methane and the mining company does not want the drill holes to interfere with the mine
- d. The gas is a waste product of mining coal
  - i. The mining company in some instances can capture and sell the captured methane to an immediate adjacent power plant or some other company to process.
- e. Allow the mining companies to capture and sell the methane.
- f. Force the mining companies and the gas companies to work together to capture and sell the gas that would otherwise be wasted and vented to the atmosphere.

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Comment Number: 0002474\_Trice\_20160728\_EPA-2

Organization I: U.S. Environmental Protection Agency

Commenter I: Jessica Trice

Other Sections: 8.10

Comment Excerpt Text:

EPA recommends that the Draft PEIS estimate the direct and indirect GHG emissions caused by the various future coal use scenarios, including emissions associated with end use combustion of coal. It may be appropriate to employ the social cost of carbon and social cost of methane to estimate the economic value of impacts associated with the proposal's net change in CO<sub>2</sub> and CH<sub>4</sub> to contextualize the potential emissions and compare alternatives. EPA recommends that the Draft PEIS describe measures to reduce GHG emissions, including reasonable alternatives and practicable mitigation opportunities, and disclose the estimated GHG reductions. Such measures should include technologies used to mitigate coal mine methane that is currently vented to the atmosphere. Given the likelihood of advancements in GHG mitigation technologies during the timeframe considered, we recommend the Draft PEIS discuss how the BLM can encourage adoption of those technologies in future lease sales.

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Comment Number: 0002480\_Culver\_20160728\_TWS-47

Organization I: The Wilderness Society

Commenter I: Nada Culver

Other Sections: I

Comment Excerpt Text:

Since 1990, methane pollution in the United States has decreased by eleven percent, even as activities that can produce methane have increased. However, methane pollution is projected to increase to a level equivalent to

over 620 million tons of carbon dioxide pollution in 2030 absent additional action to reduce emissions. BLM recognized that “[r]educing methane emissions is a powerful way to take action on climate change.” (57) Although methane emissions from coal mines account for only about 6.3 percent of the total lifecycle emissions for coal used to produce electricity, (58) an analysis by The Wilderness Society suggests that implementation of the Mine Methane Waste Rule could reduce direct emissions from the federal coal program by an estimated 2.4 million MTCO<sub>2e</sub>. (59)

(57) From BLM to Examine Steps to Reduce Methane from Mining Operations on Public Lands, at [http://www.blm.gov/ut/st/en/info/newsroom/2014/april/blm\\_to\\_examine\\_steps.html](http://www.blm.gov/ut/st/en/info/newsroom/2014/april/blm_to_examine_steps.html).

(58) Whitaker et al., Harmonization of Coal Life Cycle GHG Emissions, Yale University, 2012. <http://onlinelibrary.wiley.com/doi/10.1111/j.1530-9290.2012.00465.x/pdf>

(59) Ratledge, Nathan. Unpublished analysis of carbon emissions reduction potential of current and proposed rules at the Department of the Interior and related agencies. October 2015. Available upon request.

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Comment Number: 0002480\_Culver\_20160728\_TWS-48

Organization I: The Wilderness Society

Commenter I: Nada Culver

Other Sections: 7.4 8.10

Comment Excerpt Text:

Recommendations: The BLM should examine and advance regulations to reduce the emissions of methane and other greenhouse gases from coal mining operations, both underground and surface operations. Unless and until those regulations are complete, the BLM should immediately consider other options to offset these emissions or otherwise address the associated climate impacts.

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Comment Number: 0002480\_Culver\_20160728\_TWS-87

Organization I: The Wilderness Society

Commenter I: Nada Culver

Other Sections: I

Comment Excerpt Text:

In 2014, the BLM issued an Advance Notice of Proposed Rulemaking to reduce methane from mining operations on public lands. (60) BLM cited its authority for regulation methane waste: “The authority for the BLM to address the capture, use, or destruction of waste mine methane across 700 million acres of Federal mineral estate comes from the Mineral Leasing Act.”

(60) Waste Mine Methane Capture, Use, Sale, or Destruction, A Proposed Rule by the Bureau of Land Management on April 29, 2014, 79 FR 23923, RIN 1004-AE23.

<https://www.federalregister.gov/articles/2014/04/29/2014-09688/waste-mine-methane-capture-use-sale-or-destruction>.

The ANPR also recognizes that methane is emitted “not only from underground coal mines, but also from active surface coal mines and post-mining operations, as well as abandoned or closed underground coal mines.” (61) BLM should consider regulations to reduce emissions from these sources as well.

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Comment Number: 0002942\_Harbine-51

Organization I: Earthjustice

Commenter I: Jenny Harbine

Comment Excerpt Text:

5. The PEIS Should Evaluate the Impacts of Coal Mine Methane and Mitigation Measures to Limit Coal Mine

Methane Emissions. There is increasing scientific evidence that for humanity to have a chance to keep climate change within tolerable levels (below 2 °C), governments around the world must act quickly to reduce methane emissions in particular. 88 Part of that consensus is that methane pollution is more damaging than previously thought. The Fifth Assessment Report of the Intergovernmental Panel on Climate Change (“IPCC”) in 2013 concluded that methane is a much more potent driver of climate change than scientists understood it to be just a few years previous—with a global warming potential as much as 36 times greater than CO<sub>2</sub> over a 100-year time frame, and 87 times greater than CO<sub>2</sub> over a 20-year time frame. Approximately one-third of the anthropogenic climate change we are experiencing today is attributable to methane and other short-lived climate pollutants, and about thirty percent of the warming we will experience over the next two decades as a result of this year’s greenhouse gas emissions will come from methane. 89 Climate scientists now recognize that avoiding catastrophic climate change will require both a long-term strategy to reduce carbon dioxide emissions and near-term action to mitigate methane and similar “accelerants” of climate change. As a 2013 article in the journal *Science* stated: “The only way to permanently slow warming is through lowering emissions of CO<sub>2</sub>. The only way to minimize the peak warming this century is to reduce emissions of CO<sub>2</sub> and [short-lived climate pollutants],” including methane. 90 Because of methane’s outside role in near-term climate-forcing, this administration has specifically targeted methane pollution to address climate change. In 2013, the White House published a climate strategy that concluded: “Curbing emissions of methane is critical to our overall effort to address global climate change.”91 The need to address methane’s damaging climate impacts spurred both BLM and EPA to propose regulations to limit the fugitive methane emissions from oil and gas operations. EPA’s 88 B. McKibben, *Global Warming’s Terrifying New Chemistry*, *THE NATION* (Mar. 23, 2016), attached as Ex. 14, and available at <http://www.thenation.com/article/global-warming-terrifying-new-chemistry/> (last visited July 28, 2016). 89 *Climate Change 2013: The Physical Science Basis, Contribution of Working Group I to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change* (Thomas Stocker et al., eds. 2013), available at [http://www.climatechange2013.org/images/report/WG1AR5\\_ALL\\_FINAL.pdf](http://www.climatechange2013.org/images/report/WG1AR5_ALL_FINAL.pdf) (last visited July 28, 2016). 90 J.K. Shoemaker, et al., *What Role for Short-Lived Climate Pollutants in Mitigation Policy?* 342 *SCIENCE* 1323-24 (2013), attached as Ex. 15, and available at <http://www-ramanathan.ucsd.edu/files/pr200.pdf> (last visited July 28, 2016). 91 Executive Office of the President, *The President’s Climate Action Plan* (June 2013), attached as Ex. 16, and available at <https://www.whitehouse.gov/sites/default/files/image/president27climateactionplan.pdf> (last visited July 27, 2016). 35 2015 proposed regulations specifically address methane’s damaging climate impacts. 92 BLM has issued draft rules that also address climate impacts. 93 Both agencies concluded that reducing methane pollution would have significant social benefits, based in large part on the significant social cost of methane and/or carbon in continuing to permit unnecessary methane releases. 94 Earlier this year, the U.S. and Canada also signed a climate agreement which calls for significant methane reductions from the oil and gas sector. 95 Coal mines—including operations that mine federal coal in the U.S. —are a significant source of methane pollution. Eight percent of global methane emissions come from coal mines. 96 One coal mine operating on federal leases in Colorado is reportedly that state’s largest single source of methane pollution; this in a state with a vast amount of oil and gas infrastructure. 97 As a result, coal mine methane (“CMM”) has also long been targeted for reduction by the federal government. In 1994, EPA established the Coalbed Methane Outreach Project (“CMOP”) to “work[] cooperatively with the coal mining industry in the United States – and other major coal-producing countries – to reduce CMM emissions. By helping to identify and implement methods to recover and use CMM instead of emitting it to the atmosphere, CMOP has played a key role in the United States’ efforts to reduce GHG emissions and address 92 U.S. Environmental Protection Agency, *Proposed Rule, Oil and Natural Gas Sector*, 80 Fed. Reg. 56,593, 56,598 (Sep. 18, 2015), attached as Ex. 17, and available at <https://www.gpo.gov/fdsys/pkg/FR-2015-09-18/pdf/2015-21023.pdf> (last visited July 27, 2016). 93 Bureau of Land Management, *Proposed Rule, Waste Prevention, Production Subject to Royalties, and Resource Conservation*, 81 Fed. Reg. 6,616, 6,617 (Feb. 8, 2016), attached as Ex. 18, and available at <https://www.gpo.gov/fdsys/pkg/FR-2016-02-08/pdf/2016-01865.pdf> (last visited July 28, 2016). 94 U.S. Environmental Protection Agency, *Proposed Rule, Oil and Natural Gas Sector*, 80 Fed. Reg. at 56,657 (Ex. 17); BLM, *Proposed Rule, Waste Prevention*, 81 Fed. Reg. at 6670-71 (Ex. 18); Bureau of Land Management, *Regulatory Impact Analysis for Revisions to Onshore Oil and Gas Leasing* (Jan. 14, 2016) at 32, 130-49 (Ex. 12). 95 The White House, *U.S.-Canada Joint Statement on Climate, Energy, and Arctic Leadership*

(Mar. 10, 2016), attached as Ex. 19, and available at <https://www.whitehouse.gov/the-press-office/2016/03/10/us-canada-joint-statement-climate-energy-and-arctic-leadership> (last visited July 28, 2016). 96 “In 2015, global methane emissions from coal mines were estimated to be 630 MMTCO<sub>2</sub>E, accounting for 8 percent of total global methane emissions.” U.S. Environmental Protection Agency, *Frequent Questions About Coal Mine Methane*, available at <https://www.epa.gov/epa-coalbed-methane-outreach-program/frequent-questions> (last visited July 28, 2016). 97 See K. Ray, *Colorado’s worst methane polluter is an Arch Coal mine*, *Colorado Independent* (May 3, 2016), attached as Ex. 20, and available at <http://www.coloradoindependent.com/159131/colorados-worst-methane-polluter-is-an-arch-coal-mine-west-elk-john-hickenlooper> (last visited July 28, 2016). 36 global climate change.”98 In 2014, the administration published a strategy to reduce methane pollution which specifically identified the need for voluntary and regulatory actions to limit methane emissions from coal mines. 99 Further, in 2014 BLM issued an advance notice for proposed rulemaking (“ANPR”) requesting “comments and suggestions that might assist the agency in the establishment of a program to capture, use, or destroy waste mine methane that is released into the mine environment and the atmosphere as a direct consequence of underground mining operations on Federal leases for coal and other minerals.”100 The ANPR for waste mine methane noted that the agency had the authority to require methane capture in coal leases: Based on the readjustment authority [30 U.S.C. § 207], the BLM may readjust lease terms to both authorize and require lessees to capture otherwise vented [waste mine methane] to use or sell. The BLM also has authority under the same section of the MLA to include such terms and conditions in new coal leases. 101 The ANPR also notes that agency climate policy supports the control or elimination of methane pollution from coal mines: [R]educing [waste mine methane] venting would reduce emissions of a potent greenhouse gas, consistent with the President’s Climate Action Plan— Strategy to Reduce Methane Emissions (March 2014) and Secretarial Order 3289, Amendment No. 1 (“Addressing the Impacts of Climate Change on America’s Water, Land, and other Natural and Cultural Resources,” dated February 22, 2010). 102 98 U.S. Environmental Protection Agency, *Coal Mine Methane – What EPA is Doing*, attached as Ex. 21, and available at <https://www.epa.gov/epa-coalbed-methane-outreach-program/what-epa-is-doing> (last visited 28, 2016). 99 The White House, *Climate Action Plan, Strategy to Reduce Methane Emissions* (Mar. 2014), attached as Ex. 22, and available at [https://www.whitehouse.gov/sites/default/files/strategy\\_to\\_reduce\\_methane\\_emissions\\_2014-03-28\\_final.pdf](https://www.whitehouse.gov/sites/default/files/strategy_to_reduce_methane_emissions_2014-03-28_final.pdf) (last visited July 28, 2016). 100 79 Fed. Reg. 23,923 (Apr. 29, 2014). 101 *Id.* at 23,924; see also *id.* at 23,923 (citing 30 U.S.C. § 189, which states that the Secretary “is authorized to prescribe necessary and proper rules and regulations and to do any and all things necessary to carry out and accomplish the purposes of” the Mineral Leasing Act governing coal leasing, and 30 U.S.C. § 207, which states that coal leases “shall include such other terms and conditions as the Secretary shall determine.”). 102 *Id.* at 23,924. 37 BLM should immediately finalize its coal mine methane rulemaking to address harmful methane emissions now, even as it considers broader reforms. In addition, BLM must evaluate the climate consequences of coal mine methane and potential mitigation to reduce those emissions in its programmatic review of the federal coal leasing program. In the context of this review, if the BLM considers any alternative that provides for new coal leasing, the agency must also consider requiring methane mitigation measures on those leases. *Wilderness Soc’y v. Wisely*, 524 F. Supp. 2d 1285, 1309 (D. Colo. 2007) (holding that EIS must consider “all possible approaches to, and potential environmental impacts of, a particular project”). In comments on the ANPR for the coal mine methane rulemaking, attached, Sierra Club, Earthjustice and others provided detailed recommendations for feasible and available mine methane mitigation measures. 103 As those comments explain, coal mine methane generally is removed from underground mines one of two ways. Methane can be removed by moving vast quantities of air, including dilute quantities of methane, through a mine’s ventilation system. This methane pollution, known as ventilation air methane (VAM), is distinct from methane removed from the coal seam by methane drainage wells (MDWs) drilled into the coal seam from above. Mitigation measures are available for both removal methods. VAM makes up over half of all coal emissions in the United States and worldwide. VAM mitigation measures are technically and economically feasible and have already been employed at mines worldwide, including in the United States, to reduce 95% or more of VAM emissions. BLM and the Forest Service (which must consent to coal leasing on national forest lands) have generally declined to address such an alternative at the leasing stage, for example, when addressing lease modifications for the West Elk Mine in the last few years, despite the multiple



examples of successful VAM mitigation measures. But the agencies' previous justifications for declining to study in detail and alternative requiring the use of VAM reduction technology all lack support, and should not be used by BLM to reject such alternative in the PEIS. In addition to measures available to reduce VAM emissions, BLM should consider carbon offsets, which are a tested, feasible, and practical alternative to allowing federal coal leaseholders to vent millions of cubic feet of methane into the atmosphere every without (or with minimal) mitigation or control. EPA has repeatedly urged land management agencies to assess carbon offsets in EAs and EISs as a way to reduce climate change impacts of agency actions. EPA has specifically noted that offsets are a reasonable alternative to lessen the impacts of coal mine methane emissions. In a 2007 letter concerning a proposal to permit methane drainage wells at the West Elk Mine, EPA specifically rejected the Forest Service's assertion that a carbon offset alternative was not reasonable: "[I]t is reasonable to consider offset mitigation for the release of methane, as appropriate. Acquiring offsets to counter the greenhouse gas impacts of a particular project is something that thousands of organizations, including private corporations, are doing today." 104 EPA specifically recommended that another EIS on a coal leasing proposal 103 See Comments by Sierra Club, et al., 1004-AE23, Waste Mine Methane Capture, Use, Sale, or Destruction, Advance Notice of Proposed Rulemaking (June 30, 2014), attached as Ex. 23. 104 Letter from L. Svoboda, U.S. Environmental Protection Agency to C. Richmond, U. S. Forest Service (Aug. 7, 2007) at 7 (emphasis added), attached as Ex. 24. 38 "acknowledge that revenues for carbon credits are available via several existing markets." 105 Similarly, EPA has recommended that a Forest Service NEPA analysis of a forest health project "discuss reasonable alternatives and/or potential means to mitigate or offset the GHG emissions from the action." 106 Numerous state agencies already use offsets to control GHG emissions. 107 BLM has authority to require such offsets, and numerous federal agencies require similar mitigation, and so addressing such an alternative in the PEIS is reasonable. For example, the Interior Department is a participant in an offset program related to GHG pollution from the Navajo Generating Station in Arizona. In a settlement with state, federal, tribal and conservation groups related to Clean Air Act compliance, DOI committed to reduce or offset federal CO<sub>2</sub> emissions by 3% annually for a total of 11.3 million metric tons of emissions reductions by the end of 2031. 108 This is intended to reduce CO<sub>2</sub> emissions and demonstrate the workability of a credit-based system to achieve pollution reductions. DOI also committed to facilitating development of Clean Energy Projects intended to achieve 80% generation of clean energy for the federal share at the Navajo Generating Station by 2035 by securing nearly 27 million megawatt hours in Clean Energy Development Credits. 109 A number of underground coal mines operating on federal leases not only remove methane in dilute quantities through ventilation systems (as VAM), but also emit millions of cubic feet a day of higher concentration methane via methane drainage wells (MDWs). Because emissions from MDWs generally contain methane in higher concentrations, such emissions can be combusted, or flared, before they enter the atmosphere. Flaring results in an 87% reduction in GHG emissions compared with venting methane directly into the atmosphere. 110 As a State of Colorado 2016 report states: From a climate change standpoint, emitting carbon dioxide is much less harmful on the environment than a mine's direct emission of methane into the atmosphere. Accordingly, flaring methane, 105 U.S. Environmental Protection Agency July 2012 Comment Letter at 5 (identifying four U.S. carbon exchanges creating a market for carbon credits), attached as Ex. 25. 106 Letter from L. Svoboda, U.S. Environmental Protection Agency, to T. Malecek, U. S. Forest Service, at 8 (Oct. 27, 2010), attached as Ex. 26. 107 See, e.g., Settlement Agreement, ConocoPhillips and California (Sept. 10, 2007) (California agency requiring offsets as a condition of approving a project), attached as Ex. 27; Minn. Stat. § 216H.03 subd. 4(b) (Minnesota law requiring offsets for certain new coal-fired power plants); Me. Rev. Stat. Ann. tit. 38, § 580-B(4)(c) (Maine law establishing greenhouse gas initiative that includes the use of carbon offsets). 108 See Technical Work Group Agreement Related to Navajo Generating Station (July 25, 2013) at 5-6, 9, available at [https://www.doi.gov/sites/doi.gov/files/migrated/upload/7-25-2013-NGS-TWG-Agreement-FINAL\\_Executed.pdf](https://www.doi.gov/sites/doi.gov/files/migrated/upload/7-25-2013-NGS-TWG-Agreement-FINAL_Executed.pdf) (last viewed July 28, 2016). 109 Id. 110 Daniel J. Brunner & Karl Schultz, *Effective Gob Well Flaring* 724 (1999), attached as Ex. 28. 39 which converts the residual gas emission to carbon dioxide, has nearly the same environmental impacts as using methane to generate electricity or heat. 111 Where MDWs are or can be utilized, methane flaring is a reasonable, practical, effective, and feasible alternative to reduce GHG emissions from new or existing coal lease. 112 Although mitigation for coal mine methane emissions is not alone sufficient to avoid or mitigate the climate change impacts of the federal coal leasing program, it is a near-term necessity to

ensure that existing coal mining does not exact irreversible consequences. The PEIS should analyze these mitigation options.

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Comment Number: WO\_CoalPEIS\_0003060\_Laverty\_N\_20160710-1

Commenter I: Denise Claire Laverty

Comment Excerpt Text:

Require coal companies to capture and use the methane they release from their mines.

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Comment Number: 000001239\_RECKLE\_20160623-4

Commenter I: Eric Reckle

Commenter Type: Individual

Other Sections: 18

Comment Excerpt Text:

let's see addressed is the fact that any methane vent -- we have to watch out how we put those in, especially if above-ground area is a wilderness area. I think I'd look at that in terms of how we, how we put that vent in if it's a wilderness area above ground.

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Comment Number: 00001268\_Ortiz\_20160623-2

Organization I: Western Slope Conservation Center

Commenter I: Karen Ortiz

Other Sections: 11

Comment Excerpt Text:

You've heard about our very clean burning coal. North Fork communities have benefited from this wealth over many decades without sacrificing the other riches that our local land, water, and air provide. That, coupled with methane off-gassing from our closed and currently operating mines in our recapture project, puts us into an excellent position for the Federal Government to leverage our values of methane recapture methods [indiscernible] research and training site. It could create training and jobs for some displaced miners while diversifying our local economy and energy generation through methane recapture and other renewable sources at our disposal.

### **ISSUE 5.13 - SURFACE OWNER RIGHTS**

Total Number of Submissions: 9

Total Number of Comments: 12

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Comment Number: 0000072\_Tully\_20160517-7

Organization I: Northern Plains Resource Council

Commenter I: Tom Tully

Comment Excerpt Text:

Provide for protection for surface owners in the instance of a split-estate and especially before allowing the exchange of split-estate coal, regardless of the methods used to mine coal. This includes longwall and other methods of underground mining.

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Comment Number: 0000076\_Pfister\_20160517-1

Organization I: Western Organization of Resource Councils

Commenter I: Ellen Pfister

## Comment Excerpt Text:

Much of BLM's 570 million acre mineral estate in the West is under private surface such as mine. And as the surface owner, I am very concerned about this. This thing has hung over my head for 25 years. Only one thing will be mined from the coal deposit, but the lease is for all the coal. And so we actually stand a potential for being under-mined two or three more times, and we don't know when the lease expires. Does it expire when the main seam is taken? Does it expire a hundred years from now when maybe they get around to the last one? There's no certainty when you coal -- when you own surface over federal coal, and there's a lot of private surface owners in the West in that situation.

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Comment Number: 000051 I\_Pfister\_WesternOrg of Resource Councils\_20160517-1

Organization I:Northern Plains Resource Council

Commenter I:Ellen Pfister

## Comment Excerpt Text:

As a surface owner over federal coal, I, too, am concerned about the future of coal leasing. I have had a federal coal trade or lease hanging over my head for 25 years. Only one seam will be mined, but there are a number of less lucrative seams. BLM refused to do a seam specific lease in our area. Is the coal lease effective until the last thin seam is removed or until the mine gets the one it says it wants? When does the lease expire? Does it release my land when every last section in the lease is mined or is it as the coal is removed section by section? Surface owner consent, hard fought in SMCRA, is compromised by coal trades or coal for land trades. Are owners of grazing rights on federal lands compensated for the loss of the rights and the income they represent?

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Comment Number: 000051 I\_Pfister\_WesternOrg of Resource Councils\_20160517-10

Organization I:Northern Plains Resource Council

Commenter I:Ellen Pfister

## Comment Excerpt Text:

BLM has areas in its lease forms for additional provisions. There is lots of talk today about "private property rights". In some cases property owners have everything except the coal, but as holders of those rights from the federal government, we are treated as nothing more substantial than overburden. I believe the Federal Government has an equitable responsibility to see that our lands are reclaimed and not rendered unusable while and after federal mineral is developed. BLM has been unwilling to add equitable remedies to coal leases in the additional provisions sections

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Comment Number: 0000840-3

Commenter I:Craig J. Provost

## Comment Excerpt Text:

It is also important to note that many of the properties being considered are so close to, or adjacent to, our beautiful National Parks, which are the source of millions of dollars to the tourism industry of our state. Decimating the quality of air in our Parks and further damaging the quality of our public roads including historic scenic byways is not worth the bargain basement prices the BLM offers these lands for leasing. Then there is the question of rehabilitation of the lands after they have been robbed of their resources, and left as slag heaps when the Coal companies have gone bankrupt, as reported by the banking industry, which is reluctant to offer loans for further coal development.

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Comment Number: 0002079\_Horwitz\_20160623-1

Commenter I:Christopher Horwitz

Other Sections: 8.5

## Comment Excerpt Text:

landholders should be paid up front for their land, including the remediation charges; the coal production should only then proceed.

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Comment Number: 0002390\_Pfister\_20160721-10

Organization I:Northern Plains Resource Council

Commenter I:Ellen Pfister

Comment Excerpt Text:

As a surface owner over federal coal I have some questions about my private property rights in relation to leased federal coal which I would like to have delineated.

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Comment Number: 0002390\_Pfister\_20160721-3

Organization I:Northern Plains Resource Council

Commenter I:Ellen Pfister

Comment Excerpt Text:

As a surface owner over federal coal, I, too, am concerned about the future of coal leasing. I have had a federal coal trade or lease hanging over my head for 25 years. Only one seam will be mined, but there are a number of less lucrative seams. BLM refused to do a seam specific lease in our area. Is the coal lease effective until the last thin seam is removed or until the mine gets the one it says it wants? When does the lease expire? Does it release my land when every last section in the lease is mined or is it as the coal is removed section by section? Surface owner consent, hard fought in SMCRA, is compromised by coal trades or coal for land trades. Are owners of grazing rights on federal lands compensated for the loss of the rights and the income they represent?

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Comment Number: 0002391-5

Commenter I:Tom Tully

Comment Excerpt Text:

5) Provide more protection for surface owners in the instances of a split estate, and especially before allowing exchanges of split estate coal, regardless of the method used to mine coal. This includes longwall and other methods of underground mining.

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Comment Number: 0002394-2

Commenter I:Barbara Archer

Comment Excerpt Text:

Surface owners need to be fairly considered in the case of the split estates.

Split estate coal has been exchanged without landowners' permission. When mined, for all practical purposes surface damage is permanent. Reclamation so far is taking generations.

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Comment Number: 0002458\_Friez\_20160728-1

Organization I:North American Coal Corporation

Commenter I:Christopher Friez

Comment Excerpt Text:

In North Dakota, federal coal typically represents a small, yet not inconsequential, proportion of the coal within a mine area. The federal coal exists in pockets intermingled with larger blocks of privately and state owned coal. Often, the federal government may share its ownership of the federal coal in a given tract with other coal owners. Additionally, the federal government has no surface ownership above its coal reserves.

Comment Number: 0002458\_Friez\_20160728-5  
Organization I:North American Coal Corporation  
Commenter I:Christopher Friez  
Comment Excerpt Text:

As indicated above, in North Dakota, in some cases where the federal government owns coal, it does not own 100% of the coal underlying an entire tract. In those cases, the federal government shares its coal ownership with private owners. By sterilizing these tracts of coal, the federal government is stranding the assets of private citizens and may bring liability issues upon itself by not allowing private citizens to develop their valuable resources. In addition, in nearly all cases where the federal government owns coal at NACoal's operations, the surface on those tracts is privately owned.

## **Issue 6 - Environmental justice**

Total Number of Submissions: 16  
Total Number of Comments: 18

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Comment Number: 0000015\_Gorenflow\_TNInterfaithPwr\_20160525-1  
Organization I:Tennessee Interfaith Power and Light  
Commenter I:Louise Gorenflo  
Comment Excerpt Text:

The elderly, children, communities of color and lower-income people - those least responsible for climate change - are disproportionately harmed by the impacts of climate change and our persistent inaction.

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Comment Number: 00000161\_HUGHES\_20160517-2  
Organization I:Statewide Organizing for Community Empowerment  
Commenter I:Adam Hughes  
Other Sections: 10  
Comment Excerpt Text:

In 2008, one billion gallons of coal ash contaminated with heavy metals spilled on the communities of Roane County. The cleanup was long and costly, finishing only last year and doing damage that cannot be truly quantified. The ash from the spill was shipped by train to the cash poor predominantly African-American community of Uniontown, Alabama, where it sits in a land fill directly across from houses. Residents report health problems and crop failures, and they have filed a civil rights complaint and testified in Washington, D.C. We must understand that the Federal Coal Leasing Program is directly connected to the injustices in Kingston and Uniontown.

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Comment Number: 0000081\_Lempke\_20160517-5  
Organization I:Tri-State Generation and Transmission Association  
Commenter I:Doug Lempke  
Comment Excerpt Text:

our member system serves one of the economically depressed communities in the region where residents can least afford to pay higher electrical bills. As BLM develops the programmatic environmental impact statement for the federal coal program, Tri-State strongly encourages you to consider the impact on the cost of electricity, consider federal, state, and local government dependence on royalty payments that they'd receive

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Comment Number: 0000797\_Nehring\_Voices for UT Children\_20160519 -9

Organization I:Voices for Utah Children

Commenter I:Lincoln Nehring

Other Sections: I

Comment Excerpt Text:

Among children who suffer from asthma, racial and economic inequities persist, as well. As Children's National Health System chairman of pediatrics Stephen Teach explains, "There are stark and dramatic disparities in the prevalence of the disease."<sup>5</sup> In Utah, asthma is likewise known to have disparate impacts on certain groups, often affecting higher percentages of the populations of some racial and ethnic minorities. According to the 2016 Utah Prevention and Needs Assessment report on asthma in schools, for example, Salt Lake County data indicated "black youth (21.3%) had a higher current asthma prevalence compared to the total (12.2%), other (10.5%), and Hispanic youth (8.1%)."<sup>6</sup>

(5) <http://upr.org/post/childhood-asthma-rates-level-racial-disparities-remain>

(6) <http://health.utah.gov/asthma/pdfs/data/schoolIPNA2016.pdf>

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Comment Number: 0000824-6

Commenter I:Garrett Atwood

Other Sections: I

Comment Excerpt Text:

Since 1980, the world has increased its use of coal, oil, and natural gas by over 80 percent - because that is the most cost-effective way to produce energy. At the same time, the average life expectancy of our world's 7 billion people has gone up 7 years-that's 7 years of precious life! Every other metric of human well-being has also improved, from income to access to health care to nourishment to clean water access. The most growth has been among the poorest people in the world. (Source: BP Statistical Review of World Energy, Historical data workbook World Bank, World Development Indicators (WDI)).

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Comment Number: 0002011\_Clay\_20160623-1

Commenter I:Beth Clay

Comment Excerpt Text:

The poor people, and I mean poor in a financial way, have coal furnaces in almost every older home in town. If coal is no longer available, how can those people, who cannot afford to replace their furnaces with some green form that won't work, heat their homes.

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Comment Number: 0002067\_VanSickle\_20160622-1

Commenter I:Jim Van Sickle

Comment Excerpt Text:

Reduction of the coal industry in Montana will bring our poverty stricken Crow nation to their knees.

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Comment Number: 0002474\_Trice\_20160728\_EPA-4

Organization I:U.S. Environmental Protection Agency

Commenter I:Jessica Trice

Comment Excerpt Text:

Therefore, EPA recommends the Draft PEIS consider the potential for any associated disproportionate adverse impacts and any benefits to minority and low-income populations that may occur as a result of various reforms to the Federal coal program, including consideration of reasonable mitigation where appropriate.

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Comment Number: 0002942\_Harbine-42

Organization I:Earthjustice

Commenter I:Jenny Harbine

Other Sections: I I

Comment Excerpt Text:

The PEIS Should Evaluate the Impacts of Mining and Burning Federal Coal on Downstream Communities, Including the Environmental Justice Impacts Associated with Each Considered Alternative BLM's Notice of Intent states that "[w]ith respect to the climate impacts of the Federal coal program, the Programmatic EIS will examine how best to measure and assess the climate impacts of continued Federal coal production, transportation, and combustion." 168 We applaud this commitment. But the PEIS must go further: it must also analyze and disclose the non-carbon environmental, health, and economic impacts of coal production, transport, and combustion. NEPA requires federal agencies to consider "any adverse environmental effects of their major actions." 42 U.S.C. § 4332(2)(C). This consideration extends to both direct and indirect impacts. 40 C.F.R. § 1508.8. Indirect impacts are reasonably foreseeable impacts that are caused by the project but that occur later in time or at a greater distance. *Id.* A "reasonably foreseeable impact" is one that is "sufficiently likely to occur that a person of ordinary prudence would take into account in reaching a decision." *Mid States Coal. for Progress*, 345 F.3d at 549 (citing *Sierra Club v. Marsh*, 976 F.2d 763, 767 (1st Cir. 1992)). Even if complete information is lacking on the extent of the foreseeable impact, "the agency may not simply ignore the effect." 166 Leonard G. Pearlstine, *Elise V. Pearlstine, & Nicholas G. Aumen, A Review of the Ecological Consequences and Management Implications of Climate Change for the Everglade*, 29-4 *JOURNAL OF THE NORTH AMERICAN BENTHOLOGICAL SOCIETY*, 1510, 1513 (2010); E. Stabenau, J. Sadle, & L. Pearlstine, *Sea-level Rise: Observations, impacts, and proactive measures in Everglades National Park*, 28 *PARK SCIENCE*, 26-30 (2011). 167 Government Accountability Office, *Climate Change*, at 27. 168 81 Fed. Reg. at 17,725. 49 *Id.* If the nature of the effect is reasonably foreseeable, this effect must be addressed in the PEIS. *Id.* Given the scope and scale of the federal leasing program, it is undeniable that it has significant, adverse effects on water quality and access, air quality, health and climate. The activities directly and indirectly associated with coal leasing include, among other things, coal transport by rail, truck and sea, construction and operation of infrastructure and equipment related to storing, shipping and processing coal, coal combustion domestically and overseas, and disposal of coal ash. Each of these "downstream" activities negatively downstream communities, harming their health, threatening their safety and causing significant nuisance. More specifically, the federal coal program's downstream activities generate coal dust and other air , reduce water access and worsen water quality, increase accident and hazard risk, induce growth that magnifies these affects, and hasten impacts from climate disruption, such as sea level rise. These impacts are particularly pernicious because many downstream communities, and low income communities and communities of color in particular, are already disproportionately impacted by pollution and hazards. Communities situated within two miles of rail lines, 169 in cities next to ports, those near coal terminals and plants, and communities that depend upon clean and accessible water for their livelihoods are most vulnerable. Since NEPA requires analysis of all foreseeable direct, indirect and cumulative impacts, the PEIS must analyze impacts to downstream communities.

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Comment Number: 0002942\_Harbine-44

Organization I:Earthjustice

Commenter I:Jenny Harbine

Other Sections: I O

Comment Excerpt Text:

The PEIS must analyze downstream impacts of coal dust. Coal dust emissions can significantly impact the health of downstream communities and workers, and damage our environment. The PEIS should analyze both coal dust emissions impacts from railcars and fugitive emissions. Coal dust is generated by coal-carrying rail cars during transit and as a fugitive emission from coal storage piles, and loading and unloading activities. 177 Rail lines parallel waterways where rail cars emit coal dust, transporting it to nearby communities and farms. Coal trains emit coal dust from the top and bottom of the rail cars throughout the trip. An average rail car loses 645 lbs during a 400

mile trip. 178 BNSF estimates that 500 to 2000 lbs of coal dust can be emitted from each train car per trip. 179 Surfactants are sometimes sprayed over the coal to control dust. However, surfactants wear off during the trip and require tremendous quantities of water to apply. Coal dust can impact port communities and workers because of higher emissions associated with containment within a smaller area and the types of locomotives used within port facilities. 180 Currently, no federal regulations protect communities from coal dust exposure. Coal dust consists mainly of granules and fine black particles that increase both PM10 and PM 2.5 in the ambient air. Most acutely, coal dust causes wheezing, excess cough and other 176 Power Consulting, Inc., *The Economic Consequences of the Federal Coal Leasing Program: Improving the Quality of the Economic Analysis* (July 27, 2016) at 49, attached as Ex. 1, citing, inter alia, National Research Council, *Hidden Costs of Energy: Unpriced Consequences of Energy Production and Use*, Committee on Health, Environmental, and Other External Costs and Benefits of Energy Production and Consumption (2010), available at <http://nap.edu/12794> (last visited July 27, 2016), attached as Ex. 32; Paul R. Epstein, et al., *Full cost accounting for the life cycle of coal*, in “*Ecological Economics Review*, *ANNALS OF THE NEW YORK ACADEMY OF SCIENCES*, 1219 (2011): 73-98, available at [http://www.chgeharvard.org/sites/default/files/epstein\\_full%20cost%20of%20coal.pdf](http://www.chgeharvard.org/sites/default/files/epstein_full%20cost%20of%20coal.pdf) (last visited July 27, 2016), attached as Ex. 33; Nicholas A. Muller et al., *Environmental Accounting for Pollution in the United States Economy*. *AMERICAN ECONOMIC REVIEW* 101 (August 2011): 1649-1675, available at <http://pubs.aeaweb.org/doi/pdfplus/10.1257/aer.101.5.1649> (last visited July 27, 2016), attached as Ex. 34. 177 Comments of Phyllis Fox, *Environmental Health and Safety Impacts of the Proposed Oakland Bulk and Oversized Terminal*, September 21, 2015, at 13, attached as Ex. 35. 178 Comments of Phyllis Fox, *Environmental Health and Safety Impacts of the Proposed Oakland Bulk and Oversized Terminal*, September 21, 2015, at 2 (Ex. 35). 179 Sustainable Systems Research, LLC, “*Technical Memorandum Air Quality, Climate Change, and Environmental Justice Issues from Oakland Trade and Global Logistics Center*, September 18, 2015, at 6, attached as Ex. 36. 180 Id. 52 respiratory symptoms. 181 Longer term exposure can lead to skin damage, circulatory problems, and increased risk of developing cancer. Coal dust also increases accident risk because coal dust from trains destabilizes the track ballast—the surface that bears the load of the railroad ties. Coal dust contaminates soil, coats crops, yards, homes and vehicles raising health concerns and causing nuisance. 182 Fugitive coal dust can impair lung function, and cause or contribute to cardiovascular disease and developmental disorders. Covered rail cars would appear to reduce coal dust emissions, so the PEIS should also explore the impacts of covered rail cars. To our knowledge, at this time, no covered coal trains are in use in the U.S. and we know of no published study of the efficacy for coal trains. Covered cars would still emit coal dust from the bottom of the train, which constitutes 7 percent of the total coal dust. 183 And if the cars included venting units, the coal dust would additionally vent from the top of the car. Covered rail cars also pose an additional rail accident risk; coal is highly combustible, and coal trapping heat limited space could facilitate spontaneous combustion. 184 In addition to analyzing the impacts of coal dust emissions from uncovered cars, the PEIS should analyze and disclose emissions from empty coal trains. One recent Australian study found that empty coal trains emit more particulate pollution than loaded ones. 185 Controlling coal dust requires millions of gallons of water per year. Water is needed during rail car loading, at storage piles within enclosures, at drop points, and during ship loading. 186 About 8 gallons of water are required for each ton of coal throughput to control dust. 187 Given that coal travels through states that are experiencing drought, the PEIS should analyze the impacts of coal leasing in this context. The PEIS should also consider the cumulative impacts of coal dust given the impacts faced by communities located near rail lines and ports where the trains are carried. Cumulative impacts are the related past, present, and reasonably foreseeable future projects. 181 Comments of Phyllis Fox, *Environmental Health and Safety Impacts of the Proposed Oakland Bulk and Oversized Terminal*, September 21, 2015, at 16 (Ex. 35). 182 Paul R. Epstein et al, *Full Cost of Accounting for the Life Cycle of Coal*, *ANNALS OF THE NEW YORK ACADEMY OF SCIENCES*, v. 1219, 2011, at 84 (Ex. 33). 183 Comments of Phyllis Fox, *Health and Safety Impacts of the Proposed Oakland Bulk and Oversized Terminal*, September 21, 2015, at 17 (Ex. 35). 184 Id. at 18. 185 Nick Higgenbotham et al, *Coal Train Pollution Signature Study: A briefing paper prepared for the For the Coal Terminal Action Group Dust and Health Committee*, August 2013, attached as Ex. 37. 186 Comments of Phyllis Fox, *Environmental Health and Safety Impacts of the Proposed Oakland Bulk and Oversized Terminal*, September 21, 2015, at 2 (Ex.



35). 187 Id. at 7. 53 Given that ports and other areas impacted by coal dust are located in low-income communities and communities of color, the PEIS must analyze these impacts. 188

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Comment Number: 0002942\_Harbine-55

Organization I:Earthjustice

Commenter I:Jenny Harbine

Comment Excerpt Text:

8. The PEIS must analyze environmental justice impacts. The PEIS must address the environmental justice implications the federal coal program, particularly with regard to climate impacts. Minority and low-income communities bear a disproportionate risk of suffering adverse effects of climate disruption. According to EPA, “[C]limate change is an environmental justice issue. Low-income communities and communities of color already overburdened with pollution are likely to be disproportionately affected by, and less resilient to, the impacts of climate change.”<sup>207</sup> In addition, low-income communities and communities of color face multiple vulnerabilities due to threats to health, housing, healthy food, transportation, jobs, safety, and clean energy, among other things, 208 all of which the mining and burning of federal coal exacerbates. EPA cites the Intergovernmental Panel on Climate Change’s (“IPCC’s”) Fifth Assessment Report, which concludes that climate disruption will hit low-income neighborhoods and people of color the hardest. According to the IPCC, “[m]any key risks constitute particular challenges for the least developed countries and vulnerable communities, given their limited ability to cope.”<sup>209</sup> These disproportionate risks relate to economic impacts and effects on 206 A recent draft EIS evaluating the impact of Millennium Bulk Terminals Longview in Washington State acknowledged that the coal project would increase the number of rail accidents by 22% statewide. 207 Clean Power Plan, 80 Fed. Reg. 64,662, 64,914 (Oct. 23, 2015). 208 National Association for the Advancement of Colored People, EQUITY IN BUILDING RESILIENCE IN ADAPTATION PLANNING at 2 available at [http://action.naacp.org/page/-/Climate/Equity\\_in\\_Resilience\\_Building\\_Climate\\_Adaptation\\_Indicators\\_FINAL.pdf](http://action.naacp.org/page/-/Climate/Equity_in_Resilience_Building_Climate_Adaptation_Indicators_FINAL.pdf) (last visited July 28, 2016), attached as Ex. 39. 209 Intergovernmental Panel on Climate Change, CLIMATE CHANGE 2014: IMPACTS, ADAPTATION, AND VULNERABILITY: SUMMARY FOR POLICYMAKERS (2014), at 13. 57 human health. In the United States, researchers have found that African-Americans and Latinos are also more likely to reside in areas vulnerable to climate change impacts such as sea-level rise, flood risk, and wildfire risk, and that median household incomes are inversely related to these vulnerability risks. 210 This is not a recently reached conclusion. EPA’s supporting documents in its 2009 Endangerment Finding summarized major assessment reports by the U.S. Global Change Research Program (USGCRP), the IPCC, and the National Research Council (NRC) of the National Academies, which found that that poor communities can be especially vulnerable to climate change impacts. 211 According to EPA, recent studies reaffirm these conclusions. These studies, cited extensively in supporting documentation for EPA’s Clean Power Plan, “find that certain climate change related impacts—including heat waves, degraded air quality, and extreme weather events—have disproportionate effects on low-income populations and some communities of color, raising environmental justice concerns.”<sup>212</sup> Additionally, EPA concluded that climate disruption poses particular threats to health, well-being, and ways of life of indigenous peoples in the U.S. As part of the PEIS process, DOI must, at a minimum, acknowledge the body of well-established research, endorsed by EPA, which concludes that “low income populations and some communities of color are especially vulnerable to the health and other adverse impacts of climate change.” In addition to fully disclosing the climate impacts of its federal coal leasing program, DOI must disclose the likelihood that the impacts of any decision to continue leasing and burning taxpayer-owned coal will fall disproportionately on low-income communities and communities of color.

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Comment Number: 0003037\_Crystal\_J\_06052016-1

Organization I:Keep Electricity Affordable

Commenter I:John Crystal

Comment Excerpt Text:

Proposed changes to the federal coal program could threaten the reliability and affordability of electricity by

increasing federal coal royalty rates and thus forcing consumers like me to pay more for the power we need at home and work. While I personally might be able to afford that, all I read about are the increasing numbers of more economically disadvantaged that are having problems in affording their monthly utility bills. Why should our government penalize those that are most economically disadvantaged?

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Comment Number: 0003043\_Griffith\_J\_06112016-1

Organization I: Keep Electricity Affordable

Commenter I: Caleb Griffith

Comment Excerpt Text:

Don't listen to those who just want to keep coal in the ground, which would produce no return for taxpayers and disproportionately affects the poor.

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Comment Number: 0003046\_Kinnes\_J\_06032016-1

Commenter I: Dwight Kinnes

Comment Excerpt Text:

Increased electricity rates hurt those who can least afford it the most. Seniors on fixed incomes and families living on the edge of poverty cannot afford any increases in electricity.

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Comment Number: 0020012\_Holmes\_UCARE\_20160712-8

Organization I: Utah Citizens Advocating Renewable Energy

Commenter I: Stanley Holmes

Other Sections: 1

Comment Excerpt Text:

In 2014, the NAACP in found that low income families and communities of color are disproportionately harmed by the fossil fuel industry.(3)

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Comment Number: 00001270\_Smyth\_20160623-4

Commenter I: Joe Smyth

Commenter Type: Individual

Other Sections: 5

Comment Excerpt Text:

Spring coal is a major cause of air pollution, particularly in lower-income communities.

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Comment Number: 0000847\_Mann\_SierraClub-2

Comment Excerpt Text:

I share the deep concern expressed earlier that we are not moving rapidly enough to avert catastrophic climate impacts that will most definitely burden and potentially displace the most vulnerable communities, especially low income and people of color communities, and will rob my grandchildren of their generation of the future they deserve

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Comment Number: 0000873\_Kirkpatrick-1

Commenter I: Claudia Kirckpatrick

Other Sections: 10

Comment Excerpt Text:

Burning coal is a direct cause of asthma, respiratory illnesses and cancer. It is a serious risk especially to children

and families in the areas around the power plants which are still burning coal. And it is more likely that low income and minority children and families will be the people most seriously harmed

### **Issue 7 - Public health and safety**

Total Number of Submissions: 68

Total Number of Comments: 124

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Comment Number: 0000005\_Kurtz\_20160526\_Oral-3

Commenter I: Sandra Kurtz

Comment Excerpt Text:

Mining companies should pay the full cost of any mining on public land including the cost of adverse impacts to human health.

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Comment Number: 00000161\_HUGHES\_20160517-2

Organization I: Statewide Organizing for Community Empowerment

Commenter I: Adam Hughes

Other Sections: 9

Comment Excerpt Text:

In 2008, one billion gallons of coal ash contaminated with heavy metals spilled on the communities of Roane County. The cleanup was long and costly, finishing only last year and doing damage that cannot be truly quantified. The ash from the spill was shipped by train to the cash poor predominantly African-American community of Uniontown, Alabama, where it sits in a land fill directly across from houses. Residents report health problems and crop failures, and they have filed a civil rights complaint and testified in Washington, D.C. We must understand that the Federal Coal Leasing Program is directly connected to the injustices in Kingston and Uniontown.

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Comment Number: 00000169\_HILL\_20160517-1

Organization I: Kentuckians for the Commonwealth

Commenter I: Joanne Golden Hill

Comment Excerpt Text:

The Cooper Power Plant was built in 1963 on the banks of the Cumberland River in Burnside, Kentucky. The power plant is located directly across the river from the Burnside Elementary School. You don't have to be in the healthcare field to notice there is an abnormal high amount of brain cancer in the Burnside, Kentucky area, some diagnosed as early in their thirties. And most of them have attended the Burnside Elementary School.

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Comment Number: 00000170\_JUDY\_20160517-1

Commenter I: Carol Judy

Other Sections: 1

Comment Excerpt Text:

If you will go to ILoveMountains.org, there are at least thirteen health studies there on water qualities, physical health, and the cost of medical attention or nonattention, as I would say. But also, you can go to the Beehivecollective.org. This is an artist cooperative that over the past fifteen years have looked at global and local issues in the same way.

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Comment Number: 00000172\_TERRY\_20160517-1

Commenter I: Vicky Terry

Other Sections: 16

## Comment Excerpt Text:

I became aware of all the health effects and the water quality. And we water test. We monitor our own water because we have been able to the coal mine and the regulations that are in place isn't the violations up there. I can show you with -- I can show you violations. And they are not being enforced. Nobody is enforcing any regulations. We are watching our water quality go down. We don't eat fish out of the creeks anymore. We are scared of the fish. And we have to watch where we go swimming now.

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Comment Number: 00000174\_ HEADRICK\_20160517-1

Commenter I: Mary Headrick

## Comment Excerpt Text:

there are health hazards for people who live or work near a coal extraction site that include toxic pollutants in air and water, such as selenium, benzene, mercury, arsenic, but more widespread than these and affecting many more lives are the health hazards of actually burning coal

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Comment Number: 00000174\_ HEADRICK\_20160517-3

Commenter I: Mary Headrick

## Comment Excerpt Text:

To give you the statistic, each increase of 30 micrograms per cubic meter of fine particulates can increase the risk of death, all causes, by three percent, increases of death of heart disease by ten percent, increase of death of respiratory disease by twenty-seven percent.

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Comment Number: 00000181\_ MULLINS\_20160517-2

Commenter I: Nick Mullins

## Comment Excerpt Text:

Those who enjoy the brief economic benefits of coal employment have been left to suffer the health impacts, including black lung, cancer, joint deterioration, and back injuries.

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Comment Number: 00000182\_ BANBURY\_20160517-1

Commenter I: Scott Banbury

## Comment Excerpt Text:

We are the asthma capital of the United States right now. Coal combustion, in both bow and steam plant, but also at private facilities that burn coal for their own internal power consumption have contributed the vast majority of aggravants that kids are suffering from and elderly are suffering from. These are the things that I hope are really going to be considered. These externalities impact the public health.

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Comment Number: 00000199\_ BURTON\_20160517-1

Commenter I: James Robert Burton

## Comment Excerpt Text:

I live in a city that has the twelfth worst air pollution in the country. And most of that air pollution comes from coal-fired power plants. Those coal-fired power plants are owned by Alabama Power. Fifty percent of Alabama Power's energy comes from coal. Fifty percent of that coal comes from the Powder River Basin, and so a lot of their coal is mined from lands that you all work on. Ever since I moved to Birmingham, I have had about four times worse health than before, and, according to my doctors, is about twenty percent of my health condition. And I think all of these health issues are something that needs to be considered when you all work to decide your policies on what the price of leasing is.

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Comment Number: 00000320 \_ GARBER \_20160519-1

Commenter I:Howie Garver

Other Sections: I

Comment Excerpt Text:

These are some of the healthcare costs of burning coal. The emission from coal plants are the major source of sulfur dioxide, second only to automobiles as sources of nitrogen oxide and particulate matter. NOx also is also a precursor of ozone. The emissions of all the coal-powered plants in this country have been calculated by the American Lung Association to cause about 25,000 premature deaths every year or an average of 30 to 50 deaths per plant per year. Coal-powered plant pollution is responsible for half a million asthma attacks, 16,000 episodes of conic bronchitis and 38,000 nonfatal heartaches every year. This pollution increases the annual healthcare bill by about \$170 billion according to the California EPA. The American Heart Association and the American Lung Association state that air pollution on average shortens the life span of everyone one to three years. No one escapes the consequences of air pollution. 47,000 Utah children live within 30 miles of a coal power plant. Please look at the 2015 USGS report of toxic mercury concentration in the Colorado River. It doesn't take a rocket scientist to recognize that this mercury comes from coal-fired power plants near Price, Utah, and Page, Arizona.

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Comment Number: 00000367 \_ Rossi \_20160519-1

Commenter I:Ericka Rossi

Other Sections: I 5

Comment Excerpt Text:

According to information I have received, toxic coal mined from our public lands and burned in Utah's coal fire plants -- power plants have significantly affected the health of many people. The Hunter and Huntington coal-fired power plants are responsible for 40 percent of all of our state's dangerous haze causing nitrogen oxide pollution from the electricity sector. According to the Clean Air Task Force, pollution from the plants contributes to 11 premature deaths and 233 asthma attacks every year.

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Comment Number: 0000766 \_Scissors\_20160623-1

Commenter I:Kenneth Scissors

Comment Excerpt Text:

Processing and burning fossil fuels contributes significantly to air pollution which in turn causes health problems, especially in the oldest and youngest, and those with pulmonary disease. As a doctor I have seen these health problems first hand, especially at the VA with its vulnerable population. These health effects are caused both directly by inhaling harmful chemicals and particles and indirectly by upsetting the balance of nature and weather.

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Comment Number: 0000766 \_Scissors\_20160623-2

Commenter I:Kenneth Scissors

Other Sections: I

Comment Excerpt Text:

For those interested in understanding the scientific evidence, the best publication I have found is titled "Scientific Evidence of Health Effects from Coal Use in Energy Generation", produced by the Health Care Research Collaborative based at the University of Illinois. It is easily located on the Internet. In summary, it documents that the use of coal as an energy source has multiple large-scale serious worldwide health effects including illness and death related to respiratory, cardiac, and neurological diseases, as well as cancers and adverse effects on the developing fetus and pregnancy.

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Comment Number: 0000797 \_Nehring\_Voices for UT Children\_20160519 -1

Organization I:Voices for Utah Children

Commenter I: Lincoln Nehring

Comment Excerpt Text:

in efforts to modernize its coal leasing program, give specific focus and consideration to potential impacts on the overall health and wellbeing of children and families.

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Comment Number: 0000797\_Nehring\_Voices for UT Children\_20160519 -6

Organization I: Voices for Utah Children

Commenter I: Lincoln Nehring

Other Sections: I

Comment Excerpt Text:

The health and environmental impacts of coal combustion are many and varied. Pollutants discharged into the atmosphere through the combustion of coal by electrical utilities are well-known to cause harm to the respiratory system; this is especially problematic for children, whose lungs and respiratory systems are still in the process of developing. These effects, as noted in literature from Physicians for Social Responsibility, fall into several classes: "de novo production of a condition, such as asthma, that did not exist prior to an exposure; an exacerbation of a previously-existing illness, again, such as asthma; and the development or progression of a chronic illness such as asthma, lung cancer, chronic obstructive pulmonary disease (COPD), and emphysema."<sup>2</sup>

(1) <https://www.regulations.gov/documentDetail;D=BLM-2016-0002-0044>

(2) <http://www.psr.org/assets/pdfs/coals-assault-chapter-3.pdf>

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Comment Number: 0000797\_Nehring\_Voices for UT Children\_20160519 -7

Organization I: Voices for Utah Children

Commenter I: Lincoln Nehring

Other Sections: I

Comment Excerpt Text:

According to the Utah Department of Health's Utah Asthma Program, "poor air quality [is] a health concern for many Utahns, especially children and those with asthma."<sup>3</sup> Although air quality and childhood asthma are significant concerns in Utah, however, the majority of the state's energy is still produced by the burning of coal. Despite the well-settled correlation between air quality and respiratory conditions, moreover, policy efforts aimed at controlling

asthma tend merely to emphasize limiting exposure to pollution rather than highlighting the importance of pollution reduction. The reality, though, is that reducing the triggers of asthma attacks - including carbon pollution - represents an equally critical element of any viable approach.

(3) <http://www.health.utah.gov/asthma/>

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Comment Number: 0000797\_Nehring\_Voices for UT Children\_20160519 -8

Organization I: Voices for Utah Children

Commenter I: Lincoln Nehring

Other Sections: I

Comment Excerpt Text:

In 2008, it was estimated that more than 52,000 children in Utah had asthma. Among these children, lifetime asthma prevalence amounted to 9.8 percent, while current asthma prevalence was 6.6 percent. Based on 2012-2013 data from the Central Utah Public Health Department and the Centers for Disease Control (CDC), the rate of physician-diagnosed asthma among Utah children (ages 0 -17) was 11.4 percent, compared with a national average rate of 9.3 percent. And the economic toll is high: Utah spent some \$16.2 million in asthma-related hospitalizations in 2010 alone. <sup>4</sup>

(4) <http://archive.slttrib.com/story.php?ref=/slttrib/news/54743373-78/asthma-utah-health-quality.html.csp>

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Comment Number: 0000819-2

Organization I:Utah Physicians for a Healthy Environment

Commenter I:Howie Garber

Comment Excerpt Text:

The current coal leasing program is a dinosaur. It gives unfair economic advantage to an industry that greatly contributes to global warming and to air pollution. The climate crisis is recognized in the medical community as the greatest public health crisis of our time.

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Comment Number: 0000824-5

Commenter I:Garrett Atwood

Other Sections: I

Comment Excerpt Text:

According to the international disaster database (Emergency Events Database EM-DATL climate-related deaths are down 98 percent over the past 80 years. In 2013, there were 21,122 such deaths worldwide compared to a high of 3.7 million in 1931, when world population was less than a third of its current size. Why is the climate killing less people? Because while fossil fuel use has only a mild warming impact, it has an enormous protecting impact. Nature doesn't give us a stable, safe climate that we make dangerous. It gives us an ever-changing, dangerous climate that we need to make safe. And the driver behind sturdy buildings, affordable heating and air-conditioning, drought relief and everything else that keeps us safe from climate is cheap, plentiful, reliable energy, overwhelmingly from coal and other fossil fuels. (Source: "The Moral Case for Fossil Fuels", Alex Epstein)

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Comment Number: 0000829-5

Organization I:Utah Citizens Advocating Renewable Energy (UCARE)

Commenter I:Stanley Holmes

Other Sections: I

Comment Excerpt Text:

Is coal really affordable? A 2010 study found that Utah's coal-fired power plants cause hundreds of premature deaths annually and hundreds of millions of dollars in health care costs. University of Utah researchers report that children are especially vulnerable to respiratory illnesses from fossil fuel emissions. One "U" pediatrician referred to our children as "21st Century Canaries in the Coal Mine" ...lightning rods for the dangers that ultimately threaten us all. Is coal cheap? Not for asthmatic kids.

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Comment Number: 0001134-1

Commenter I:Janice Smith

Comment Excerpt Text:

And also, I am a retired teacher. I am a retired teacher of preschool children. I have seen the evidence of coal in these young infants and adolescents. They are at risk. There is increase of respiratory-related illnesses such as asthma, RSV, too numerous, numerous illnesses.

And also I'm a senior citizen. I am 70 years old. Our senior citizens have chronic bronchitis, emphysema, COPD, pulmonary fibrosis are indicators of coal dust in our systems.

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Comment Number: 0001179-1

Commenter I:Joanna Schoettler

Comment Excerpt Text:

So I usually say when I tell people about coal and fossil fuels that we can live without fossil fuel products but we

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can't live without clean water. And as you saw on our signs, it says coal costs us our money, our health, our lands and our future, so keep the fossil fuel in the ground. It's not worth it for sustainability of our public health.

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Comment Number: 0001189-1

Commenter I: Vivian MacKay

Comment Excerpt Text:

The kids and the adults playing at Golden Gardens Park on Puget Sound, which isn't too far from my house are breathing in coal dust because the trains run right behind the park. The coal dust is blowing into Puget Sound from the trains, again, running right along the Sound, endangering the fish, the birds, shellfish and anything else that happens to be close by.

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Comment Number: 0002114\_Savlove\_20160613-1

Commenter I: John Savlove

Comment Excerpt Text:

Coal mine leasing programs have outlived their usefulness. Compared with England, both the amount of coal and the byproducts reaped (positive and negative) are much greater in proportion. Black lung disease killed off the British miners while the land was being stripped. In the 90s, long after the mines and jobs were left barren, other grave coal-related accidents in the aftermath took place.

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Comment Number: 0002115\_Schaefer\_20160623-4

Commenter I: C. Thomas Shaefer

Comment Excerpt Text:

Coal is the fuel of the Industrial Revolution of the 19th century. Two centuries ago, fatalities resulting from coal mine collapses, explosions, and black lung disease were acceptable collateral damage--part of the price of admission to the modern era. The same was true of toxic smog and soot deposition. Of course, this was long before the advent of even more destructive mining technologies such as strip mining and mountaintop removal, and long before anyone dreamed of human-caused global warming or ocean acidification.

Today, in the 21st century, we understand much, much more about the immense damage to human and environmental health caused by the continuing mining and combustion of coal.

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Comment Number: 0002115\_Schaefer\_20160623-5

Commenter I: C. Thomas Shaefer

Comment Excerpt Text:

Moreover, coal mining, transport, and combustion cause the release of myriad toxic chemicals that threaten the health of humans and wild organisms alike.

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Comment Number: 0002157\_Burger\_SabineCenter\_09132016-12

Organization I: Sabine Center for Climate Change Law

Commenter I: Michael Burger

Comment Excerpt Text:

David Hillman spoke about labor-related liabilities, such as legacy healthcare costs for retirees. He described several types of such liabilities and whether they can be terminated in bankruptcy.

First, there are benefits from collective bargaining agreements (CBAs), and these can be terminated in bankruptcy if deemed necessary for the reorganization or liquidation. Second, the Coal Act imposes two types of obligations on companies: to provide healthcare benefits to their own retirees and



dependents, and to pay monthly premiums to health care funds that cover not only the operator's former employees but also employees of operations that have gone out of business. Bankruptcy courts have held that the debtors may terminate or modify the healthcare benefits, but they cannot terminate the premiums (because these are treated in bankruptcy as taxes with administrative expense priority status). Third, the Black Lung Act requires operators to pay certain health and disability benefits to current and former employees with black lung disease and to pay an exercise tax on coal sales. The Black Lung obligations cannot be terminated in bankruptcy: the person with black lung has an unsecured claim against the operator, and if the operator cannot pay, the employee can receive funds from the federal Black Lung Disability Trust Fund. Andy Stevenson concluded the panel with a presentation about taxpayer liability to these costs when coal companies go bankrupt. He noted that the short-term taxpayer costs from coal bankruptcies are up to \$3.7 billion from the big 3 coal companies alone (Alpha Natural, Peabody, and Arch Coal). This includes \$1.7 in exposure from coal mine reclamation settlements. In terms of long-term taxpayer costs, he estimated that there could be up to \$30 billion in total mine and worker retirement obligations.

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Comment Number: 0002167\_Baumgartner\_20160629-3

Commenter I: Laura Baumgartner

Comment Excerpt Text:

Coal is responsible for irreparable damage to the planet's air and water resources in the form of sulfur oxides, nitrogen oxides, and carbon monoxide and carbon dioxide produced from the combustion of coal. In addition, coal mining produces solid wastes that are toxic and must be remediated to avoid leaching of heavy metals into the water and soil. These consequences are not just risks. They are real threats to the air we breathe, the water we drink, and the soil in which we grow our food. Not only do they threaten us, they threaten our children and future generations of people both here and around the world, and they threaten the ability of other species to survive and thrive.

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Comment Number: 0002170\_Garber\_20160622-1

Organization I: Utah Physicians for a Healthy Environment (UPHE)

Commenter I: Howie Garber

Comment Excerpt Text:

These are some of the health care costs of burning coal. The emissions from coal plants are the major source of Sulfur Dioxide and are second only to automobiles as sources of Nitrogen Oxide and particulate matter. NO<sub>x</sub> also is precursor of ozone.

The emissions of all the coal power plants in this country have been calculated by the American Lung Association, to cause about 25,000 premature deaths every year, or an average of 30 to 50 deaths per plant per year. Coal power plant pollution is responsible for half a million asthma attacks, 16,000 episodes of chronic bronchitis, and 38,000 non-fatal heart attacks every year. This pollution increases the annual health care bill by about 170 billion dollars according to the California EPA. The American Heart Association and the American Lung Association state that air pollution on average shortens the life span of everyone one to three years. No one escapes the consequences of air pollution: 47,000 Utah children live within 30 miles of a coal power plant. Protecting public and global health should be our top priority. Do we really want to subsidize an industry that causes such adverse health consequences and climate disruption?

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Comment Number: 0002170\_Garber\_20160622-2

Organization I: Utah Physicians for a Healthy Environment (UPHE)

Commenter I: Howie Garber

Comment Excerpt Text:

Methylmercury is a potent neurotoxin . It is well known that most mercury in our lakes and rivers and children comes from coal powered power plants. In early 2004, EPA scientists estimated that one in six women of childbearing age in the U.S. has levels of methylmercury in her blood that are sufficiently high to put 630,000 of the four million babies born each year at risk of learning disabilities, developmental delays, and problems with fine motor coordination, among other problems. This figure is a doubling of previous estimates based on increasing evidence that methylmercury concentrates in the umbilical cord, exposing the developing fetus to higher levels of mercury than previously understood. The neurological deficits can be subtle and not recognizable until the child is 4-5 years old. The mother may not have any symptoms and yet her child may be born with severe deficits. I urge you to look at the 2015 USGS report of toxic mercury concentrations in Lake Powell and the Colorado River. It doesn't take a rocket scientist to conclude that this mercury originates from coal powered power plants near Price, Utah and Page, Arizona.

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Comment Number: 0002170\_Garber\_20160622-3

Organization I:Utah Physicians for a Healthy Environment (UPHE)

Commenter I:Howie Garber

Comment Excerpt Text:

My understanding is that the coal burned from US Federal lands account for 13% of US greenhouse gas emissions. The climate crisis is recognized in the medical community as the greatest public health crisis of our time. A hotter world is already becoming a world of more virulent infectious diseases. West Nile, Lyme disease, yellow fever, Japanese encephalitis, Zika and malaria are just a few of the many infectious diseases spreading far beyond their previous geography .Insect-borne diseases never before seen in the United States such as Zika are now here.. Zika causes small brains in children of pregnant women exposed to it.

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Comment Number: 0002175\_Woodcock\_20160627-2

Organization I:MSU Department of American Studies

Commenter I:Jennifer Woodcock-Medicine Horse

Comment Excerpt Text:

The toxicity of petrochemicals and their ill effects on workers and surrounding communities is scarcely a big secret.

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Comment Number: 0002186\_Torp\_20160512-1

Commenter I:Christian Torp

Comment Excerpt Text:

Communities near to coal-mining sites bear a hugely disproportionate share of the cost when it comes to the environmental degradation caused by extractive industries. Peer reviewed scientific research has shown a 40+% increase in birth defects and huge increases in cancer for those living near certain forms of coal mining.

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Comment Number: 0002198\_Provost\_20160519-1

Commenter I:Dale Provost

Other Sections: I

Comment Excerpt Text:

Coal-fired power plants were responsible for 66% of the state's total CO2 emissions.(WWW.sourcewatch.com) and this does not address the people who live who have adverse health events from pollution, or the pollution and severe environmental impact of coal mining. So, if coal power kills 66% of 1000 to 2000 Utahns per year, that is, kills 660 to 1320 people per year, what is worth more- 2,036 jobs or between 660 and 1320 LIVES PER YEAR? I believe that it is highly inappropriate for the federal government to continue to subsidize in any way an industry that is harming our population and our environment.

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Comment Number: 0002225\_Wheeler\_20160519-3  
Commenter I: Ray Wheeler  
Comment Excerpt Text:  
Averse health effects from air pollution from coal burning

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Comment Number: 0002228\_Graves\_20160627-2  
Commenter I: Royal Graves  
Comment Excerpt Text:  
Burning coal affects several major body organ systems and contributes to four of the five leading causes of mortality in the U.S.: heart disease, cancer, stroke, and chronic lower respiratory diseases. Coal release nitrous oxide which causes asthma attacks and adversely affects the lung development of children.

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Comment Number: 0002229\_Schneider\_20160627-1  
Commenter I: Debra Schneider  
Comment Excerpt Text:  
We need to stop externalizing the health costs of burning coal to tax payers.

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Comment Number: 0002263\_Davidheiser\_20160710-4  
Organization I: German House  
Commenter I: James Davidheiser  
Comment Excerpt Text:  
4) include the external costs of using coal such as the impact on health and the environment into the royalty rates.

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Comment Number: 0002274\_Hazen\_20160715-1  
Commenter I: Libby Hazen  
Comment Excerpt Text:  
The noise, coal dust from the uncovered cars, and particulates from the heavy diesel traffic are all detrimental to my health and that of my family. Therefore I ask for the “no action alternative” to new coal leases on federal lands. The cost is too high. Public lands should benefit the public, not destroy our health!

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Comment Number: 0002278\_Wynn\_20160717-1  
Commenter I: Ralph Wynn  
Comment Excerpt Text:  
The coal lease program needs serious review and significant reform. Coal from leased public lands constitutes a significant percentage of the greenhouse gas emissions and other pollutants that contribute to the deterioration of the air quality in our region, a decrease in the ability to see clearly into the distance and an increase in the respiratory diseases that effect both the adults and children living here. We have also seen here in Eastern TN the devastating results of coal ash spill and the impact on the surrounding area. Part of any lease, should include strict regulations regarding worker, environmental and community health and safety.

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Comment Number: 0002314\_Beres\_EarthMinWAInterfaithPower\_20160722-4  
Organization I: Creation Justice Ministries  
Commenter I: Shantha Alonso

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## Comment Excerpt Text:

We are also aware that rising rates of asthma and other maladies that relate to mercury exposure and air quality must be counted when we consider the coal's impact on communities.

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Comment Number: 0002320\_Gordon\_20160722-1

Commenter I: Thomas Gordon

## Comment Excerpt Text:

Kashama Sawant of the Seattle City Council testified on June 21, 2016, at the PEIS hearing in Seattle that the pollution from coal and oil cause 800,000 premature births worldwide each year. The burning of coal from China alone sends CO<sub>2</sub> and mercury to us in the pollution that comes via the jet stream, plus who knows the true extent of chemicals?

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Comment Number: 0002326\_Moench\_20160724\_UtahPhysicHealthyEnviron-39

Organization I: Utah Physicians for a Healthy Environment

Commenter I: Malin Moench

## Comment Excerpt Text:

Permits for five new port facilities in the Pacific Northwest have been applied for that total 170 million tons of capacity per year. That much coal would translate to an additional 63 trains per day through Wyoming, Montana, Oregon, and Washington above today's traffic. They would pass through towns and cities along railroad corridors and rivers, exposing them to substantial amounts of toxic coal dust. (Western Resource Councils, 2014.)

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Comment Number: 0002326\_Moench\_20160724\_UtahPhysicHealthyEnviron-40

Organization I: Utah Physicians for a Healthy Environment

Commenter I: Malin Moench

Other Sections: 1

## Comment Excerpt Text:

Billings Montana pulmonologist Dr. Robert Merchant warns that "shipping export-bound coal through towns like mine has significant health impacts ranging from increased problems with asthma and COPD to increased heart attacks and strokes." [http://billingsgazette.com/news/local/dr-robert-merchant/image\\_c6e64340-54b3-5622-a19c-15914eb8c246.html](http://billingsgazette.com/news/local/dr-robert-merchant/image_c6e64340-54b3-5622-a19c-15914eb8c246.html).

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Comment Number: 0002326\_Moench\_20160724\_UtahPhysicHealthyEnviron-41

Organization I: Utah Physicians for a Healthy Environment

Commenter I: Malin Moench

## Comment Excerpt Text:

While coal-fired power plants provide the direct benefit of slightly cheaper power than clean alternatives (a circumstance that will last for only three or four more years), the indirect costs of such costs are staggering. This is because coal-fired power plants are essentially enormous neurotoxin factories—an economic reality that has yet to be reflected in the price of the power that they produce.

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Comment Number: 0002326\_Moench\_20160724\_UtahPhysicHealthyEnviron-43

Organization I: Utah Physicians for a Healthy Environment

Commenter I: Malin Moench

Other Sections: 16

## Comment Excerpt Text:

When coal is burned, toxins in the coal are released into the smokestack. If modern air pollution controls are in

place, airborne toxins are captured through filtration systems before they can become airborne. The captured toxins end up in coal ash. As a result, heavy metals such as mercury are concentrated in what the EPA considers "recycled air pollution control residue." This only delays the exposure of the public to these toxins. The EPA concedes that all coal ash landfills eventually leak, and Federal regulation of coal ash landfills is minimal. Rain falling on ash piles leaches out these heavy metal compounds. The heavy metals eventually end up in ground water, or in lakes and streams, contaminating drinking water sources.

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Comment Number: 0002326\_Moench\_20160724\_UtahPhysicHealthyEnviron-45

Organization I: Utah Physicians for a Healthy Environment

Commenter I: Malin Moench

Other Sections: I

Comment Excerpt Text:

There are over 3,500 peer-reviewed scientific studies that document the harm to public health from air pollution, especially in urban in developed economies. (D'amato, g., et al., 2010.) Fossil fuel combustion is responsible for the vast majority of air pollution in developed countries.(21) Air pollution has been found to damage every major organ system in the human body. These studies have caused the World Health Organization to conclude that air pollution is the most important environmental cause of cancer, more important than second-hand cigarette smoke. <http://www.usatoday.com/story/news/world/2013/10/17/cancer-air-pollution-carcinogens/3002239/>.

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Comment Number: 0002326\_Moench\_20160724\_UtahPhysicHealthyEnviron-46

Organization I: Utah Physicians for a Healthy Environment

Commenter I: Malin Moench

Other Sections: 5

Comment Excerpt Text:

Cigarette smoke contains 69 known carcinogens. Coal-fired power plant emissions contain 67 known carcinogens or neurotoxins (U.S.EPA, 1998)—many of the same ones found in cigarette smoke. Cigarette smoke and power-plant emissions both contain

- Fine particulate matter (PM2.5)
- Carbon monoxide
- Ozone precursors
- Volatile Organic Compounds (VOCs), such as benzene, toluene, and formaldehyde;
- Acid gases, such as hydrogen chloride and hydrogen fluoride;
- Dioxins and furans;
- Lead, arsenic, and other toxic heavy metals;
- Mercury;
- Polycyclic Aromatic Hydrocarbons (PAH); and
- Thorium, Uranium, Polonium and other radioactive metals

The harm to public health that second-hand cigarette smoke and fossil fuel emissions pose is remarkably similar. The difference is primarily quantitative, not qualitative. A typical life-long smoker will shorten his life by ten years. The American Lung Association reports that the typical urban dweller in the United States is exposed to enough airborne fine particulate matter to shorten his life by one-to-three years. (Pope, C.A. III, 2000.) Nearly all of that exposure is due to pollution from the burning of fossil fuels. This shortened life span of a typical urban dweller is not just the effect of his exposure to fine particulate pollution. Exposure to other components of air pollution caused by burning fossil fuels--such as ozone and Hazardous Air Pollutants (HAPs)--further shortens his life.

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Comment Number: 0002326\_Moench\_20160724\_UtahPhysicHealthyEnviron-48

Organization I: Utah Physicians for a Healthy Environment

Commenter I: Malin Moench

Other Sections: I

Comment Excerpt Text:

An example of the current research on the toxicity of lead is provided by a major study of the relationship between lead exposure levels and reduced intellectual capacity that was completed in Italy in 2012. (Lucchini, R.G., et al., 2012.) The study found that the I.Q. of Italian teenagers is reduced in proportion to their lead exposure, no matter how small their lead exposure is. Specifically, the study demonstrated that every 0.19 micrograms of lead per deciliter in an adolescent's blood is accompanied by a one-point reduction in that teenager's I.Q.

According to this study, the I.Q. of Italian adolescents has been reduced by 9 points on average, given their average blood serum lead level of 1.71 micrograms. The most recent lead exposure data available for the United States focuses on the 1-5 year-old age group. For the years 2007-2010, their average blood serum level was 1.3 µg/dL. The Italian study implies that the I.Q. of preschoolers in the United States has been reduced by 7 points, on average, due to their exposure to lead pollution, since the exposure of American preschoolers is a little more than three-fourths that of Italian teenagers. (24)

(24) The implication that the degree of mental impairment in American pre-school children due to their average blood-serum levels of lead is approximately three-fourths of the impairment experienced by Italian teenagers is based on the assumption that impairment is proportional to exposure levels. This is a conservative assumption since other research consistently shows that the younger children are, the more vulnerable they are to exposure to neurotoxins. In addition, although blood lead concentrations in American preschool children of 1.3 µg/dL are less than the 1.71 µg/dL in Italian teenagers, these concentrations would likely be comparable if American teenagers were measured, because blood levels of heavy metals generally increase quadratically until age 50. See Caldwell KLI, Mortensen ME, Jones RL, Caudill SP, Osterloh JD., Total blood mercury concentrations in the U.S. population: 1999-2006, *Int J Hyg Environ Health*. 2009 Nov;212(6):588-98. doi: 10.1016/j.ijheh.2009.04.004. Epub 2009 May 29.

It is estimated that average blood lead levels are 50 times higher than natural lead levels were before the industrial revolution. (Flegal, A.R., et al., 1992.) In the United States, as in Italy, lead exposure has historically had three main sources: lead paint, leaded gasoline, and coal-fired power plants. Lead exposure from paint and gasoline has largely been brought under control. Coal-burning power plants are now the primary source of lead exposure for young children in most of the United States.

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Comment Number: 0002326\_Moench\_20160724\_UtahPhysicHealthyEnviron-50

Organization I: Utah Physicians for a Healthy Environment

Commenter I: Malin Moench

Comment Excerpt Text:

The harm to public health from lead pollution from coal-fired power plants, however, is modest compared to the harm that they cause through mercury pollution. Estimates of the amount of mercury in the environment that is generated by human activity range from 70 to 96%. The World Health Organization estimates that total worldwide mercury emissions have tripled as a result of the industrial revolution. The single largest source of environmental exposure to mercury in the United States (65%) is from coal-fired power plants. (AMAP/UNEP, 2013 at 3-4.) (26) The main sources of man-caused mercury pollution are the proliferation of coal-fired power plants, the use of mercury in small-scale, low-technology (and typically illegal) gold and silver mining in less developed countries, and the use of lead in dental amalgam. See [www.psr.org/assets/pdfs/coal-fired-power-plants.pdf](http://www.psr.org/assets/pdfs/coal-fired-power-plants.pdf).

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Comment Number: 0002326\_Moench\_20160724\_UtahPhysicHealthyEnviron-51

Organization I: Utah Physicians for a Healthy Environment

Commenter I: Malin Moench

Comment Excerpt Text:

From the perspective of epidemiologists, coal-fired power plants are huge neurotoxin factories. A typical coal-fired power plant without modern pollution controls emits 170 pounds of mercury each year. In 2009, coal-fired power plants in the United States injected 134,365 pounds (more than 67 tons) of mercury into our environment. Ninety percent of this mercury could be removed by using activated carbon injection (ACI) technology combined with baghouses. As of 2011, however, only 8% percent of coal-fired power plants were equipped with this technology. (EPA Trends Report, 2010.)

When coal is burned by a power plant without controls, mercury is released into the air and settles onto bodies of water where it is converted to its organic form (methylmercury). Methylmercury accumulates in the tissue of fish and shell fish. Eating fish is the main source of methylmercury exposure for most of the population.

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Comment Number: 0002326\_Moench\_20160724\_UtahPhysicHealthyEnviron-52

Organization I: Utah Physicians for a Healthy Environment

Commenter I: Malin Moench

Other Sections: I I

Comment Excerpt Text:

Climate disrupting CO<sub>2</sub> emissions come primarily from coal-fired power plants. Reducing those emissions also reduces other pollution (notably SO<sub>2</sub>, NO<sub>x</sub>, and PM<sub>2.5</sub>), which brings major health benefits to the American public. The EPA's Integrated Planning Model yields an updated estimate that implementing the Clean Power Plan would reduce CO<sub>2</sub> and related emissions in the year 2030 by 30% relative to 2012 levels. This would yield health and benefits of from \$64 to \$99 billion by reducing SO<sub>2</sub>, NO<sub>x</sub>, PM<sub>2.5</sub> emissions (without taking the effects of reduced exposure to neurotoxins into account). <http://www.nrdc.org/air/pollution-standards/>. However, if political or legal considerations keep the Clean Power Plan from being implemented, or an unreformed Federal coal leasing program continues to offset its effects, coal-fired power plants will continue to inject neurotoxins into the environment at the pace. The result could be that the productivity of the nation's children will be far below what it could otherwise be at the time that those children enter the workforce.

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Comment Number: 0002326\_Moench\_20160724\_UtahPhysicHealthyEnviron-82

Organization I: Utah Physicians for a Healthy Environment

Commenter I: Malin Moench

Other Sections: I

Comment Excerpt Text:

In 2010, utilities in the United States burned 1.05 billion tons of coal. (Energy Information Agency, 2014.) This coal contains 109 tons of mercury, 7884 tons of arsenic, 1167 tons of beryllium, 750 tons of cadmium, 8810 tons of chromium, 9339 of nickel, and 2587 tons of selenium.

[http://www.precaution.org/lib/laid to waste.000601.pdf](http://www.precaution.org/lib/laid%20to%20waste.000601.pdf), p. 2. On top of emitting 1.9 billion tons of carbon dioxide each year, coal-fired power plants in the United States also create 120 million tons of toxic waste. That means each of the nation's 600 coal-power plants produce an average 240,000 tons of toxic waste each year. A plant that operates for 40 years will leave behind 9.6 million tons of toxic waste. This coal combustion waste (CCW) constitutes the nation's second largest waste stream, after municipal solid waste. See [http://www.precaution.org/lib/08/prn is coal green.081106.htm](http://www.precaution.org/lib/08/prn%20is%20coal%20green.081106.htm)

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Comment Number: 0002326\_Moench\_20160724\_UtahPhysicHealthyEnviron-85

Organization I: Utah Physicians for a Healthy Environment

Commenter I: Malin Moench

Comment Excerpt Text:

Methylmercury is the most powerful non-radioactive neurotoxin in nature. It is many-fold more toxic than lead.

This is confirmed by a recent study conducted at the University of Calgary medical school. In the study, brain neurons were exposed in vitro to a series of metals that were known or suspected neurotoxins. At concentrations so small that neither lead, cadmium, aluminum, nor manganese affected neuron integrity, methylmercury caused 77% of exposed neuron endings to disintegrate. (Leong, C.C., et al., 2001.)

According to the World Health Organization, exposure to methylmercury damages not just the nervous system, but the digestive, respiratory, and immune systems as well. It causes intellectual impairment during fetal development and childhood, attention deficit disorder, impaired vision and hearing, tremors, paralysis, insomnia, and emotional instability. (WHO Report, 2005.) In adults, mercury poisoning closely mimics the symptoms of Alzheimer's disease. (Mutter, J., et al., 2010.) The World Health Organization observes that "mercury may have no threshold below which some adverse effects do not occur." Id.

As an indication of its potency, just 1/70th of a teaspoon of mercury deposited in a 25-acre lake can make all of the fish in that lake unsafe to eat for a year. (Weiner, J.G., et al., 1990.) It is estimated that over 6 million acres of lakes, reservoirs, and ponds in the United States have unsafe concentrations of mercury. (EPA Watershed Assessment, 2010.) In 47 of the 50 states, wild fish cannot be eaten because their methyl mercury exceeds safe levels, due, primarily, to emissions from coal-fired power plants. [www.ucsusa.org/clean-energy/coalswind/c02c.html#.VHQPMfRDuSq](http://www.ucsusa.org/clean-energy/coalswind/c02c.html#.VHQPMfRDuSq).

Human fetuses are five to ten times more vulnerable than adults to the brain-addling powers of methylmercury. There are two reasons, 1) they typically receive a 70% greater exposure to mercury than the mother (because of the placenta's concentrating action), and 2) their brain cells need to move from the center of the brain to the surface before they multiply. Methylmercury paralyzes brain cells, blocking the movement and multiplication that is necessary for normal fetal development. (Mahaffey, K., et al., 2004 at 562-570; Mahaffey, K., EPA Methylmercury Update, 2004, Slide 9.)

In the United States, one in six mothers of childbearing age has enough mercury in her blood to put her fetus at risk of intellectual impairment. (Center for Disease Control, 2001; Mahaffey, K., EPA Methylmercury Update, 2004.) This implies that 689,000 of the 4.1 million babies born every year are at risk of reduced mental capacity as a result of mercury exposure. (National Center for Health Statistics, 2010 at 1.) The estimate that one in six mothers of childbearing age have blood lead levels that are unsafe for a fetus, however, is almost certainly understated because it is based on the EPA's definition of a safe blood level of 0.58 µg/dL. This is higher than the World Health Organization's definition of a safe blood level of lead [0.5 µg/dL]. The recent research described above, however, implies that methylmercury is much more toxic than lead and other toxic metals, and, therefore, the definition of a safe blood level of methylmercury (if there were one) should be well below that of other such metals.

There is evidence that the neurotoxic effects of methylmercury in the presence of other heavy metals in blood and tissues is not merely additive, but is synergistic, and amplifies the neurotoxic effects of both metals. (Schubert, J., et al., 1978.) Child development experts have recently been warning chemical and metal brain toxicity is increasingly prevalent in the human population, causing a silent, global pandemic of neurobehavioral disorders and intellectual compromise in children. (Grandjean, P., et al., 2014.) The rapid proliferation of neurotoxins that children are exposed to, and the likelihood that they act synergistically, provide a powerful argument for the Federal government to become more aggressive in reducing their exposure. At the top of the list of known neurotoxins that are contributing to this tragic trend are mercury, lead, and arsenic—all prominent components coal-fired power plant emissions.

While overall exposure to some neurotoxins like lead has decreased in recent years for a variety of reasons having nothing to do with reduced coal power plant emissions, mercury exposure has increased. A study showed that in 2006, 30% of women had detectable levels of mercury, up from 2% in 2000. (Laks, D., 2009.) Mercury is also implicated as a cause of Alzheimer's disease. A recent meta-analysis reviewing 1,041 studies clearly showed a strong relationship between this increasingly common illness and exposure to mercury. (Mutter,



J., et al., 2010.) Research shows that Alzheimer's was the underlying cause in 500,000 deaths in the United States in 2010. This represents a 68% increase from 2000. [http://www.alz.org/alzheimers disease facts and figures.asp#cost](http://www.alz.org/alzheimers_disease_facts_and_figures.asp#cost).

More money is spent on treating Alzheimer's patients than on any other disease. Care for Alzheimer patients is costing the nation about \$200 billion annually, a figure which does not reflect the costs of lost productivity, nor the emotional and financial burden of the "free care" that family members provide. If the rapid growth of Alzheimer's continues, it has the potential to bankrupt the nation's health care system. Mercury emitted by coal-fired power plants appears to bear a significant share of the blame.

## 2. Accounting for the Combined Effect of Exposure to Methylmercury and Lead on Intellectual Capacity and Workforce Productivity

A crucial question is what the combined effect of exposure to methylmercury and lead is on the public's intellectual capacity. We know that methylmercury is far more toxic than lead to the nervous system, and we know that the separate effects of methylmercury and lead are amplified when they occur in combination. Although we do not know precisely how much more toxic to the nervous system methylmercury is than lead, or how synergistic it is with lead, it is safe to assume that its toxicity is at least equal to that of lead. Therefore, it is also safe to assume that the effect of blood serum levels of mercury and lead are at least additive when exposure to mercury and lead occurs together at levels near their current average concentrations.

Under this conservative hypothesis, to account for the combined impact of currently prevailing blood levels of both methylmercury and lead on the intellectual capacity of the preschool population, one would have to assign a neurological effect to methylmercury in blood serum that is at least equal to the neurological effect of an equivalent concentration of lead in the blood. Average blood levels of methylmercury among American preschool female children are 0.356  $\mu\text{g}/\text{m}^3$ . (27) This implies that, on average, blood serum levels of methylmercury in preschool children in the United States have reduced their intellectual capacity by roughly 2 points (at a minimum) in addition to the 7 I.Q. points from their exposure to lead, or a total of 9 I.Q. points.

(27) Caldwell KLI, et al. 2009, cited above. Total mercury in blood serum occurs overwhelmingly in the form of methylmercury.

If the current generation of American workers had escaped exposure to both methylmercury and lead, their average I.Q. could be expected to be at least 9 points higher. Reducing the intellectual capacity of an entire workforce by 9 points transforms the intellectual capacity that workforce. National average I.Q. has a strong correlation with GDP per worker. Research suggests that while an increase of 15 points (one standard deviation) results in a 15% increase in average wages of individuals, it results in proportionately greater increases in national productivity (approximately 150%), due largely to a multitude of external effects that increased intellectual capacity has on the economic processes of a society as a whole.(28) Again, taking a conservative approach, if the average I.Q. of American school-age children has been reduced at least 9 points due to exposure to lead and methylmercury, this amounts to a reduction of one-half of a standard deviation. Therefore, such exposure has likely reduced the productivity of the national workforce at least 75% (half of 150%).

(28) See, e.g., research summarized in Jones, G., 2011.)

The loss of intellectual capacity from the avoidable exposure of America's children to methylmercury and lead pollution is a personal and social tragedy. The recent epidemiological and macroeconomic studies cited above imply that this loss of intellectual capacity is drastically reducing the productivity of our nation's workforce, as illustrated by our back-of-the-envelope estimate of those effects presented below. This strongly implies that the most important co-benefit of reducing reliance on coal to generate electric power—as the Administration's Clean Power Plan hopes to do—is that it reduces the level of exposure of the American workforce to methylmercury and lead pollution.

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Comment Number: 0002328\_Paddock\_20160724-12

Commenter I: Brian Paddock

Comment Excerpt Text:

Coal combustion injures human health during the entire cycle from extraction to disposition of coal combustion wastes. Our Federal Government should not produce coal any more than it should produce cigarettes or lead paint.

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Comment Number: 0002328\_Paddock\_20160724-13

Commenter I: Brian Paddock

Comment Excerpt Text:

Coal extraction injures workers,(14) and coal mining is considered one of America's top ten most dangerous jobs.(15)

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Comment Number: 0002328\_Paddock\_20160724-16

Commenter I: Brian Paddock

Other Sections: I

Comment Excerpt Text:

Coal ash containment has come to the fore as an issue since TVA's massive spill. TVA has spent more than a Billion dollars on partial remediation of the Kingston spill, compensation to landowners, civil penalties for environmental pollution, and attorney fees. It is spending another Billion on creating lined landfills for future ash generated. Its proposal to leave legacy ash "capped and covered" in unlined riverside ponds is being challenged. The latest and deadly problem to become visible is worker deaths and injuries resulting from handling TVA coal ash after the 2008 spill. (18)

Coal is a cradle to grave polluter when burned. It injures health and environment from beyond the grave when forever coal ash dumps discharge leachate to ground and surface waters. As a Tennessee Valley resident I oppose the extraction of federally owned coal which is delivered to fuel TVA power plants by rail and barge. As a ratepayer my bills have increased steadily as TVA been forced to deal with the decades of coal ash dumped in unlined and unreliable ponds in(19) and adjacent to our rivers and lakes.

(14) See: Bureau of Labor Statistics. Injury Experience in Coal Mining, 2012

(15) <http://www.blog4safety.com/2009/10/dangerous-job-coal-mining/>

(16) [http://www.ucsus.org/clean\\_energy/coalvswind/c01.html#.V5OBCDVVXYk](http://www.ucsus.org/clean_energy/coalvswind/c01.html#.V5OBCDVVXYk)

(17) Id.

(18) Article on worker exposure to coal ash by Kristen Lombardi at Center for Public Integrity:

[https://www.publicintegrity.org/2016/07/20/19962/former-cleanup-workersblame-illnesses-toxic-coal-ash-exposures?utm\\_medium=social&utm\\_source=twitter.com&utm\\_campaign=publici-ifttt](https://www.publicintegrity.org/2016/07/20/19962/former-cleanup-workersblame-illnesses-toxic-coal-ash-exposures?utm_medium=social&utm_source=twitter.com&utm_campaign=publici-ifttt)

(19) The coal ash from the Johnsonville 10 unit coal fired plant was first put into a shallow area of the Tennessee river contained only by porous berms. This ash constantly discharges leachate containing toxic heavy metals to the river.

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Comment Number: 0002335\_Webber\_20160725\_HealthActionNM-1

Organization I: Health Action New Mexico

Commenter I: Barbara Webber

Comment Excerpt Text:

Coal has a had a serious impact on the health of New Mexicans and we feel evaluation the health impact of coal extraction and related processes is essential to safe coal reform.

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Comment Number: 0002335\_Webber\_20160725\_HealthActionNM-2

Organization I: Health Action New Mexico

Commenter I: Barbara Webber

Comment Excerpt Text:

We support reforming the outdated federal coal program to ensure that the impacts on public health are factored into decisions on whether to lease coal, and applaud the Department of Interior and Bureau of Land Management for taking steps to reform the program.

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Comment Number: 0002335\_Webber\_20160725\_HealthActionNM-4

Organization I:Health Action New Mexico

Commenter I:Barbara Webber

Comment Excerpt Text:

As described below, each stage in the life cycle of coal development has an impact on public health and on the health of our environment. The human health and environmental impacts and full costs of each stage in the coal development life cycle must be factored into the reform of the federal coal program. Any reforms should aim to eliminate these impacts.

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Comment Number: 0002335\_Webber\_20160725\_HealthActionNM-5

Organization I:Health Action New Mexico

Commenter I:Barbara Webber

Other Sections: I I I

Comment Excerpt Text:

According to research by the Center for Health and the Global Environment at the Harvard School of Public Health (2) (CHGE), “The economic, health and environmental impacts associated with extraction, transportation, processing, and combustion cost the U.S. public between a third to over half a trillion dollars annually.” Coal mining regions have 11,000 excess deaths annually from lung cancer, heart, respiratory and kidney disease. Lives lost in coal mining regions are evaluated at \$74.6 billion per year.

(1) <http://www.emnrd.state.nm.us/MMD/Coal-FAQs.html#CoalinNM>

(2) [p://www.chgeharvard.org/resource/explore-true-costs-coal](http://www.chgeharvard.org/resource/explore-true-costs-coal)

These adverse health impacts are felt in New Mexico. In San Juan County, where coal activity is more prevalent, the American Lung Association (ALA) reports that residents are at an elevated risk for lung diseases. The ALA indicates there are 2,885 cases of pediatric asthma, 8,442 cases of adult asthma and 5,219 people diagnosed with COPD in this rural northwestern New Mexico county alone.

Measurable health effects of coal-related air pollution include increased rates of lung and heart disease. According to CHGE, 2005 data showed that “[p]articulates and oxides of nitrogen and sulfur kill over 24,000 people annually, including 2,800 from lung cancer.” Further, pollution from coal operations produces 38,200 non-fatal heart attacks annually.

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Comment Number: 0002335\_Webber\_20160725\_HealthActionNM-6

Organization I:Health Action New Mexico

Commenter I:Barbara Webber

Other Sections: I

Comment Excerpt Text:

Of particular concern, combustion from coal-fired utilities and industrial boilers causes mercury to be released into the air and therefore the ecosystem (3). Microbes turn mercury to methylmercury, which builds up in fish and enters the human body when those fish are eaten. Mercury causes mental health issues and cardiovascular disease in people.

(3) <http://pubs.usgs.gov/fs/fs-016-03/>

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Comment Number: 0002335\_Webber\_20160725\_HealthActionNM-7

Organization I:Health Action New Mexico

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Commenter I: Barbara Webber

Comment Excerpt Text:

Moreover, ponds built next to coal mines and processing plants contain dangerous coal byproducts such as slurry, sludge, and fly ash that can contaminate the air and water with toxins, heavy metals and radioactive elements. These waste ponds, which have a history of spilling, increase risk of property damage, injuries and deaths.

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Comment Number: 0002374\_Whiting\_20160721-1

Commenter I: Betty Whiting

Comment Excerpt Text:

We need to know what effects

coal has on our health, and if they need to pay for it they need to pay for that. What was once considered a really good source of energy now may be considered a deadly product.

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Comment Number: 0002440\_Zwigart\_20160721-1

Commenter I: Donna Zwigart

Comment Excerpt Text:

Have we investigated what burning federal coal imposes on the tax payers of our country with resulting higher medical bills and chronic diseases? FAIR tax revenues could be used not for disruptive programs but constructive programs such as the reeducation of the many people who continue to lose their jobs in the coal industry, researching and development of new forms of clean energy and the education of the public on the moral issue that climate change is REAL!

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Comment Number: 0002441\_Hyche\_20160724-1

Commenter I: Roe Hyche

Comment Excerpt Text:

Health reasons: Coal mining itself causes health problems for the workers, the people in the surrounding communities, and also, importantly, the people affected by the dumping of the coal ash. In Uniontown, AL, those people didn't even know they were getting a coal ash pond in their community. Why didn't the coal ash pond remain in TN where it started? TN needs to keep it in TN and completely secure the coal ash so it doesn't affect any of TN's citizens. Meanwhile, Uniontown's residents are still reeling from and dealing with the unclean ash pond. And they are not the only ones in the USA with this problem.

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Comment Number: 0002477\_Saul\_20160728\_CBD\_UPHE-15

Organization I: Center for Biological Diversity

Commenter I: Michael Saul

Other Sections: I

Comment Excerpt Text:

The occupational health impacts of mining coal are well known and must be considered when reviewing the effects of electricity generation with coal. Most of the research on the health effects of coal mining have been performed among miners in large scale mines in Europe and North America.<sup>150</sup>

Traumatic injury remains a significant problem and ranges from trivial to the fatal. Coal mining leads U.S. industries in fatal injuries.<sup>151</sup> Common causes of fatal injury include rock fall, fires, explosions, mobile equipment accidents, falls from height, entrapment and electrocution.<sup>152</sup> Less common but recognized causes of fatal injury include flooding of underground workings, wet-fill release from collapsed bulkheads and air blast from block caving failure.<sup>153</sup> Noise is almost ubiquitous in mining; it is generated by drilling, blasting, cutting, materials

handling, ventilation, crushing, conveying and ore processing. Controlling noise has proven difficult in mining and noise-induced hearing loss remains common.<sup>154</sup>

Coal mining is also associated with chronic health problems among miners, such as Coal Workers' Pneumoconiosis, also known as CWP or "black lung disease," which causes permanent scarring of the lung tissue.<sup>155</sup> A 2002 review of 250 studies on coal mining calculated that up to 12% of coal miners develop the potentially fatal lung condition due to the inhalation of dust during mining operations. Data indicates a direct relationship between the mass of respirable coal mine dust inhaled and the incidence and severity of CWP.<sup>156</sup> The following chain of events has been proposed for the initiation and progression of CWP: (1) inhaled coal dust concentrates at the bifurcations of the respiratory bronchioles; (2) local inflammation results in the accumulation of phagocytic cells that scavenge coal dust particles, forming lung lesions known as coal macules; (3) with further exposure, coal macules enlarge to form coal nodules; (4) as the lesions condense, surrounding tissue is torn forming scar emphysema; and lastly (5) connective tissue becomes associated with these lesions leading to progressive massive fibrosis (PMF).<sup>157</sup>

Not only are miners at a higher risk for CWP, but they are also at higher risk for chronic bronchitis and accelerated loss of lung function. As a result, the Federal Coal Mine Health and Safety Act of 1969 legislatively has defined "black lung disease" to include not only CWP but also obstructive lung diseases, such as chronic bronchitis and emphysema, as well as silicosis associated with an employment history in coal mines.<sup>158</sup> Inhalation of coal mine dust is associated with the development of pulmonary disease in miners, and coal miners have also been reported to have a higher than normal incidence of stomach cancer.<sup>159</sup>

(150) C. Stephens, M. Ahern, *Worker and Community Health Impacts Related to Mining Operations Internationally*. A

Rapid Review of the Literature, London, Mining and Minerals for Sustainable Development Project (2001)

(151) See *Coal's Assault on Human Health* at vi.

(152) A.M. Donoghue, *Occupational Health Hazards in Mining: An Overview*, *Occupational Medicine* 283 (2004)

(153) *Id.*

(154) *Id.*

(155) See generally R.K. Pachauri & A. Reisinger (eds), *Climate Change 2007--Synthesis Report: Contribution of Working Groups I, II, and III to the Fourth Assessment Report of the IPCC* (2007); C. Stephens, et al.; E. Burt, et al., *Health Effects from Coal Use; Coal's Assault on Human Health*.

(156) W.M. Walton et al., *The Effect of Quartz and Other Non-Coal Dusts in Coal Workers' Pneumoconiosis: Part I*,

Walton, W.H. (ed) *Inhaled Particles IV* 669-700 (1977)

(157) R. Finkelman et al., *Health Impacts of Coal and Coal Use: Possible Solutions*, *International Journal of Coal Geology* 50, at 438 (2002).

(158) *Id.*

(159) *Id.* at 440.

Threats to the public health persist even after removal of coal from a mine. Surface mining destroys forests and groundcover, leading to flood-related injury and mortality, as well as soil erosion and the contamination of water supplies. When mines are abandoned, rainwater reacts with exposed rock to cause the oxidation of metal sulfide minerals. This reaction releases iron, aluminum, cadmium, and copper into the surrounding water system and can also contaminate drinking water.

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Comment Number: 0002477\_Saul\_20160728\_CBD\_UPHE-18

Organization I: Center for Biological Diversity

Commenter I: Michael Saul

Other Sections: 5 I

Comment Excerpt Text:

The "external costs" of electricity generation from coal are the burdens to society that are not included in the electricity's monetary price. Estimates of the external costs of electricity generation from coal suggest that 95% of the external cost consists of the adverse health effects on the population.<sup>163</sup> When coal is burned, it produces air-borne pollutants of sulfur dioxide, particulate matter (PM), nitrogen oxides, mercury, arsenic, chromium, nickel, and other heavy metals, acid gases, hydrocarbons, and dozens of other substances known to be hazardous to human health.<sup>164</sup> It also contributes to smog through the release of oxides of nitrogen, which react with volatile organic compounds (VOCs) in the presence of sunlight to produce ground level ozone, the primary ingredient in smog. In 2011, the World Health Organization compiled air quality data from 1,100 cities in 91 countries and found that residents living in many urban areas are exposed to persistently elevated levels of fine particle pollution, partly due to coal-fired power plants, as well as the burning of coal for cooking and heating.<sup>165</sup>

A 2007 article published in the medical journal, *The Lancet*, summarizes the burden of the health effects of generating electricity from coal and lignite (a type of coal). It estimated that for every TWh (Terrawatt-hour) of electricity produced from coal in Europe, there are 24.5 deaths, 225 serious illnesses including hospital admissions, congestive heart failure and chronic bronchitis, and 13,288 minor illnesses.<sup>166</sup> When lignite, the most polluting form of coal, is used, each TWh of electricity produced results in 32.6 deaths, 298 serious illnesses, and 17,676 minor illnesses.<sup>167</sup> To give these data perspective, consider the fact that nearly half of the 4,160 TWh of electricity generated in the United States in 2007 came from coal-fired power plants.<sup>168</sup> If these estimates are applied to the U.S., as many as 50,000 deaths per year may be attributable to burning coal.<sup>169</sup>

The major health effects linked to coal combustion emissions damage the respiratory, cardiovascular, and nervous systems and contribute to four of the top five leading causes of death in the United States: heart disease, cancer, stroke, and chronic lower respiratory diseases.<sup>170</sup> Although it is difficult to ascertain the proportion of this disease burden that is attributable to coal pollutants, even very modest contributions to these major causes of death are likely to have large effects at the population level, given high incidence rates.

(163) E. Burt, et al., *Health Effects from Coal Use* at 4.

(164) See *id.* at 3.

(165) *Tackling the Global Clean Air Challenge*, News Release, World Health Organization (Sept. 2011).

(166) A. Markandya & P. Wilkinson, *Energy and Health 2: Electricity Generation and Health*, *The Lancet* 979-990 (2007)

(167) *Id.*

(168) *Id.*

(169) A. Lockwood, et al., *Coal's Assault on Health* at 2.

(170) See generally E. Burt, et al., *Health Effects from Coal Use*; A. Lockwood, et al., *Coal's Assault on Human Health*

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Comment Number: 0002477\_Saul\_20160728\_CBD\_UPHE-19

Organization I: Center for Biological Diversity

Commenter I: Michael Saul

Other Sections: I

Comment Excerpt Text:

Particulate Matter -- Particulate matter is generated from the combustion of coal and is characterized by size -- small particles less than 2.5 micrometers (PM<sub>2.5</sub>) and larger particles up to 10 micrometers (PM<sub>10</sub>). PM<sub>2.5</sub> travels deeper into the airways than PM<sub>10</sub> and is therefore generally believed to cause a greater threat to human health.<sup>171</sup> In a report evaluating over 40 studies on the health effects of exposure to small particulate matter (PM<sub>2.5</sub>), the U.S. Environmental Protection Agency concluded that PM<sub>2.5</sub> likely causes respiratory symptoms, the development of asthma, and decrements in lung function in children.<sup>172</sup> Findings from the review conclude that a 10 µg/m<sup>3</sup> increase in PM<sub>2.5</sub> is associated with a 1% to 3.4% decrease in FEV<sub>1</sub>, a measure of lung function, in asthmatic children.<sup>173</sup> It also concluded that exposure to PM<sub>2.5</sub> increases emergency department visits and hospital admissions for respiratory related symptoms such as infections and chronic obstructive pulmonary

disease.<sup>174</sup> Epidemiological evidence from Australia and New Zealand, Mexico, Canada, and Europe confirm that these health effects on the respiratory system are seen around the globe among communities exposed to PM<sub>2.5</sub>.<sup>175</sup> In addition to respiratory illnesses, long-term exposure to PM<sub>2.5</sub> is causally linked to the development of lung-cancer. [Implementing the final emission guidelines of the Clean Power Plan may lead to reductions in ambient PM<sub>2.5</sub> concentrations below the NAAQS for PM and ozone in some areas and assist other areas with attaining these NAAQS.]<sup>176</sup>

**Sulfur Dioxide --** Exposure to sulfur dioxide (SO<sub>2</sub>) emitted by coal burning power plants increases the severity and incidence of respiratory symptoms of those living nearby, particularly children with asthma.<sup>177</sup> For adults and children who are susceptible, inhalation of SO<sub>2</sub> causes inflammation and hyper-responsiveness of the airways, aggravates bronchitis, and decreases lung function. There is a significant association between community-level SO<sub>2</sub> concentration and hospitalizations for asthma and other respiratory conditions, and asthma emergency department visits particularly among children and adults over 65.<sup>178</sup> The EPA identified three short-term morbidity endpoints that the SO<sub>2</sub> ISA identified as "causal relationship": asthma exacerbation, respiratory related emergency department visits, and respiratory-related hospitalizations.<sup>179</sup>

**Oxides of Nitrogen --** Oxides of nitrogen (NO<sub>x</sub>) are by-products of fossil fuel combustion from automobiles and coal-fired power plants, among many other sources. Oxides of nitrogen react with chemicals in the atmosphere to create pollution products such as ozone (smog), nitrous oxide (N<sub>2</sub>O), and nitrogen dioxide (NO<sub>2</sub>). NO<sub>2</sub> and ozone are pollutants of particular concern. When asthmatic children are exposed to NO<sub>2</sub> they can experience increases in wheezing and cough.<sup>180</sup> Exposure to NO<sub>2</sub> also increases susceptibility to viral and bacterial infections, and at high concentrations (1-2 ppm), it can cause airway inflammation.<sup>181</sup> At low concentrations (0.2 - 0.5 ppm) NO<sub>2</sub> causes decrements in lung function in asthmatics.<sup>182</sup> Increases in ambient NO<sub>2</sub> levels (3-50 ppb) cause increases in hospital admissions and emergency department visits for respiratory causes, particularly asthma. Depending on localized concentrations of volatile organic compounds, reducing NO<sub>x</sub> emissions would also reduce human exposure to ozone and the incidence of ozone-related health effects.<sup>183</sup>

Reducing emissions of SO<sub>2</sub> and NO<sub>x</sub> would also reduce human exposure to ambient PM<sub>2.5</sub> and the incidence of PM<sub>2.5</sub>-related health effects.<sup>184</sup> In 2008, the National Academies of Sciences issued a series of recommendations to the EPA regarding the quantification and valuation of ozone-related short-term mortality. Chief among these was that "...short-term exposure to ambient ozone is likely to contribute to premature deaths" and the committee recommended that "ozone-related mortality be included in future estimates of the health benefits of reducing ozone exposures..."<sup>185</sup>

(171) See E. Burt, et al., *Health Effects from Coal Use* at 5.

(172) U.S. Environmental Protection Agency, *Integrated Science Assessment for Particulate Matter* (Dec. 2009).

(173) *Id.*

(174) *Id.*

(175) A.G. Barnett, et al., *Air Pollution and Child Respiratory Health: A Case-Crossover Study in Australia and New*

*Zealand*, *Am. J. of Resp. Crit. Care Med.* (2005); A. Barraza-Villarreal, et al., *Air Pollution, Airway Inflammation, and Lung Function in a Cohort Study of Mexico City Schoolchildren*, *Environ. Health Persp.* (2008); Y. Chen, et al.,

*Influence of Relatively Low Level of Particulate Air Pollution on Hospitalization for COPD in Elderly People*, *Inhal Toxicol.* (2004); J. De Hartog, et al., *Effects of Fine and Ultrafine Particles on Cardiorespiratory Symptoms in Elderly Subjects with Coronary Heart Disease: The ULTRA Study*, *Am. J. Epidemiol.* (2003).

(176) *Regulatory Impact Analysis for the Clean Power Plan Final Rule*, U.S. Environmental Protection Agency (Aug.

2015) available at: <https://www.epa.gov/sites/production/files/2015-08/documents/cpp-final-rule-ria.pdf>

(177) See E. Burt, et al., *Health Effects from Coal Use* at 6.

(178) *Integrated Science Assessment for Sulfur Oxides – Health Criteria*, U.S. Environmental Protection Agency

(2008).

(179) See Regulatory Impact Analysis at 4-53.

(180) Integrated Science Assessment for Oxides of Nitrogen-Health Criteria, U.S. Environmental Protection Agency

(July 2008).

(181) See id.

(182) See id.

(183) Id.

(184) See Regulatory Impact Analysis at 4-11.

(185) Id. at 4-17, 4-18.

Comment Number: 0002477\_Saul\_20160728\_CBD\_UPHE-20

Organization I: Center for Biological Diversity

Commenter I: Michael Saul

Other Sections: I

Comment Excerpt Text:

Coal-fired power plants contribute to the global burden of cardiovascular disease primarily through the emission of particulate matter. PM<sub>2.5</sub> has been causally linked to cardiovascular disease and death.<sup>186</sup> The World Health Organization (WHO) estimates that worldwide, 5% of cardiopulmonary deaths are due to particulate matter pollution.<sup>187</sup> Long term exposure to PM<sub>2.5</sub> has been shown to accelerate the development of atherosclerosis and increase emergency department visits and hospital admissions for ischemic heart disease and congestive heart failure.<sup>188</sup> The U.S. EPA reports that a majority of the studies it reviewed found a 0.5-2.4% increase in emergency department visits and hospital admissions for cardiovascular diseases per each 10 µg/m<sup>3</sup> increase in PM<sub>2.5</sub> concentrations,<sup>189</sup> and a 2007 scientific review of the health effects of combustion emissions reported an 8-18% increase in cardiovascular deaths per 10 µg/m<sup>3</sup> increase in PM<sub>2.5</sub> concentration in the United States.<sup>190</sup>

(186) See Integrated Science Assessment for Particulate Matter,.

(187) Global Health Observatory (GHO): Outdoor Air Pollution, World Health Organization (2003) available at: [http://www.who.int/gho/phe/outdoor\\_air\\_pollution/en/index.html](http://www.who.int/gho/phe/outdoor_air_pollution/en/index.html).

(188) See E. Burt, et al., Health Effects from Coal Use, at 7.

(189) See Integrated Science Assessment for Particulate Matter.

(190) J. Lewtas, Air Pollution Combustion Emissions: Characterization of Causative Agents and Mechanisms Associated with Cancer, Reproductive, and Cardiovascular Effects, *Mut. Res.* 636:95 (2007)

Comment Number: 0002477\_Saul\_20160728\_CBD\_UPHE-21

Organization I: Center for Biological Diversity

Commenter I: Michael Saul

Other Sections: I

Comment Excerpt Text:

Coal contains many naturally-occurring heavy metals, including mercury. When coal is burned, mercury is emitted into the atmosphere in gaseous form. The United Nations estimates that 26% of global mercury emissions (339-657 metric tons/ year) come from the combustion of coal in power plants.<sup>191</sup> The mercury emitted into the atmosphere is deposited into waterways, converted to methylmercury, and passed up the aquatic food chain. Consumption of methylmercury-contaminated fish, from mercury emissions locally, regionally, and internationally, by pregnant women can cause developmental effects in their offspring such as lower intelligence levels, delayed neurodevelopment, and subtle changes in vision, memory, and language.<sup>192</sup>

(191) J. Pacyna, et al., Study on Mercury Sources and Emissions and Analysis of Cost and Effectiveness of Control Measures: "UNEP Paragraph 29 Study", UNEP (Nov. 2010).

(192) World Health Organization, Exposure to Mercury: A Major Public Health Concern, *Pub. Health & Env.* (2007)



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Comment Number: 0002477\_Saul\_20160728\_CBD\_UPHE-22

Organization I: Center for Biological Diversity

Commenter I: Michael Saul

Other Sections: I

Comment Excerpt Text:

The National Academy of Sciences concluded that "the population with the highest risk is the children of women who consumed large amounts of fish and seafood during pregnancy. The committee concludes that the risk to that population is likely to be sufficient to result in an increase in the number of children who have to struggle to keep up in school."<sup>193</sup> The evidence of air pollution's effects on pregnancy is sufficient to conclude that exposure to air pollution during pregnancy can cause low birthweight.<sup>194</sup> Researchers have studied the association between electricity generation from coal-fired power plants and infant mortality, and infant mortality was shown to increase with increased coal consumption in countries that had mid to low infant mortality rate at baseline (1965).<sup>195</sup>

(193) National Research Council (NRC), *Toxicological Effects of Methylmercury* (2000).

(194) See E. Burt, et al., *Health Effects from Coal Use* at 7.

(195) J. Gohlke, et al., *Estimating the Global Public Health Implications of Electricity and Coal Consumption*, *Env. Health Perspect.* 119(6) (June 2011)

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Comment Number: 0002477\_Saul\_20160728\_CBD\_UPHE-23

Organization I: Center for Biological Diversity

Commenter I: Michael Saul

Other Sections: I 16

Comment Excerpt Text:

The storage of post-combustion wastes from coal plants also threatens human health. After combustion, some coal ash is recycled into cement and other engineering products, but most of it is disposed of in dry or wet landfills.<sup>217</sup> There are 584 coal ash dump sites in the U.S., and toxic residues have migrated into water supplies and threatened human health at dozens of these sites.<sup>218</sup> Landfills that leak fly-ash waste can contaminate ground and surface water with arsenic, cadmium, barium, thallium, selenium, and lead.<sup>219</sup>

(217) See E. Burt, et al., *Health Effects from Coal Use* at 3.

(218) See *Methane as a Greenhouse Gas*, U.S. Climate Change Science Program (2006) available at: <http://www.climatechange.gov/infosheets/highlight/CCSP-HI-methane18jan2006.pdf>; *Coalbed methane—An Untapped Energy Resource and an Environmental Concern—USGS Fact Sheet*, U.S. Geological Survey, FS-019-97 (1997) available at: <http://energy.usgs.gov/factsheets/Coalbed/coalmeth.html>.

(219) See E. Burt, et al., *Health Effects from Coal Use* at 3.

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Comment Number: 0002477\_Saul\_20160728\_CBD\_UPHE-24

Organization I: Center for Biological Diversity

Commenter I: Michael Saul

Other Sections: I

Comment Excerpt Text:

The occurrence of uncontrolled coal fires increased following the beginning of coal mining because of the increased amount of coal being exposed to oxygen and because of fires associated with the mining activity as well as accidental and intentional fires started on coal waste piles. Unofficial estimates from the U.S. Office of Surface Mining indicate that, despite many years of concerted efforts to extinguish these fires, there are still approximately 150 uncontrolled surface and underground coal fires in the U.S.<sup>220</sup>

(220) R. Finkelman, *Potential Health Impacts of Burning Coal Beds and Waste Banks*, 59 *Intl. J. of Coal Geo.* 19, 20 (2004).

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Comment Number: 0002477\_Saul\_20160728\_CBD\_UPHE-37

Organization I: Center for Biological Diversity

Commenter I: Michael Saul

Comment Excerpt Text:

In evaluating the federal coal leasing program as a whole, however, BLM must consider not only energy supply and economic return and the physical and policy limits on greenhouse gas emissions, but also several other significant indirect consequences of the coal leasing program. Federal coal leasing has significant adverse effects on both human health and welfare and on species at risk of extinction (both from the direct impacts of coal mining, transport, combustion, and disposal, and from the federal coal programs' significant contribution to global greenhouse gas emissions).

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Comment Number: 0002477\_Saul\_20160728\_CBD\_UPHE-38

Organization I: Center for Biological Diversity

Commenter I: Michael Saul

Other Sections: I

Comment Excerpt Text:

As discussed herein, coal's life-cycle impacts are significant based on the intensity of effects on public health and safety, and the cumulative nature of the effects, particularly on coal mining, transport and export communities. Other agencies have recognized that the impacts of coal mining and coal transport are sufficiently significant to require preparation of an EIS. See e.g., *WildEarth Guardians*, 738 F.3d at 311 (Department of Interior prepared EIS for coal mining leases, where impacts included local air pollution, including ozone and nitrous oxides); *Natural Res. Def. Council, Inc. v. Jamison*, 815 F. Supp. 454, 457 (D.D.C. 1992) (Department of Interior prepares EIS to assess impact of leasing proposed sites for coal mining); *US Army Corps of Engineers, Notice of Amendment to the Intent To Prepare an Environmental Impact Statement (EIS) for the Millennium Bulk Terminals—Longview Shipping Facility Project*, 78 Fed. Reg. 54873 (Sept. 6, 2013) (EIS to be prepared due to potentially significant impacts related to proposed construction and operation of a facility to ship coal, which included air and water quality, noise, traffic, and recreation).

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Comment Number: 0002477\_Saul\_20160728\_CBD\_UPHE-39

Organization I: Center for Biological Diversity

Commenter I: Michael Saul

Other Sections: I

Comment Excerpt Text:

In addition to the significance of impact based on health and safety effects, the cumulative impact of coal's life-cycle processes is significant. See 40 C.F.R. §1508.27(b)(7). CEQ regulations define cumulative impact as "the impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions. Id. at 1508.7. When an agency's action involves an increase in existing impacts, the relevant environmental impact is the cumulative impact, not merely the incremental difference between the new and existing level of activity. See *Grand Canyon Trust v. FAA*, 290 F.3d 339, 342 (D.C. Cir. 2002) (EA should have considered cumulative impact of new airport, and not merely incremental difference between noise associated with new airport and noise associated with existing airport.). The cumulative impacts of coal's life-cycle effects on human health and the environment are significant and therefore, BLM is obligated to consider the effects of those impacts, "incorporating the effects of other projects into the background data base of the project at issue." *Grand Canyon Trust*, 290 F.3d at 342 (citation omitted). Finally, recognizing the potentially significant public health impacts of the life-cycle of coal would set a precedent that would require BLM to apply NEPA to all future impacts and activities associated with federal coal, both upstream and downstream. Clearly, the health impacts of coal from cradle to grave are significant, as discussed at length in

the following sections. Therefore, BLM has a responsibility within the scope of their NEPA authority to examine these impacts thoroughly and provide for ample public review.

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Comment Number: 0002477\_Saul\_20160728\_CBD\_UPHE-4

Organization I:Center for Biological Diversity

Commenter I:Michael Saul

Other Sections: 6

Comment Excerpt Text:

Effects on health from increased temperatures: “The impact on mortality and morbidity associated with increases in average temperatures, which increase the likelihood of heat waves, also provides support for a public health endangerment finding.”<sup>20</sup>

(20) Final Endangerment Finding, 74 Fed. Reg. at 66,497

Increased chance of extreme weather events: “The evidence concerning how human induced climate change may alter extreme weather events also clearly supports a finding of endangerment, given the serious adverse impacts that can result from such events and the increase in risk, even if small, of the occurrence and intensity of events such as hurricanes and floods. Additionally, public health is expected to be adversely affected by an increase in the severity of coastal storm events due to rising sea levels.”<sup>21</sup>

(21) Final Endangerment Finding at 66,497-98.

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Comment Number: 0002477\_Saul\_20160728\_CBD\_UPHE-66

Organization I:Center for Biological Diversity

Commenter I:Michael Saul

Other Sections: 1

Comment Excerpt Text:

From cradle to grave, coal’s impact on human health is undeniable. At every stage of coal’s lifecycle, health impacts are clearly documented including during mining, transport, preparation at the power plant, combustion, disposal of post-combustion wastes, and export abroad. Coal combustion in particular has been well-studied, with compelling evidence of widespread health effects on neighboring communities. Burning coal to generate electricity harms human health and compounds many of the major public health problems facing the world today. The pollution from coal affects all major organ systems in the human body, and contributes to diseases affecting large portions of the U.S. population, including asthma, lung cancer, heart disease and stroke.<sup>148</sup> It interferes with lung development, increases the risk of heart attacks, and compromises brain capacity and mental health. In addition, the discharge of carbon dioxide into the atmosphere associated with burning coal is responsible for more than 30% of total U.S. carbon dioxide pollution, contributing significantly to global warming and its associated health impacts.<sup>149</sup>

(148) See generally E. Burt, et al., *Scientific Evidence of Health Effects from Coal Use in Energy Generation*, Healthcare Research Collaborative, University of Illinois at Chicago School of Public Health (April 2013); A. Lockwood, et al., *Coal’s Assault on Human Health*, Physicians for Social Responsibility (Nov. 2009).

(149) See *Id.*

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Comment Number: 0002477\_Saul\_20160728\_CBD\_UPHE-67

Organization I:Center for Biological Diversity

Commenter I:Michael Saul

Other Sections: 1 6

Comment Excerpt Text:

Climate change health effects

Pollution from the life-cycle of coal is one of the leading causes of climate change.<sup>196</sup> Climate change itself is a

significant threat to human health and well-being.<sup>197</sup> The health impacts of climate change include harms from increasing heat stress and other extreme weather events, increases in air pollution, the spread of vector-borne diseases, food insecurity and under-nutrition, changing exposure to toxic chemicals, displacement, and stress to mental health and well-being.<sup>198</sup> Although everyone is vulnerable to health impacts from climate change, certain groups are particularly vulnerable to climate change-related health harms such as children, the elderly, low-income communities, some communities of color, immigrant groups, and persons with disabilities and preexisting medical conditions.<sup>199</sup> The 2015 Lancet Commission on Health and Climate Change highlighted that climate change is causing a global medical emergency, concluding that “the implications of climate change for a global population of 9 billion people threatens to undermine the last half century of gains in development and global health.”<sup>200</sup>

Climate change-driven health impacts are already occurring in the United States, particularly due to morbidity and mortality from extreme weather events which are increasing in frequency and intensity.<sup>201</sup> Heat is already the leading cause of weather-related deaths in the United States, and extreme heat is projected to lead to increases in future mortality on the order of thousands to tens of thousands of additional premature deaths per year across the United States by the end of this century.<sup>202</sup> Extreme precipitation events have become more common in the United States, contributing to increases in severe flooding events in some regions.<sup>203</sup> Floods are the second deadliest of all weather-related hazards in the United States and can lead to drowning, contaminated drinking water leading to disease outbreaks, and mold-related illnesses.<sup>204</sup>

Air pollution components, specifically ozone, air particulates, and allergens, are expected to increase with climate change. 74 Fed. Reg. 66496 §IV.B.1(b). Climate-driven increases in ozone will cause more premature deaths, hospital visits, lost school days, and acute respiratory symptoms.<sup>205</sup> Projected climate-related increases in ground-level ozone concentrations in 2020 could lead to an average of 2.8 million more occurrences of acute respiratory symptoms, 944,000 more missed school days, and over 5,000 more hospitalizations for respiratory-related problems.<sup>206</sup> In 2020, the continental U.S. could pay an average of \$5.4 billion (2008\$) in health impact costs associated with the climate penalty on ozone, with California experiencing the greatest estimated impacts averaged at \$729 million.<sup>207</sup>

Risks from infectious diseases are also increasing as climate change alters the geographic and seasonal distribution of vector-borne diseases.<sup>208</sup> Climate change favors the spread of some pathogen-carrying vectors. Lyme disease is the most common vector-borne disease in the United States, with 25,000–30,000 cases reported to the CDC per year, with the highest incidence among children between ages 5 and 9.<sup>209</sup> The risk of human exposure to Lyme disease is expected to increase as ticks carrying Lyme disease and other pathogens become active earlier in the season and expand northward in response to warming temperatures.<sup>210</sup> Rising temperatures and changes in rainfall have already contributed to the maintenance of West Nile virus in parts of the United States, and climate change is expected to increase suitable conditions for the mosquitoes that transmit West Nile virus, increasing human exposure risk to the disease.<sup>211</sup>

As highlighted by the Third National Climate Assessment, fighting climate change by reducing greenhouse gas pollution provides critical “opportunities to improve human health and well-being across many sectors,” including a wide array of important health co-benefits.<sup>212</sup>

The impacts of coal combustion can also be described in economic terms, and several papers have attempted to estimate the cost of using coal by assigning value to the environmental and public health damage caused during each stage of coal’s extraction, transportation, combustion, and disposal. One such study estimated that the external costs of coal-fired electricity in the U.S. add an extra 17.8 cents to each kWh of electricity produced; an amount that would triple its cost to consumers.<sup>213</sup> Another U.S. report by Machol et al. estimates 45 cents per kWh as the cost of the health burden and environmental damages from coal combustion.<sup>214</sup> In 2011, the US EPA estimated the benefits and costs of the Clean Air Act, a law which regulates emissions of sulfur dioxide, oxides of

- nitrogen, carbon monoxide, and particulate matter in the United States. The EPA calculated that the ratio of health care cost savings to compliance costs was 25:1 in 2010.<sup>215</sup> This means that for every dollar spent complying with the Clean Air Act, twenty-five dollars were saved in health care costs due to lower disease burden, including a reduction in premature deaths, and cases of bronchitis, asthma, and myocardial infarction.<sup>216</sup>
- (196) Intergovernmental Panel on Climate Change Fifth Assessment Report Chapter 7, Energy Systems. pg 554.
- (197) Luber, G. et al. 2014: Ch. 9: Human Health. Climate Change Impacts in the United States: The Third National Climate Assessment. J. M. Melillo, Terese (T.C.) Richmond, and G. W. Yohe, Eds., U.S. Global Change Research Program, 220-256. doi:10.7930/J0PN93H5. See also Watt, N. et al. 2015. Health and climate change: policy responses to protect public health. *The Lancet* 386: 1861-1914.
- (198) Sheffield, P. and Landrigan, P.J. 2011. Global Climate Change and Children's Health: Threats and Strategies for Prevention. *Environmental Health Perspectives* 119: 291-298.
- (199) See Id. See also USGCRP [US Global Change Research Program]. 2016. The Impacts of Climate Change on Human Health in the United States: A Scientific Assessment. Crimmins, A., J. Balbus, J.L. Gamble, C.B. Beard, J.E. Bell, D. Dodgen, R.J. Eisen, N. Fann, M.D. Hawkins, S.C. Herring, L. Jantarasami, D.M. Mills, S. Saha, M.C. Sarofim, J. Trtanj, and L. Ziska, Eds. U.S. Global Change Research Program, Washington, DC, 312 pp. <http://dx.doi.org/10.7930/J0R49NQX>.
- (200) Watt, N. et al. 2015. Health and climate change: policy responses to protect public health. *The Lancet* 386: 1861-1914.
- (201) See Id. See also Luber, G. et al. 2014: Ch. 9: Human Health. Climate Change Impacts in the United States: The Third National Climate Assessment. J. M. Melillo, Terese (T.C.) Richmond, and G. W. Yohe, Eds., U.S. Global Change Research Program, 220-256. doi:10.7930/J0PN93H5; USGCRP [US Global Change Research Program]. 2016. The Impacts of Climate Change on Human Health in the United States: A Scientific Assessment. Crimmins, A., J. Balbus, J.L. Gamble, C.B. Beard, J.E. Bell, D. Dodgen, R.J. Eisen, N. Fann, M.D. Hawkins, S.C. Herring, L. Jantarasami, D.M. Mills, S. Saha, M.C. Sarofim, J. Trtanj, and L. Ziska, Eds. U.S. Global Change Research Program, Washington, DC, 312 pp. <http://dx.doi.org/10.7930/J0R49NQX>.
- (202) See USGCRP, 2016. The Impacts of Climate Change on Human Health in the United States.
- (203) See Luber, G. et al. 2014: Ch. 9: Human Health. Climate Change Impacts in the United States.
- (204) See Id.
- (205) See USGCRP, 2016. The Impacts of Climate Change on Human Health in the United States.
- (206) UCS [Union of Concerned Scientists]. 2011. Rising Temperatures and Your Health: Rising Temperatures, Worsening Ozone Pollution. Available at [http://www.ucsusa.org/sites/default/files/legacy/assets/documents/global\\_warming/climate-change-and-ozonepollution.pdf](http://www.ucsusa.org/sites/default/files/legacy/assets/documents/global_warming/climate-change-and-ozonepollution.pdf).
- (207) See Id.
- (208) See USGCRP, 2016. The Impacts of Climate Change on Human Health in the United States
- (209) Bernstein, A.S. and S.S. Myers. 2011. Climate change and children's health. *Current Opinion in Pediatrics* 23: 221-6.
- (210) See USGCRP, 2016. The Impacts of Climate Change on Human Health in the United States.
- (211) Harrigan, R.J., H.A. Thomassen, W. Buermann, and T.B. Smith. 2014. A continental risk assessment of West Nile virus under climate change. *Global Change Biology* 20: 2417-2425; Paz, S. 2015. Climate change impacts on West Nile virus transmission in a global context. *Philosophical Transactions of the Royal Society B* 370: 20130561.
- (212) See Luber, G. et al. 2014: Ch. 9: Human Health. Climate Change Impacts in the United States.
- (213) P.R. Epstein, et al., Full Cost Accounting for the Life Cycle of Coal, *Ann. NY Acad. Sci.* (2011)
- (214) B. Machol & S. Rizk, Economic Value of U.S. Fossil Fuel Electricity Health Impacts, 52 *Env. Intl.* 75-80 (2013)
- (215) The Benefits and Costs of the Clean Air Act: 1990-2020, U.S. Environmental Protection Agency, Office of Air and Radiation (2010).
- (216) Id.

Comment Number: 0002477\_Saul\_20160728\_CBD\_UPHE-68

Organization 1: Center for Biological Diversity

Commenter 1: Michael Saul

Organization 2: Utah Physicians for a Healthy Environment

Other Sections: 1

Comment Excerpt Text:

The United States produced just under a billion short tons of coal in 2015, but as domestic coal use declines, producers are increasingly looking to export U.S. coal—and the pollution associated with burning this coal—overseas.<sup>221</sup> Even though the coal will ultimately be burned elsewhere, the mining and transportation of coal for export nonetheless have significant adverse effects on human health and the environment in the United States. Transporting the coal to ports releases coal dust from open rail cars, as well as diesel exhaust from train engines, along the rail lines.<sup>222</sup> Coal dust particles themselves contribute to lung disease, asthma, and cardiopulmonary diseases, and can contain toxic heavy metals like arsenic and lead, which pose additional health risks, such as skin, bladder, liver, and lung cancers and damage to the nervous system.<sup>223</sup> At the ports, unloading the coal, storage in piles, and reloading it onto ships all emit large quantities of coal dust.<sup>224</sup> Trains and ships used to transport coal also emit diesel exhaust and other harmful air pollutants, which worsen respiratory and pulmonary conditions and can cause premature death.

(221) U.S. Energy Information Administration's Coal Use Projections and forecasts found at <https://www.eia.gov/forecasts/steo/report/coal.cfm>; Government Accountability Office, Coal Leasing: BLM Could Enhance Appraisal Process, More Explicitly Consider Coal Exports, and Provide More Public Information 36 (Dec. 2013), GAO-14-140.

(222) BNSF Railway. "Coal Cars." Found at <http://www.bnsf.com/customers/equipment/coal-cars/>.

(223) Center for Disease Control and Prevention. "Coal dust." NIOSH Pocket Guide to Chemical Hazards. Nov 18, 2010. Found at <http://www.cdc.gov/niosh/npg/npgd0144.html>.

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Comment Number: 0002477\_Saul\_20160728\_CBD\_UPHE-69

Organization 1: Center for Biological Diversity

Commenter 1: Michael Saul

Other Sections: 1 5

Comment Excerpt Text:

Ports are also a significant source of coal dust. When a train arrives at a coal export terminal, it may dump its coal into an open air storage pile or holding silo. Alternatively, a train arriving at a port terminal may wait for days in a train yard at the port before its coal is unloaded. These waiting train cars and open-air coal piles are significant sources of coal dust particulate matter at export terminals because typical wind speeds and wind gusts prevalent in near-coastal areas cause coal particles from the storage piles and from the uncovered tops of waiting coal cars to be released into the air.<sup>228</sup> Unloading the coal from rail cars into storage piles at the port facility and storing the coal in these piles emits coal dust into the air, soil, and water nearby. In addition, coal dust is carried off the storage piles as runoff when the piles are exposed to rain.<sup>229</sup> This runoff can impact both surface water and underlying groundwater. When a ship is ready for loading, conveyor belts transport the coal from the train car, silo, or coal pile, and dump the coal onto the ship, releasing additional coal dust into the air and water.

Coal dust, once emitted, can have multiple impacts on humans and the environment. Fugitive coal dust that is 10 micrometers or less in diameter is classified as PM<sub>10</sub>, and fugitive coal dust that is 2.5 micrometers or less in diameter is classified as PM<sub>2.5</sub>. PM<sub>10</sub> can travel up to 30 miles, and PM<sub>2.5</sub> can travel 500 miles.<sup>230</sup> Both PM<sub>10</sub> and PM<sub>2.5</sub> are extremely harmful to human health. The particles can travel deep into the lungs and into the bloodstream, causing premature death in people with heart or lung disease, heart attacks, decreased lung function, and increased respiratory effects, including irritation of the airways, aggravated asthma, coughing, and breathing difficulties.<sup>231</sup> Groups that are most at risk due to PM<sub>10</sub> and PM<sub>2.5</sub> exposure include children, older adults, low-income communities, and individuals with asthma or preexisting heart and lung disease. Inorganic arsenic found in coal dust deposited in soil near coal export terminals is a human carcinogen.<sup>232</sup> Human

exposure to inorganic arsenic by inhalation has been strongly associated with lung cancer, and ingestion has been linked to skin, bladder, liver, and lung cancers.<sup>233</sup> Chronic inhalation has been associated with irritation of the skin and mucous membranes, as well as effects in the brain and nervous system. Gastrointestinal effects, anemia, peripheral neuropathy, skin lesions, hyperpigmentation, and liver or kidney damage have resulted from chronic oral exposure to elevated levels of inorganic arsenic.<sup>234</sup>

In addition to coal dust, the trains and ships used to transport coal emit diesel exhaust. Diesel exhaust contains significant sources of harmful air pollutants including particulate matter (PM/PM<sub>2.5</sub>), volatile organic compounds (VOCs), toxic compounds known as air toxics, carbon monoxide (CO), nitrogen oxides (NO<sub>x</sub>) and, in the case of ships, sulfur oxides (SO<sub>x</sub>), and contributes to elevated ozone levels.<sup>235</sup> This pollution causes poor air quality, reduced visibility, water and soil contamination, and ecosystem damage. Health effects associated with exposure to this pollution include premature mortality, increased hospital admissions, heart and lung diseases, asthma, reduced lung function, and increased cancer risk.<sup>236</sup>

<sup>228</sup> Bounds, WJ and Johannesson, KH. "Arsenic addition to soils from airborne coal dust originating at a major coal

shipping terminal." *Water, Air, and Soil Pollution* 185 (2007): 195-207.

<sup>229</sup> See *Id.* at 198.

<sup>230</sup> See *Id.* at 200.

<sup>231</sup> See Environmental Protection Agency, Integrated Science Assessment on PM at 25.

<sup>232</sup> See Bounds, WJ and Johannesson, KH at 196.

<sup>233</sup> World Health Organization Fact Sheet on Inorganic Arsenic found at <http://www.who.int/mediacentre/factsheets/fs372/en/>.

<sup>234</sup> See *Id.*

<sup>235</sup> California EPA's Fact Sheet on Health Impacts of Diesel Exhaust emissions found at: <http://oehha.ca.gov/media/downloads/calenviroscreen/indicators/diesel4-02.pdf>,

<sup>236</sup> See *Id.*

Comment Number: 0002477\_Saul\_20160728\_CBD\_UPHE-74

Organization I: Center for Biological Diversity

Commenter I: Michael Saul

Other Sections: I 17

Comment Excerpt Text:

The indirect effects of coal leasing and mining include atmospheric emissions of mercury from coal combustion. Mercury is a potent and widely distributed neurotoxin with serious adverse health effects on human health and development as well as the behavior, reproduction, and survival of threatened and endangered species. The United Nations estimates that 26% of global mercury emissions (339-657 metric tons/ year) come from the combustion of coal in power plants.<sup>294</sup> A recent decision held that agencies must consider the indirect effects of even microscopic levels of mercury from coal leasing, mining and combustion decisions:

(294) J. Pacyna, et al., Study on Mercury Sources and Emissions and Analysis of Cost and Effectiveness of Control Measures: "UNEP Paragraph 29 Study", UNEP (Nov. 2010).

"the record reveals that even microscopic changes in the amount of mercury deposition can have significant impacts on threatened and endangered species in the area impacted by the Four Corners Power Plant. See AR 1-2-14-1990 (concluding that a .1% increase in mercury deposition in the basin is likely to jeopardize the continued existence of the Colorado pikeminnow). Given the potentially significant impacts of mercury pollution, OSM's failure to discuss or analyze the deleterious impacts of combustion-related mercury deposition in the area of the Four Corners Power Plant is troubling.<sup>295</sup>"

(295) *Dine Citizens Against Ruining Our Environment v. U.S. Office of Surface Mining Reclamation and Enforcement*, 82 F.Supp. 3d 1201, 1215 (D. Colo. 2015).

The deposition of mercury and selenium within the Colorado River Basin continues to threaten both human health and endangered species, including the four Colorado River endangered fish. Current scientific information indicates continuing mercury and selenium contamination in the Colorado River Basin, which has the potential to detrimentally affect these species.

Consumption through the food chain is the primary mechanism of bioaccumulation of mercury in the endangered fish, and particularly affects the Colorado pikeminnow's diet as the largest of the endangered Colorado River fish (Herrmann et al. 2016 at 204). Sources of mercury include high levels of atmospheric mercury deposition called "cold condensation" from coal-fired power plant emissions (Id. at 205). This atmospheric deposition and watershed runoff is the most prevalent source of mercury in the Colorado River, but mercury pollution from old gold smelters in the Basin have also infiltrated this river system through decades of runoff from smaller tributaries (Id. At 215). In Grand Canyon, there is a high concentration of mercury in the atmosphere due to emissions from the coal burning Navajo Generating Station in Page, Arizona, resulting in direct negative effects on the endangered fishes' habitat in the lower Colorado River Basin (Walters 2015 at 2385).

Mercury contamination is especially concerning because all four species depend on aquatic invertebrates as a food source. Other piscivorous animals and non-native fish that prey on these juvenile fish, in turn, accumulate mercury, which continues up the food chain, bioaccumulating in adult fish. Concentrations of mercury exceeding 8 micrograms ( $\mu\text{g/g}$ ) in fish organs or eggs may result in reproductive dysfunction and abnormalities (Herrmann et al. 2016 at 204). Walters et al. (2015) found that mean mercury concentrations for three native species and three non-native species from a Colorado River sample site exceeded the risk threshold for piscivorous mammal consumption (Id. at 2390).

Because of the scale of the federal coal leasing program (over 40% of U.S. coal production), BLM must quantify, consider, and consult on, the indirect mercury emissions from combustion of coal, its contribution to global mercury atmospheric concentrations and deposition rates, and its ensuing effects on sensitive, threatened, and endangered species, including the four Colorado River listed fish.

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Comment Number: 0002491\_Weiskopf\_20160728\_NextGenClimateAmer-112

Organization I:NextGen Climate America

Commenter I:David Weiskopf

Other Sections: 1 1 1

Comment Excerpt Text:

Emissions associated with the coal leasing program impair the public interest through the health and welfare costs of air pollution and climate change. Of total nationwide emissions in 2013, 36% came from electric power generation, of which 76% was from coal combustion, of which 41% was from coal produced from federal lands.<sup>22</sup> A recent study by PSE Healthy Energy concludes that communities living near coal power plants are at higher risk of developing adverse health impacts. Emissions from coal combustion in Pennsylvania and Ohio caused more than 4,333 premature deaths nationwide in 2015 alone.<sup>23</sup> These premature deaths and illnesses also generated nearly \$38 billion in health impacts.<sup>24</sup> The per-capita impacts were most concentrated in areas near to and downwind of coal power plants – areas with higher than average concentrations of minority and/or low-income residents. By failing to consider these health effects, BLM misses the opportunity to interpret the public interest in a way that serves Americans.

[<sup>22</sup> U.S. Environmental Protection Agency, Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990-2013 (April 15, 2015).]

[<sup>23</sup> This figure compiles the health burdens from Ohio and Pennsylvania power plants' fine particle pollution, with 2,133 adult deaths in Ohio and 2,300 adult deaths in Pennsylvania (4,333 total) from coal and gas plants combined. Of these totals, 2,088 and 2,263, respectively, were attributable to coal power plants in each state.



Krieger, E, et al., “The Clean Power Plan in Pennsylvania Analyzing power generation for health and equity,” June 2016. Available at <https://nextgenamerica.org/news-reports/our-air-pa-technical/> at viii; Krieger, E, et al., “Our Air: Healthy and Equity Impacts of Ohio’s Power Plants,” June 2016. Available at <https://nextgenamerica.org/news-reports/our-air-ohio/> at 6. Supplemental data specific to coal plants courtesy of the report’s author.]  
[24 Id.]

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Comment Number: 0002499\_Nichols20160728-13

Organization I: WildEarth Guardians

Commenter I: Jeremy Nichols

Comment Excerpt Text:

Ash management impacts: Burning of coal produces massive amounts of coal ash, which is often disposed of in inconsistent and potentially unhealthy ways. The PEIS must address the impacts of coal ash production and disposal and provide information and analysis disclosing to what extent the federal coal program is linked to adverse health and environmental impacts related to coal ash production.

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Comment Number: 0002513\_Lish\_20160707-12

Commenter I: Christopher Lish

Comment Excerpt Text:

Respiratory effects: Air pollutants from coal play a role in the development of chronic obstructive pulmonary disease (COPD), a lung disease characterized by permanent narrowing of airways. Coal pollutants may also cause COPD exacerbations. Coal pollutants —among them nitrous oxide and very small particles, known as PM2.5— adversely affect lung development and trigger asthma attacks, thus posing particular risks to children. Nitrous oxide in combination with volatile organic compounds in the presence of sunlight and heat forms ground-level ozone, a widespread pollutant which can cause permanent lung scarring as well as exacerbations of asthma. Exposures to ozone and PM are also correlated with the development of and mortality from lung cancer, the leading cancer killer in both men and women.

Cardiovascular effects: The concentration of PM2.5 in ambient air increases the risk of heart attacks and hospital admissions for ischemic heart diseases, disturbances of heart rhythm, and congestive heart failure. Nitrogen oxides and PM2.5, along with other pollutants, are associated with hospital admissions for potentially fatal cardiac arrhythmia. Nervous system effects: Studies have shown a correlation between coal-related air pollutants and stroke. Mercury exposure contributes to neurological and developmental impairments like autism and causes lifelong loss of intelligence. Coal Life-Cycle: Burning coal is not the only health harming action, but all steps of the coal lifecycle—mining, transportation, washing, and disposing of post-combustion wastes—impacts human health. Each of these steps must be evaluated for the cumulative impacts on Americans of further coal leasing on federal lands.

Health effects associated with climate change: Because coal-fired power plants account for so much of U.S. carbon dioxide emissions, coal is a major contributor to the health impacts of climate change. Determination of the climate threats needs to be quantified by the PEIS to evaluate the ultimate cumulative impact of additional leasing on federal land. For example, more frequent heat waves will lead to a rise in heat exhaustion and heat stroke, potentially resulting in death, especially among elderly and poor urban dwellers. Rising temperatures are expanding the ranges for disease-carriers like mosquitoes and ticks in some cases causing epidemics of Lyme disease. Drought causes detrimental effects on food supply resulting in crop failure, higher prices and worsening nutrition. The increased frequency of intense precipitation events contributes to flooding, water contamination and the spread of infectious and mosquito-borne diseases. Drought, declining food supplies and rising sea levels increase the migration of affected populations and increase armed conflict and global instability.

These threats to health are of great concern to me. It is essential to analyze the large costs to our health from the mining, combustion and management of coal ash to our health when we evaluate the leasing program on publicly-owned land.

Comment Number: 0002942\_Harbine-43

Organization I:Earthjustice

Commenter I:Jenny Harbine

Other Sections: 8.1 I

Comment Excerpt Text:

The PEIS Should Examine Significant Non-climate Impacts Associated With Coal Mining, Transport, and Combustion. BLM's scoping notice acknowledges that "[t]he Federal coal program has other potential impacts on public health and the environment, beyond climate impacts, that will also be assessed in the Programmatic EIS." 170 However, the notice states that the EIS's analysis will "include the effects of coal production" without explicitly addressing the impacts of coal transport and combustion. 171 The scoping notice also commits to a broad analysis of the federal coal program's socioeconomic impacts. 172 Because NEPA requires agencies to evaluate the direct, indirect and cumulative impacts of a proposed action, and coal combustion is a foreseeable result 169 Comments of Phyllis Fox, Environmental Health and Safety Impacts of the Proposed Oakland Bulk and Oversized Terminal, September 21, 2015, at 19. 170 81 Fed. Reg. at 17,725-26. 171 Id. at 17,726 (emphasis added) 172 Id. 50 of coal mining on federal lands, the PEIS must disclose the non-carbon environmental and socio-economic impacts of coal combustion. 173 It is particularly crucial that the PEIS address these impacts because they are likely significant. The that mining, transportation, and especially combustion of federally owned coal causes to life expectancy and health may be much larger than the current estimates and are tied to greenhouse gas emissions. In June 2016, a White House Council of Economic Advisors report on the economic impacts of the federal coal leasing program explicitly recognized that significant health-based costs are associated with the continued mining and burning of federal coal. 174 Specifically: On the production side, coal mining involves emissions of methane, which is a potent greenhouse gas. Coal extraction and processing also may lead to external costs from water pollution and land degradation. Transportation of coal is often energy and emissions intensive. Coal combustion releases carbon dioxide, mercury, and other harmful air pollutants. Impoundments and coal combustion waste can also lead to severe water . 175 All of these social and environmental costs must be disclosed in the PEIS. Numerous environmental reviews from the past several years support the White House Report findings concerning harms from the non-carbon emissions of coal-fired electric generators: sulfur and nitrogen oxides, particulate matter, volatile organic compounds, ammonia, and mercury. These environmental reviews reveal damage from coal burning to health, 173 In addition, this letter speaks at length about the need to analyze the impacts of the federal coal program's climate-related impacts. The program drives the continued production of coal and reliance on coal for energy generation, frustrating state, national, and international climate goals. In addition the federal coal program perpetuates and increases exposure by downstream communities to climate disruption. While this section focuses on non-climate impacts, the downstream climate impacts due to the federal coal program also should be analyzed in the PEIS. 174 White House Fair Return Report, at 28 175 Id. 51 longevity, quality of life, and property. 176 As discussed below, these are all environmental and health impacts that NEPA mandates that the PEIS address

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Comment Number: 0002942\_Harbine-44

Organization I:Earthjustice

Commenter I:Jenny Harbine

Other Sections: 9

Comment Excerpt Text:

The PEIS must analyze downstream impacts of coal dust. Coal dust emissions can significantly impact the health of downstream communities and workers, and damage our environment. The PEIS should analyze both coal dust emissions impacts from railcars and fugitive emissions. Coal dust is generated by coal-carrying rail cars during transit and as a fugitive emission from coal storage piles, and loading and unloading activities. 177 Rail lines parallel waterways where rail cars emit coal dust, transporting it to nearby communities and farms. Coal trains emit coal dust from the top and bottom of the rail cars throughout the trip. An average rail car loses 645 lbs during a 400

mile trip. 178 BNSF estimates that 500 to 2000 lbs of coal dust can be emitted from each train car per trip. 179 Surfactants are sometimes sprayed over the coal to control dust. However, surfactants wear off during the trip and require tremendous quantities of water to apply. Coal dust can impact port communities and workers because of higher emissions associated with containment within a smaller area and the types of locomotives used within port facilities. 180 Currently, no federal regulations protect communities from coal dust exposure. Coal dust consists mainly of granules and fine black particles that increase both PM10 and PM 2.5 in the ambient air. Most acutely, coal dust causes wheezing, excess cough and other 176 Power Consulting, Inc., *The Economic Consequences of the Federal Coal Leasing Program: Improving the Quality of the Economic Analysis* (July 27, 2016) at 49, attached as Ex. 1, citing, inter alia, National Research Council, *Hidden Costs of Energy: Unpriced Consequences of Energy Production and Use*, Committee on Health, Environmental, and Other External Costs and Benefits of Energy Production and Consumption (2010), available at <http://nap.edu/12794> (last visited July 27, 2016), attached as Ex. 32; Paul R. Epstein, et al., *Full cost accounting for the life cycle of coal*, in “*Ecological Economics Review*, *ANNALS OF THE NEW YORK ACADEMY OF SCIENCES*, 1219 (2011): 73-98, available at [http://www.chgeharvard.org/sites/default/files/epstein\\_full%20cost%20of%20coal.pdf](http://www.chgeharvard.org/sites/default/files/epstein_full%20cost%20of%20coal.pdf) (last visited July 27, 2016), attached as Ex. 33; Nicholas A. Muller et al., *Environmental Accounting for Pollution in the United States Economy*. *AMERICAN ECONOMIC REVIEW* 101 (August 2011): 1649-1675, available at <http://pubs.aeaweb.org/doi/pdfplus/10.1257/aer.101.5.1649> (last visited July 27, 2016), attached as Ex. 34. 177 Comments of Phyllis Fox, *Environmental Health and Safety Impacts of the Proposed Oakland Bulk and Oversized Terminal*, September 21, 2015, at 13, attached as Ex. 35. 178 Comments of Phyllis Fox, *Environmental Health and Safety Impacts of the Proposed Oakland Bulk and Oversized Terminal*, September 21, 2015, at 2 (Ex. 35). 179 Sustainable Systems Research, LLC, “*Technical Memorandum Air Quality, Climate Change, and Environmental Justice Issues from Oakland Trade and Global Logistics Center*, September 18, 2015, at 6, attached as Ex. 36. 180 Id. 52 respiratory symptoms. 181 Longer term exposure can lead to skin damage, circulatory problems, and increased risk of developing cancer. Coal dust also increases accident risk because coal dust from trains destabilizes the track ballast—the surface that bears the load of the railroad ties. Coal dust contaminates soil, coats crops, yards, homes and vehicles raising health concerns and causing nuisance. 182 Fugitive coal dust can impair lung function, and cause or contribute to cardiovascular disease and developmental disorders. Covered rail cars would appear to reduce coal dust emissions, so the PEIS should also explore the impacts of covered rail cars. To our knowledge, at this time, no covered coal trains are in use in the U.S. and we know of no published study of the efficacy for coal trains. Covered cars would still emit coal dust from the bottom of the train, which constitutes 7 percent of the total coal dust. 183 And if the cars included venting units, the coal dust would additionally vent from the top of the car. Covered rail cars also pose an additional rail accident risk; coal is highly combustible, and coal trapping heat limited space could facilitate spontaneous combustion. 184 In addition to analyzing the impacts of coal dust emissions from uncovered cars, the PEIS should analyze and disclose emissions from empty coal trains. One recent Australian study found that empty coal trains emit more particulate pollution than loaded ones. 185 Controlling coal dust requires millions of gallons of water per year. Water is needed during rail car loading, at storage piles within enclosures, at drop points, and during ship loading. 186 About 8 gallons of water are required for each ton of coal throughput to control dust. 187 Given that coal travels through states that are experiencing drought, the PEIS should analyze the impacts of coal leasing in this context. The PEIS should also consider the cumulative impacts of coal dust given the impacts faced by communities located near rail lines and ports where the trains are carried. Cumulative impacts are the related past, present, and reasonably foreseeable future projects. 181 Comments of Phyllis Fox, *Environmental Health and Safety Impacts of the Proposed Oakland Bulk and Oversized Terminal*, September 21, 2015, at 16 (Ex. 35). 182 Paul R. Epstein et al, *Full Cost of Accounting for the Life Cycle of Coal*, *ANNALS OF THE NEW YORK ACADEMY OF SCIENCES*, v. 1219, 2011, at 84 (Ex. 33). 183 Comments of Phyllis Fox, *Health and Safety Impacts of the Proposed Oakland Bulk and Oversized Terminal*, September 21, 2015, at 17 (Ex. 35). 184 Id. at 18. 185 Nick Higgenbotham et al, *Coal Train Pollution Signature Study: A briefing paper prepared for the For the Coal Terminal Action Group Dust and Health Committee*, August 2013, attached as Ex. 37. 186 Comments of Phyllis Fox, *Environmental Health and Safety Impacts of the Proposed Oakland Bulk and Oversized Terminal*, September 21, 2015, at 2 (Ex.

35). 187 Id. at 7. 53 Given that ports and other areas impacted by coal dust are located in low-income communities and communities of color, the PEIS must analyze these impacts. 188

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Comment Number: 0002942\_Harbine-45

Organization I:Earthjustice

Commenter I:Jenny Harbine

Other Sections: 5

Comment Excerpt Text:

The PEIS must consider all air pollutant impacts from coal transport on downstream communities. Coal transport by rail also causes significant air quality and health impacts through coal train exhaust, which includes diesel particulate matter (DPM), and criteria pollutants including NO<sub>x</sub>, SO<sub>2</sub>, PM<sub>10</sub>, PM<sub>2.5</sub> and CO. Trains emit these pollutants while in motion and idling. 189 Communities and workers in close proximity to rail tracks, coal terminals, and shipping lanes are at highest risk for DPM exposure. DPM is associated with “acute short term symptoms such as headache, dizziness, light headedness, nausea, coughing, difficulty breathing, tightness of chest, and irritation of eyes, nose and throat. Long-term exposure can result in increased probability of heart attacks, lung cancer, worsening of asthma, and infant mortality. 190 Health risk assessments of rail terminals and ports have found significant cancer risks associated with DPM up to two miles from coal terminals. 191 The PEIS should quantify health impacts along the entire coal transportation corridor. In addition, the PEIS should analyze air emissions from coal export and shipping activities. For instance, air modeling for a proposed state of the art covered coal export at the Port of Morrow in Oregon showed major exceedances of particulate matter and NAAQs for NO<sub>x</sub>. 192 Storing coal in communities also generates large amounts of PM. 193 It is also well known that coal export can increase acid rain and mercury deposition in the Pacific Ocean and Western US from Asia. 194 These impacts should also be analyzed. In evaluating the significance of air quality impacts due to coal storage and transportation, the analysis should not base its conclusions solely on National Ambient Air Quality Standards (“NAAQS”) because harms may occur at pollutant concentrations below the NAAQS standards. For example, epidemiological studies have shown associations between SO<sub>2</sub> 188 Pastor, Manuel Jr., et al., *Waiting to Inhale? The Demographics of Toxic Air Release Facilities in 21st Century California*, 85 *SOCIAL SCIENCE QUARTERLY*, no. 2, June, 2004. 189 Comments of Phyllis Fox, *Environmental Health and Safety Impacts of the Proposed Oakland Bulk and Oversized Terminal*, September 21, 2015, at 19 (Ex. 35). 190 Id. 191 Id. 192 See, e.g., AMI International, *AIR QUALITY MODELING FOR THE PROPOSED ENCLOSED COAL EXPORT FACILITY AT THE PORT OF MORROW* (2012), [http://media.oregonlive.com/environment\\_impact/other/AERMOD\\_Modeling\\_Morrow\\_vfin.pdf](http://media.oregonlive.com/environment_impact/other/AERMOD_Modeling_Morrow_vfin.pdf) (last visited July 28, 2016), attached as Ex. 38. 193 See id. 194 Comments of Phyllis Fox, *Environmental Health and Safety Impacts of the Proposed Oakland Bulk and Oversized Terminal*, September 21, 2015, at 7 (Ex. 35). 54 concentrations and emergency room visits and hospital admissions down to the 50 ppb level even though the NAAQS for SO<sub>2</sub> is 85 ppb. 195 Moreover, NAAQS does not account for the fact that some pollutants have higher localized impacts—pollutants like SO<sub>2</sub> concentrate locally. The PEIS should analyze the significance of the health impacts of the program associated with air emissions on downstream communities.

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Comment Number: 0002942\_Harbine-48

Organization I:Earthjustice

Commenter I:Jenny Harbine

Other Sections: 8.11

Comment Excerpt Text:

The PEIS should analyze the impact of accidents caused by federal coal transport and storage. The PEIS should include a meaningful analysis of the potential safety, human and environmental risks of rail accidents, both those involving, and those proximately caused by, coal trains. Rail accidents can release coal into the surface waters and water supply causing significant impacts. Moreover, coal is very difficult to clean up. 201 This affects downstream communities as coal released into water supply can degrade agricultural communities and municipal water

supplies in addition to harming fish and other aquatic life. The blast zone for coal trains is within one mile of the train tracks. These explosions disproportionately impact low income communities and communities of color—because these often are the communities that live near railroad tracks. 202 This impact should be analyzed as an indirect and cumulative impact, especially in light of other hazards these communities are exposed to. 203 Coal trains, which weigh far more than other types of trains, also deposit coal dust on the tracks and in the track ballast. The additional stress on the tracks increases the probability of accidents. 204 Coal dust is highly combustible and causes risks from explosions and fire. The federal Surface Transportation Board has concluded that coal dust can impair track stability lead to train derailment. 205 Consequently, coal trains are a proximate cause of rail accidents. 206 200 Id. at 20. 201 Id. at 9. 202 “Crude Injustice on the Rails,” Communities for a Better Environment and Forest Ethics, (June 2015) at 3 (80 percent of the 5.5 million Californians with homes in the blast zone live in low income communities and communities of color). 203 Id. at 11. 204 Id. at 10. 205 Surface Transportation Board Decision, Arkansas Electric Cooperative Corporation – Decision on Petition for Declaratory Order, Docket No. FD 35305 (Mar. 3, 2011); available at [http://stb.dot.gov/Decisions/readingroom.nsf/UNID/79B5382AE20F7930852578480053111F/\\$file/40436.pdf](http://stb.dot.gov/Decisions/readingroom.nsf/UNID/79B5382AE20F7930852578480053111F/$file/40436.pdf) (last visited July 28, 2016). 56 Spills are not uncommon during bunkering (or fueling), and spills into environmentally sensitive waters. The PEIS should evaluate this spill risk for both offshore bunkering— throughout the route— and onshore at port.

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Comment Number: 0003010\_MasterFormI\_PhysiciansSocialRespon-1

Organization I:Physicians for Social Responsibility

Comment Excerpt Text:

Respiratory effects: Air pollutants from coal play a role in the development of chronic obstructive pulmonary disease (COPD), a lung disease characterized by permanent narrowing of airways. Coal pollutants may also cause COPD exacerbations. Coal pollutants—among them nitrous oxide and very small particles, known as PM2.5—adversely affect lung development and trigger asthma attacks, thus posing particular risks to children. Nitrous oxide in combination with volatile organic compounds in the presence of sunlight and heat forms ground-level ozone, a widespread pollutant which can cause permanent lung scarring as well as exacerbations of asthma. Exposures to ozone and PM are also correlated with the development of and mortality from lung cancer, the leading cancer killer in both men and women.

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Comment Number: 0003010\_MasterFormI\_PhysiciansSocialRespon-2

Organization I:Physicians for Social Responsibility

Comment Excerpt Text:

Cardiovascular effects: The concentration of PM2.5 in ambient air increases the risk of heart attacks and hospital admissions for ischemic heart diseases, disturbances of heart rhythm, and congestive heart failure. Nitrogen oxides and PM2.5, along with other pollutants, are associated with hospital admissions for potentially fatal cardiac arrhythmia.

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Comment Number: 0003010\_MasterFormI\_PhysiciansSocialRespon-3

Organization I:Physicians for Social Responsibility

Comment Excerpt Text:

Nervous system effects: Studies have shown a correlation between coal-related air pollutants and stroke. Mercury exposure contributes to neurological and developmental impairments like autism and causes lifelong loss of intelligence.

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Comment Number: 0003010\_MasterFormI\_PhysiciansSocialRespon-4

Organization I:Physicians for Social Responsibility

## Comment Excerpt Text:

Coal Life-Cycle: Burning coal is not the only health harming action, but all steps of the coal lifecycle—mining, transportation, washing, and disposing of post-combustion wastes—impacts human health. Each of these steps must be evaluated for the cumulative impacts on Americans of further coal leasing on federal lands.

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Comment Number: 0003010\_MasterFormI\_PhysiciansSocialRespon-5

Organization I:Physicians for Social Responsibility

Other Sections: 6

## Comment Excerpt Text:

Health effects associated with climate change: Because coal-fired power plants account for so much of U.S. carbon dioxide emissions, coal is a major contributor to the health impacts of climate change. Determination of the climate threats needs to be quantified by the PEIS to evaluate the ultimate cumulative impact of additional leasing on federal land. For example, more frequent heat waves will lead to a rise in heat exhaustion and heat stroke, potentially resulting in death, especially among elderly and poor urban dwellers. Rising temperatures are expanding the ranges for disease-carriers like mosquitoes and ticks in some cases causing epidemics of Lyme disease. Drought causes detrimental effects on food supply resulting in crop failure, higher prices and worsening nutrition. The increased frequency of intense precipitation events contributes to flooding, water contamination and the spread of infectious and mosquito-borne diseases. Drought, declining food supplies and rising sea levels increase the migration of affected populations and increase armed conflict and global instability.

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Comment Number: 0003010\_MasterFormI\_PhysiciansSocialRespon-7

Organization I:Physicians for Social Responsibility

## Comment Excerpt Text:

The Programmatic Environment Impact evaluation needs to incorporate the health impacts of coal pollutants. Air pollution from burning coal affects all major body organ systems and contributes to four of the five leading causes of mortality in the U.S.: heart disease, cancer, stroke, and chronic lower respiratory diseases.

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Comment Number: 0003029\_Arrington\_J\_06032016-1

Organization I:Keep Electricity Affordable

Commenter I:Patrick Arrington

## Comment Excerpt Text:

When we cut out CO emissions the crops world wide will decline and you will be responsible for starvation of people

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Comment Number: 0003056\_Andersen\_20160729-1

Commenter I:Susan Andersen

## Comment Excerpt Text:

It is also true that coal mined in certain areas, among them South Dakota and Wyoming contain radioactive materials such as uranium which are dispersed into the air when the coal is burned and pose a radiation exposure danger to anyone within a certain radius of the coal plant, especially the workers themselves who are present for large amounts of time.

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Comment Number: 0003085\_Hyche\_D\_20160712-1

Commenter I:Joe Hyche

## Comment Excerpt Text:

Coal mining itself causes health problems for the workers, the people in the surrounding communities, and also, importantly, the people affected by the dumping of the coal ash

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Comment Number: 0003085\_Hyche\_D\_20160712-2

Organization I:

Commenter I: Joe Hyche

Comment Excerpt Text:

Coal ash must be stored in completely secure ponds where no leakage occurs. This is not happening. Not only that, but the more the coal is mined, the harder it will be to contain the pollution it causes. Our taxpayer-owned public lands need protection, not exploitation. Cleaner energy sources are environmental friendly.

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Comment Number: 0003089\_Laws\_I\_20160628-1

Commenter I: Miki Laws

Comment Excerpt Text:

and in my work

as a church minister regularly visiting the elderly I clearly see the long-term effects of exposure to coal mining and use in electric power production. A majority of the elderly in my care are suffering from lung conditions that can be tied back to these factors, in this rural area where coal mining has played a historic role, and the local air is downwind from coal-powered electric generating stations.

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Comment Number: 0003126\_McLaughlin\_20160608-1

Commenter I: Michael McLaughlin

Comment Excerpt Text:

Burning coal creates acid rain, spreads toxic methyl mercury into the environment, where it is picked up by organisms and biomagnified until it affects the health of humans and other large animals. It is a neurotoxin, affecting brain health at tiny concentrations.

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Comment Number: 0020001\_Murnion\_20160712-4

Commenter I: David Murnion

Other Sections: 5

Comment Excerpt Text:

The emission control apparatus on all coal generating power plants needs more modifications now, as we continue to learn that several chemical agents in the coal emissions are causing lung and heart diseases such as heart failure, asthma and cancer.

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Comment Number: 0020006\_Cowden\_20160712-1

Commenter I: Rhonda Cowden

Other Sections: 5 I

Comment Excerpt Text:

The UN Environmental Program reported on May 24, 2016 that according to WHO the air pollution level has risen 8% between 2008-2013, threatening to kill 7 million people yearly. 80% of these people living in areas where air pollution is monitored.

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Comment Number: 0020006\_Cowden\_20160712-3

Commenter I: Rhonda Cowden

Comment Excerpt Text:

CDC - Heart Disease ages 35 plus 334-1094 death rates per 100,000 by 2013 in Tennessee.

CDC - All Cancers 178-201 per 100,000 by 2012 by 2012 death rates per 100,000 in Tennessee.

These statistics are directly impacted by the use of burning fossil fuels.

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Comment Number: 0020012\_Holmes\_UCARE\_20160712-7

Organization I: Utah Citizens Advocating Renewable Energy

Commenter I: Stanley Holmes

Other Sections: I

Comment Excerpt Text:

A 2010 Synapse Energy Economics report prepared for Utah found that the state's mostly coal-fired energy generation units (EGUs) were responsible for hundreds of premature deaths annually and hundreds of millions of dollars in health care costs.[2]

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Comment Number: 0020012\_Holmes\_UCARE\_20160712-9

Organization I: Utah Citizens Advocating Renewable Energy

Commenter I: Stanley Holmes

Other Sections: I

Comment Excerpt Text:

In her 2015 Pediatric Grand Rounds presentation at Primary Children's Hospital, available on YouTube, Dr. Michelle Hofmann highlights the current state of the science exploring a host of health threats posed to children exposed to ambient air pollution, including fossil fuels pollution (4).

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Comment Number: 0020030\_Griffin\_20160722-2

Commenter I: Nancy Griffin

Comment Excerpt Text:

Coal dust is a health problem.

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Comment Number: 0020037-1

Commenter I: Corey Weathers

Other Sections: 6

Comment Excerpt Text:

We strongly oppose coal leasing in WA state as coal is not only a public health threat but also one of the key contributors to climate change

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Comment Number: 002501\_Ring\_20160728-4

Organization I: Climate911

Commenter I: Wendy Ring

Comment Excerpt Text:

Costly damage to public health

Coal is harmful to human health in every phase of its life cycle and a contributor to 4 of our 5 leading causes of death. Harvard's Center for Global Health and the Environment estimates that coal mining costs the American



public \$175 billion to 523 billion dollars per year in damage to health, the climate and the environment (CGHE, 2011). Since 41% of coal is mined from federal lands, the attributable cost is \$70 to \$209 billion dollars annually. When the full social cost of coal; including health, climate and environmental impacts extending far beyond the lifetime of the leases; is taken into account along with fees and royalties commensurate with market value, coal is less affordable than clean alternatives.

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Comment Number: 003058\_Armistead, M.d.\_1072016-1

Commenter I: Susan Armistead

Comment Excerpt Text:

The United States produced 110 million tons of coal ash in 2012. It contains manganese, selenium, and arsenic, which can cause nerve problems, reproductive system problems and cancer. People living within a mile of unlined coal ash storage ponds have a 1-in-50 risk of cancer, according to the EPA. It's a cancer risk more than 2,000 times higher than the EPA considers acceptable

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Comment Number: 003069\_Rabener\_1072016-1

Commenter I: Nancy Rabener

Comment Excerpt Text:

U.S. coal-fired power plants pump more than 48 tons of mercury into the air each year. Approximately a third of U.S. emissions settles within U.S. borders, poisoning lakes and waterways. The rest cycles through the atmosphere, with much of it eventually winding up in the world's oceans. Inorganic mercury is not easily assimilated into the human body, and if the mercury emitted by power plants stayed in that form, it probably would not have made so many people sick. But when inorganic mercury creeps into the aquatic sediments and marches, as well as mid-depths of oceans, bacteria convert it into methylmercury, an organic form that not only is easily assimilated, but also accumulates in living tissue as it moves up the food chain: the bigger and older the fish, the more mercury in its meat. It takes only a tiny amount to do serious damage: One-seventieth of a teaspoon can pollute a 20-acre lake to the point where its fish are unsafe to eat. Thousands of tons a year settle in the world's oceans, where they bioaccumulate in carnivorous fish. Forty percent of human mercury exposure comes from a single source --- Pacific tuna.

Comment Number: 000001297\_Slabakov\_20160623-2

Organization I: Climate Reality Project

Commenter I: Yana Slabakov

Comment Excerpt Text:

Coal mining areas are also the hardest hit by another reality -- health impacts. These external costs are great. And coal miners and their communities often pay for them with their wellbeing. Coal is harmful to the human body at every stage of its production cycle. The American Lung Association estimates that 13,000 premature deaths occur each year from coal pollution. And this pollution is a major contributor to chronic respiratory diseases, heart disease, stroke, and cancer. Those who mine coal themselves take on the biggest dangers associated. But, it certainly doesn't end there. Mining operations spew water contaminated with mercury, sulfur oxides, and heavy metal, which finds its way into local water supplies and into the aquatic food chain. This acid mine drainage, coupled with mine chemicals that are often improperly injected underground, spread an unforeseen and uncontained wave. At its core, this is a public health problem. Not only miners are affected. The consequences of coal combustion impacts us all. Associated air pollutants, such as mercury, sulfur dioxide, and particulate matter contribute to growing rates of asthma, lung disease, and nervous system impairment. High mercury concentrations in water have a left more and more children being born with low birth weights and blood mercury levels high enough to impact IQ.

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Comment Number: 00001271\_Sussors\_20160623-1

Commenter I: Kenneth Sussors

Other Sections: 5

Comment Excerpt Text:

Processing and burning fossil fuels contributes significantly to air pollution, which in turn causes health problems, especially in the oldest and youngest and those with pulmonary disease. As a doctor, I've seen these health problems firsthand, especially here at the VA with its vulnerable population. These health affects are caused both directly by inhaling harmful chemicals and particles and indirectly by upsetting the balance of nature and weather

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Comment Number: 00001271\_Sussors\_20160623-2

Commenter I: Kenneth Sussors

Other Sections: 1

Comment Excerpt Text:

Coal is particularly significant due to the high concentration and wide range of harmful particles and chemicals it produces and the large amount of coal that America uses to generate heat and power. The ideas I'm presenting today are not just my own personal opinions. They are evidence-based. The world's scientists have been studying the health effects of coal for decades and have accumulated a vast database indicating that the health effects are indeed extremely harmful. These findings are not controversial. They are universally acknowledged as scientifically valid. For those who are interested in understanding this scientific evidence, I would recommend a publication titled Scientific Evidence of Health Effects from Coal Use in Energy Generation. Again, for those interested, the publication is Scientific Evidence of Health Effects from Coal Use in Energy Generation. And it is easily available on the internet. It's produced by the Healthcare Research Collaborative, based at the University of Illinois. It's a summary of documents that the use of coal as an energy source has multiple, large-scale, serious worldwide health effects, including illness and considerable death rates related to respiratory, cardiac, and neurologic diseases, as well as cancers and adverse effects on pregnancies and developing fetuses.

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Comment Number: 00001271\_Sussors\_20160623-3

Commenter I: Kenneth Sussors

Comment Excerpt Text:

In conclusion, the scientific evidence for adverse health effects stemming from using coal as an energy source is overwhelming. In fairness to the human race and all other living species and the planet itself, it is an urgent medical and ecological imperative to take a more comprehensive approach to our fuel choices and move vigorously towards clean energy sources.

Certainly our own government, tasked with protecting its citizenship and protecting its environment, should take a lead role in safe energy development for our country.

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Comment Number: 0001280\_Weidner\_20160623-1

Commenter I: Sharon Weidner

Comment Excerpt Text:

Burning coal releases numerous toxic chemicals and particulates, which can have hidden costs to a country's population in terms of life expectancy and increased health cost. While pollutants, such as acid gases, stay in a local area, metals, such as lead and arsenic, travel beyond the State line. And fine particulate matter has a global impact. Physicians for Social Responsibility released a report in 2009 called Coal's Assault on Human Health. Some of what they're saying is that coal combustion releases mercury particulate matter, nitrogen oxide, sulfur oxide, dioxide, and dozens of other hazardous substances. Air pollutants produced by coal combustion act on our respiratory system, causing asthma, lung disease, lung cancer. Pollutants from coal combustion have cardiovascular effects as arterial blockage causing heart attacks, tissue death due to oxygen deprivation, leading to permanent heart damage, as well as cardiac arrhythmia, and congestive heart failure. Coal pollutants, mainly

mercury, act on the nervous system to cause decreased influxual [phonetic] capacity. It's estimated that between 300 and 600,000 children born each year with blood mercury levels high enough to decrease the IQ scores and cause lifelong loss of intelligence. Researchers from Harvard University School of Public Health found that pregnant women exposed to high levels of mercury were twice as likely to have an autistic child than their peers in low-pollution areas. Even people who do not develop illness from coal pollutants will find their health and wellbeing impacted due to coal's contribution to climate change. We're seeing increased and stronger storm systems causing flooding. Increased temperatures causing fires, heat stroke, malaria. Declining food production, scarce water supplies, social conflict, and starvation. There are negative impacts in each step of the coal life cycle. Coal mining leads U.S. industries in fatal injuries and is associated with chronic health problems among miners. The communities near the mines may be as [indiscernible] affected by blasting, washing, leakage from [indiscernible] ponds, damage to streams and waterways. And I'd just like to say that the cost of coal, it has to include our health and our planet's health.

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Comment Number: 0000741\_Perry\_NWF-3

Commenter I: Edward Perry

Comment Excerpt Text:

The adverse impacts on human health are also substantial. As just one example, every body of water in our country is contaminated with mercury caused primarily by burning coal. Some streams and lakes in Pennsylvania are so contaminated the state lists an additional 86 streams and lakes where they recommend women of childbearing age only consume one meal of fish per month.

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Comment Number: 0000848\_Tomick\_20160628-2

Commenter I: Patrice Tomcik

Comment Excerpt Text:

I live downwind from one of the largest coal plants. I'm particularly concerned about what my children are breathing in. The pollutants that are emitted are particulate matter, nitrogen oxide, sulfur dioxide and dangerous heavy metals such as mercury, lead and there are many more. This pollution can effect our children's health by causing ground level ozone response, which affects lung tissue, cause respiratory diseases, adversely affect the normal lung development of children and exacerbate asthma attacks. Asthma is a leading cause of missed school days among children ages 5 to 17. Exposure to mercury is a particular concern for pregnant women and nursing mothers and young children because mercury is a toxic heavy metal that can cause brain damage, impairs learning and growth. Even people who do not develop illness directly from whole foods find their health impacted due to coal's contribution to carbon dioxide and causing climate change. The health risk from climate change are especially serious for children, elderly those who are immune compromised. The direct effects of climate change include increased illness and deaths from extreme weather and heat stress. Children are especially vulnerable to heat exposure because they don't have fully developed temperature regulation mechanisms within their bodies. The indirect effects of climate change are malnutrition, food insecurity, anxiety, depression and increase of insect-borne diseases like the zika virus. The BLM must consider the climate consequences and health impacts on our children and future generations of leasing public lands for fossil fuel extraction. We need to start developing the capacity today to generate energy from clean, safe and renewable sources for the health of our children today and future generations.

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Comment Number: 0000849\_Perry\_20160628-2

Organization I: NWF

Commenter I: Ed Perry

Comment Excerpt Text:

And as I understand it, this EIS is only going to focus on future leases, but any business today, when it's

recognized that they are causing damage to public health or pollution problems, they have to clean up their act. So I strongly recommend that this EIS, whatever you come up with, also applies to existing coal operations

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Comment Number: 0000849\_Perry\_20160628-4

Organization I:NWF

Commenter I:Ed Perry

Comment Excerpt Text:

The adverse impacts on human health are also substantial. Just one example, every body of water in our country is contaminated with mercury. And here in Pennsylvania, the State of Pennsylvania lists an additional 86 streams and lakes, thousands of stream miles and thousands of acres of lakes that are so contaminated they recommend women of childbearing age only consume one meal of fish per month.

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Comment Number: 0000868\_Rakovan-I

Commenter I:Rachel Rakovan

Comment Excerpt Text:

in recap, coal mining causes cancer, which then causes people to become addicted to cancer medications, which then contributes to the illicit drug trade and then causes teenage drug overdose

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Comment Number: 0000873\_Kirkpatrick-I

Commenter I:Claudia Kirckpatrick

Other Sections: 9

Comment Excerpt Text:

Burning coal is a direct cause of asthma, respiratory illnesses and cancer. It is a serious risk especially to children and families in the areas around the power plants which are still burning coal. And it is more likely that low income and minority children and families will be the people most seriously harmed

## Issue 8 - Socioeconomics

Total Number of Submissions: 301

Total Number of Comments: 449

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Comment Number: 0000010\_Swingle\_20160526\_Oral-5

Commenter I:Rocky Swingle

Comment Excerpt Text:

Determining what can be done to make sure that coal miners and others in secondary industries that rely on coal-like railroad workers who haul coal, for example - don't lose their livelihoods but are able to make the transition to a clean energy economy.

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Comment Number: 00000103\_Williams\_Arch Coal\_ 20160517-2

Organization I:Arch Coal

Commenter I:Keith Williams

Comment Excerpt Text:

Right now, public coal is struggling to compete in the marketplace due in large part to the high taxes and royalty burden placed upon it. Simply put an increase in the royalty rate will only create further uncertainty and put additional pressure on communities throughout the West and on critical state programs as well. I'd like to finish up by saying part of the properties I'm in charge of are the Thunder Basin properties in the Powder River Basin in Wyoming. The first of the year, we had about 1,700 employees employed at those properties, and now we're

close to 1,400. So we're down 300 employees. A little over 15 percent of our workforce has declined through what's happening

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Comment Number: 00000106\_Newell\_20160517-1

Commenter I:Kevin Newell

Comment Excerpt Text:

The fishing industry in the Northwest is a three-and-a-half billion dollar industry. It represents 16,000 jobs. They depend on good fishing, not okay fishing, not inconsistent fishing, but fishing that we know will be there for the long term -- today, tomorrow, and forever.

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Comment Number: 00000108\_Opfer\_20160517-1

Organization I:Thunder Basin Coal Company

Commenter I:James Opfer

Comment Excerpt Text:

It doesn't matter whether you are an advocate of coal or not, you can't deny having received immense benefit from the countless number of public projects that have been funded either in their entirety or in part by the existing federal coal lease program. Projects ranging from highways to schools to water supply pipelines and other public infrastructure have been funded by this program. It is highly likely that the vast majority of these projects would never have been undertaken, and, in fact, many of them would not have been made possible if it weren't for the funds generated from the coal leasing program.

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Comment Number: 00000108\_Opfer\_20160517-3

Organization I:Thunder Basin Coal Company

Commenter I:James Opfer

Comment Excerpt Text:

In the scenario of higher rates coupled with the existing coal marketplace, it is likely that coal consumption from the PRB could be curtailed significantly along with the collection of federal and state receipts associated with the leasing program, not to mention the potential significant decrease in the number of good-paying mining jobs.

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Comment Number: 00000119\_Schilling\_20160517-2

Organization I:Wyoming Business Alliance

Commenter I:Bill Schilling

Comment Excerpt Text:

Campbell County's employment is primarily dominated by goods-producing sectors, jobs that add value to the economy. That 40 percent figure is about twice that of the State's overall average and more than twice of the national average. So that 40 percent accounts for all the rest, quite frankly. That also is not mentioned in your research and it has to be. You have to distinguish between goods-producing and service-providing. And the folks you have heard today, these miners, they are the goods-producing people that make our lives that much better. The number of jobs, 2000 jobs direct and indirect that have basically been lost in the coal industry in recent months, I imagine if that percentage were to apply to a larger metropolitan area, take Campbell County's population and multiply that out. Let's take Chicago. Instead of being 2,000 jobs, it would be more like 100,000 jobs. The 2,000 jobs in Wyoming are hardly a blip on the national media, but a hundred-thousand-plus jobs in Chicago would be national news.

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Comment Number: 00000120\_Wasserburger\_20160517-1

Commenter I:Jeff Wasserburger

## Comment Excerpt Text:

Wyoming has used this revenue from coal to remodel or build new construction in schools in all 48 districts. Every school district in this state has benefitted as a result of the coal lease bonus program. The moratorium on coal lease bonus threatens the future of Wyoming's K-12 system and all of our students.

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Comment Number: 00000125\_Fairbanks\_20160517-1

Commenter I: Clark Fairbanks

## Comment Excerpt Text:

I'm here to ask on behalf of the coal companies that you complete the programmatic environmental impact statement, that you not levy new taxes, that by allowing the coal companies, Cloud Peak or Powder River Basin coal companies to continue in the economic system that they've been operating in that they can continue to do more and continue to support our communities

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Comment Number: 00000126\_Moeller\_20160517-1

Commenter I: Stacey Moeller

## Comment Excerpt Text:

But have you thought about the moral issues of burdening the coal companies to the extent of bankrupting them? I do not advocate for those companies, but for the thousands of people who work in our mines and associated jobs in our communities, the effort to shut down coal is not bankrupting just the companies. They are bankrupting our communities and my people.

---

Comment Number: 00000127\_Kot\_Sweetwater\_Board\_of\_Count-1

Organization I: Sweetwater County Board of Commissioners

Commenter I: Mark Kot

## Comment Excerpt Text:

Coal production provides approximately \$245 million to the annual assessed valuation of the county. This valuation helps support high quality public services including schools, roads, recreation, social services, and healthcare. "The Sweetwater County coal mines of Jim Bridger and Black Butte together employ approximately 710 workers. With the 310 employees who work at the coal-fired Jim Bridger power plant, the coal industry employs approximately 1,000 workers within Sweetwater County. "The National Mining Association estimates that for every coal mining job, an additional 3.5 jobs are created. This means the Sweetwater County coal creates approximately 350 additional jobs -- excuse me 3,500 additional jobs. "Employees directly or indirectly related to coal production, their families, communities depend upon the stable coal and energy markets backed by sound federal policies. Without these stable markets and sound policies, jobs could be lost, home values could fall, and the economy of our communities, county and state, will suffer."

---

Comment Number: 00000130\_Backer\_United\_Way\_20160517-1

Organization I: United Way

Commenter I: Roxann Backer

## Comment Excerpt Text:

this proposed increase, this proposed change, and the other regulations coming down from our federal government will dramatically impact our community and your community as well, whether you live in Wyoming, Montana, Colorado, Virginia, Washington, D.C. This is what I think so many people don't understand. The benefits that residents in our state receive from the coal industry is incomparable to any other state.

---

Comment Number: 00000133\_Blake\_20160517-1

Commenter I: Laura Blake

Comment Excerpt Text:

Few other incomes in Wyoming or in other states are comparable to what the coal mines offer in terms of wages, benefits, and quality of life. In short, the income from coal is virtually irreplaceable

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Comment Number: 00000137\_Goodnough\_Western\_Fields\_Asso-1

Organization I: Western Fields Association and Western Fields Wyoming, Inc.

Commenter I: Beth Goodnough

Comment Excerpt Text:

The Clean Power Plan is projected to -- depending on what study you read -- either raise electricity prices by more than 10 percent or double or triple the price. This will be coupled with losses of 260,000 jobs annually between 2020 and 2040. Therefore, while the Clean Power Plan calls for reducing coal use by 32 percent nationwide, the market replacement technology is simply not available or would wreck the economy to try to implement by 2030. Given the projected negative impacts to the economy due to the Clean Power Plan, it is imperative that the BLM retain a reasonable and practical federal coal leasing program in order to keep the lights on in this country and especially in rural America.

---

Comment Number: 00000138\_Simonson\_20160517-1

Organization I: Wyoming Machinery Company

Commenter I: David Simonson

Comment Excerpt Text:

Every coal mining job that is regulated out of existence eliminates at least three additional service support jobs, reduces federal and state revenues, and reduces the incomes of every citizen of Wyoming with really no quantifiable benefit to our nation. Current royalty rates and compounded taxes and fees of the coal industry are above all other industries and above the market of those charged for private lands in other states, and if increased, it will only result in decreased production and decreased return on investment for federal and local taxpayers. That hurts schools, roads, infrastructures. It hurts everyone in Casper, the State of Wyoming and also the federal -- the rest of the United States.

---

Comment Number: 00000141\_Kline\_20160517-1

Commenter I: David Kline

Comment Excerpt Text:

The coal royalties currently provide sufficient value and should continue to provide values for the American public as long as the coal is allowed to be mined. Further restrictions on coal production will severely impact the local and state economies. Coal jobs are some of the highest-paying jobs, as everybody's been saying earlier. For every coal job lost, there's three to seven additional jobs, service jobs that are also lost throughout the community and the country.

---

Comment Number: 00000142\_Deti\_20160517-1

Organization I: Wyoming Mining Association

Commenter I: Travis Deti

Other Sections: 8.7

Comment Excerpt Text:

Attempts to artificially increase the fair market value and raise costs of leases on leased grounds appear political with the intent of making the resource uneconomical to develop. If the agency does choose to pursue this, we surely recommend the inclusion of a much more empirical social benefit standard to include not only the positive

economic realities of vital jobs and revenues, schools, and infrastructure but the measurable positive contribution and reliable low cost electricity for our country and the world.

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Comment Number: 00000143\_Short\_20160517-1

Commenter I: Robert Short

Comment Excerpt Text:

Expect the cost of everything in our everyday lives to increase dramatically if you arbitrarily assign punitive costs to coal in an effort to justify more costly electric power which will be economically damaging and have a negative effect on the entirety of our country.

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Comment Number: 00000146\_Cady\_20160517-2

Commenter I: Kelli Cady

Comment Excerpt Text:

If you leave the royalty rate alone, great jobs will still remain for thousands of people across the country just like me

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Comment Number: 00000147\_Jinat\_20160517-1

Organization I: Wild Earth First Guardians

Commenter I: Judy Jinat

Comment Excerpt Text:

People support their families in other states with Campbell County coal mining because there are no job opportunities like these where they come from.

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Comment Number: 00000148\_Long\_20160517-1

Commenter I: Jim Long

Comment Excerpt Text:

Mineral extraction is what supports the Wyoming economy. Additional taxes will probably put the final nail in the coffin of an already struggling industry

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Comment Number: 00000149\_Long\_20160517-1

Commenter I: Briana Long

Comment Excerpt Text:

increasing taxes on coal and therefore electricity will make electricity prices rise, creating a further burden on college students already struggling to make ends meet.

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Comment Number: 00000150\_Nell\_SalArmy\_20160517-1

Organization I: Salvation Army

Commenter I: Jenny Nell

Comment Excerpt Text:

Every day I see firsthand the problems coal families are facing with the recent layoffs and energy industry slowdown.

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Comment Number: 00000150\_Nell\_SalArmy\_20160517-2

Organization I: Salvation Army

Commenter I: Jenny Nell



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**Comment Excerpt Text:**

The trickle-down effect on nonprofits that support our families and provide much needed therapies and health services as well as food and shelter is leaving the citizens of our community in danger of being unsupported. We can not afford any more taxes or royalties on coal, or we may not survive.

---

Comment Number: 00000151\_Sweeney\_20160517-1

Commenter I: Pat Sweeney

**Comment Excerpt Text:**

one of the environmental groups, stated that coal mines were bad for tourism because they're an eyesore. That's absolute nonsense

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Comment Number: 00000153\_Smith\_BoysGirlsClb\_20160517-1

Organization I: Boys and Girls Club of Campbell County

Commenter I: Robert Smith

**Comment Excerpt Text:**

I have witnessed the devastation Washington's energy agenda has had on Wyoming families. I have seen families divided as fathers are displaced, as mothers struggle with two or three jobs. I witness the effect these have on our community as we shift and how that affects our children. Our Wyoming youth have observed the attack on coal, the attack on their way of life. I have seen their frustration. I have heard their anger. Their grades and behavior are indicators of this. The absence of coal in our community is not only hurting our economy but our nation. As a nonprofit CEO, I rely on the donations that I receive from coal and the industry that everything is about and everything about it. These donations help me to provide all the necessary aspects to the community that strengthen those components, and currently I'm struggling to do so.

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Comment Number: 00000154\_Edwards\_20160517-1

Commenter I: Michelle Edwards

**Comment Excerpt Text:**

I have seen the firsthand devastation of communities that are affected by a single mine closure

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Comment Number: 00000155\_Jenkins\_Congressman Griffith\_20160517-2

Organization I: United States Congress

Commenter I: Michelle Jenkins

**Comment Excerpt Text:**

The impacts of this action are not only felt in the coal fields, but also in industries such as rail, manufacturings, and others that rely on coal mines for dependable energy. After all, life above ground is impacted when work stops underground as the result of a regular onslaught on coal regions, the low cost of competitive fuel, and a sluggish world economy."

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Comment Number: 00000155\_Paad\_20160517-1

Commenter I: Paul Paad

**Comment Excerpt Text:**

In 2014 Wyoming received more than \$555 million from coal. That funded a lot of things around here including our education system

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Comment Number: 00000155\_Paad\_20160517-2

Commenter I: Paul Paad

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## Comment Excerpt Text:

The study by his Energy found that the current base load generation mix anchored by coal saves ratepayers roughly \$93 billion in annual electric bills while also reducing utility volatility by 30 percent. That's what we need to look at, volatility. We don't need this jumping up and down or around

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Comment Number: 00000156\_ Dargon\_ Congressman Phil Rowe \_20160517-1

Organization I:United States Congress

Commenter I:Bill Dardon

Other Sections: 8.7

## Comment Excerpt Text:

I want to begin by saying that Congressman Rowe believes that the review is unnecessary because the program is working well and providing a fair return to the taxpayers, both at the state and federal levels. To give you a sense of whether the program is giving a fair return, all you need to do is look at what has happened in the communities where coal producers have pulled out and stopped mining. There is widespread economic devastation, and federal agencies crafting these policies don't seem to care.

---

Comment Number: 00000157\_ PRATT \_20160517-2

Commenter I:Jack Pratt

## Comment Excerpt Text:

I also am very concerned about the recent news of coal company bankruptcies. Top executives at one company unveiled a plan to give over \$11 million in bonuses to senior executives while (Inaudible) and worker benefits. Alfa Coal also proposed to eliminate health insurance, disability, and other benefits for mine workers. Frankly, mine workers deserve better

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Comment Number: 00000158\_ FRENCH \_20160517-1

Organization I:Northern Plains Resource Council

Commenter I:Kate French

## Comment Excerpt Text:

The negative effects of coal mining are both fiduciary and ecological. From the threat mining poses to pre-existing stable and vital economic sectors to the tax burden foisted upon the public, coal development under current regulations weakens our state's long-term economic stability. In Montana and Wyoming, most coal is mined in the Powder River Basin. And it is also an area that is home to thousands of farms and ranches. In some counties, agriculture -- the agricultural sector provides more jobs than any other sector.

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Comment Number: 00000158\_ FRENCH \_20160517-4

Organization I:Northern Plains Resource Council

Commenter I:Kate French

Other Sections: 8.7

## Comment Excerpt Text:

The leasing, bonding, and bid rates set for federal coal mining is intended to count for all these externalities. However, in the West, these costs are far from sufficient. Half the funds collected through federal coal mining in Montana goes back to the state and to our local budgets and this pays for schools and roads. So, when the externalities are not taken into account, this severely affects what we can fund in our state

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Comment Number: 00000161\_ HUGHES \_20160517-1

Organization I:Statewide Organizing for Community Empowerment

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Commenter I: Adam Hughes

Comment Excerpt Text:

A recent report by the nonprofit environmental entrepreneurs praises Tennessee as among the best nationwide for growth in clean energy jobs, with nearly half the gains coming in the crucial manufacturing sector. This growth could be even more profound were it not for the defective federal subsidy for the coal industry. When considering the true cost of the Federal Leasing Program, please consider the economic impact it has on our green economy.

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Comment Number: 00000165\_WATERMAN\_20160517-1

Commenter I: John Todd Waterman

Comment Excerpt Text:

We must also ensure that displaced miners are the first to benefit from the new green economy and its far more abundant jobs by providing them with the transitional support and training they need. The best analyses found the economic benefits of switching to sustainable energy sources are from five to twenty times greater than its cost.

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Comment Number: 00000167\_WILSON\_20160517-1

Commenter I: William Wilson

Comment Excerpt Text:

Coal counties in Appalachia are consistently some of the poorest counties in the nation. Coal does not bring economic benefit.

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Comment Number: 00000175\_Christensen\_WySenate\_20160517-3

Organization I: Wyoming Legislature

Commenter I: Leland Christensen

Comment Excerpt Text:

Wyoming, which relies on coal, a lot of our electricity and the nation's comes from Wyoming. Here we are with roughly half of the electrical rates that California has. You see other countries around the world are now starting to abandon the wind and solar because they had left coal, and they found out their electrical rates increasing from triple to doubling, doubling to tripling.

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Comment Number: 00000176\_Ziegler\_20160517-1

Commenter I: Jacqueline Ziegler

Comment Excerpt Text:

A reformed coal leasing program must include investments to future or support workers' transitions to different economic opportunities, different careers. Royalties from future mining should be tied to job training and other support programs for workers so that we can ensure a fair and just transition away from the fossil fuels. A fair and just transition to people means affected workers, their unions, and communities, our equal partners in a wellplanned, carefully negotiated and managed transition from fossil fuels to clean energy.

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Comment Number: 00000176\_Ziegler\_20160517-2

Commenter I: Jacqueline Ziegler

Comment Excerpt Text:

I invite you to read House Bill 4456 called the reclamation or Reclaim Act sponsored by West Virginia state -- House Representative "Hal" Rogers, and it will give you information about moneys and programs available to help you.

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Comment Number: 00000179\_ FUSAN\_20160517-4

Commenter I:Lynn Fusan

Other Sections: I

Comment Excerpt Text:

Most importantly, we no longer need coal. Renewable energy is the future. Fortune Magazine's January 16, 2016 issue noted: "Last year, the solar sector added workers at a rate that was almost twelve times faster than the overall economy. In fact, 1.2 percent of all jobs or 1 in 83 jobs created in the U.S. last year were solar jobs."

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Comment Number: 00000181\_ MULLINS\_20160517-1

Commenter I:Nick Mullins

Comment Excerpt Text:

The cyclical boom and bust nature of coal markets have left sweeping poverty, complete with the typical indicators, including rampant substance abuse.

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Comment Number: 00000182\_ BANBURY\_20160517-3

Commenter I:Scott Banbury

Comment Excerpt Text:

And the socio-economic impacts, I hope that we are not just going to focus on the loss of mining jobs, but also focus on how not internalizing the environmental and health impacts of taking this coal carbon out of the ground and putting it into our atmosphere, how not internalizing those costs is affecting the competitiveness of clean alternative energy forms like wind and distributive solar.

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Comment Number: 00000186\_ GELLERT\_20160517-2

Commenter I:Paul Gellert

Comment Excerpt Text:

And I think a lot of Americans would be surprised that the Bureau of Land Management, which provides an awful lot of public services and ecosystem services and however one wants to term it, is selling that for coal in a period in which climate change is so urgently needing to be addressed

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Comment Number: 00000186\_ GELLERT\_20160517-5

Commenter I:Paul Gellert

Comment Excerpt Text:

And think we need to think about the distribution of costs and benefits. I think the figures that were introduced by the representatives of our congress people at the beginning threw out some figures without putting it into any sort of comparison. Yes, coal produces money, but what are the costs and what are the incommensurable non-monetizable costs of this production?

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Comment Number: 00000192\_ GOSS\_20160517-1

Organization I:Tennessee Citizens for Wilderness Planning

Commenter I:Sandra Goss

Comment Excerpt Text:

I am here to encourage you to take a transparent and understandable look and provide us a good analysis of exactly what the situation is in terms of costs to communities, both in jobs, benefits, taxes, royalties, et cetera, costs to our country in terms of national and resource security,

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Comment Number: 00000291\_FONVILLE\_20160519-1

Commenter I:Terry Fonville

Comment Excerpt Text:

I am concerned about potential impacts that changing the federal coal lease program could have on my life, my employer, and the communities currently. A large portion of the economy and tax base for the communities and counties in central Utah are connected to the production and support of the coal industry and its employees.

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Comment Number: 00000295\_EARL\_20160519-1

Organization I:Bowie Resource Skyline Mine

Commenter I:Tayler Earl

Comment Excerpt Text:

Limiting coal's ability to provide inexpensive power to our state and country would not only be hurting us by raising our monthly power billing but would force companies to relocate with states and countries with cheaper energy costs taking jobs away from not only the people that work at those companies but everyone that works at coal mines, coal-fired power plants, trucking companies, and every other industry that supports them.

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Comment Number: 00000296\_PAULSEN\_20160519-2

Organization I:Canyon Fuel Company Skyline Mine

Commenter I:Todd Paulsen

Comment Excerpt Text:

I saw a proposal to include the social cost of mining such as loss of recreational or other values in the leasing program. The question is who is going to determine if there really is a cost and what the value is?

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Comment Number: 00000299\_GARLICK\_20160519-1

Organization I:Skyline Mine

Commenter I:Robert Garlick

Comment Excerpt Text:

Support for streamlining the current leasing process so the Federal Coal Program is administered in a way that better promotes economic stability and jobs, especially in coal communities which are already suffering from depressed economic conditions.

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Comment Number: 00000302\_LEVANGER\_20160519-1

Organization I:Skyline Mine

Commenter I:Carol Levanger

Comment Excerpt Text:

We need to be able to lower the royalty rates and to make the permitting process a little bit more manageable so that we encourage some more coal mines to go in. That will create jobs. That will create revenue. That will create tax revenue for everybody, for federal, state, local, and businesses.

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Comment Number: 00000304\_BYERS\_20160519-1

Organization I:Sufco Mine

Commenter I:John Beyers

Comment Excerpt Text:

You've heard from other commenters that increased royalties may push struggling oil, gas, and coal completely out of business. I want to make you aware of the small portion of impacts of royalties in surrounding area. These projects have been great additions to our community and either sustain or improve our way ever life. They also

provide jobs for local engineering and construction companies. Without funding from BLM royalties these projects would either not exist or be funded personally by each of us. I would like you to consider the socioeconomic impacts of your decision and the true impact it will make.

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Comment Number: 00000311 \_ SMALDON \_ FriendsCoalWest\_20160519-2

Organization I: Friends of Coal West

Commenter I: David Smaldone

Comment Excerpt Text:

Coal producers take 40 percent of the selling price of coal in taxes, fees, and royalties, and there's no justification to increase royalty or leasing rates. To increase these rates will leave less revenue for states and communities, fewer jobs, higher energy prices, and will hit all Americans in the checkbook

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Comment Number: 00000315 \_ SMITH \_20160519-1

Organization I: Canyon Fuel Company

Commenter I: Jacob Smith

Comment Excerpt Text:

Currently the coal industry pays an effective tax rates of approximately 40 percent. This money is used to support our government and improve the communities in which we live.

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Comment Number: 00000316 \_ PALMA \_20160519-1

Organization I: BLM

Commenter I: Juan Palma

Comment Excerpt Text:

We must ensure that our coal workers and communities are protected and supported. I believe that that is something that the BLM ought to consider as you move forward with this Programmatic EIS.

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Comment Number: 00000330 \_ Ross \_ NPCConserv\_20160519-1

Organization I: Public Lands Solution

Commenter I: Catherine Ross

Comment Excerpt Text:

I am just here to reiterate the message that recreation is a proven economic driver. Look at Moab. Moab is thriving off of recreation. Recreation is sustainable, not subject to the same market fluctuations as traditional resource extraction. And I just urge the people representing communities in this room to think about diversifying a little bit

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Comment Number: 00000331 \_ St. Joan\_20160519-1

Commenter I: Sharon St. Joan

Comment Excerpt Text:

Jobs depend on attracting tourists to the beauty of our wildlands. Three million tourists visit Zions National Park every year. No tourists will travel to visit coal mines.

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Comment Number: 00000332 \_ Collinson \_20160519-1

Commenter I: Angel Collinson

Other Sections: 8.7

Comment Excerpt Text:

Winter is shorter, warmer, we're receiving less snowfall. And it's having a real impact on skiers like me and our

communities here depend on our winter sports economy. The outdoor recreation industry in Utah alone generates 12 billion annually and supports 122,000 jobs, which is one in every ten jobs. So our public lands are really important to us. And I'm speaking at this hearing to ask that the coal industry pays the fair market rate for these lands and not at a discounted rate as it currently can.

---

Comment Number: 00000336 \_ May \_ 20160519-2

Organization I:SUFCA Mine

Commenter I:Kenneth May

Comment Excerpt Text:

the benefit of central and rural region of Utah, SUFCA employs 383 people and accounts for as many as 300 truck driving jobs. SUFCA Mine delivers to Utah County and families \$43 million in payroll, \$81 million in supplies and services, \$4.4 million in utility costs, \$2 million in local property tax, \$7.2 million in production tax, \$24.2 million in royalties to the Federal Government, 36 million to the local trucking jobs, a total of \$188 million in direct and indirect benefits to our part of the state.

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Comment Number: 00000343 \_ Salvato \_ 20160519-3

Commenter I:Bobbie Bryant-Salvato

Other Sections: 19

Comment Excerpt Text:

My hope is that the Federal Government and the State of Utah will look at alternative forms of clean energy that will increase employment in rural Utah as a demand for coal decreases, give these clean industry businesses the same advantages on federal lands that we have given the coal industry for decades

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Comment Number: 00000346 \_ Taylor \_ 20160519-1

Organization I:SUFCA Mine

Commenter I:Joshua Taylor

Comment Excerpt Text:

if we stop coal leases, we not only lose the lease but the economic boost that helps our schools and our communities, which heavily rely on our coal companies to survive

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Comment Number: 00000351 \_ Carson \_ 20160519-2

Organization I:Skyline Mine

Commenter I:jared Carson

Comment Excerpt Text:

Shutting down coal production won't just affect our local cities, it will also affect the economies, because it will raise the price of power, it will put some people out of work and possibly put them on unemployment, but also, people that are living in poverty or close to poverty will have more expense because a higher percent of their income will go to paying for the energy, which will go up in price. That will also affect their health and their standards, less access to health care, healthy food, things like healthy lifestyle, and more dependence upon the government.

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Comment Number: 00000353 \_ Klunker \_ 20160519-2

Commenter I:Chris Klunker

Comment Excerpt Text:

To impose increased rates would cause a negative effect on the coal dependent communities.

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Comment Number: 00000353 \_ Klunker \_20160519-3

Commenter I:Chris Klunker

Comment Excerpt Text:

Our lifestyle in rural Utah demands conservation and responsible use of our natural resources.

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Comment Number: 00000356 \_ Provost \_20160519-3

Commenter I:Craig Provost

Comment Excerpt Text:

And although coal mining has been important as income for many of you good, hardworking people, we should focus on helping y'all shift the skills at these high schools and junior highs that the man just mentioned to teach the new generation new jobs, because coal does appear to be going out.

---

Comment Number: 00000357 \_ Walsh \_20160519-5

Organization I:Sierra Club (National)

Commenter I:Elizabeth Walsh

Comment Excerpt Text:

As you consider opening these and other areas to coal leasing, I urge you to carefully consider and study the negative impacts to our climate, our future water quality, and the economic consequences on the eco-tourism economy.

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Comment Number: 00000365 \_ Lund \_20160519-1

Commenter I:Steve Lund

Comment Excerpt Text:

In Sanpete County, we are one of the poorest counties in the state. And being one of the poorest counties in the state, we rely heavily upon the coal industry. We have two hospitals that are primary care, we have three high schools and one junior college. If these miners here lose their jobs, we potentially lose one hospital and one high school.

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Comment Number: 0000065\_Ballow\_WyDE\_20160517-2

Organization I:State of Wyoming

Commenter I:Jillian Ballow

Comment Excerpt Text:

Coal is the main revenue source for school capital construction. In fact, the lease bonuses have paid for new school buildings and major maintenance in our state since. Even the smallest communities in our state have excellent facilities and equitable opportunities for students to succeed because of coal devastating our state. Since our state has spent over \$. billion on school facilities. We've built new schools, and we've modernized an additional . This was paid for almost entirely with coal lease bonus money.

---

Comment Number: 0000065\_Ballow\_WyDE\_20160517-3

Organization I:State of Wyoming

Commenter I:Jillian Ballow

Comment Excerpt Text:

Recently, Wyoming was ranked eighth in the nation and best in the West for quality of education. The quality of our education could not be as high as it is without the mining revenue and because of our way of life that the mining industry has carved out for us in Wyoming. Mining has allowed Wyoming to pay higher wages for our teachers and to our para-professionals in schools. It's allowed us to pay percent of our education costs, special



education costs, percent of our school transportation costs, and percent of our school construction since 2003. Now, realize in other rural states, funding of these activities, funding these items is difficult at best. Schools in small communities have closed. Small communities have dried up and withered away.

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Comment Number: 0000065\_Ballow\_WyDE\_20160517-4

Organization I: State of Wyoming

Commenter I: Jillian Ballow

Comment Excerpt Text:

Rural states have struggled to provide a quality education to students, but because of coal, Wyoming has ensured opportunities for students all across our state and especially in our smallest communities like other states have not been able. We have reached a point where the restrictions and the regulations have outpaced any opportunity for us, for the industry to continue to work and adapt, and it has directly put thousands of hard-working families out of work. It is bankrupting our state, and it doesn't need to happen that way.

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Comment Number: 0000067\_Laresche\_20160517-1

Organization I: Powder River Basin Resource Council

Commenter I: Bob Laresche

Comment Excerpt Text:

First, 40 years of leasing and management have created thousands of jobs, thriving communities, and deep state revenue dependence on coal mining. Both state and federal governments have created moral obligations to provide a just transition to the new economic future. Pensions, healthcare, other benefits earned over the decades must not be voided. Economic diversification initiatives must be created and underwritten. Interior can't do this alone. The federal government can't do this alone. States like Wyoming must participate

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Comment Number: 0000068\_Smitherman\_20160517-1

Organization I: The Wilderness Society

Commenter I: Dan Smitherman

Comment Excerpt Text:

As natural gas supply across the country has grown and its prices have dropped, coal is no longer the cheap energy source it once was, and the market and the financiers have recognized this.

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Comment Number: 0000068\_Smitherman\_20160517-3

Organization I: The Wilderness Society

Commenter I: Dan Smitherman

Other Sections: 8.1

Comment Excerpt Text:

Right now it's estimated that we have 20 years of federal coal reserves already leased. It is an ideal time to take stock of where we are and where we want to go. We need to look to how we can adapt and diversify to ensure that boom and bust cycles don't affect individuals in the way that they have. We need a diverse economy, and that means looking to our public lands for value outside of coal, including renewable energy, recreation, and conservation. With reform of the federal coal program, what we have in front of us is an opportunity to really look at what we want the future to be.

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Comment Number: 0000068\_Smitherman\_20160517-6

Organization I: The Wilderness Society

Commenter I: Dan Smitherman

## Comment Excerpt Text:

Coal has long been important to Wyoming. It has brought jobs, revenue, and power to many parts of the state. And the recent downturn in coal has been devastating to many communities and people who have seen formerly stable jobs go away. But fossil fuels like coal, oil, and gas are commodities and subject to worldwide market conditions that are largely out of the hands of many. This is what we've seen here in Wyoming.

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Comment Number: 0000078\_Neal\_20160517-2

Commenter I: Dan Neal

## Comment Excerpt Text:

I'd like to see if the program can be modified in a way that leases could be set up to protect workers and the communities that they reside in. We need to cut deals and hold these companies to it. Historically, Wyoming, you know, imposed -- initially imposed a 10-and-a-half percent severance tax on the coal producers with the promise that, when a coal impact fund had reached \$250 million, that severance tax could be cut to 7 percent.

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Comment Number: 0000079\_Obermiller\_20160517-1

Organization I: Sierra Club

Commenter I: Donna Obermiller

## Comment Excerpt Text:

Our infrastructure needs to be replaced in building, engineering, and transportation, not just in green jobs, and that means funding for education, long-term funding -- not a month, not a year, maybe like four years and graduate degrees.

---

Comment Number: 0000081\_Lempke\_20160517-1

Organization I: Tri-State Generation and Transmission Association

Commenter I: Doug Lempke

## Comment Excerpt Text:

Increasing the cost of federal coal will have a direct adverse impact on our members and the communities they serve, but will provide little actual benefit to the environment since it will just shift the development to other areas.

---

Comment Number: 0000084\_Christopherson\_EngyCapEconDev\_20160517-2

Organization I: Energy Capital Economic Development

Commenter I: Phil Christopherson

## Comment Excerpt Text:

The second point that needs to be addressed is how are we going to ensure that our people have good, well-paying jobs? We shouldn't artificially raise the minimum wage. We should provide good-paying jobs that allow people to go out and work and earn a good living. That's what coal jobs are. That's what mineral jobs are. That's what technology jobs are. That's where the focus of your scoping needs to be. How do we provide good affordable energy for our nation so we can continue to grow? And how do we continue to provide good jobs for our citizens?

---

Comment Number: 0000091\_Stubson\_WyLSO\_20160517-1

Organization I: Wyoming Legislature

Commenter I: Tim Stubson

## Comment Excerpt Text:

you should move forward knowing that coal is an essential element to the economic health of our state and its

people. Prior to the recent downturn, Wyoming coal produced 11 percent of Wyoming's gross state product. It employed about 7,000 people in good-paying jobs. In one year alone, 2012, coal paid \$1.3 billion to the State of Wyoming, and those funds were used to build schools, educate our kids, to provide basic state services to people all across the State. But it's important to remember it's not just an economic benefit to the State of Wyoming. It's an economic benefit to our nation

---

Comment Number: 0000097\_Voelker\_20160517.txt-1

Commenter I: Sandra Voelker

Comment Excerpt Text:

Now, I'm going to talk about externalities. For those of you who don't speak "economicalese," that means any costs that are not incorporated into the fixed and variable costs of any business enterprise. It's obvious. A lot of the externalities that come from the coal companies, but one thing that I haven't heard mentioned so much is the impact on the tourism industry. Tourism is the second greatest income producer in Wyoming. People do not come to Wyoming to see coal mines. They come to see the beauty of our natural resources, which I think sometimes we have become so used to we don't even see them.

---

Comment Number: 0000097\_Voelker\_20160517.txt-2

Commenter I: Sandra Voelker

Comment Excerpt Text:

You're all familiar with severance taxes, and Wyoming collects them on energy production, and they have fallen from nearly 960 million in fiscal year 2014 to an estimated 625 million in the current fiscal year. That's a decline of about 35 percent in one year

---

Comment Number: 0000099\_Wilbert\_20160517-3

Commenter I: Kim Wilbert

Comment Excerpt Text:

Third, the new coal leasing program must include measures to offset the loss of economic opportunities for people and communities most affected by the transition away from coal.

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Comment Number: 0000099\_Wilbert\_20160517-7

Commenter I: Kim Wilbert

Comment Excerpt Text:

The new program must include money sources to help miners and communities dependent on coal mines to transition away from coal. We must make these corporations be responsible community actors and make whole these people that have worked to create the corporate profits from this publicly owned resource.

---

Comment Number: 0000233\_Dwyer\_20160519-1

Commenter I: Kevin Dwyer

Comment Excerpt Text:

I encourage the Interior Department to conduct a thorough PEIS, accounting for the complete economic costs, including externalities, of the coal leasing program

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Comment Number: 0000280\_TATTEN\_20160519-2

Commenter I: Kurt Tatten

Comment Excerpt Text:

But I want to talk about little bit the economic impact that our money brings to the state and to our surrounding

communities. We employ 107 employees. Out of that there are an additional 73 trucking jobs that are supplied through another vendor to haul the coal from our mine. This is just last year, 2015. So total jobs indirect and direct -- there's another ratio of vendors and other support -- comes to 501 people. 501 families supported from this small mine but in MSHA's eyes a large mine. Our payroll is 13 million and some change. Supplies and services 24 million, that we're paying out to vendors. Our utilities, Rocky Mountain Power, \$1,425,000. Here's getting to these ends. Property taxes, 385,000. Production taxes 902,000, and royalties 2,229,00. Again, this is 2015. So total direct benefits to the state that they see out of Dugout Canyon Mine is \$42,422,000. Indirect benefits, average employee wage for the mine, so 107 employees, \$122,000 annual. That's wages and benefits. We're part of Bowie Resource Partners teams. You're going to hear substantially higher numbers that we're part of. So we provide a service that's actually paying to help our schools, help our state, help our communities, and help our children. So please take that into consideration when you look at this re-leasing.

---

Comment Number: 0000364\_Albury\_20160519-3

Commenter I: Kathryn Albury

Other Sections: 2

Comment Excerpt Text:

We, as a nation, must not abandon the workers in the coal industry who are already getting laid off and having difficulty finding new work. Retraining and perhaps relocation is needed for many workers and should be easily available to them.

---

Comment Number: 0000507\_Martinson\_20160517-1

Organization I: Rehab Solutions

Commenter I: Dustin Martinson

Comment Excerpt Text:

Due to the war on coal and the companies having to change their health insurance to higher deductible, lower reimbursing plans, healthcare in Wyoming is at an incredible risk. At a hospital in Wyoming, the bad debt has increased by 43% in less than two years. This is directly due to the war on coal. There are over 670 rural hospitals in America that are at risk for closure, none in Wyoming, yet! If this war on coal continues there will continue to be an effect and the chance for a Wyoming hospital to close greatly increases.

---

Comment Number: 0000509\_Pauack\_20160517-1

Commenter I: Don Pauack

Comment Excerpt Text:

First you have the loss of jobs and income to families in the coal mining industry, then you have the increase in cost of electricity to the general public. The loss of jobs and incomes to families in industries related to or connected to the coal mining industry. No revenue to the tax payers for however long this situation drags on.

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Comment Number: 0000510\_Buell\_20160517-1

Commenter I: Rick Buell

Comment Excerpt Text:

Low income folks will suffer from coal loss as well my family

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Comment Number: 0000511\_Pfister\_WesternOrg of Resource Councils\_20160517-5

Organization I: Northern Plains Resource Council

Commenter I: Ellen Pfister

Comment Excerpt Text:

If it were not for the very low Montana severance tax on underground coal, Musselshell County, where most of the coal for Signal Peak is located, would receive nothing back from the Federal coal leasing, since Great Northern Properties, LLC and the Northern Cheyenne Tribe have latched onto the money produced from the federal coal in this area. Under ordinary circumstances, half the lease money would have been paid to the State of Montana, and half of that would have gone to Musselshell County. Today all of it goes to Houston and Lame Deer.

---

Comment Number: 0000518\_Madden\_20160517-2

Organization I: Wyoming Legislature

Commenter I: Michael Madden

Other Sections: 6

Comment Excerpt Text:

As an economist, I submit that raising taxes and leases will not increase revenue to the Federal government - it will decrease, it will not increase the viability of low cost energy - it will reduce it, it will not increase the stability and dependability of the nations power grid - it will reduce both. It will not increase economic growth, but rather drastically reduce it. Nobody benefits. Most important, it will not contribute any measurable impact on the climate, whatsoever.

---

Comment Number: 0000520\_Barrasso\_US Senate\_20160517-1

Organization I: United States Senate

Commenter I: John Barrasso

Comment Excerpt Text:

In Wyoming, production of federal coal has enabled thousands of people to achieve the American dream. Production of federal coal provides good jobs for Americans regardless of their educational background.

In 2014, the average annual wages for coal workers in Wyoming was \$83,594. That is almost twice the average annual wages for all workers in Wyoming. And over 60 percent above the average annual wages for all workers in the United States.

In Wyoming, a coal worker's salary provides financial security. It allows parents to buy a home, save for their children's education, prepare for their own retirement, and assist their elderly parents. Simply put- coal production provides a level of financial security and social mobility that is unavailable in most of America

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Comment Number: 0000521\_Lummis\_US Rep\_20160517-2

Organization I: United States Congress

Commenter I: Cynthia Lummis

Comment Excerpt Text:

Coal lease sales provide revenue to both the federal and state governments through per acre fees as well as bonus bids on the coal reserve tonnage. Coal production in Wyoming creates good paying jobs and helps fund our education system and other vital community services.

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Comment Number: 0000532-1

Organization I: Wyoming House of Representatives

Commenter I: Rosie Berger

Comment Excerpt Text:

Not only are people losing their jobs, but the jobs that remain cannot support a family.

A decrease in hours coupled with a decrease in hourly rates has resulted in a 40 percent decrease in wages for

some Wyoming workers... and even more for many others.

Workers and their families are getting hit from both the rate and the available hours, and those are the lucky ones who still have jobs to go to.

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Comment Number: 0000533-1

Organization I: Campbell County School District

Commenter I: David Fall

Comment Excerpt Text:

Coal lease bonus money has been invaluable for school construction in the state of Wyoming and our county. Since 1980 Wyoming has received an estimated 2.71 billion dollars in coal lease bonus payments with 2.38 billion or 88% deposited in the school capital construction account and used to build schools all over Wyoming. Every county in the state of Wyoming has at least one new school built with coal lease money.

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Comment Number: 0000543-4

Commenter I: Dianna Moesh

Comment Excerpt Text:

Consider funding to help mining labor reboot for jobs in alternative energy

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Comment Number: 0000565-1

Organization I: Western Organization of Resource Councils

Commenter I: Bob LeResche

Comment Excerpt Text:

40 YEARS OF LEASING AND MANAGEMENT HAVE CREATED THOUSANDS OF JOBS, THRIVING COMMUNITIES, AND EXCESSIVE STATE REVENUE DEPENDENCE ON COAL MINING. BOTH STATE AND FEDERAL GOVERNMENTS HAVE CREATED MORAL OBLIGATIONS TO PROVIDE A JUST TRANSITION TO THE NEW ECONOMIC FUTURE. QUITTING FEDERAL COAL LEASING "COLD TURKEY" WOULD BE AN UNJUST DISASTER

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Comment Number: 0000608-5

Organization I: JE Stoer & Associates

Commenter I: Tamme Bishop

Comment Excerpt Text:

How will severance tax payments to local governments be affected?

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Comment Number: 0000610-2

Organization I: City of Craig

Commenter I: Ray Beck

Comment Excerpt Text:

We support the current program because coal is the backbone of our community. The federal coal program results in thousands of jobs, provides affordable electricity to some of the most economically depressed regions of our state and supports our energy needs.

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Comment Number: 0000610-3

Organization I: City of Craig

Commenter I: Ray Beck

Comment Excerpt Text:

Increased royalty rates will only result in depressed revenue for our schools and roads with little, if any, positive impact on the environment. Increased rates would also have a detrimental effect on our local economy which would be seen in decreased state revenue, lost jobs and increased electricity prices for consumers.

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Comment Number: 0000618-1

Organization I: Citizens for Clean Air

Commenter I: Karen Sjoberg

Comment Excerpt Text:

A comprehensive review of the existing federal coal program is essential for our quality of life. We are surrounded by public lands that many of us work, play and appreciate on a daily basis.

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Comment Number: 0000621-2

Commenter I: Marc Thomas

Comment Excerpt Text:

It is true that many communities, like Tonawanda, NY that depend on the coal industry for jobs and for tax revenue are in trouble. There, community, environmental, and labor groups established a coalition to address the problems, and the recently passed NY state budget gives financial assistance to the schools and local governments losing tax revenues. This type of cooperative action turns a community facing a loss into one building its future. Similar actions must be done nationwide with federal support for workers, businesses and communities.

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Comment Number: 0000623-1

Commenter I: Jason Timbreza

Comment Excerpt Text:

I'm one of the last 40 employees at Bowie #2 and will only be employed for 5 more weeks. In my lifetime in our Valley there have been many jobs lost in different industries, logging, agriculture, construction, oil and gas, and as this has occurred many people from those industries came to the coal mines because of the financial security and the benefits provided or to help keep family farms in operation and small businesses running. With the loss of the coal mining jobs there is nothing that will replace the lost revenue to our Valley and the surrounding communities.

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Comment Number: 0000623-2

Commenter I: Jason Timbreza

Comment Excerpt Text:

Further more the reduction in coal generated power, will only lead to problems in providing reliable power and paying higher prices for electricity, something that will end up costing tax payer's more, rather than receiving any tax revenue from mining.

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Comment Number: 0000624-2

Comment Excerpt Text:

Even without the nearly 40% tax rate, the affordable energy that the poorest among us enjoys is a tremendous benefit to our local, state and national economy

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Comment Number: 0000625-1

Commenter I: Ty Gardiner

Comment Excerpt Text:

The federal coal program provides revenues to federal and state governments, totaling \$13.8 Billion since 2003.

Comment Number: 0000751\_Rubingh\_20160623-1

Commenter I:Jeremy Rubingh

Comment Excerpt Text:

Federal support for economic transition must grow continue, local elected officials need to support connectivity and the public lands that help drive our booming tourism and remote workforce economies and we all need to acknowledge reality as we plan for a prosperous future in western Colorado.

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Comment Number: 0000752\_Lempke\_Tri-State\_20160623-2

Organization I:Tri-State Generation and Transmission Association, Inc

Commenter I:Doug Lempke

Comment Excerpt Text:

Increasing the costs of federal coal will have a direct, adverse impact on our members and the communities they serve, but provide little actual benefit to the environment, since it will just shift coal development to other areas.

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Comment Number: 0000754\_Nutgrass\_20160623-1

Commenter I:Chris Nutgrass

Other Sections: 2

Comment Excerpt Text:

There are a few techniques already being used around the American West and world to help mitigate the impacts of market fluctuations on community livelihoods.

The first are local stabilization funds. These are funds created by collecting revenue when resource prices are high and distributed when resource prices are low. This type of fund helps to smooth out the volatility of government receipts and spending. Stabilizations funds require communities to set trigger prices for the commodity above which revenue is collected and below which signal disbursements. These funds are also sometimes referred to as "rainy day" funds and can provide critical assistance during an unexpected event that affects the market.

Another type of fund is a permanent trust. Whereas stabilization funds are designed to counter the cycle of revenue flows, permanent trusts are established to create a sustainable benefit from an unsustainable source. These funds are created by placing a portion of the revenues from resource extraction into a trusts for future generations. The fund can then be invested and income from that fund used to support education, health, economic development, infrastructure maintenance, and other local priorities. Although there are many examples of this type of fund around the west, including Wyoming, Montana, and New Mexico, Colorado has no such fund. On an international level, over \$4 trillion has been invested in this type of fund.

And yet another fund, known as a growth fund, is also being implemented. It is similar to a permanent trust but used to expand business and investment holdings. The Southern Ute tribe is using this type of fund to capitalize on revenues from their land. Realizing that energy resources are finite, the fund is used to diversify the economic activity of the tribe.

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Comment Number: 0000756\_Reece\_Club 20\_20160623-1

Organization I:CLUB 20

Commenter I:Christian Reece

Comment Excerpt Text:

With an annual economic impact of over \$2.8 billion to Colorado's Gross Domestic Product, Colorado's Coal industry directly employs 6,200 individuals and indirectly contributes to more than 23,000 jobs to our region.



These individuals are highly compensated for their time, averaging more than \$110,000 in wages and benefits per employee. In these difficult economic times, high paying jobs in our rural communities are rare and these jobs allow families to contribute back to our local economies.

---

Comment Number: 0000756\_Reece\_Club 20\_20160623-5

Organization I: CLUB 20

Commenter I: Christian Reece

Comment Excerpt Text:

These efforts combined will lead to further job losses, increase the price of energy on middle and low-income families, and ensure that state and federal revenues become non-existent. In fact, we have already seen a 50% reduction in coal production over the last couple of years and Colorado has lost its largest export market due to regulations with intentions similar to these proposals. Our rural communities cannot afford the kinds of impacts that will result from keeping coal in the ground.

---

Comment Number: 0000763\_Koontz\_20160623-1

Commenter I: Wendell Koontz

Comment Excerpt Text:

this PEIS should also consider:

- Social benefits provided to the taxpayers from bonus bid payments, royalties, taxes, and continued employment of thousands and that economic impact to the US, states, and local communities.
- Social benefits of dependable reliable power to the health care industry, print and digital media, recreation, government, emergency responders, military, and other industries that require affordable power on demand 24/7.
- Social impacts of lost jobs including the 900 lost jobs locally in the North Fork and thousands of lost jobs nationally on families, communities, and states.
- Social cost of increasing prices on commodities and utilities that are the logical outcome on the proposed increases in royalties and taxes and decreasing production.

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Comment Number: 0000782-5

Commenter I: Lawson LeGate

Comment Excerpt Text:

As the BLM considers socio-economic impacts, it should examine the potential for a just transition to new employment opportunities in a changing economy. Coal mining generates numerous externalities, all of which should be factored in to the coal leasing program costs.

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Comment Number: 0000789-1

Organization I: Sufco Mine

Commenter I: Satoshi Bautista

Comment Excerpt Text:

If they don't allow our mine to lease it may affect many families involved in the mining industry from truck drivers to vendors all the way down to the children of those parents.

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Comment Number: 0000795-1

Organization I: Sufco

Commenter I: Anoy Ballow

Comment Excerpt Text:

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Close to 100 people in Sever County alone are employed by Sufco coal mine. Making close to 70,000 dollars a year. If you take that away it affects every business in the county by removing this money.

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Comment Number: 0000815-1

Organization I:Dugout Canyon Mine

Commenter I:William King

Comment Excerpt Text:

The Government is asking the wrong questions. They should be asking for economically and environmentally safe ways to obtain maximum coal extraction rates which in turn would provide an increased return for Americans while protecting the environment.

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Comment Number: 0000825-1

Commenter I:Gary Leaming

Comment Excerpt Text:

In the last three years approximately 40% of the MMUs in our country have been shut down. Displaced miners are struggling to find employment of any kind and the communities they help support are losing jobs and tax base rapidly. For every coal mining job lost, at least six other people's jobs are affected. This ripple affect impacts almost all aspects of their communities including tax revenue, lost jobs, lost employment hours, higher costs for goods, and so on. This coal lease moratorium along with other government sanctions are continuing the shuttering of coal mines and placing hundreds of families below the poverty level. Rather than being viable, contributing citizens, these hard-working miners and their families are now on the dependency and welfare rolls of our country.

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Comment Number: 0000832-2

Comment Excerpt Text:

To the benefit of the central and rural region of Utah, Sufco employs 383 people and provides 300 local contract trucking jobs.

Sufco mine delivers to Utah's counties and families:

\$43 million local payroll

\$81 million in supplies and services

\$4.4 million in Utilities costs,

\$2 million in local property taxes

\$7.2 million in production taxes

\$24.2 million in royalties.

\$36 million to local contract trucking companies.

\$188 million in total direct and indirect benefit.

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Comment Number: 0001103\_BYRD\_WY state rep\_20160621-1

Organization I:Wyoming House District 44

Commenter I:James Byrd

Comment Excerpt Text:

So quickly, in my district we do not have any coal at all. I am 250 miles from the nearest coal mine. But I have at least 500 direct jobs that are related by the coal business and another couple thousand jobs that are indirectly related to the coal business in my area, and those are in the industry. There's related industries that are the railroads, the other support industries, the engineering and everything, so it's not just the coal industry that suffers with improper regulation. It is in my case the entire state.

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The largest impact in my area is money that comes from the coal lease program that goes directly into building schools and providing the materials so that we can give our students a competitive education and be right up there in the top.

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Comment Number: 0001106\_CORNELISON\_20160621-1

Organization I:Cityof Hood River, OR

Commenter I:Peter Cornelison

Other Sections: 8.7

Comment Excerpt Text:

The City of Hood River urges the Department of Interior to do three things: Update the coal royalty rate for fossil fuels extracted on public lands; number two, help diversify those rural economies and create new jobs and investments where the coal miners will be displaced; and number three, tighten the bonding requirements for coal. As we've heard, there's huge scars on the land. We're not sure the coal companies have the wherewithal financially to recover that. That needs to be inspected.

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Comment Number: 0001125-1

Commenter I:Elke Littleleaf

Comment Excerpt Text:

And not only through our guide service, it's the way we make a living, but we use it as an education to teach non-tribal members what's in our rivers, because it's not just about catching the fish, it's about, you know, respecting the fish. We're one of the only guide services that teaches catch and release, and this is something that we feel that as American Indians we teach people to respect our animals, our creatures of this world. And once upon a time I used to work on a railroad, and 90 percent of my jobs that I've done were just disastrous things, derailments, and I could see that nothing could ever be replaceable, you know, with our system, our fish, our rivers, and this is just a gamble that we can't take.

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Comment Number: 0001142-2

Organization I:United Steelworkers

Commenter I:Steve Garey

Comment Excerpt Text:

The new program must also provide support for economic diversification, for protecting local tax bases to help ensure adequate funding for local governments, education, and other necessary services.

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Comment Number: 0001148-1

Organization I:Powder River Basin Resource Council

Commenter I:Bob LeResche

Comment Excerpt Text:

40 years leasing and management have created thousands of jobs, thriving communities, and excessive state revenue dependence on coal mining. Both state and federal governments have created a moral obligation to provide a just transition to the new economic future. Quitting federal coal leasing cold turkey would be an unjust disaster.

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Comment Number: 0001159-1

Organization I:Got Green

Commenter I:Rashad Barber

Comment Excerpt Text:

So we're talking about social economic impacts, but I ask you to really consider the social impacts. And there's no hospital costs that's being externalized the way that it's being affected to my family and our -- and my people.

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Comment Number: 0001165-1

Commenter I:Pat Freiberg

Comment Excerpt Text:

Oh. Meanwhile, in the midst of all this destruction, 40 percent of global electricity is produced by burning coal. A halt in this system could cause social and governmental collapse and that collapse would be equal to the climate collapse that we're hoping to avoid, so we're in a Catch-22, a balancing act.

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Comment Number: 0001180-2

Organization I:Alaska Coal Association

Commenter I:Loralie Simon

Comment Excerpt Text:

If production on federal lands is decreased, consumers will be forced to pay for more expensive forms of power generation.

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Comment Number: 0001181-3

Organization I:Green Peace

Commenter I:Britten Cleveland

Comment Excerpt Text:

We should also be setting aside resources to help communities transition when coal companies pack up shop and leave.

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Comment Number: 0001187-3

Commenter I:Peggy Willis

Comment Excerpt Text:

And I would say in the review I would urge you to include a very thorough current best science and economics-based review. I haven't heard a lot of emphasis on the science-based current best practices science-based review today.

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Comment Number: 0002004\_Borner\_20160617-1

Organization I:Musselshell County

Commenter I:Nicole Borner

Comment Excerpt Text:

The state of Montana, Musselshell County, people's livelihood, and many communities' economic health are directly tied to the coal industry. The coal industry provides a reliable and affordable source of energy to hardworking Montana families, we are directly affected by decisions being made by the BLM review.

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Comment Number: 0002004\_Borner\_20160617-2

Organization I:Musselshell County

Commenter I:Nicole Borner

Comment Excerpt Text:

I humbly ask that BLM's proposals to change coal leasing policy take into consideration the impacts that will

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happen to my community and state and be very diligent that they are not being swayed by emotional rhetoric of an extreme environmental agenda.

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Comment Number: 0002012\_Colton\_20160613-2

Commenter I: Dave Colton

Comment Excerpt Text:

Many jobs are being lost in Colorado, Wyoming and other coal producing states. This is impacting people in real ways. Governments are losing severance taxes which reduces services they can provide to their residents.

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Comment Number: 0002024\_Grassman\_20160622-1

Commenter I: Brent Grassman

Comment Excerpt Text:

Perhaps some funding could be provided to transition coal workers to different jobs and ease the transition, but ultimately coal will go away, as it should.

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Comment Number: 0002035\_Clausing\_20160622-1

Commenter I: Marcia Clausing

Comment Excerpt Text:

The negative impact on families from recent closures in this state of relatively low economic status is already being felt in the small community of Colstrip.

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Comment Number: 0002042\_Highum\_20160608-1

Commenter I: Jess Highum

Comment Excerpt Text:

I do know that thousands of people are directly affected by the recent "war on coal", many losing their jobs and all the benefits from those jobs.

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Comment Number: 0002063\_Trebella\_20160622-1

Commenter I: Matt Trebella

Comment Excerpt Text:

We as a country need to continue to become less reliant on this dirty technology, and instead increase renewable sources. While it may hurt some jobs in Montana, the net outcome will benefit Montana and our surrounding states with decreased healthcare costs, and a shift to more sustainable energy future.

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Comment Number: 0002069\_Williamson\_20160619-1

Commenter I: Alec Williamson

Other Sections: 2

Comment Excerpt Text:

I don't want the communities that benefit from coal mining to suffer economically, so those towns should get first priority receiving tax breaks or other incentives to become clean energy producers.

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Comment Number: 0002089\_Krizan\_20160623-1

Commenter I: Larry Krizan

Comment Excerpt Text:

Coal is a vital element of our national and state economies. Eliminating its use all together just to satisfy a

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minority in the USA and elsewhere that don't like the mining industry, prefer wind and solar over fossil fuels, and don't make their living working in the fossil fuels industry is very short sighted and will devastate the economies of affected states and the energy they produce for the country and the rest of the world.

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Comment Number: 0002092\_Lynch\_20160624-1

Commenter I:K. Lynch

Comment Excerpt Text:

Montana workers need the jobs that coal mining creates for them

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Comment Number: 0002108\_Raymond\_20160624-1

Commenter I:jazmine Raymond

Comment Excerpt Text:

If Montana is to keep a viable economy into the future, we are going to have to find new ways to create jobs while relying less on the extraction of non-renewable resources.

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Comment Number: 0002112\_Sanderson\_20160624\_CoMineAssoc-11

Organization I:Colorado Mining Association

Commenter I:Stuart Sanderson

Comment Excerpt Text:

The current measures are simply an attempt to drive coal out of the energy mix and will hurt Colorado's economy and deprive our public schools of hundreds of millions of dollars of royalty revenues.

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Comment Number: 0002112\_Sanderson\_20160624\_CoMineAssoc-3

Organization I:Colorado Mining Association

Commenter I:Stuart Sanderson

Other Sections: 1

Comment Excerpt Text:

Coal miners in Colorado alone earn average wages and benefits approaching \$135,000 annually, according to the Colorado Mining Association's Coal Production and Employment Report for 2015. But federal and state laws have resulted in significant harm to western slope economies. Since 2013, two mines in Gunnison and Delta Counties have been forced to cease operations and a third recently announced a reduction in its workforce. All mines in Colorado have reduced production, which fell to a 25 year low in 2015 of less than 19 million tons, down more than 50 percent from the record levels achieved in 2004.

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Comment Number: 0002112\_Sanderson\_20160624\_CoMineAssoc-4

Organization I:Colorado Mining Association

Commenter I:Stuart Sanderson

Comment Excerpt Text:

The Secretary of the Interior and the Bureau of Land Management have announced an unprecedented assault on affordable energy and coal production, one of the backbones of Colorado's and the nation's economy.

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Comment Number: 0002112\_Sanderson\_20160624\_CoMineAssoc-8

Organization I:Colorado Mining Association

Commenter I:Stuart Sanderson

Comment Excerpt Text:

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Western coal mining jobs are important to rural economies and the clean, affordable and reliable energy from mining still accounts for the bulk of electricity produced in Colorado and much of the west.

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Comment Number: 0002121\_Sullivan\_20160624-1

Commenter I: Don Sullivan

Comment Excerpt Text:

Any thought of new regulations must be scrapped and existing regulations that cost jobs and hurt economic growth need to be rolled back.

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Comment Number: 0002124\_Todd\_20160622-1

Commenter I: David Todd

Other Sections: 8.1

Comment Excerpt Text:

I support the President's plan to reduce coal extraction and burning and reject the efforts of Steve Daines to block those reductions.

Rather than burn coal to keep US jobs, Daines might better lead an effort to keep US companies from shipping jobs abroad.

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Comment Number: 0002125\_Turnquist\_20160623-2

Commenter I: Debra Turnquist

Comment Excerpt Text:

Those people now employed in the coal industry should have first rights to jobs in clean energy.

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Comment Number: 0002132\_Pirruccio\_20160525-1

Commenter I: Tyler Pirruccio

Comment Excerpt Text:

A coal miner is not a scientist, and we should expect them to be hesitant to change. Its good to see you that people care about there jobs. And the only chance we have at keeping jobs in industry is adapting quickly. Solar energy, wind, etc. We have the chance to be at the front lines of the energy revolution or drag your heels in the back because were scared to loose jobs.

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Comment Number: 0002133\_Kukowski\_20160525-1

Commenter I: Arthur Kukowski

Comment Excerpt Text:

The impact that coal mining has on people and communities is a very large one. Many people that are currently in the industry have dedicated their lives to it. That is how they support their families and is a large part of their entire lives. That, to me, is the legacy of coal mining, and the meaning of coal mining to everyone that is involved in this industry.

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Comment Number: 0002136\_Hooley\_20160525-1

Commenter I: Kevin Hooley

Comment Excerpt Text:

The sheer number of people that are effected by the moratorium have been seriously overlooked. It's not just the coal miner, power plant worker, truck driver or vendor. The census goes down due to people relocating and it's also the construction worker, school teacher, police and small businesses.

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Comment Number: 0002138\_Drake\_20160521-1

Commenter I: Wilrose Drake

Comment Excerpt Text:

shutting down the coal industry will certainly put some people out of work, but consider how many jobs it will open as we move to other ways of providing power

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Comment Number: 0002142\_Briggs\_20160602-2

Organization I: Converse County Auto Repair

Commenter I: Mike Briggs

Comment Excerpt Text:

We have seen the loss of approximately 500 coal related jobs and countless oil field, railroad, uranium and local business related jobs all within a 100 mile radius of our town. This can be devastating to a state whose total population is only about 300,000. With the state of Wyoming being this country's leading supplier of coal and a major supplier of oil, natural gas and uranium our government should be troubled by the direction it is taking.

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Comment Number: 0002142\_Briggs\_20160602-3

Organization I: Converse County Auto Repair

Commenter I: Mike Briggs

Comment Excerpt Text:

A loss of local taxes greatly affects our education systems, funding for needed projects and community upgrades such as libraries, justice buildings, road and highway repairs just to name a few.

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Comment Number: 0002144\_Kot\_20160519\_SweetwtrCnty-2

Organization I: Sweetwater County, Wyoming

Commenter I: Wally Johnson

Comment Excerpt Text:

Coal production provides approximately 245 million dollars to the annual assessed valuation of Sweetwater County. This valuation helps support high quality public services including schools, roads, recreation, social services and health care.

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Comment Number: 0002144\_Kot\_20160519\_SweetwtrCnty-3

Organization I: Sweetwater County, Wyoming

Commenter I: Wally Johnson

Comment Excerpt Text:

The Sweetwater County coal mines, Jim Bridger and Black Butte, together employ approximately 710 workers. With the 310 employees, who work at the coal fired Jim Bridger Power Plant, the coal industry employs approximately 1000 workers within Sweetwater County.

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Comment Number: 0002144\_Kot\_20160519\_SweetwtrCnty-4

Organization I: Sweetwater County, Wyoming

Commenter I: Wally Johnson

Comment Excerpt Text:

The National Mining Association estimates that, for every coal mining job, an additional 3.5 jobs are created. This means that, for Sweetwater County, coal creates approximately 3,500 additional jobs for a total of 4,500 coal related jobs in our county.

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· Employees, directly or indirectly related to coal production, their families and communities depend upon stable coal and energy markets backed by sound federal policies. Without these stable markets and sound policies, jobs could be lost, home values could fall, and the economy of our communities, county and state will suffer.

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Comment Number: 0002145\_Buchanan\_20160513\_IEEFA-17

Organization I: Institute for Energy Economics and Financial Analysis

Commenter I: Tom Sanzillo

Comment Excerpt Text:

It is also possible that other ailing mining companies could follow their competitors into Chapter 11. Such a development may make it possible to close unprofitable mines, restructure their debt (especially nonsecured debt), sell or shut noncompetitive assets, and start to restore their businesses to a firmer financial footing. In addition, some companies may wind up liquidated and their creditors wiped out, creating the opportunity for players that provide new capital to earn profits by buying up the mine properties that are cash positive and would then be unencumbered by previous obligations. But these initiatives might have only limited impact on the overall financial health of the industry, given that there could continue to be many miners sticking to the business as usual path.

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Comment Number: 0002145\_Buchanan\_20160513\_IEEFA-22

Organization I: Institute for Energy Economics and Financial Analysis

Commenter I: Tom Sanzillo

Comment Excerpt Text:

The coal industry's failure to provide manageable financial and economic models in the current environment makes DOI's response all the more urgent.

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Comment Number: 0002145\_Buchanan\_20160513\_IEEFA-23

Organization I: Institute for Energy Economics and Financial Analysis

Commenter I: Tom Sanzillo

Other Sections: I

Comment Excerpt Text:

McKinsey & Co., a prominent global business consultancy, has recently observed that coal companies require "a major mindset industry change" if they are to fashion a winning strategy. McKinsey warns that coal companies emerging from bankruptcy run a risk of adopting business strategies that will result in another round of bankruptcies

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Comment Number: 0002147\_Anderson\_20160621\_BlueGreenAlliance-16

Organization I: BlueGreen Alliance

Commenter I: Kim Glas

Comment Excerpt Text:

Powerful economic forces continue to influence a shift in the U.S. energy sector. A combination of factors is forging a new reality where lower natural gas prices, rising coal costs, and the competitive cost of renewable energy sources are driving a shift to clean energy. The new energy technologies coming on-line will create hundreds of thousands of new jobs and will continue to do so in communities across the country. But, as our nation makes this transition, some workers and communities may be impacted.

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Comment Number: 0002147\_Anderson\_20160621\_BlueGreenAlliance-2

Organization I: BlueGreen Alliance

Commenter I: Kim Glas  
Other Sections: 2 8.1  
Comment Excerpt Text:

The contemplated overhaul of this program is, however, not only an opportunity to fix a broken system, but also an opportunity to take a hard look at how coal-dependent communities, regional economies, and individual workers can transition to new economic models.

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Comment Number: 0002147\_Anderson\_20160621\_BlueGreenAlliance-4  
Organization I: BlueGreen Alliance  
Commenter I: Kim Glas  
Other Sections: 2  
Comment Excerpt Text:

The contemplated review of the federal coal leasing systems must evaluate BLM authority and opportunities—as well as actions other agencies and Congress could take—to help ensure a just transition for workers and communities to a clean energy economy. Such actions should include robust investment in community economic development, protection of worker livelihoods, and development of new tax revenue sources for local economies.

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Comment Number: 0002147\_Anderson\_20160621\_BlueGreenAlliance-8  
Organization I: BlueGreen Alliance  
Commenter I: Kim Glas  
Comment Excerpt Text:

Coal mines, coal-fired power plants, coal transportation infrastructure, coal handling facilities, and their associated supply and maintenance industries are often the lifeblood of small towns, providing significant employment and contributing to their communities' tax base. Moving toward clean energy could result in fewer jobs at a local level and a reduction in the tax stream going to local governments, cutting into funding for public schools, hospitals, and infrastructure projects.

Therefore, as the BLM works to capture a fair return for American taxpayers generally, it must also consider that the economic impacts of a reduction in coal usage over the coming years will not be shared equally across the American public. We must consider what authority and opportunities it possesses—having succeeded in capturing a fair return for extracted coal—to ensure that some portion of this increased return is put to use ensuring a just transition for workers, communities, and regional economies. It will be necessary for some workers to obtain new skills and employment and for some communities to redevelop and diversify their economies.

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Comment Number: 0002147\_Anderson\_20160621\_BlueGreenAlliance-9  
Organization I: BlueGreen Alliance  
Commenter I: Kim Glas  
Other Sections: 2  
Comment Excerpt Text:

In protecting the interests of the American public, BLM must also seek to protect the interests of those populations that will be disproportionately impacted by the gradual transition away from fossil energy resources. Reform of the federal coal leasing system provides an opportunity to secure a stable source of funding to provide the tools and resources necessary for workers to transition to new jobs, and to diversify local and regional economies.

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Comment Number: 0002148\_OLaughlin\_20160621\_K2-1

Organization I:K2 Sports

Commenter I:Matt O'Laughlin

Other Sections: I

Comment Excerpt Text:

According to a 2012 NRDC report on the “Climate Impacts on the Winter Tourism Economy in the US”, across 38 states in the U.S., winter tourism generates \$12.2 billion in revenue and over 200K jobs annually. In Washington State, winter tourism contributes over 6,000 jobs and \$348 million in value to our economy every year. When you consider higher emission scenarios, the PNW snowpack is projected to decrease between 40-70% by 2050 due to warmer winters. That would have a significant impact on the physical health of our customers, the financial health of winter sports retail in the region and K2’s global business as a whole if we don’t act now.

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Comment Number: 0002149\_Hewitt\_20160519\_WyLSO-1

Organization I:Wyoming Legislature's Select Federal Natural Resource Management Committee

Commenter I:Ted Hewitt

Other Sections: I

Comment Excerpt Text:

Prior to the recent downturn in the coal industry, Wyoming’s coal producers created more than 11% of Wyoming’s gross state product. In 2012, the industry produced more than \$5 billion of coal. It employed almost 7,000 hard-working Wyomingites in good-paying jobs. According to the Bureau of Labor Statistics, in 2013 the average Wyoming coal mine worker’s annual salary exceeded \$80,000. Each Wyoming coal mine worker depended on that job to help accomplish life’s goals: to buy a house, to send a child to college, to save for retirement. Additionally, tax revenue from the coal industry provides vital support to our state and local governments. In 2012, direct taxation on coal production provided almost \$1.3 billion in total revenues to the state.

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Comment Number: 0002149\_Hewitt\_20160519\_WyLSO-8

Organization I:Wyoming Legislature's Select Federal Natural Resource Management Committee

Commenter I:Ted Hewitt

Comment Excerpt Text:

The Bureau of Land Management (BLM), with control of more than 40 million acres of federal mineral estate in Wyoming, plays a pivotal role in determining how Wyoming’s coal industry performs. Reductions in coal production caused by an overhaul of the federal coal program would reduce our ability to provide for our state’s schools, roads, and hospitals. Wyoming is already dealing with the negative effects of reduced demand for coal: higher unemployment, reduced incomes, corporate bankruptcies, and lower revenues for state and local governments. Our federal government should not make this problem worse; rather it should work to help increase coal production. We should maximize our coal’s value and put it to work to improve our country.

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Comment Number: 0002149\_Hewitt\_20160519\_WyLSO-9

Organization I:Wyoming Legislature's Select Federal Natural Resource Management Committee

Commenter I:Ted Hewitt

Comment Excerpt Text:

Certainly, it is true that low natural gas prices currently depress demand for coal, however that could change given the unpredictable variables that control the price of natural gas. Rather than weaken coal as one of our country’s great energy assets we should strengthen it so that we can continue to enjoy the benefits that it provides.

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Comment Number: 0002157\_Burger\_SabineCenter\_09132016-14

Organization I: Sabine Center for Climate Change Law

Commenter I: Michael Burger

Comment Excerpt Text:

given the scale of current legacy liabilities, they also felt that other solutions would be necessary to protect taxpayers from the costs of coal bankruptcies. Andy Stevenson recommended the short-term solution of a Bailout Recovery Fee on coal production that would allow states to recoup their unpaid coal bills, and the longer-term solution of a coal-utility fee to help cover taxpayer exposure created by the coal industry.

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Comment Number: 0002157\_Burger\_SabineCenter\_09132016-17

Organization I: Sabine Center for Climate Change Law

Commenter I: Michael Burger

Comment Excerpt Text:

U.S. coal markets face several significant challenges, primarily from renewable energy and natural gas, which are unlikely to abate to a degree sufficient to cause an upturn in their medium- or long-term prospects.

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Comment Number: 0002157\_Madder\_20160517\_EnergyPolicyNetwork-2

Organization I: Energy Policy Network

Commenter I: Kelly Mader

Comment Excerpt Text:

Setting aside policy considerations and the legality of these rules under the Clean Air Act, the BLM must consider the sweeping nature of the regulation of coal combustion and the impact that these rules have on the competitiveness of coal in state resource planning processes and the economic dispatch protocols in organized markets. These rules increase the costs of coal as a fuel source and ultimately serve to (1) price new coal entirely out of competitive bidding processes for new generation resources and (2) severely disadvantage existing coal in any security-constrained economic dispatch model or resource planning process.

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Comment Number: 0002157\_Madder\_20160517\_EnergyPolicyNetwork-4

Organization I: Energy Policy Network

Commenter I: Kelly Mader

Comment Excerpt Text:

In evaluating any alternative that would result in increased coal royalty rates, increased bonuses to be paid when the BLM issues a lease, increased rental fees, or any combination of these results, the BLM must consider the socio-economic consequences of the alternative. To be meaningful, this analysis should consider how the alternative in question will impact coal's competitiveness in resource planning processes and in organized electric markets, while also analyzing the impacts on electric reliability of the significant decrease or outright elimination of coal as a generation resource. The Council on Environmental Quality's NEPA regulations require the consideration of the effects of each alternative, and further provide that "[e]ffects includes ecological (such as the effects on natural resources and on the components, structures, and functioning of affected ecosystems), aesthetic, historic, cultural, economic, social, or health, whether direct, indirect, or cumulative."<sup>(3)</sup> The effects on electric rates and electric reliability are indirect effects of any change to the Federal coal program and should therefore be considered within the scope of this NEPA analysis of any alternatives.<sup>(4)</sup>

(3) 40 C.F.R. 1508.8

(4) 40 C.F.R. 1502.16 requiring the consideration of indirect effects); 40 C.F.R. 1508.8 ("Indirect effects, which are caused by the action and are later in time or farther removed in distance, but are still reasonably foreseeable. Indirect effects may include growth inducing effects and other effects related to induced changes in the pattern of

land use, population density or growth rate, and related effects on air and water and other natural systems, including ecosystems.")

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Comment Number: 0002158\_Kasperik\_20160517\_StateRep-5

Organization I:HD 32 Wyoming State Legislature

Commenter I:Norine Kasperik

Comment Excerpt Text:

much of the rest of the country benefits from the affordable, reliable electricity made possible by Wyoming coal.

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Comment Number: 0002160\_Kot\_20160629\_SweetwtrCnty-I

Organization I:Sweetwater County

Commenter I:Wally Johnson

Comment Excerpt Text:

Coal PEIS Economic Impact: Sweetwater County strongly objects to the PEIS proposed modifications to the Coal Leasing Program, and believes that, if the BLM suggestions are implemented, they will negatively impact the economy of Sweetwater County and the State of Wyoming. Some of the PEIS proposed modifications we object to include:

- Adding external costs such as climate change and social and environmental impacts to the determination of fair market value for coal leases.
- Increasing coal royalty and bonus payments
- Creating new regulations addressing water resources, air quality, human health, visibility, wildlife and others.

All of these proposed modifications will increase the cost of mining coal especially when added to the myriad of federal rules that have been adopted to regulate coal mining and its related industries. A partial list of these rules include the Clean Power Plan, Regional Haze Rules, Clean Water Act Definition of Water of the United States, pending regulation regarding Sage Grouse, Mercury and other Toxic Air Pollution Standards which are in addition to more than three dozen additional federal rules that govern the mining industry. The layering effect of these regulations drives up the cost of coal mining making it more costly for coal mining companies to stay in business.

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Comment Number: 0002160\_Kot\_20160629\_SweetwtrCnty-I0

Organization I:Sweetwater County

Commenter I:Wally Johnson

Comment Excerpt Text:

Coal Severance: In 2014, Wyoming Coal Companies contributed \$269.4 million in severance taxes to the state, which contribute to the Wyoming Mineral Trust Fund. This fund provides revenue to the state when minerals are not profitable to extract, and the taxes become a smaller portion of government revenues. These funds will help all Wyoming counties and communities if mineral revenues decline.

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Comment Number: 0002160\_Kot\_20160629\_SweetwtrCnty-II

Organization I:Sweetwater County

Commenter I:Wally Johnson

Comment Excerpt Text:

Federal Mineral Bonus Payments: The 2014 funds from federal mineral bonus payments contributed \$212.9 million to build Wyoming schools. The Sweetwater County school system has benefitted from these funds.

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Comment Number: 0002160\_Kot\_20160629\_SweetwtrCnty-12

Organization I: Sweetwater County

Commenter I: Wally Johnson

Comment Excerpt Text:

Abandoned Mine Lands: In 2014, the Abandoned Mine Lands program distributed \$49.9 million in grants to mitigate lands affected by coal mining. Sweetwater County has benefited from these finds.

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Comment Number: 0002160\_Kot\_20160629\_SweetwtrCnty-13

Organization I: Sweetwater County

Commenter I: Wally Johnson

Other Sections: 8.7

Comment Excerpt Text:

coal is a vital economic driver for the economy of Sweetwater County, and because of this, Sweetwater County strongly opposes the Coal PEIS and its proposals to place economic hardships on our coal industry. These hardships include adding external costs into the fair market value of coal, increasing royalty and bonus payments and increasing the layers of regulations.

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Comment Number: 0002160\_Kot\_20160629\_SweetwtrCnty-3

Organization I: Sweetwater County

Commenter I: Wally Johnson

Comment Excerpt Text:

The Coal PEIS modifications will have a major impact on small businesses. The coal mining industry is a tapestry of smaller companies and, in the western states, the PEIS will have a disproportionate impact on this important segment of the economy. In Sweetwater County, this industry directly creates hundreds of jobs and indirectly creates many hundreds more jobs with equipment and parts suppliers, service providers, and other vendors. Many of these providers are small to medium sized businesses. The reach of job creation and small business start-up goes far beyond the county in which a mine is located.

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Comment Number: 0002160\_Kot\_20160629\_SweetwtrCnty-5

Organization I: Sweetwater County

Commenter I: Wally Johnson

Comment Excerpt Text:

In this summary, we have included economic values from the Jim Bridger Power Plant along with the values from the Jim Bridger and Black Butte coal mines because the Jim Bridger Power Plant is coal dependent and is an integral part of the operation of the Jim Bridger Mine.

Employment and population: Within Sweetwater County, the Jim Bridger and Black Butte Coal Mines and the Jim Bridger (coal fired) Power Plant are the primary coal industries. Together these industries employ approximately 1000 workers. The National Mining Association estimates that, for every coal mining job, an additional 3.5 jobs are created. This means coal creates approximately 3,500 additional jobs for a total of 4,500 coal related jobs in our county. With an average of 2.5 person per household, coal mining supports 15,750 county residents or approximately 35% of the total Sweetwater County population of 44,626 residents.

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Comment Number: 0002160\_Kot\_20160629\_SweetwtrCnty-6

Organization I: Sweetwater County

Commenter I: Wally Johnson

Comment Excerpt Text:

Housing: Sweetwater County coal related employees play an important factor in adding to the value and stability

of the county housing market. From recent estimates, within the county, there are 11,774 owner occupied homes, which represent approximately 62% of the total housing market. If we assume that coal employees own the same percentage of single family homes as the general population, then 62% of the 4,500 coal related employees own their home, for an approximate total of 3,000 single family homes. These 3000 coal related employee single family homes represent 25% of the total 11,774 owner occupied homes in Sweetwater County. With an average value of \$213,500, these homes add approximately 640 million dollars to the total value of Sweetwater County.

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Comment Number: 0002160\_Kot\_20160629\_SweetwtrCnty-7

Organization I: Sweetwater County

Commenter I: Wally Johnson

Comment Excerpt Text:

Coal Ad Valorem Values — equipment, land, and production: The Sweetwater County Assessor's Office has reported that 2015 equipment and land values of the Black Butte and PacifiCorp Jim Bridger Power Plant and Coal Mine together have an assessed value of \$40,104,219. The coal production from Black Butte and Jim Bridger Coal Mines adds \$231,104,831 to the assessed valuation. Together, the assessed value of the equipment, land and production of the Black Butte and Jim Bridger Coal Mines with the assessed value of the Jim Bridger Power provides a total of \$271,209,050 to the assessed valuation of Sweetwater County.

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Comment Number: 0002160\_Kot\_20160629\_SweetwtrCnty-8

Organization I: Sweetwater County

Commenter I: Wally Johnson

Comment Excerpt Text:

Sales Tax: According to the Wyoming Department of Revenue, in 2015, the Jim Bridger Power Plant paid \$3,200,000 in sales tax and the Jim Bridger and Black Butte Coal Mines paid a combined total of \$336,000 in sales tax. Together these primary coal related industries paid \$3,536,000 in sales tax of which \$1,909,440 remained with local governments and 1,626,560 were paid to the state.

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Comment Number: 0002160\_Kot\_20160629\_SweetwtrCnty-9

Organization I: Sweetwater County

Commenter I: Wally Johnson

Comment Excerpt Text:

Mineral Royalty: In 2014, Wyoming Coal Mines paid 263.5 million dollars in federal royalty payments. These payments helped pay for schools across the state. Sweetwater County has received mineral royalty dollars for the construction of new schools.

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Comment Number: 0002164\_Whyde\_20160519-1

Commenter I: Patricia Whyde

Comment Excerpt Text:

Several coal companies in WY have gone bankrupted. It seems no thought was placed for downturns like this. The environment has suffered. The people working for those coal companies have been affected. The communities and the state of WY have all been affected.

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Comment Number: 0002172\_Adamek\_20160627-2

Commenter I: Cari Adamek

Comment Excerpt Text:

In addition, coal has a large economic impact in Montana. You need to factor in how much your changes will affect jobs and the economy in Montana.

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Comment Number: 0002172\_Adamek\_20160627-3

Commenter I: Cari Adamek

Comment Excerpt Text:

I am also concerned that a sudden change like this in energy sources for electricity may cause an increase in electricity rates.

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Comment Number: 0002173\_Quick\_20160622-11

Commenter I: Kendra Quick

Comment Excerpt Text:

The PEIS must evaluate how changes to the Federal Coal Program impact reliability and affordability of electricity. Many lower income families and the elderly are on fixed incomes and cannot afford to have their utility bills increase. If production on federal lands is decreased due to increased royalty rates or governmental oversight, consumers will be forced to pay for more expensive forms of power generation.

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Comment Number: 0002173\_Quick\_20160622-14

Commenter I: Kendra Quick

Comment Excerpt Text:

Raising royalty would have a negative effect on an industry already struggling in a very difficult regulatory climate and market environment. Political efforts to use the BLM Coal Lease Program to further burden industry in an attempt to eliminate the resource are simply unacceptable. As is making a national statement that “we will put all coal miners out of business”.

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Comment Number: 0002173\_Quick\_20160622-3

Commenter I: Kendra Quick

Comment Excerpt Text:

In 2014, the coal industry contributed over \$1.1 billion in revenue to state and local governments in taxes, royalties and fees. Since 2002, over \$6 billion in federal mineral royalties have been paid and coal has contributed over \$19 billion to federal, state and local governments in taxes, royalties and fees. Over the years, bonus bids from the federal coal leasing program have totaled over \$2.6 billion; providing revenue that has been dedicated to building schools and supporting community colleges, universities and highways across the state. Over 100 school buildings and facilities have been built in Wyoming with money from coal bonus bids, and every county has benefitted.

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Comment Number: 0002173\_Quick\_20160622-4

Commenter I: Kendra Quick

Comment Excerpt Text:

Wyoming also gets value from 6,000 direct mining jobs (prior to the latest layoffs) with an annual payroll of nearly \$700 million. The average coal mining job pays nearly \$83,000 per year, well above the national average.

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Comment Number: 0002173\_Quick\_20160622-7

Commenter I: Kendra Quick

Comment Excerpt Text:

This does not include the monetary investments of the companies for the National Environmental Policy Act



(NEPA) studies, exploratory drilling so the federal government can obtain information of about the coal reserves and mitigation costs. All these activities provide numerous jobs for the communities in and around the coal mining areas.

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Comment Number: 0002175\_Woodcock\_20160627-4

Organization I:MSU Department of American Studies

Commenter I:Jennifer Woodcock-Medicine Horse

Comment Excerpt Text:

To say that Montanans will lose jobs is really clouding the issue, when those workers can be re-employed in green energy jobs at a minimal retraining cost

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Comment Number: 0002189\_Jozwik\_20160517-20

Commenter I:Darryl Jozwik

Comment Excerpt Text:

DOES THE CURRENT PROGRAM ADEQUATELY ACCOUNT FOR EXTERNALITIES RELATED TO FEDERAL COAL PRODUCTION, INCLUDING ENVIRONMENTAL AND SOCIAL IMPACTS – YES. PROVIDES LOW COST ENERGY TO SOME OF THE POOREST COMMUNITIES.

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Comment Number: 0002189\_Jozwik\_20160517-21

Commenter I:Darryl Jozwik

Comment Excerpt Text:

HOW DOES THE ADMINISTRATION, AVAILABILITY, AND PRICING OF FEDERAL COAL AFFECT STATE, REGIONAL, AND NATIONAL ECONOMIES (INCLUDING JOB IMPACTS), AND ENERGY MARKETS IN GENERAL – CURRENT PROGRAM WORKS WELL. ANY ADDITIONAL REQUIREMENTS OR UNCERTAINTIES WILL NEGATIVELY AFFECT STATE, REGIONAL, AND NATIONAL ECONOMIES.

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Comment Number: 0002189\_Jozwik\_20160517-22

Commenter I:Darryl Jozwik

Comment Excerpt Text:

WHAT IS THE IMPACT OF POSSIBLE PROGRAM ALTERNATIVES ON THE PROJECTED FUEL MIX AND COST OF ELECTRICITY – WILL RESULT IN HIGHER COST AND HAVE NEGATIVE AFFECTS ON ECONOMY.

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Comment Number: 0002189\_Jozwik\_20160517-28

Commenter I:Darryl Jozwik

Comment Excerpt Text:

WHEN IT COMES TO NONPROFIT COOPERATIVES, WHICH SUPPLY ENERGY TO OUR RURAL AND LOWER INCOME AREAS, ANY INCREASE IN THE FUEL COST IS DIRECTLY BORN BY THE MEMBERS. THESE ARE THE ONES WHO CAN LEAST BARE THE COST OF HIGHER ENERGY BILLS.

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Comment Number: 0002192\_Befus\_20160518-1

Organization I:University of Wyoming Foundation

Commenter I:Brett Befus

Comment Excerpt Text:

Coal production is beneficial to the University of Wyoming, State of Wyoming, the United States and the rest of the world. Increased taxes and further regulation on coal leasing decrease this benefit.

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Comment Number: 0002196\_Thalken\_20160519-1

Commenter I: Lisa Thalken

Comment Excerpt Text:

With the mines north of town being the main source of employment in Converse County, it is of no surprise that the recent layoffs as well as the general uncertainty surrounding the future of coal has made a huge impact on the community already. By changing the federal coal program and possibly increasing taxes and royalties, you will only make this worse.

---

Comment Number: 0002196\_Thalken\_20160519-2

Commenter I: Lisa Thalken

Comment Excerpt Text:

I urge you to step back and look at what a decrease in coal is already doing to our Wyoming communities. We are already seeing an increase in crime, abuse, dependence on alcohol and suicide and this is only the beginning. I discourage you from changing the federal coal program. I would encourage you to review future leases quickly. We need Wyoming coal. We need the jobs that coal provides, the stability that the mines provide for their employees, the revenue that then trickles down to every business in the community and ultimately the affordable electricity that it generates for the rest of the country. Wyoming coal has been a backbone of this state for too long to just throw it by the wayside. Please don't forget the people of Wyoming and of Converse County. We need this industry as much as it needs us.

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Comment Number: 0002197\_Wise\_20160519-4

Organization I: Kiewit Mining Group Inc.

Commenter I: Dirk Wise

Comment Excerpt Text:

How the pricing of Federal Coal will affect regional and national economies- By increasing royalty rates at a time when the market is so low would ensure the demise of the coal industry. Which in my opinion is what this department & president are out to do. Having said that, I believe that increasing royalty rates will ensure that coal is no longer mined and that the government as well as the public will lose all income produced by mining. By switching to alternative energies the cost of electricity will no doubt increase substantially (a point that even the president has admitted to), to a point where electricity will be too expensive for most people to afford. This nation will begin to suffer the economic and social issues this will cause when it cannot afford the required energy to function. At a local level, I invite you to come to Gillette Wyoming or how about West Virginia where the mines are closing....Funding for schools for the state is dwindling resulting in teachers being laid off, construction projects for public transportation have been paused, halted or cancelled altogether forcing workers to abandon their homes because they can't sell them and certainly can't pay for them since there are no longer any jobs, the businesses that supported the mines have already started closing or going bankrupt. These are not just a few businesses or just a few people but thousands that have already lost everything they own due to this administrations agenda. The people have not just been affected in this town but in towns all across this state. In short, the socio economic impact that's already been made by this administration is deplorable and you have only affected us this far, if you do this to the rest of the country it will be devastating to the economy.

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Comment Number: 0002204\_Trowbridge\_20160602-2

Commenter I: Geoffrey Trowbridge

Comment Excerpt Text:

I understand that the economic power of coal companies is still very strong and the jobs involved in it- which have been declining over time and will only continue to decline- are appealing to many people who make arguments about the need for a healthy economy. But as former U.S. Senator Gaylord Nelson said, "There is no

economy without an ecology”, and that’s the spirit that I believe the U.S. Interior Department should approach its power to give- or to not give- coal companies leases for federal land.

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Comment Number: 0002211\_Russell\_20160620-3

Commenter I:Holly Russell

Comment Excerpt Text:

In 2014, the coal industry contributed over \$1.1 billion in revenue to state and local governments. Since 2002, coal has contributed over \$19 billion to federal, state and local governments in taxes, royalties and fees. Since 2002, over \$6 billion in federal mineral royalties have been paid. Over the years, bonus bids from the federal coal leasing program have totaled over \$2.6 billion – revenue that has been dedicated to building schools, and supporting community colleges and highways across the state. This does not include charitable donations made to schools and other local programs.

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Comment Number: 0002221\_Anderson\_20160524-2

Organization I:University of Utah

Commenter I:Samuel Anderson

Comment Excerpt Text:

coal miners and their families must receive support during the transition, as coal is a dying industry. The economies of Central/Southern Utah need to be diversified as well.

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Comment Number: 0002222\_Gray\_20160524-1

Commenter I:Low Gray

Comment Excerpt Text:

Running up the cost of power in the USA will drive good paying jobs like those in Norfolk, NE to China and India. The opportunity for other good paying jobs in Norfolk, NE are nearly nonexistent. Most of the steel plant’s workforce is not high-tech employees that can find another equivalent paying job in the surrounding corn fields of Nebraska.

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Comment Number: 0002225\_Wheeler\_20160519-1

Commenter I:Ray Wheeler

Comment Excerpt Text:

Hugely unfavorable cost-benefit ratio to our Utah economy due to averse impacts on corporate recruitment due to bad air on the Wasatch Front and in other cities. Note that coal mining accounts for just 0.2 percent of Utah jobs (as of 2009--it’s gone down since), while tourism by contrast accounts for 132,000 jobs in Utah (2014 data).

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Comment Number: 0002225\_Wheeler\_20160519-5

Commenter I:Ray Wheeler

Comment Excerpt Text:

Lost economic benefits due to air quality degradation in coal strip mines closely proximate or adjacent to Bryce Canyon National Park

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Comment Number: 0002226\_Tobe\_20160603-3

Commenter I:Jerry Tobe

Comment Excerpt Text:

Another cost is the costs associated with train derailments. There were 18 train derailments in the first five months of 2016 and at least one of them was a coal train derailment.

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Comment Number: 0002229\_Schneider\_20160627-2

Commenter I: Debra Schneider

Comment Excerpt Text:

its time to use our tax dollars to subsidize clean energy and move our economy and jobs toward a more equitable and wise choices for taxpayers and long term economic jobs and choices for our citizens.

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Comment Number: 0002231\_Schwend\_20160620-2

Organization I: Cloud Peak Energy

Commenter I: David Schwend

Comment Excerpt Text:

The DOI's recent moratorium on federal coal leases will negatively impact funding for local schools, governments, and communities. When industry is regulated into bankruptcy or near bankruptcy it has a ripple effect into every part of the state's economy. Not only are coal miners, power plant workers and coal industry companies affected; equipment and part suppliers, manufacturers, railroads, truckers, steel manufacturers and a long list of service jobs are all greatly affected.

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Comment Number: 0002231\_Schwend\_20160620-4

Organization I: Cloud Peak Energy

Commenter I: David Schwend

Other Sections: 8.7

Comment Excerpt Text:

In 2015 Spring Creek Coal Mine paid \$52 Million to the State of Montana for taxes and royalties and approximately \$20 Million to the federal government. We exported 3.6 Million tons of coal to Asia in 2015 and lost money. Between Spring Creek Mine and Cloud Peak Energy Logistics, \$82 Million were lost in 2015. Cloud Peak Energy CPE) as a whole lost \$204.9 Million. CPE pays approximately \$0.39 for every dollar on taxes and royalties. How much more taxes does the government want coal companies to pay? 39% isn't enough?

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Comment Number: 0002267\_Duncan\_20160713\_WyBusinessAlliance-I

Organization I: Wyoming Business Alliance

Commenter I: Bill Schilling

Comment Excerpt Text:

Several thousand prime jobs have vanished in Campbell county over the past year – coal company jobs direct, contract labor direct, plus community indirect impact jobs of several thousand more. With the loss of 10,000 jobs over the past year, Wyoming's unemployment rate today is at 5%, below the national rate. The mines have made their cuts, now comes the trickle down effects – home sales and distressed prices, declining retail sales, and most importantly in the Gillette area uncertainty about the future.

The job losses in Campbell County (Gillette) – over 4,000 – are impactful, but on the national scale miniscule. Extrapolated, these 4,000 jobs for an area of 40,000 people would, in Chicago alone, be 280,000! Clearly that would catch the attention of the American public, and all federal agencies.

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Comment Number: 0002276\_Henderson\_20160715\_350Colorado-6

Organization I: 350 Colorado Board of Directors

Commenter I: Gina Hardin

Organization 2: 350 Colorado Board of Directors

Comment Excerpt Text:

BLM's National Operations Center (NOC) has a potential role in assisting offices in impacted communities in with maintaining strength and focus, providing communications and economics advice, as well as grants and other assistance. NOC could task the resources to assist District and State Offices respond positively, while also helping BLM staff deal with the transitions and local negative reaction in their community. We don't know that NOC's role can be or should be put into regulation, but it can be taken as an agency initiative now. We also question whether a "community reclamation" bond could be put into place specifically for local transition from a coal based economy.

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Comment Number: 0002282\_Bradford\_20160719-5

Commenter I: David Bradford

Comment Excerpt Text:

Coal from federal lands generates considerable revenues. These revenues provide a significant amount of the revenues used by states, counties and municipalities where federal coal is located. As noted previously, any changes in the federal coal program need to evaluate the effects of these changes on the socio-economic condition of the states, counties and municipalities in which the federal coal is located.

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Comment Number: 0002287\_Whittemore\_20160714-1

Commenter I: Judy Whitmore

Comment Excerpt Text:

You are also ignoring the fact of the hundred of thousands of jobs lost and economic devastation to local mining areas.

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Comment Number: 0002289\_Spalding\_20160711-1

Commenter I: Mike Spalding

Comment Excerpt Text:

If you raise the cost of energy, you raise the cost of nearly everything. A poor person will see the cost of electricity, heating and transportation increase. But, since these are components of all retail stores and all goods, they will see everything else increase too. A small increase in energy prices will add up to a huge reduction in everyone's standard of living.

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Comment Number: 0002292\_Rich\_20160603-1

Commenter I: Brenda Rich

Comment Excerpt Text:

Colorado has an abundance of clean burning coal and it's the best source for electricity in the west - plus it provides much needed good-paying jobs for Colorado

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Comment Number: 0002293\_Niemi\_20160606-1

Commenter I: Sharman Niemi

Comment Excerpt Text:

Coal mining in the western United States not only serves our coal fired power plants to sustain reliable and affordable electricity but also provides good paying jobs to rural families and tax revenues to local counties.

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Comment Number: 0002293\_Niemi\_20160606-3

Commenter I: Sharman Niemi

Comment Excerpt Text:

Because federal coal royalties are a direct, pass through cost to all consumers, rates for electricity will increase

requiring consumers to cut spending in other areas. The trickle-down effect of such cuts can significantly impact the economic livelihood for rural communities.

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Comment Number: 0002309\_Monseu\_20160721\_AmericanCoalCouncil-10

Organization I: American Coal Council

Commenter I: Betsy Monseu

Comment Excerpt Text:

For many states with major fiscal challenges, reduced tax dollars are already a reality due to the surging number of regulations resulting in decreasing coal production. The prospect of further declines in tax revenues due to changes in the federal coal leasing program is a very serious concern for them.

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Comment Number: 0002309\_Monseu\_20160721\_AmericanCoalCouncil-11

Organization I: American Coal Council

Commenter I: Betsy Monseu

Comment Excerpt Text:

Unnecessary regulations and reforms targeted at coal are already devastating coal communities. The coal industry has lost more than 45,000 jobs in the past three years.<sup>7</sup>

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Comment Number: 0002309\_Monseu\_20160721\_AmericanCoalCouncil-12

Organization I: American Coal Council

Commenter I: Betsy Monseu

Other Sections: I

Comment Excerpt Text:

The recent report on the economics of federal coal leasing issued by the Obama administration's Council of Economic Advisors ("CEA") mirrors that lack of understanding. This government modeling exercise addresses the question of whether an increase in royalty rates by the Department of the Interior will increase or decrease government revenues. The CEA's answer to the question is that it will increase them. However, the conclusions reached by CEA in arriving at its answer show a complete disconnect between its theoretical modeling results and the way the real-world coal marketplace functions. The CEA therefore misconstrues the outcome

of such a policy change and its report must not be relied on. As an example of the problematic nature of the report, one of the CEA's conclusions is that increasing the cost to produce coal under federal leases (which mainly occurs in the Powder River Basin) through higher royalty payments will raise the market price of coal nationally. This conclusion is incorrect, and it demonstrates a failure to appropriately analyze the competitive market forces at play in the various coal producing regions of the United States, as well as the broader energy marketplace in America.

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Comment Number: 0002309\_Monseu\_20160721\_AmericanCoalCouncil-13

Organization I: American Coal Council

Commenter I: Betsy Monseu

Other Sections: I

Comment Excerpt Text:

Premature shutdown of coal-consuming plants is a trend already occurring due to the influence of an increasing number of environmental regulations promulgated for such plants. The robust marketplace competition that exists coal and natural gas 2 Energy Information Administration, "Today in Energy", March 16, 2016.

3 IHS Energy News Release, “IHS Study: Diversity of United States Power Supply Could be Significantly Reduced in Coming Decades”, July 24, 2014. Available at <http://press.ihs.com/press-release/energy-powermedia/ihs-study-diversity-united-states-power-supply-could-be-significant> will be significantly changed as more coal plants are shut down and new ones are not added to the system. The graph below from the Department of Energy’s Energy Information Administration is a snapshot of scheduled electric generation capacity additions and shutdowns for 2015, and clearly shows the net reduction in coal capacity. If this trend continues, as expected, coal demand and production will drop. Natural gas demand will increase, bolstered by the build out of new natural gas capacity underway. These conditions will lead to higher natural gas prices and coal will be less available to buffer higher gas prices and gas price spikes.

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Comment Number: 0002309\_Monseu\_20160721\_AmericanCoalCouncil-2

Organization I: American Coal Council

Commenter I: Betsy Monseu

Comment Excerpt Text:

The American Coal Council is greatly concerned about any reform of the federal coal program by DOI-BLM that would increase cost of mining and thereby negatively impact the ability of coal suppliers to compete in the highly competitive U.S. and global energy markets.

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Comment Number: 0002309\_Monseu\_20160721\_AmericanCoalCouncil-3

Organization I: American Coal Council

Commenter I: Betsy Monseu

Comment Excerpt Text:

The stage is set for higher electricity costs for American households and businesses. This could occur because of a change such as a royalty rate increase on federal coal that raises the cost to produce coal, or as a result of factors pushing the U.S power generation fleet’s continued shift away from coal and forcing its heavier reliance on natural gas.

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Comment Number: 0002310\_Payne\_20160721-3

Commenter I: Steven Payne

Comment Excerpt Text:

Colorado’s \$13.2 billion outdoor recreation economy depends on healthy public lands and abundant snow pack.

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Comment Number: 0002314\_Beres\_EarthMinWAInterfaithPower\_20160722-3

Organization I: Creation Justice Ministries

Commenter I: Shantha Alonso

Comment Excerpt Text:

An aspect of the coal economy that has long been overlooked is in the tax system. Local communities that should have received millions in royalties to support schools, libraries, roads, and other projects for the common good, have not gotten their fair share.

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Comment Number: 0002314\_Beres\_EarthMinWAInterfaithPower\_20160722-5

Organization I: Creation Justice Ministries

Commenter I: Shantha Alonso

Comment Excerpt Text:

we know that changes in the marketplace for coal have and will continue to impact jobs in our communities.

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Comment Number: 0002314\_Beres\_EarthMinWAInterfaithPower\_20160722-6

Organization I:Creation Justice Ministries

Commenter I:Shantha Alonso

Comment Excerpt Text:

we also believe that any responsible federal coal review process should include a robust plan and discussion around ensuring that coal workers are cared for, and that they will have new economic opportunities available to them.

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Comment Number: 0002315\_Stewart\_UnitedChurchChirst\_20160722-5

Organization I:Creation Justice Ministries

Commenter I:Shantha Alonso

Comment Excerpt Text:

We believe it is a moral imperative that this federal coal review process include a conversation about a transition plan for coal economy workers and that local, state and the federal governments come together to take strong action to address this challenge.

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Comment Number: 0002318\_Gordon\_20160722-4

Commenter I:Diana L. Gordon

Other Sections: 6

Comment Excerpt Text:

This pollution causes ocean acidification and climate change. We have already evidenced both of these phenomena. Ocean acidification which, for example, interferes with the ability of oysters to form shells, has already had repercussions in our shellfish industry, especially with oysters. The shellfish industry brings in about 270 million dollars to Washington's economy and provides jobs for about 3,200 people. Can we afford to do anything that we know might affect it further?

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Comment Number: 0002324\_Dubbert\_20160722\_BME-2

Organization I:Blue Mountain Energy

Commenter I:Jeffrey C Dubbert

Comment Excerpt Text:

BME believes the taxpayer and the local community is getting a fair return from the coal resources. The impact that the mine has on the local community is enormous, the mine is one of the largest employers in the community. Without the support of the mine through wages and taxes, server limitation would be placed on the local community.

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Comment Number: 0002324\_Dubbert\_20160722\_BME-3

Organization I:Blue Mountain Energy

Commenter I:Jeffrey C Dubbert

Comment Excerpt Text:

In rural communities such as Rangely, Colorado energy drives the economy. It builds roads, schools and recently helped build a new Hospital. The town, county and local communities depend upon the mine just like the mine depends upon the community to provide services to the operation and to its employees. There is no question that the BME mining operation is a good member of the community and definitively pays the fair share to help support it.

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Comment Number: 0002326\_Moench\_20160724\_UtahPhysicHealthyEnviron-36

Organization I:Utah Physicians for a Healthy Environment

Commenter I:Malin Moench

Comment Excerpt Text:

It will artificially accelerate the loss of jobs in the Appalachian coal industry,

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Comment Number: 0002326\_Moench\_20160724\_UtahPhysicHealthyEnviron-49

Organization I:Utah Physicians for a Healthy Environment

Commenter I:Malin Moench

Comment Excerpt Text:

The loss of intellectual capacity from unnecessary exposure to lead in the United States (and in the rest of the developed world that relies on coal to generate power) is not only a personal and social tragedy, it has caused a drastic reduction in the productivity of the workforce in the economies of countries that obtain their energy primarily from burning coal.(25)

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Comment Number: 0002326\_Moench\_20160724\_UtahPhysicHealthyEnviron-52

Organization I:Utah Physicians for a Healthy Environment

Commenter I:Malin Moench

Other Sections: 10

Comment Excerpt Text:

Climate disrupting CO<sub>2</sub> emissions come primarily from coal-fired power plants. Reducing those emissions also reduces other pollution (notably SO<sub>2</sub>, NO<sub>x</sub>, and PM<sub>2.5</sub>), which brings major health benefits to the American public. The EPA's Integrated Planning Model yields an updated estimate that implementing the Clean Power Plan would reduce CO<sub>2</sub> and related emissions in the year 2030 by 30% relative to 2012 levels. This would yield health and benefits of from \$64 to \$99 billion by reducing SO<sub>2</sub>, NO<sub>x</sub>, PM<sub>2.5</sub> emissions (without taking the effects of reduced exposure to neurotoxins into account). <http://www.nrdc.org/air/pollution-standards/>. However, if political or legal considerations keep the Clean Power Plan from being implemented, or an unreformed Federal coal leasing program continues to offset its effects, coal-fired power plants will continue to inject neurotoxins into the environment at the pace. The result could be that the productivity of the nation's children will be far below what it could otherwise be at the time that those children enter the workforce.

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Comment Number: 0002326\_Moench\_20160724\_UtahPhysicHealthyEnviron-53

Organization I:Utah Physicians for a Healthy Environment

Commenter I:Malin Moench

Comment Excerpt Text:

BLM leases are the source of 40% of the thermal coal burned for power in the United States. Current Federally-leased reserves are projected to run out in 20 years. If the current moratorium were made permanent, it might eventually reduce the amount of thermal coal burned in the United States by as much as 40%. Such a moratorium would then bring with it a roughly 40% reduction in exposure of the American public to SO<sub>x</sub>, NO<sub>x</sub>, PM<sub>2.5</sub>, and to mercury, lead, and other toxic heavy metals. A back-of-the-envelope estimate of the long-term value to the American economy of phasing out Federally leased thermal under these assumptions is an increase in the productivity of the American workforce worth about \$5.83 trillion per year ( $\$14.586 \times 0.40 = \$5.83$ ). (31)

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Comment Number: 0002326\_Moench\_20160724\_UtahPhysicHealthyEnviron-54

Organization I:Utah Physicians for a Healthy Environment

Commenter I:Malin Moench

Comment Excerpt Text:

As mentioned earlier, if the electric generating capacity that had been supplied by phased-out coal is replaced primarily by energy efficiency and renewable forms of energy, as is contemplated under the Clean Power Plan, the National Resources Defense Council has shown that retail electric rates would actually fall by 2030. This implies that in calculating the economic value of a long-term phasing out of Federal coal as a source of electric power, there is no need to adjust that value downward for increases in retail electric rates.

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Comment Number: 0002326\_Moench\_20160724\_UtahPhysicHealthyEnviron-7

Organization I:Utah Physicians for a Healthy Environment

Commenter I:Malin Moench

Comment Excerpt Text:

Chronically selling Federal coal far below its market value continues to have a number of socially damaging effects. It has resulted in depriving both Federal and state governments of some \$40 billion in revenue<sup>(2)</sup> since the market made its major turn from privately-sourced coal to underpriced Federally-leased coal. Chronically selling Federal coal far below its market value has also had a damaging effect on employment. Most Federally-leased coal is surface mined. Selling it below its market price displaces coal from the privately-held underground mines of Appalachia and Illinois. In the process, it substantially reduces overall employment in the coal mining industry. Mining coal underground in Appalachia is labor intensive, while surface mining is capital intensive. Coal strip mined in the Powder River Basin supports one-tenth as many jobs as the same quantity of coal mined underground in Appalachia, and one-fifth as many jobs as the same quantity of coal mined in the Illinois Basin

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Comment Number: 0002326\_Moench\_20160724\_UtahPhysicHealthyEnviron-79

Organization I:Utah Physicians for a Healthy Environment

Commenter I:Malin Moench

Comment Excerpt Text:

Federal coal subsidies unfairly disadvantage coal producers in Appalachia and other regions, causing economic dislocation and lowering total employment in the United States. More broadly, the BLM's subsidies of coal distort U.S. markets, incentivize U.S. coal exports by subsidizing transportation costs, place low-carbon sources of energy at a disadvantage, and ultimately undercut the president's Climate Action Plan. DOI's subsidies of coal also harm public health and damage America's natural systems, directly through strip mining, and indirectly by accelerating changes to America's climate. The health and climate effects do particular harm to the Western United States.

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Comment Number: 0002326\_Moench\_20160724\_UtahPhysicHealthyEnviron-81

Organization I:Utah Physicians for a Healthy Environment

Commenter I:Malin Moench

Other Sections: I

Comment Excerpt Text:

A study by the New Climate Economy Project<sup>(19)</sup> and a working paper from the International Monetary Fund<sup>(20)</sup> recently corroborated the results of the NRDC's update of the EPA's Integrated Planning Model. They conclude that because of recent advances in renewable technology and the secondary health benefits of cutting fossil fuel emissions, the choice between a strong economy and a strong response to climate change is a false one. They found that ambitious policies to cut carbon emissions would either have a very small drag on economic growth or lead to faster growth. Jeff Spross, *Would Limiting Carbon Emission's Destroy the Economy?*, October 16, 2013, at <http://thinkprogress.org/climate/2013/10/16/2730271/carbon-regulations-economy/>. Recent modeling of an extremely aggressive national carbon tax for the United States found a similar result, even before the health benefits are factored in. (Nystrom, S., 2014.) A recent of upcoming British policy to cut emissions from its economy reached a similar conclusion. (Cambridge Economics, 2014.)

(19) See New Climate Economy Project, Global Commission on the Economy and Climate, available at <http://newclimateeconomy.report/>.

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Comment Number: 0002327\_Everdean\_20160724-2

Commenter I:Jo Everdean

Comment Excerpt Text:

The Baseload Act should not apply to coal development that is done on public lands. In addition to harming the public, it also has negative socioeconomic impacts. The public should not have to pay for a private company to do it's business. Even more over, those who are struggling economically should not have to at all support a private company, even if that company is developing energy for public use.

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Comment Number: 0002329\_Segger\_20160724\_CambellCntyWY-1

Organization I:County and Prosecuting Attorney's Office, Campbell County, Wyoming

Commenter I:Carol Seeger

Other Sections: 13

Comment Excerpt Text:

The potential impacts to state and local government resulting from a proposed change to the federal coal leasing program are not identified as being an issue that will be addressed in the environmental assessment. We specifically request that the economic impacts to state and local governments be included. Currently, there is an estimated 25 billion tons of economically recoverable coal located in the Powder River Basin with 343 million tons of coal being produced in Campbell County in 2013 accounting for 88% of the state's total production. Eighty percent of all coal in Wyoming is produced from federal and Indian lands.

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Comment Number: 0002329\_Segger\_20160724\_CambellCntyWY-2

Organization I:County and Prosecuting Attorney's Office, Campbell County, Wyoming

Commenter I:Carol Seeger

Other Sections: 13

Comment Excerpt Text:

Campbell County generated 120 million in revenue in FY2014 stemming from coal resources valued at 3.5 billion. In 2013, Campbell County collected 64.7 million in ad valorem tax with 85% coming from natural resource production. This percentage does not include the revenue generated by the service industries that support coal production nor the fact that 5,195 people representing approximately 11% of the county residents and 24% of total employment are directly employed by the coal mining industry. In addition to the revenue generated to support Campbell County government, a mill levy is also applied to the taxable value of the coal to support the Campbell County Hospital District, the Campbell County Cemetery District, the Campbell County School District, the Campbell County Weed & Pest District, the Campbell County Conservation District, the City of Gillette and the Town of Wright. Any EIS intended to evaluate the federal coal leasing program must address the economic impacts to state and local governments. Such impacts are without question relevant in evaluating the federal coal program.

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Comment Number: 0002329\_Segger\_20160724\_CambellCntyWY-3

Organization I:County and Prosecuting Attorney's Office, Campbell County, Wyoming

Commenter I:Carol Seeger

Comment Excerpt Text:

Any change to the federal coal program needs to consider the potential impacts to taxpayers throughout the country if this affordable method by which electricity is provided is altered.

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Comment Number: 0002329\_Segger\_20160724\_CambellCntyWY-8

Organization I: County and Prosecuting Attorney's Office, Campbell County, Wyoming

Commenter I: Carol Seeger

Comment Excerpt Text:

The Board would first like to lend its support to the concerns raised by members of the United States Senate in a letter dated July 14, 2016, and signed by both Senator Barrasso and Senator Enzi representing the great State of Wyoming. The letter expressed concern regarding the timing of a report entitled The Economics of Coal Leasing on Federal Lands: Ensuring a Fair Return to the Taxpayers which was published by the President's Council of Economic Advisors. This report covers and makes assertions regarding the federal coal leasing program that we understood was to be the subject of the programmatic assessment being conducted by your office. The issuance and timing of this report severely compromises the integrity of any assessment of the federal coal leasing program completed by the Department.

There is a reference in the above mentioned report that increasing royalty payments will increase revenues to state governments. As you know, Campbell County relies on ad valorem tax as its revenue source. Ad valorem tax is paid on the fair market value of the coal produced less federal royalty payments. Any increase in federal royalty payments has a direct negative impact on ad valorem taxes paid to Campbell County. This was a point we made at the scoping session held in Gillette, Wyoming, last summer. It should be further noted that the majority of ad valorem tax collected in Campbell County goes to support the K through 12 school system throughout the State of Wyoming. In Wyoming, ad valorem tax revenue is recaptured and redistributed from wealthier school districts to poorer districts within the state. To date, Campbell County School District has paid over \$1 billion to the State of Wyoming that was redistributed to other school districts within the state. Under the best scenario, only 48% of the additional money that may be gained by an increase to the federal mineral royalty would be returned to the State of Wyoming. (Federal mineral royalties are distributed 50% to the federal government, 48% to the State of Wyoming with a 2% administrative charge withheld by the federal government.)

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Comment Number: 0002333\_Magagna\_20160725\_WyStockgrowers-2

Organization I: Wyoming Stock Growers Association

Commenter I: Jim Magagna

Comment Excerpt Text:

Every citizen of the state of Wyoming benefits significantly from the revenues generated from coal mining and the bonus payments, taxes and royalties paid by the mining industry. Many of our smaller ranching enterprises are made more sustainable by the opportunity for a family member to work in the mining industry to support the ranching enterprise.

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Comment Number: 0002333\_Magagna\_20160725\_WyStockgrowers-4

Organization I: Wyoming Stock Growers Association

Commenter I: Jim Magagna

Comment Excerpt Text:

While the natural resource industries in our state share a certain competitiveness for land and labor, we have a critical interdependence. Mines create employment opportunities for ranch families, while ranching provides rural living opportunities for miners. Our members benefit from the enhanced services that spring up in our local communities from public facilities to retail businesses.

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Comment Number: 0002335\_Webber\_20160725\_HealthActionNM-5

Organization I: Health Action New Mexico

Commenter I: Barbara Webber

Other Sections: 10 I

Comment Excerpt Text:

According to research by the Center for Health and the Global Environment at the Harvard School of Public Health (2) (CHGE), “The economic, health and environmental impacts associated with extraction, transportation, processing, and combustion cost the U.S. public between a third to over half a trillion dollars annually.” Coal mining regions have 11,000 excess deaths annually from lung cancer, heart, respiratory and kidney disease. Lives lost in coal mining regions are evaluated at \$74.6 billion per year.

(1) <http://www.emnrd.state.nm.us/MMD/Coal-FAQs.html#CoalinNM>

(2) [p://www.chgeharvard.org/resource/explore-true-costs-coal](http://www.chgeharvard.org/resource/explore-true-costs-coal)

These adverse health impacts are felt in New Mexico. In San Juan County, where coal activity is more prevalent, the American Lung Association (ALA) reports that residents are at an elevated risk for lung diseases. The ALA indicates there are 2,885 cases of pediatric asthma, 8,442 cases of adult asthma and 5,219 people diagnosed with COPD in this rural northwestern New Mexico county alone.

Measurable health effects of coal-related air pollution include increased rates of lung and heart disease. According to CHGE, 2005 data showed that “[p]articulates and oxides of nitrogen and sulfur kill over 24,000 people annually, including 2,800 from lung cancer.” Further, pollution from coal operations produces 38,200 non-fatal heart attacks annually.

Comment Number: 0002336\_Cole\_20160725\_MesaCntyCO-2

Organization I: Mesa County Colorado, Board of County Commissioners

Commenter I: Kristen Cole

Comment Excerpt Text:

Affordable Energy Improves our Standard of Living: In addition to the economic benefits we get from resource extraction such as coal mining, we should also recognize that affordable, reliable energy that comes from coal helps to stimulate our economy. The more affordable and reliable our electricity is, the better our access is to food, shelter, clothing, transportation, sanitation and clean water. In states such as California where electricity from fossil fuel use has been restricted, electricity rates are over double the rates we pay here in Colorado.

Comment Number: 0002336\_Cole\_20160725\_MesaCntyCO-4

Organization I: Mesa County Colorado, Board of County Commissioners

Commenter I: Kristen Cole

Comment Excerpt Text:

Economic Impacts to Mesa County: While coal resource extraction in Mesa County is limited, there are several companies that operate in and around Mesa County that provide goods and services to the coal mining industry. These businesses provide good paying jobs with benefits for many residents in the county. Additionally, many of the miners who live in rural communities outside of Mesa County travel to our county to shop and do business. Businesses here in Mesa County will be impacted if additional mines are forced to close due to excessive federal government regulation and interference

In addition to direct tax revenue, an economy that has a solid base of natural resource development will provide additional economic opportunities for tourism and other service industries

Comment Number: 0002339\_Satterfield\_20160726\_IECA-2

Organization I: Industrial Energy Consumers of America (IECA)

Commenter I: Marnie Satterfield

Other Sections: I

Comment Excerpt Text:

According to the Energy Information Administration (EIA), between 2008 and 2013, U.S. coal production fell by 16 percent. In 2015, U.S. coal production was 11 percent lower than 2014, the lowest level since 1986. However, U.S. electricity prices are rising. Since 2005, U.S. electricity prices have risen 28 percent. (3) And, industrial electricity prices have risen 20 percent and manufacturing jobs have decreased by 13 percent over the same ten-

year time period. (4) With the decline of coal production, and more expensive energy forms introduced into the market, consumers of energy have suffered.

3) Energy Information Administration, Electricity, <http://www.eia.gov/electricity/>.

(4) Bureau of Labor Statistics, Employment, <http://www.bls.gov/ces/>.

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Comment Number: 0002339\_Satterfield\_20160726\_IECA-6

Organization I: Industrial Energy Consumers of America (IECA)

Commenter I: Marnie Satterfield

Other Sections: 7.4 I

Comment Excerpt Text:

2. The BLM has failed to include increased global GHG emissions because of industrial GHG leakage. The BLM has not included the cost of industrial GHG leakage in its cost calculations. When coal and coal-fired electricity prices increase, energy-intensive trade-exposed (EITE) industries will shift production to other countries in order to be competitive. (7) When they do, their GHG emissions and jobs move with them and global GHG emissions will not have been achieved.

7) Climate Change Trade Measures: Consideration for U.S. Policymakers, GAO, <http://www.gao.gov/products/GAO-09-724R>

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Comment Number: 0002342\_Etter\_20160726-6

Organization I: Bowie Resources, LLC

Commenter I: Art Etter

Comment Excerpt Text:

I have experienced firsthand the impacts lost coal mining jobs have on our local, rural communities. I'm a resident of Delta County, Colorado, with a population of 30,000. As the Denver Post reported on May 14, the closing of two mines in the valley resulted in a loss of roughly 1000, well-paying jobs. Jobs that paid on average \$80,000 per year in salaries, not including health and retirement benefits. This equates to a total economic hit to the county of \$80 million annually in salaries alone.

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Comment Number: 0002347\_Matney\_20160607-2

Commenter I: Barry Matney

Comment Excerpt Text:

-People spoke of poor communities where coal mines are – I believe that is a false statement. These communities may be poor compared to larger developed communities but the incomes that are made in these areas are spent in these areas. What causes these communities to become run down and desolate and poor is when it becomes too expensive for operators to operate the mine and it shuts down due to federal regulations – that income (normally higher paying wages) has disappeared and now who is left to buy the new vehicles, shop at the local furniture store, etc. The trickledown effect causes the communities to dry up. No greater example than what happened in Detroit under this administration.

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Comment Number: 0002348\_Thompson\_20160607-2

Commenter I: bret thompson

Comment Excerpt Text:

I have a four year degree in Wildlife Conservation. I have worked for both the North Carolina Wildlife and the Wyoming Game and Fish. I have also worked for the Wyoming Department of Corrections. Until I worked for Antelope Mine, Cloud Peak Energy, a coal mine, I could not afford more than a house trailer. I now own a new 2,200 square ft. house, if I lose my job my family and I will not be able to afford the payments on the house, a situation many of my friends and miners from other companies are currently facing. The sudden loss of jobs in

the area has caused a huge increase in available houses for sale, all our houses are under water. There aren't any comparable jobs in the area so the vast majority of us will end up defaulting on our loans and we will lose our homes and our credit rating. This will affect not only us but also the economy of the region.

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Comment Number: 0002352\_Hutt\_20160721-I

Organization I: Cloud Peak Energy

Commenter I: Ryan Hutt

Comment Excerpt Text:

Please don't take away coal companies ability through increase in costs and mining costs – don't take away their ability to help provide families in the Powder River Basin with jobs, good reliable jobs, and good clean energy.

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Comment Number: 0002355\_Prinkki\_20160721-I

Commenter I: John Prinkki

Comment Excerpt Text:

Coal is important to the state of Montana. It's important to Carbon County. We are going to spend another \$2 Million in the next biennium on TSEP project funded bridges – that trust fund is going to be inviolate and never removed, but we rely on the interest rates. Without building that fund, the interest that we draw on that money – inflation is going to eat that benefit up. So infrastructure projects that are good for the State of Montana and Carbon County will not be funded in the same way they have in Helena. We introduced resolutions to the National Associations of Counties and the interim resolution we have now is in opposition basically to the Clean Power Plan urging congress not to allow the implementation of the Clean Power Plan until the federal government finds a way to either provide tax incentives or funding to develop clean coal technology. Like the Crow Tribe – they have developed technology where they can use Carbon through algae to produce fertilizer or high grade jet fuel. That would be a win-win process for the State of Montana, the Crow Tribe and the federal government. Its alarming to me that the federal government is in a deficit situation, yet we will not use our natural resources to reduce that deficit.

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Comment Number: 0002358\_Small\_20160721-I

Organization I: Boilermakers Local 11

Commenter I: Jason Smalls

Comment Excerpt Text:

As far as trades

goes, we have boilermakers, pipefitters, electrical workers and operating engineers who are all getting hit by this. These are good salt of the earth people. Businesses such as the mine in Butte, the mine, and refineries in billings in laurel are also taking the hit. Other things that affect it like we said are infrastructure projects, school systems, and the pension of many Montanans. Your good working class people. The other thing that's starting to come into play now will be the lack of money that the coal board is allowed to disperse. And we have to remember them because they do a lot of good for the local communities and also for some of the reservations in Montana. I know the Crow reservation receives funding from them. And the Northern Cheyenne tribe just last week got \$300,000 and another \$45,000 for the utilities commission. That makes over \$600,000 to these communities the past three years alone.

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Comment Number: 0002359\_Goffena\_20160721-I

Organization I: Musselshell County

Commenter I: Bob Goffena

Comment Excerpt Text:

The United

States has 25% of the recoverable coal in the world. Out of that 25%, 8% of it is in Montana so it's kind of like we are sitting on a coal mine or a gold mine, however you want to look at it. So, if we are going to develop this coal, this is what's going to run up our economy for our state. It will affect our state government, but it will especially affect us at the county government. Signal Peak, the only underground coal mine in Montana is mostly in our county. But last year, 36.3% of our revenue come directly from Signal Peak mine and that's of course is what is running our economy and our budget. This coming year we are going to take a 50% drop in that so we are going to have to cut our budget by 18% because of the loss of coal revenue. When I was a commissioner the first time in 2000, we were the second lowest county per capita income of non-reservation counties so we were pretty close to the bottom. Now we are 17th from the bottom per capita income. We have a lot of high paying coal miner jobs and because of that my three children were able to stay in Musselshell County and not have to move away to make a living. We are looking forward to Signal Peak continuing production.

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Comment Number: 0002361\_Williams\_20160721-1

Organization I:City of Colstrip

Commenter I:John Willians

Comment Excerpt Text:

We need to recognize that, we need to get the word out on the value of coal development and the power plants in Colstrip, what they do for the state. There is almost a billion dollars that's sits in the school trust account, a billion dollars that has been collected in one tax alone and that doesn't count for the billions of dollars paid in wages to the good jobs to the people of our state.

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Comment Number: 0002369\_Neiman\_20160721-1

Organization I:West Energy Company

Commenter I:Sabrina Neiman

Comment Excerpt Text:

In 2013 the state of Montana made over \$56 million in state severance tax. So where does that go? \$14 million of that went to grants to local government infrastructure projects. \$7.4 million of that went to the Treasure State Endowment Program to do regional water system projects. \$7.4 million of that went to grants and loans, are available to local governments for economic development projects such as certified regional development corporations for the purposes of: creating good paying jobs for Montana residents, promoting long-term stable economic growth, encouraging local economic development organizations, and retaining or expanding existing businesses. \$13 million of that went to the general fund. That goes to public schools, human services, Department of Corrections, and higher education. \$6.7 million goes to the legislature who appropriates the money in HB 5 to finance building projects at universities, locational educational institutions, state buildings, and state institutions. \$3.2 million is appropriated to the coal board in HB 2 for local impact grants and administrative costs. \$3 million can be spent for the following 3 purposes: Montana growth through agriculture, conservation districts, and the state library commission. \$718,000 to state parks. \$537,000 to renewable resource debt service fund. This money in this fund is used to service debt on coal severance tax bonds used to finance renewable resource projects. \$356,000 is distributed to the stress for the purposes of protecting works apart in the Capitol. \$250,000 goes in appropriated HB 2 to the Department of Environmental Quality to administer and enforce Coal and Uranium land reclamation.

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Comment Number: 0002376\_Custer\_20160721-2

Organization I:Montana House of Representatives

Commenter I:Geraldine Custer



## Comment Excerpt Text:

Coal in the state of Montana produces property taxes for the universities, states, schools, counties, and districts. The income tax alone on \$114 million in 2015 that was just on coal mining jobs.

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Comment Number: 0002378\_Heaphy\_20160721-1

Organization I: Cloud Peak Energy

Commenter I: Hayden Heaphy

Comment Excerpt Text:

And now on the economic side of things, Sheridan, Wyoming, they just had their economic area Top 10 List, Spring Creek is #3 on the employment. Only 3 of the 10 top employers were non-state or federal entities. The other one was the railroad and Walmart. So the mine is the only thing that is actually generating revenue and money from a resource and creating value for the local economy. Everything else is either service-based or it's funded through things like coal, income taxes, and everything else. So getting rid of that one item that generates revenue for the area, and value, it's going to feel all other background circle and everything else is going to come down.

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Comment Number: 0002381\_Schwend\_20160721-1

Organization I: Cloud Peak Energy

Commenter I: Molly Schwend

Comment Excerpt Text:

The average coal miner, you know without benefits, without overtime, is making \$70,000 at Spring Creek Mine. Just last year we put \$17 million into this community, mostly in Billings between goods and services

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Comment Number: 0002382\_Ankney\_20160721-3

Organization I: State of Montana

Commenter I: Duane Ankney

Comment Excerpt Text:

Coal is labor intensive.

It takes a lot of people to mine it. It takes a lot of people to burn it. That's a lot of paychecks going home on Friday night getting thrown on the table, shoes for the baby. There are not a lot of jobs in wind regardless of what you hear. 600 Megawatts of wind will be about 12 jobs. 600 Megawatts of Coal fired generation is about 135 at the plant, and about another 100 jobs at the coal mine. \$80,000 plus a year jobs.

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Comment Number: 0002385\_Arveschoug\_20160721-1

Organization I: Big Sky EDA

Commenter I: Steve Arveschoug

Comment Excerpt Text:

From our stand point and an economic development stand point, it's a significant issue. Energy drives our economy. We must have affordable and reliable energy to create jobs, power business, and power industry and continue to develop as a global community and as a state. Notwithstanding Senator Keane's earlier comments, 50% of the major power users in the state of Montana are in Yellowstone County. I have not quantified that by power usage but I do know that industry in Yellowstone County relies on affordable, reliable power. Resolving this issue about our energy future is very, very important for local industries, local businesses that support those industries,

and all the jobs that are tied to those. So from an economic development standpoint, this is a very important issue for Yellowstone County and parts of the state that we help to support and where we encourage economic growth

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Comment Number: 0002390\_Pfister\_20160721-5

Organization I: Northern Plains Resource Council

Commenter I: Ellen Pfister

Comment Excerpt Text:

When BLM decides to lease coal in an area, all other uses of the area are overshadowed. Coal does not tolerate other industries coming into its immediate area. Colstrip has a fair sized population for Eastern Montana, but it has the most minimal business infrastructure possible for a town that size. Its population is terrorized right now because of the fear for the viability of the power plant and mine. What will they do? They may be in as tough a situation as the homesteaders stranded on the prairie. BLM has a responsibility to the people who come in to mine the coal. Opening mining in an area should not be done lightly.

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Comment Number: 0002392-4

Commenter I: Mary Fitzpatrick

Comment Excerpt Text:

the BLM should be preparing to help coal country plan for an economic future where we all can prosper with a national coal leasing plan. We need to promote economic diversification in communities hurt by the decline of the coal industry

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Comment Number: 0002436-10

Commenter I: Sharon St Joan

Comment Excerpt Text:

It will also be possible to provide programs and re-training for coal and other fossil fuel workers join the new economy. These workers have worked hard to provide energy for us to heat and cool our homes and for us to have electricity, and they deserve a just transition. But coal is the energy of the past. Now it is time to move on.

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Comment Number: 0002443\_Koontz\_20160727\_BowieResources-1

Organization I: Bowie Resource Partners, LLC

Commenter I: Gene DiClaudio

Comment Excerpt Text:

The local rural cities and towns, counties, and state economies rely on the economic contributions of the Bowie mines through its payment of salaries, taxes, and royalties. The continued operations of the Bowie mines is critical to the future economic health of the communities and counties local to the mines. Additionally, much of the coal produced from the Bowie mines is used to generate low-cost electricity that is supplied to the residences of Utah and other western states.

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Comment Number: 0002444\_Rait\_20160727-3

Organization I: The Pew Charitable Trusts

Commenter I: Ken Rait

Other Sections: 18 |

Comment Excerpt Text:

In conducting the Programmatic Environmental Impact Statement (PEIS) of the federal coal leasing program, the

Pew Charitable Trusts recommends that BLM consider the potential impacts new policy direction will have on the agency's mission to manage the lands with wilderness characteristics as part of BLM's multiple use mission. Pristine BLM lands provide a range of uses and benefits in addition to their value as settings for solitude or primitive and unconfined recreation. These lands are some of our nation's most sought after hunting and fishing grounds, most popular mountain biking trails, home to an extensive network of ungulate migration corridors, essential habitat for imperiled species like the greater sage grouse and habitat for 450 listed species. The protection of these values deserves consideration when reforming the federal coal leasing program on BLM lands. Recreation on natural BLM-managed lands has a significant positive impact on rural economies across the West. A study conducted by the independent firm ECONorthwest and commissioned by The Pew Charitable Trusts recently highlighted this value, finding non-motorized recreation on the 246 million acres of our nation's land overseen by the Bureau of Land Management supports 25,000 jobs and generates \$2.8 billion for the U.S. economy. (See: <http://www.pewtrusts.org/en/research-and-analysis/analysis/2016/03/31/the-economic-value-ofquiet-recreation-on-blm-lands>)

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Comment Number: 0002446\_Balck\_20160727-1

Organization I: Craig/Moffat Economic Development Partnership

Commenter I: Michelle Balleck

Other Sections: I

Comment Excerpt Text:

Surface and subsurface coal mining directly employ 4.6% of the region's employees and account for 17.4% of the region's direct output. Coal mining provides 1,545 direct jobs and total employment (direct and indirect) of 3,149 jobs out of the Northwest Colorado region's total employment of 33,411. The coal mining sector contributes \$478.6 million to the region's Gross Regional Product.

The report, "Measurement of Economic Activity for Coal Industry and Electrical Power Generation Industry" outlines measures of the economic activity associated with coal mining and associated electrical power generation in Northwest Colorado. The report observes that the coal industry "provides a strong foundation of primary jobs based on the introduction of wealth from outside sources and strong output from the coal mining companies." We support the current program because coal is the backbone of our community's economy and a critical part of meeting our nation's affordable energy needs.

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Comment Number: 0002447\_Mork\_20160727-1

Organization I: Interfaith Workers Justice

Commenter I: Ian Pajer-Rogers

Comment Excerpt Text:

Coal companies not only bear an responsibility to their workers, through fair royalties and taxes, but they are also responsible to entire communities, to those who depend on good infrastructure, quality schools, safe communities and so much more.

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Comment Number: 0002447\_Mork\_20160727-2

Organization I: Interfaith Workers Justice

Commenter I: Ian Pajer-Rogers

Comment Excerpt Text:

Further, when these coal companies mine on federal lands, they have an even greater burden of responsibility to ensure that profits earned from coal mined on public lands are used to benefit the greater public good. This must include providing a smooth transition for the tens of thousands of miners who will lose their jobs as the nation transitions and reduces the amount of coal it burns. In Germany, for example, the transition away from coal was buttressed by work-training for miners under the age of forty and a program to help older workers ease into retirement, while fulfilling promises on retiree payments. In the United States, no such program exists to help

miners. Particularly for those miners who work on public lands, such a program should be a top priority for coal companies and the federal government.

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Comment Number: 0002447\_Mork\_20160727-3

Organization I: Interfaith Workers Justice

Commenter I: Ian Pajer-Rogers

Comment Excerpt Text:

We call on BLM to take bold action and investigate whether workers, taxpayers, and local communities are getting a fair return from these publicly owned resources. We call on the BLM to find new ways to hold coal companies accountable to their workers, to make sure that promises made are kept. Finally, we call on the BLM and the Federal Government as a whole to pay special attention to good, living wage jobs in the communities hardest hit by the inevitable changes in this industry.

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Comment Number: 0002449\_Lyon\_20160727\_NWF-39

Organization I: National Wildlife Federation Action Fund

Commenter I: Jim Lyon

Other Sections: I

Comment Excerpt Text:

This report demonstrates that big game and other wildlife populations in the area are vulnerable to the impacts of coal leasing, both directly from mining but also from indirect and cumulative impacts such as coal rail transport and climate change. Declines in habitat have direct impacts on local economies. Nearly 11 million tourists travel through Montana annually, largely driven by recreation and wildlife-watching opportunities. Visitors to Montana support over 38,000 jobs and generate \$3.9 billion to the state economy. In Wyoming, tourism created 31,510 jobs and totaled \$3.33 billion in revenue. (93)

(93) National Wildlife Federation and Natural Resources Defense Council, *Losing Ground Energy Development's Impacts on the Wildlife, Landscapes, and Hunting Traditions of the American West* (Nov. 2015) at 11, available at [https://www.nrdc.org/sites/default/files/wil\\_15111601a.pdf](https://www.nrdc.org/sites/default/files/wil_15111601a.pdf).

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Comment Number: 0002450\_Trainor\_20160727-1

Organization I: Cloud Peak Energy

Commenter I: Michael Trainor

Comment Excerpt Text:

The result of keeping coal in the ground will also have a devastating impact on employment rates. Those who earn their living mining support local businesses, charities, community programs, and quality education. As this domino effect, created by keeping coal in the ground, spreads we will see high unemployment; increased tax burden with fewer taxpayers; increased cost of electricity; businesses shutting down; and degradation of local infrastructure.

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Comment Number: 0002451\_Hibbs\_20160727-4

Organization I: Utah American Energy

Commenter I: David Hibbs

Comment Excerpt Text:

BLM contends that even if coal production decreases as a result of higher royalty rates, the net effect of increased royalty rates may be revenue neutral. But, the public return on coal development cannot be measured only through federal coal lease revenue. Federal coal development provides many measurable benefits to rural, western communities. Coal production provides high paying jobs. These jobs, mine support services and businesses generate state and local tax base and additional opportunities for economic development in rural

areas. Although, BLM argues that decreased production would be offset by higher royalty rates. BLM does not address the fact that other impacts of decreased production cannot be offset.

Employment in rural, Utah counties would be significantly impacted by decreased coal production on federal lands. Lower production translates into fewer jobs. Approximately 80% of coal produced in Utah is mined on federal land. Overall, coal mining generated 14,570 jobs in the State of Utah in 2012. In 2014, the EIA identified Utah as having 1,393 direct coal mining jobs. Most of these jobs are located in rural Utah counties. Approximately 300 of these jobs are directly attributed to UEI. Many coal producers throughout the region have already been forced to cut their workforce in the face of decreased demand and increasing production costs. An increase in the federal royalty would put further pressure on the Utah coal market, and in some cases, render operations uneconomic.

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Comment Number: 0002452\_Donovan\_20160727-1

Organization I: Colorado State Senate

Commenter I: Kerry Donovan

Comment Excerpt Text:

In Delta and Gunnison Counties, there is the same shared passion about the pathway forward and the uses of public lands. These discussions are more acute now that additional coal mines have been shuttered and additional layoffs have been announced. Change resulting in job loss is a tough subject to discuss and an even tougher one to solve. As you thoughtfully proceed through your review of coal guidelines, the associated processes, the royalties, and the future uses of our public lands, I ask that you consider including a plan that would help Western communities diversify their economies. When I have listened to national dialogue or participated in conversations regarding the decline in coal, the West is often forgotten. The wonderful small communities in my district have the will and the want to create a new diversified future, but often lack the resources. We can help them move forward.

As a Nation, and as a world, our energy supply is changing and there is momentum causing coal demand to decline. We cannot leave our coal communities behind as collateral damage. I suggest there is an opportunity to enhance the overall discussion by being proactive and helping our coal communities find their next great identity.

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Comment Number: 0002453\_Cook\_20160727-1

Organization I: Rio Blanco County

Commenter I: Katelin Cook

Comment Excerpt Text:

Rio Blanco County is highly dependent upon the natural resource extraction industries, including coal production. Sixty percent of Rio Blanco County's total assessed value is attributed to these industries, with the top fifteen taxpayers being industry related companies. Federal Mineral Lease and Severance Tax payments are critical to maintaining local infrastructure, and without additional production, these payments will not be realized by Rio Blanco County, educational institutions, special taxing districts and other service providers that are an absolute necessity. Having the ability to continue coal production and supply these resources to the world is paramount to the existence of rural communities in Northwest Colorado. If coal production is minimalized, the economic impact on Colorado, especially the Western slope of Colorado, will be devastating.

The coal industry pays a tremendous amount of taxes including, but not limited to: Federal and State Excise Tax; Federal and State Severance Tax; Black Lung Tax; Sales Tax including Excise Tax; Natural Resources Consumption Tax; Local Property Tax; Impact Fees; Payroll Taxes. The true economic impact, direct and indirect, that this specific industry has on the United States and local communities is unparalleled, and we should be working to eliminate barriers and decrease production and permitting expenses to encourage continued development, while providing a balanced, realistic approach to offering affordable energy to United States citizens.

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Comment Number: 0002455\_Walters\_20160728-1

Organization I: Wyoming House District 38

Commenter I: Tom Walters

Comment Excerpt Text:

This PEIS represents BLM complicity in the "Keep it in the Ground" campaign; it's bad for the taxpayer, bad for the economy, and bad for miners and the tens of thousands of others that depend on mining. This also increases the cost of electricity, which has a negative impact on everyone.

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Comment Number: 0002456\_Degenfelder\_20160728-3

Commenter I: Steve Degenfelder

Comment Excerpt Text:

Coal makes a significant socio economic contribution to each state where it is produced, something the President's policies continue to fail miserably in his efforts to stimulate the economy. Most importantly, coal provides safe, reliable and low-cost electricity to our nation.

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Comment Number: 0002457\_Johnson\_20160728-1

Organization I: Western Slope Conservation Center

Commenter I: Alex Johnson

Comment Excerpt Text:

We must safeguard the many natural resources upon which coal communities will rely for generations to come. WSCC and the mines have worked hard to conserve North Fork Valley resources thanks to conscientious local mines and an engaged citizenry. Put simply, coal has been a good neighbor, and we must in turn be a good neighbor to the mining community which is in the midst of a dramatic shift in their lives.

One example already happening here locally is the pioneering training program spearheaded by Solar Energy International (SEI), a global solar energy training school located in Delta County. SEI is providing high school students with the opportunity to take a year-long class in renewable energy technology where they learn about principles of electricity alongside emerging technology in biofuels, wind turbines, battery chemistry; training culminates with students receiving a vocational certificate in solar photovoltaic installation.

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Comment Number: 0002457\_Johnson\_20160728-2

Organization I: Western Slope Conservation Center

Commenter I: Alex Johnson

Comment Excerpt Text:

- Support coal miners, their families, and the communities in which they live with all available federal support to hasten new businesses and jobs and stabilize the community as it undergoes an economic transition.
  - Support local renewable energy generation by incentivizing emerging energy technologies like coal mine methane capture, residential solar and small scale hydroelectric.
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Comment Number: 0002460\_Berry\_20160728-2

Organization I: Town of Paonia

Commenter I: Jane Berry

Comment Excerpt Text:

From the Town of Paonia's perspective, annual severance and mineral leasing revenue has dropped from \$115,000 to an anticipated \$45,000. In a town that has 14 employees, the loss in revenue is equal to the salary of two employees. Further, the Town just completed a drinking water filtration project and is currently replacing

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crumbling water distribution lines. These two projects were made possible by a \$1,000,000 energy impact assistance grant funded by severance and mineral leasing taxes. The Town has been advised by the State Department of Local Affairs that no new funds will be made available. For the Town, it is a question of how to continue to provide basic services with a rapidly dwindling source of funds.

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Comment Number: 0002464\_Connelly\_20160728\_WyCoaltLocalGov-10

Organization I: Coalition of Local Governments

Commenter I: Kent

Comment Excerpt Text:

In 2014, the Wyoming mines also employed around 6,500 people, with 958 of those employees working on mines located in Lincoln, Sweetwater, and Uinta Counties. 81 Fed. Reg. at 17721; Wyoming Mining Association at 5, 7. Coal mining also created around 9,100 indirect and induced jobs, increasing the total impact of coal mining on the state to almost 16,000 jobs created or 4.1 percent of state employment. Godby at 27 (2012 numbers, not including those associated with the rail and electricity generation sectors). In southwest Wyoming where coal mining occurs in the Uinta Basin, mining creates about 2,739 jobs or 4.3 percent of the total jobs in the region. Id. at 29 (2012 numbers).

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Comment Number: 0002464\_Connelly\_20160728\_WyCoaltLocalGov-11

Organization I: Coalition of Local Governments

Commenter I: Kent

Other Sections: I

Comment Excerpt Text:

Wyoming was just recently hit with massive layoffs in the Powder River Basin. Peabody Energy cut 235 miners at the North Antelope Rochelle Mine and Arch Coal cut 230 miners at its Black Thunder Mine on March 31, 2016. Benjamin Storrow, Casper Star Tribune, Wyoming's Two Largest Coal Mines Announce Layoffs (Mar. 31, 2016), available at [http://trib.com/business/energy/wyoming-s-two-largest-coal-mines-announce-layoffs/article\\_0d217a3a-5a9d-5b1d-8d0d-8a5081724bb2.html](http://trib.com/business/energy/wyoming-s-two-largest-coal-mines-announce-layoffs/article_0d217a3a-5a9d-5b1d-8d0d-8a5081724bb2.html). More coal mine layoffs followed with 37 miners losing their jobs in April at the Alpha Natural Resources's Belle Ayr and Eagle Butte mines, and an additional 45 layoffs from the Buckskin Mine in June. Leigh Paterson, Inside Energy, More Coal Layoffs in Wyoming (Apr. 28, 2016), available at <http://insideenergy.org/2016/04/28/more-coal-layoffs-in-wyoming/>; The Washington Times, More Coal Mine Layoffs in Wyoming (June 15, 2016), available at <http://www.washingtontimes.com/news/2016/jun/15/more-coal-mine-layoffs-in-wyoming/>. In total, Wyoming coal mines have seen over 540 lost jobs in the last three months alone.

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Comment Number: 0002464\_Connelly\_20160728\_WyCoaltLocalGov-7

Organization I: Coalition of Local Governments

Commenter I: Kent

Comment Excerpt Text:

While developing the Coal PEIS, the BLM must consider the economic impact to local communities in Wyoming from any potential reforms to the federal coal program.

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Comment Number: 0002471\_Reed\_20160728-4

Organization I: High Country Conservation Advocates

Commenter I: Matt Reed

Comment Excerpt Text:

Support Needed for Community Transition

Crested Butte, the town where HCCA is based, was founded on coal mining. Scattered ghost towns across the

area attest to the rise - and fall - of coal in Gunnison County: Baldwin, Kubler, Floresta, Anthracite, and more. It is important that the PEIS consider the need for community transition and worker support as local economies move beyond coal mining and embrace other, less polluting energy economies. The agency should evaluate means of creating opportunities to help ensure a viable transition away from coal and to a clean energy economy, including robust investment in community economic development, job training and protecting worker livelihoods. Phasing out coal mining from public lands will entail job loss. But it will also lead directly to job growth and new job opportunities. We ask that the BLM consider options for ensuring that rural western counties, like Gunnison, are able to adjust to the changes.

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Comment Number: 0002473\_Hornback\_20160728\_WCC-I

Organization I: Western Colorado Congress

Commenter I: Emily Hornback

Other Sections: I

Comment Excerpt Text:

We encourage the BLM to look at the policy ideas and initiatives that are coming from organizations such as Kentuckians for the Common Wealth and the Mountain Association for Economic Development. Such ideas include:

- Severance tax reform, ensuring that taxes that are intended to provide funds to invest in economic diversification in the coalfields are actually being invested back into coal producing counties at a higher rate and in a timely manner. Possibly setting aside a portion of annual severance tax revenues to create a "permanent fund" for long term investment in local economic development.
- The RECLAIM Act, which would release \$1 billion is available Abandoned Mine Lands funds for land remediation and reforestation and reforestation of formerly mined lands. This money will not only be used to help create jobs in mining communities but also reverse the adverse environmental effects of mining on our lands, air and waters.

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Comment Number: 0002478\_Haggerty\_20160728\_HeadwaterEcon-I

Organization I: Headwaters Economics

Commenter I: Mark Haggerty

Other Sections: I

Comment Excerpt Text:

Headwaters Economics has compiled economic and fiscal data that provide context for the socioeconomic assessment in the PEIS, including coal production, employment, and revenues. This report provides background information and methods, and documents the data sources used, and is accompanied by a web post with data visualizations and maps:

<http://headwaterseconomics.org/energy/coal/federal-coal-program-context/>

#### Summary Findings

- Federal coal, which is mined predominantly in the West, made up more than 43 percent of total U.S. coal production in 2015.
- The value of federal coal made up 20 percent of the total value of coal mined nationally in 2014. The low value relative to production is explained by a wide range of factors including low heat content, remoteness, and lower mining costs that allow producers to gain market share by selling coal at lower prices.
- Federal coal is produced largely from efficient surface mines and employs relatively few people compared to the volume of production. Coal mines with federal leases employed 19 percent of total coal mine workers in the U.S. in 2015.



-Federal coal production is concentrated in a few places. Changes to the federal coal program will be felt acutely in rural communities dependent on coal mining for employment and tax revenue. However, these impacts will be limited in scale from a state and national perspective.

-Royalty and tax revenues from coal are relatively more important to states and local governments when compared to the employment benefits. Recent modeling of leasing and royalty reform options suggests new revenues will outweigh the costs associated with reform.

(1) U.S. Council of Economic Advisors, *The Economics of Coal Leasing on Federal Lands: Ensuring a Fair Return to Taxpayers* (Washington, D.C., 2016), [https://www.whitehouse.gov/sites/default/files/page/files/20160622\\_cea\\_coal\\_leasing.pdf](https://www.whitehouse.gov/sites/default/files/page/files/20160622_cea_coal_leasing.pdf).

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Comment Number: 0002478\_Haggerty\_20160728\_HeadwaterEcon-I1

Organization I:Headwaters Economics

Commenter I:Mark Haggerty

Other Sections: 8.5 8.7 1

Comment Excerpt Text:

Several recent reports from the Government Accountability Office and the Inspector General of the Interior Department raised concerns about the leasing process, including the social and environmental impacts of the federal coal program, and whether the program was receiving a fair return for taxpayers.<sup>4</sup> Importantly, the federal coal leasing and royalty program has not been reviewed for 30 years.<sup>5</sup>

(4) "Coal Leasing: BLM Could Enhance Appraisal Process, More Explicitly Consider Coal Exports, and Provide More Public Information, February 2014" U.S. Government Accountability Office <http://www.gao.gov/products/gao-14-140>; "Coal Management Program, U.S. Department of the Interior, Report No. CR-EV-BLM-0001-2012, June 2013" Office of the Inspector General, U.S. Department of the Interior, <https://www.doioig.gov/reports/coal-management-program-us-departmentinterior>.

(5) The Secretary of the Interior, Order No 3338: Discretionary Programmatic Environmental Impact Statement to Modernize the Federal Coal Program (Washington, D.C., 2016) [http://www.blm.gov/style/medialib/blm/wo/Communications\\_Directorate/public\\_affairs/news\\_release\\_attachments.Par.4909.File.dat/SO%203338%20Coal.pdf](http://www.blm.gov/style/medialib/blm/wo/Communications_Directorate/public_affairs/news_release_attachments.Par.4909.File.dat/SO%203338%20Coal.pdf).

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Comment Number: 0002478\_Haggerty\_20160728\_HeadwaterEcon-I2

Organization I:Headwaters Economics

Commenter I:Mark Haggerty

Other Sections: 1

Comment Excerpt Text:

The Secretarial Order stated that the PEIS should at a minimum address six topics, including socioeconomic considerations. Specifically, the Order states: "Beyond the issue of fair market value, the PEIS should assess whether the current Federal coal leasing program adequately accounts for externalities related to Federal coal production, including environmental and social impacts. It should more broadly examine how the administration, availability, and pricing of Federal coal affect regional and national economies (including job impacts)."<sup>6</sup>

(6) Ibid, page 8.

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Comment Number: 0002478\_Haggerty\_20160728\_HeadwaterEcon-I3

Organization I:Headwaters Economics

Commenter I:Mark Haggerty

Other Sections: I

Comment Excerpt Text:

Socioeconomic impact assessment is important because the Department of the Interior should understand the impacts of its decisions on communities and workers. Additionally, the public deserves the opportunity to understand how government decisions will affect them and the opportunity to participate in the decision-making process.<sup>7</sup>

(7) Jeffrey B. Jacquet, *A Short History of Social Impact Assessment* (Bozeman, MT:Headwaters Economics, 2014), [http://headwaterseconomics.org/wphw/wpcontent/uploads/Energy\\_Monitoring\\_SocialImpacts\\_History.pdf](http://headwaterseconomics.org/wphw/wpcontent/uploads/Energy_Monitoring_SocialImpacts_History.pdf).

Comment Number: 0002478\_Haggerty\_20160728\_HeadwaterEcon-14

Organization I:Headwaters Economics

Commenter I:Mark Haggerty

Other Sections: I

Comment Excerpt Text:

Recent history and experience has shown that socioeconomic impact assessment too often is formulaic and lacks important context.<sup>9</sup> A comprehensive socioeconomic impact assessment should do more than compile easily obtainable baseline information such as population statistics, employment trends, and wages in affected sectors, or rely solely on an input/output model such as IMPLAN or REMI to describe the likely impacts of a federal decision on the economy.

(9) Jacquet, *A Short History of Social Impact Assessment*.

Comment Number: 0002478\_Haggerty\_20160728\_HeadwaterEcon-15

Organization I:Headwaters Economics

Commenter I:Mark Haggerty

Other Sections: I

Comment Excerpt Text:

In addition to describing baseline data, socioeconomic impact assessments should include plans and support for adaptive management and monitoring, and identify mitigation strategies that may resolve or limit some of the impacts related to proposed actions.<sup>10</sup>

(10) Ana Maria Esteves, Daniel Franks, and Frank Vanclay, "Social impact assessment: the state of the art," *Impact Assessment and Project Appraisal* 30, no. 1 (2012): 34-42.

Comment Number: 0002478\_Haggerty\_20160728\_HeadwaterEcon-16

Organization I:Headwaters Economics

Commenter I:Mark Haggerty

Other Sections: I

Comment Excerpt Text:

Headwaters Economics developed the Economic Profile System (EPS) in partnership with Bureau of Land Management (BLM) and U.S. Forest Service in order to make public data available to these federal agencies and to the public, and to help provide context to socioeconomic impact assessments.<sup>11</sup> For example, EPS can be used to assess the size of the projected changes relative to the rest of the economy (Is the expected change big or small?) and to understand the role of federal lands and natural resources in the broader economy.

Headwaters Economics also worked with academic experts to provide suggestions for how make socioeconomic monitoring effective and efficient. We produced two case studies (one on Sublette County, WY, and one on Garfield County, CO)<sup>12</sup> in addition to a review of social impact assessment and recommended best practices for monitoring the social and economic impacts related to energy development.

(11) "Economic Profile System," Headwaters Economics, <http://headwaterseconomics.org/tools/economic-profile-system/about/>.

(12) Julia Haggerty and Keegan McBride, "Does local monitoring empower fracking host communities? A case study from the gas fields of Wyoming," *Journal of Rural Studies* 43 (2016): 235-247; Jeffrey B. Jacquet, *The Battlement Mesa Health Impact Assessment: A Case Study and Oral History of Process and Lessons Learned* (Bozeman, MT: Headwaters Economics, 2014) <http://headwaterseconomics.org/energy/oilgas/energy-monitoring-practices/>.

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Comment Number: 0002478\_Haggerty\_20160728\_HeadwaterEcon-20

Organization I:Headwaters Economics

Commenter I:Mark Haggerty

Other Sections: I

Comment Excerpt Text:

In 2015, mines that had federal local leases employed 13,098 workers. Roughly half of these jobs were in Wyoming.<sup>29</sup>

Throughout this report "federal coal mining jobs" are defined as all jobs in coal mines that had active or inactive federal coal leases as of February 3, 2015.

[See Figure 3: Percent of Direct Jobs from Federal Coal Mining in 2014]

(29) "Data Sets," U.S. Department of Labor, Mine Safety and Health Administration. See 10. Employment/Production Data Set (Quarterly), <http://arlweb.msha.gov/OpenGovernmentData/OGIMSHA.asp>.

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Comment Number: 0002478\_Haggerty\_20160728\_HeadwaterEcon-21

Organization I:Headwaters Economics

Commenter I:Mark Haggerty

Other Sections: I

Comment Excerpt Text:

Increased efficiency in federal coal production resulted in significant job losses nationally. Coal employment was down by about 200,000 jobs from the early 1980s to 2015 despite large increases in total production volume.<sup>32</sup> Most of these jobs have been lost in Appalachia as coal mining shifted to more efficient Western surface mines where fewer people are required to extract an equivalent amount of coal. These mines are located primarily in the Powder River Basin in Wyoming and Montana.

<sup>32</sup> "Quarterly Census of Employment and Wages," U.S. Department of Labor, Bureau of Labor Statistics, <http://www.bls.gov/cew/>.

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Comment Number: 0002478\_Haggerty\_20160728\_HeadwaterEcon-22

Organization I:Headwaters Economics

Commenter I:Mark Haggerty

Other Sections: I

Comment Excerpt Text:

Coal Mining Employment will be more uncertain in the future. Future employment in coal mining will depend on the relative price of natural gas, renewable energy, and coal. Because natural gas prices have historically been more volatile compared to coal prices, coal producers can be less certain going forward about how much coal

will be demanded from year to year, or even month to month. This uncertainty in electricity markets creates uncertainty for coal workers.

Coal fired electricity generation provides additional employment opportunities.<sup>34</sup> Thirteen counties have coal-fired power generators that receive coal deliveries directly from mines with federal leases. These coal-fired plants listed in Table 3 contribute to an additional 3,782 direct jobs in electricity generation, transmission, and distribution,<sup>35</sup> adding to 13,098 federal coal mining jobs.

[See Table 3: Electric Power Generation Jobs in Federal Coal Mining Counties in 2014]

(34) "Electricity: Form EIA-923 detailed data," U.S. Energy Information Administration. <https://www.eia.gov/electricity/data/eia923/>.

(35) "County Business Patterns," U.S. Census Bureau, <http://www.census.gov/programs-surveys/cbp.html>.

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Comment Number: 0002478\_Haggerty\_20160728\_HeadwaterEcon-23

Organization I:Headwaters Economics

Commenter I:Mark Haggerty

Other Sections: I

Comment Excerpt Text:

Direct coal mining jobs create jobs in other local economic sectors. "Multiplier" effects of coal mining are an important contribution of the mining sector. Estimates of the indirect and induced benefits range from between 0.2 and 2, meaning every ten jobs in the mining sector creates between two<sup>36</sup> and twenty<sup>37</sup> additional jobs in the local economy. Because of the wide differences in estimates of the additional employment benefits associated with mining, this report does not describe secondary and tertiary jobs associated with mining activities. Direct employment in coal mining and in coal-fired power generation are presented in order to identify communities most dependent on coal mining.

(36) Dan Black, Terra McKinnish, and Seth Sanders, "The Economic Impact of the Coal Boom and Bust," *The Economic Journal* 115, no. 503 (2005): 449-476.

(37) National Mining Association, *The Economic Contributions of U.S. Mining* (2012), (Washington, D.C.: National Mining Association, 2014), [http://www.nma.org/pdf/economic\\_contributions.pdf](http://www.nma.org/pdf/economic_contributions.pdf) (accessed July 18, 2016).

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Comment Number: 0002478\_Haggerty\_20160728\_HeadwaterEcon-24

Organization I:Headwaters Economics

Commenter I:Mark Haggerty

Other Sections: I

Comment Excerpt Text:

Headwaters Economics developed several new tools, utilizing the latest data (through 2014) that can be used to understand economic conditions in coal mining regions and to compare coal-dependent counties to other western counties with similar characteristics.<sup>39</sup>

(39) Chris Mehl, "Know Your Economy: Economic Tools Updated for Every County," Headwaters Economics (blog), December 2015, <http://headwaterseconomics.org/economic-development/trendsperformance/insights-economic-tools-updated/>.

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Comment Number: 0002478\_Haggerty\_20160728\_HeadwaterEcon-4

Organization I:Headwaters Economics

Commenter I: Mark Haggerty

Other Sections: I

Comment Excerpt Text:

Federal coal mining generates relatively few jobs when compared to production volume. In 2015, federal coal made up 43 percent of total U.S. coal production, but was responsible for only 19 percent of direct coal mining jobs.<sup>30</sup>

(30) Headwaters Economics analysis of Mine Safety and Health Administration employment and production data.

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Comment Number: 0002478\_Haggerty\_20160728\_HeadwaterEcon-5

Organization I: Headwaters Economics

Commenter I: Mark Haggerty

Comment Excerpt Text:

Direct coal mining jobs are concentrated in relatively few Western counties. Of 224 counties that have coal mines nationally, 28 counties have coal mines with federal leases. These counties represent less than one percent of 3,114 counties (and county equivalents such as Parishes and Boroughs in Louisiana and Alaska, respectively) nationally.

In ten counties, direct employment in coal mining is a significant portion of total employment. Direct coal mining jobs in mines with federal leases make up five to fifteen percent of total private and government employment in ten counties. In all other counties, direct coal mining jobs make up less than five percent of total employment.

[See Table 1: Direct Federal and Non-Federal Coal Mining Jobs in 2015]

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Comment Number: 0002478\_Haggerty\_20160728\_HeadwaterEcon-6

Organization I: Headwaters Economics

Commenter I: Mark Haggerty

Comment Excerpt Text:

Direct coal mining jobs are a small share of total employment at a national and a state scale. In the nine states that have federal coal leases, coal mining jobs associated with these mines made up 1.6 percent of total employment (private and government) in Wyoming and less than 0.3 percent of total employment in all other states in 2015.<sup>31</sup>

[See Table 2: Direct Coal Mining Jobs as a Percent of Total State Employment in 2015]

(31) "Regional Economic Accounts," U.S. Department of Commerce, Bureau of Economic Analysis, <http://www.bea.gov/regional/>

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Comment Number: 0002478\_Haggerty\_20160728\_HeadwaterEcon-7

Organization I: Headwaters Economics

Commenter I: Mark Haggerty

Other Sections: I

Comment Excerpt Text:

The current downturn in production is resulting in job losses in coal mining in the West. Increased competition with natural gas and renewable energy sources is resulting in additional job losses in the coal sector. In the last year, employees at coal mines have worked 10 million fewer hours, and a total of 16,746 coal mining jobs have been lost.<sup>33</sup> These declines come on the heels of 22,549 coal mining jobs already lost between the first quarter of 2012 and the first quarter of 2015. The West has seen fewer coal mining job losses over time, but the recent

downturn is starting to affect the region. Wyoming has lost 858 coal mining jobs since the second quarter of 2012, with 343 of these job losses coming in the last year.

[See Figure 4: Hours Worked by U.S. Coal Miners per Quarter, 2000-2016]

(33) "Data Sets," U.S. Department of Labor, Mine Safety and Health Administration. See 10. Employment/Production Data Set (Quarterly), <http://arlweb.msha.gov/OpenGovernmentData/OGIMSHA.asp>.

Comment Number: 0002478\_Haggerty\_20160728\_HeadwaterEcon-8

Organization I: Headwaters Economics

Commenter I: Mark Haggerty

Other Sections: I

Comment Excerpt Text:

Coal mining communities have different challenges associated with declining coal production. For all coal mining communities, continued dependence on natural resources may become increasingly problematic as coal production and prices decline and are likely to become more volatile in the future. Declining coal production will disproportionately impact rural counties that do not have easy access to major population centers via road travel or that lack an educated labor force necessary to compete in the non-resource extraction portions of the U.S. economy. Rural counties will have more difficulty diversifying economically and replacing lost coal mining jobs with jobs in other sectors.<sup>38</sup>

(38) Ray Rasker, Patricia H. Gude, Justin A. Gude, and Jeff Van den Noort, "The economic importance of air travel in high-amenity rural areas," *Journal of Rural Studies* 25, no. 3 (2009): 343-353.

Comment Number: 0002478\_Haggerty\_20160728\_HeadwaterEcon-9

Organization I: Headwaters Economics

Commenter I: Mark Haggerty

Comment Excerpt Text:

Coal extracted from federal land is an important source of revenue for some states and local governments. Coal production in states with federal leases generated \$1.2 billion in 2014. The largest source of revenue is federal royalties, followed by a host of state production taxes levied directly on coal extraction, and royalties from coal extracted from state-owned lands.<sup>40</sup>

(40) Mark Haggerty, *The Impact of Federal Coal Royalty Reform on Prices, Production, and State Revenue* (Bozeman, MT: Headwaters Economics, 2015)

<http://headwaterseconomics.org/wphw/wp-content/uploads/Report-Coal-Royalty-Reform-Impacts.pdf>.

Federal coal revenue is a relatively larger contribution to state economies compared to employment. Coal revenue made up 12.5 percent of total state and local government budgets in Wyoming in 2012 (the latest year for which accurate, national data on total state and local government budgets is available). By comparison, coal mining jobs made up only 1.8 percent of total employment in 2012. This same relationship holds in the other states, although the relative importance of federal coal revenues is significantly lower. In Montana, the state where federal coal mining is second most important in terms of its fiscal contributions, federal royalty and state taxes on federal coal production add to 1.1 percent of total state and local government revenue.

Comment Number: 0002480\_Culver\_20160728\_TWS-52

Organization I: The Wilderness Society

Commenter I: Nada Culver

Other Sections: I

Comment Excerpt Text:

Support communities' creation of impact mitigation plans. Given the relatively small number of counties and communities engaged in mining of federal coal, BLM should work with communities to conduct analyses of the socio-economic characteristics of each county in which federal coal is mined. BLM should, among other things, use the Economical Profile System (EPS) and produce detailed socioeconomic profiles. (67) BLM should incorporate best practices for social impact assessment, including involving potentially affected publics and developing mitigation plans. (68) BLM could incorporate transition approaches for affected communities both in the PEIS and through targeted RMP amendments or revisions for areas with current mining operations.

(67) <http://headwaterseconomics.org/tools/economic-profile-system/about/>. Last accessed, July 24, 2016

(68) Jeffrey B. Jacquet, Ph.D., A Short History of Social Impact Assessment, November, 2014.

[http://headwaterseconomics.org/wphw/wp-content/uploads/Energy Monitoring SocialImpacts History.pdf](http://headwaterseconomics.org/wphw/wp-content/uploads/Energy_Monitoring_SocialImpacts_History.pdf)

Comment Number: 0002480\_Culver\_20160728\_TWS-53

Organization I: The Wilderness Society

Commenter I: Nada Culver

Other Sections: 8.9 I

Comment Excerpt Text:

Develop a program to hire mine workers for restoration and rehabilitation beyond the mine site. BLM should also propose a program to employ the skills of mine workers in restoration and rehabilitation of public lands, aimed at both improving resilience of public lands in the face of climate change and their ability to mitigate climate change through biological sequestration.

Over the last several decades, the federal government has invested in programs to address job losses and improve environmental conditions in local areas. BLM should look to, learn from, and improve upon past examples like the watershed restoration and the "Jobs-in-the-Woods Program" from the 1990s and its contemporary incarnations. (69)

(69) Christopher E. DeForest, 1999. Watershed restoration, jobs-in-the woods, and community assistance: Redwood National Park and the Northwest Forest Plan. Gen. Tech. Rep. PNW-GTR-449. Portland, OR: U.S. Department of Agriculture, Forest Service, Pacific Northwest Research Station. 31 p.

[http://www.fs.fed.us/pnw/pubs/pnw\\_gtr449.pdf](http://www.fs.fed.us/pnw/pubs/pnw_gtr449.pdf). Last accessed, July 26, 2016. See also, Ecotrust, "Investing in natural assets for the benefit of communities and salmon" brochure, <http://www.ecotrust.org/media/WWRI-Restoration-Economy-Brochure.pdf> describing current economic benefits of restoration for Oregon communities.

Comment Number: 0002480\_Culver\_20160728\_TWS-54

Organization I: The Wilderness Society

Commenter I: Nada Culver

Other Sections: I

Comment Excerpt Text:

Provide communities a comprehensive review of tools to help diversify their economies. This has been helpful for coal-dependent communities—across the country and specifically in the West—to support worker transition and to help communities retooling their economies to become more resilient to changing conditions. These tools include programs targeted at workers and their families to address economic security (such as job retraining programs (71), ensuring health and retirement security), local government (such as providing local infrastructure (72)), rural

school improvement (73), small business support, repurposing mine lands, and infrastructure programs. (74)

(71) Such as retaining programs in Kentucky (<http://www.jobsight.org/jobseeker/coalminers>) and West Virginia (<http://workforcewv.org/job-seekers/training/laid-off-coal-miners.html>). Last accessed, July 24, 2016.

(72) For example, see efforts to expand broad band internet access in Colorado's Delta County. <http://www.region10.net/regional-development/broadband/>. Last accessed, July 24, 2016. See also National Association of Counties' Coal-Reliant Communities Innovation Challenge. <http://www.naco.org/resources/programs-and-initiatives/coal-reliant-communities-innovation-challenge> and <http://diversifyeconomies.org/>. Last accessed July 24, 2016.

(73) See <http://ieefa.org/invest-struggling-coal-industry-communities-let-us-count-ways/>. Last accessed July 24, 2016.

(74) See also Adele C. Morris, "Build a Better Future for Coal Workers and their Communities," The Brookings Institution, Washington, D.C., APRIL 25, 2016. <http://www.brookings.edu/~media/research/files/reports/2016/04/25-coal-workers-morris/build-a-better-future-for-coal-workers-and-their-communities-morris-updated-071216.pdf>. Last accessed, July 24, 2016.

Comment Number: 0002480\_Culver\_20160728\_TWS-90

Organization I: The Wilderness Society

Commenter I: Nada Culver

Other Sections: I

Comment Excerpt Text:

Communities that are largely dependent on mining publicly-owned coal are already feeling the impacts of structural changes in the coal industry. Compared to 2008, coal production in the Powder River Basin was down by 19 percent in 2015, a decrease of nearly one-fifth in just eight years. Across ETA's Western Region, where most federally-owned coal is located, over the same period coal mining jobs went from 15,177 down to 14,100, a seven percent decrease. Colorado has lost roughly 320 coal mining jobs since January 2015, or 20 percent of jobs at mines. (62) Workers and their families have borne the brunt of these changes, losing jobs, facing unmet healthcare needs and dealing with the emotional impacts of suffering dramatic changes to their lives and those of their neighbors.

(62) Colorado Division of Reclamation, Mining and Safety

Monthly Coal Summary Reports, <http://mining.state.co.us/Reports/Reports/Pages/Coal.aspx>. Last accessed July 26, 2016. See also, <http://www.denverpost.com/2016/05/14/collapse-of-colorado-coal-industry-leaves-mining-towns-unsure-whats-next/>.

Going forward, coal-dependent communities in the West will continue to experience declines in employment and revenue. ETA's Annual Energy Outlook 2016 (AEO2016) reference case projects that coal production in the Western Region will fall by 155 million tons between 2015 and 2040. (63) These changes have occurred without any significant new policies or regulations specific to the federal coal program, driven by gains in productivity and loss of market share to natural gas and renewable energy.

(63) <http://www.eia.gov/todayinenergy/detail.cfm?id=26992>

The federal coal program should help communities become more resilient to the accelerating changes in the coal sector. A significant part of federal coal program reform and the PEIS should include taking action to address current job losses and mine closures and create more resilient economies in future.



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Comment Number: 0002480\_Culver\_20160728\_TWS-91

Organization I: The Wilderness Society

Commenter I: Nada Culver

Other Sections: I

Comment Excerpt Text:

In the West, some 45 mines with federal coal leases are spread across 27 counties in seven states. (64) The degree to which different counties and communities depend on coal varies, but all are reliant on coal mining for jobs, taxes, and federal royalties to a significant extent. Counties where coal-fired power plants are located at the mouth of the coal mine or where coal mines supply coal to only one nearby power plant are more economically dependent on the coal industry. Prime examples include Moffat and Routt Counties in Colorado, Emery County in Utah, and Campbell, Lincoln, and Sweetwater Counties in Wyoming. (65)

(64) Colorado, 7 counties; Montana, 5 counties; North Dakota, 4 counties; New Mexico, 2 counties; Utah, 3 counties; Washington, 1 county; Wyoming, 5 counties. Based on data from MSHA BLM Coal Mine Crosswalk Feb. 3, 2015. Pers. Comm. From Mark Haggerty, Headwaters Economics, July 15, 2016.

(65) Form EIA-923 detailed data, <https://www.eia.gov/electricity/data/eia923/>. Last accessed, July 22, 2016.

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Comment Number: 0002480\_Culver\_20160728\_TWS-92

Organization I: The Wilderness Society

Commenter I: Nada Culver

Other Sections: I

Comment Excerpt Text:

As BLM reviews socio-economic impacts of federal coal leasing and development, it should consider the positive and negative impacts of continued economic reliance of local communities on coal extraction. Some research has shown that dependence on coal adversely affects non-coal employment in places like Appalachia. (66) They found that high levels of coal employment are associated with lower levels of entrepreneurship and higher levels of migration out of Appalachian regions as coal crowds out other types of businesses. Prolonging coal employment may actually slow the transition to other economic activities and reduce long-term economic growth.

(66) Michael R. Betz, Mark D. Partridge, Michael Farren, Linda Lobao, Coal mining, economic development, and the natural resources curse, *Energy Economics*, Volume 50, July 2015, Pages 105–116.

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Comment Number: 0002480\_Culver\_20160728\_TWS-93

Organization I: The Wilderness Society

Commenter I: Nada Culver

Other Sections: I

Comment Excerpt Text:

Explore changes to revenue sharing statutes to improve community access to funding for local schools and other community priorities. Headwaters Economics and others have proposed changing the formula through which the federal Payments in Lieu of Taxes (PILT) program functions so that the size and relative distribution of federal payments to counties is less directly tied to the specific source of revenue. This would create a framework that can accommodate new dedicated funding streams from public lands from various sources, such as increased fossil fuel royalties, new leasing fees or a carbon tax. (70) It could also provide more stable funding for local schools in vulnerable communities. Though such an approach would require federal legislation, the PEIS could propose and analyze such an option.

(70) Testimony of Mark Haggerty, Headwaters Economics March 19, 2013, Senate Energy and Natural Resources Committee Hearing on PILT and SRS Reauthorization and Reform.

[http://www.energy.senate.gov/public/index.cfm/files/serve?File\\_id=4cf8ec04-5477-4c03-87f5-b0eb29ea6e26](http://www.energy.senate.gov/public/index.cfm/files/serve?File_id=4cf8ec04-5477-4c03-87f5-b0eb29ea6e26). Last accessed July 24, 2016.

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Comment Number: 0002484\_Ross\_20160728\_PLS-1

Organization I:Public Land Solutions

Commenter I:Katie Ross

Comment Excerpt Text:

Many gateway communities across the West currently depend significantly on resource extraction industries to support local government and public needs. However, there are also increasingly more communities that are beginning to invest in more sustainable economic drivers, such as outdoor recreation and protecting the quality of life in a rural community. Unlike the rollercoaster commodities market represented by oil, gas and coal development, recreation remains relatively stable, has experienced explosive growth in the last decade, and as an economic sector significantly outperformed resource extraction during the Recession of 2008 in many places.

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Comment Number: 0002487\_Clarke\_20160728\_UtahGovOffice-3

Organization I:Utah Office of the Governor

Commenter I:Kathleen Clarke

Other Sections: I

Comment Excerpt Text:

A recent study by independent economists commissioned by the Governor's Office of Energy Development, found that Utah's coal-mining industry contributed \$887 million dollars in 2013 to Utah's economy, including \$173 million dollars in labor income.<sup>3</sup> Utah's coal economy is especially important to rural Utah, providing roughly 2,000 direct high-paying jobs, and a fundamental part of the tax base of several rural counties.<sup>4</sup> Wages in the coal industry are, on average, 211 percent of the state average.<sup>5</sup> Without coal and the high-quality jobs it supports, many of Utah's rural communities will decline significantly or disappear.

(3) 2015 Report by Applied Analysis. Accessed July 28, 2016. <http://energy.utah.gov/wpcontent/uploads/UtahsEnergyEconomyEconomicImpactAssessment.2015.compressed.pdf>

(4) 2014 Utah State Tax Commission Report on Property Tax.

(5) Utah Department of Workforce Services data for NAICS categories analyzed by the Utah Office of Energy Development.

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Comment Number: 0002487\_Clarke\_20160728\_UtahGovOffice-7

Organization I:Utah Office of the Governor

Commenter I:Kathleen Clarke

Other Sections: I

Comment Excerpt Text:

Utah's efficient power plants supply Utah with affordable and reliable energy which supports Utah's dynamic economy. Over seventy percent of Utah's power is generated from coal mined in Utah. According to the Energy Information Administration, Utah's average price of electricity over all sectors is 8.7 cents per kWh, significantly lower than the national average of 10.06 cents per kWh.<sup>6</sup> These low power prices support Utah's economy at all levels, including residential, commercial and industrial.

(6) Energy Information Administration power pricing tables. Accessed July 28, 2016.

[https://www.eia.gov/electricity/monthly/epm\\_table\\_grapher.cfm?t=epmt\\_5\\_6\\_a](https://www.eia.gov/electricity/monthly/epm_table_grapher.cfm?t=epmt_5_6_a)

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Comment Number: 0002487\_Clarke\_20160728\_UtahGovOffice-8

Organization I:Utah Office of the Governor

Commenter I:Kathleen Clarke

Other Sections: I

Comment Excerpt Text:

In an era of rapidly changing energy systems, electricity produced by coal has provided the foundation for building a robust and diversified energy economy in Utah and the country. Needlessly restricting coal production has direct impacts to Utah's coal fleet. The result is conditions that can both increase prices and reduce resiliency of the industry. The benefits of a diversified energy fleet are well understood, and actions to restrict diversity can lead to increased costs without realizing any associated benefits.

Additionally, the coal industry in Utah is largely supported through the BLM's coal-leasing program. Continuing this program without unwarranted restriction is crucial to the vitality of Utah's coal industry. Eighty-three percent of Utah coal is produced from federal land. In 2014, Utah coal produced on federal lands had a total sales value of over \$570 million and generated royalty revenues in excess of \$41 million.<sup>7</sup> BLM must lift the coal lease moratorium during the programmatic review to prevent further harm and destabilization to the coal industry Utah's economy.

(7) Utah's Energy Landscape, 4th Edition, Utah Geologic Survey, Michael Vanden Berg.

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Comment Number: 0002487\_Clarke\_20160728\_UtahGovOffice-9

Organization I:Utah Office of the Governor

Commenter I:Kathleen Clarke

Other Sections: I

Comment Excerpt Text:

Coal is generally a more price stable fuel source than natural gas.<sup>8</sup> A study on the nation's fuel diversity for generating power found that reductions in coal utilization would cost the U.S. economy more than \$93 billion dollars a year.<sup>9</sup> Unfortunately, despite these significant costs, the BLM's coal moratorium and review are unlikely to result in any additional revenues or benefits to the American people.

(8) Energy Information Administration, "Today in Energy", March 16,2016.

(9) IHS Energy Study, The Diversity of United States Power Supply Could be Significantly Reduced in Coming Decades.

Accessed July 28, 2016. [http://press. ih s.com/press-release/energy-power-medialihs-study-di versity-united-states-powersupply-could-be-sign ificant](http://press.ih s.com/press-release/energy-power-medialihs-study-di versity-united-states-powersupply-could-be-sign ificant)

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Comment Number: 0002488\_Sanderson\_20160728-4

Organization I:Colorado Mining Association

Commenter I:Stuart Sanderson

Comment Excerpt Text:

In addition, the Regulatory Flexibility Act (hereinafter RFA), as amended by the Small Business Regulatory Enforcement Fairness Act (SBREFA) requires BLM to analyze adequately the impacts of its proposals on small entities. BLM must ensure that while conducting review of the Federal Coal Program (hereinafter Coal Program) that adverse impacts to small businesses as a result of Coal Program reform are considered. As BLM discovered in Northwest Mining Association v. Babbitt, 5 F.Supp.2d 9 (D.D.C. 1998), failure to comply with the RFA and SBREFA will invalidate a rulemaking.

Comment Number: 0002490\_Emrich\_20160728\_CloudPeakEnergy-13

Organization I: Cloud Peak Energy Inc.

Commenter I: Andrew C. Emrich, P.C.

Comment Excerpt Text:

As currently managed, the federal coal program provides significant benefits to the American people. Not only does federal coal production provide substantial revenue to federal, state, and local governments, but it also provides high-paying jobs to hardworking coal miners and other employees in industries tied to coal extraction, transportation, and combustion. The continued leasing and development of federal coal also plays an important role in America's energy portfolio by ensuring a safe, reliable, and cost-effective domestic energy source that provides America with greater energy independence from foreign sources. Any proposed change to the federal coal program that discourages coal production will harm these important domestic interests.

Comment Number: 0002490\_Emrich\_20160728\_CloudPeakEnergy-16

Organization I: Cloud Peak Energy Inc.

Commenter I: Andrew C. Emrich, P.C.

Other Sections: I

Comment Excerpt Text:

In recent years, several economic factors have adversely impacted the U.S. coal industry. With the increase of low-priced natural gas, the demand for coal in the United States has declined over the past several years. The U.S. Energy Information Administration ("EIA") estimates that the use of coal to generate electricity in the United States has decreased 29% between 2007 and 2015. Attachment 2, U.S. EIA, "Power Sector Coal Demand Has Fallen in Nearly Every State Since 2007" (Apr. 28, 2016). In turn, coal production has also declined. According to the EIA, coal production in the first three months of 2016 constituted the lowest levels since the second quarter of 1981. Attachment 3, U.S. EIA, "Quarterly Coal Production Lowest Since the Early 1980s" (June 10, 2016). In the first quarter of 2016, the Powder River Basin saw the largest decline in coal production—in both tonnage and percentage—from the previous quarter. Id. Moreover, the U.S. EIA projects that coal production will continue to decrease by more than 100 million short tons in 2016, which would constitute the largest decrease in coal production since the beginning of data collection in 1949. Attachment 4, U.S. EIA, "Short-Term Energy Outlook" (July 12, 2016).

Comment Number: 0002490\_Emrich\_20160728\_CloudPeakEnergy-17

Organization I: Cloud Peak Energy Inc.

Commenter I: Andrew C. Emrich, P.C.

Other Sections: I

Comment Excerpt Text:

The table below illustrates the current economic burdens on Cloud Peak Energy (see next page):

Table I – Cloud Peak Energy Economic Burdens

(All \$ in thousands)	2013	2014	2015	Total	3 Year Average
Total Gross Revenue	1,396,097	1,324,004	1,124,111	3,844,212	1,281,404
Total Payments to Federal, State, and Local Governments(1)	439,000	423,000	372,000	1,234,000	411,333
Government Payments as a Percentage of Total Gross Revenue	31.4%	31.9%	33.1%	–	32.1%
Net Income (Loss)	51,971	78,960	(204,900)	(73,969)	–

To further illustrate, the following is an illustrative breakdown of the royalties, taxes, and production costs assessed on a single ton of July 2016 Powder River Basin coal:

Table 2 –	Taxes, Royalties, and Production	Costs Per Ton of PRB Coal
Spot Price—	July 2016 PRB Coal	(8800 Btu) \$8.78
Federal Royalty	(12.5%)	(\$1.10)
Abandoned Mine Lands Tax	(3.19%)	(\$0.28)
Black Lung Tax	(4.21%)	(\$0.37)
Bonus Bid Payment(2)	(11.39%)	(\$1.00)
State Severance Tax	(5.24%)	(\$0.46)
County Ad Valorem Tax	(4.33%)	(\$0.38)
Total Taxes and Royalties =		(\$3.59)
Illustrative Cash Cost of Production		(\$6.75)
Loss:		(\$1.56)

(1) These amounts represent the accrued federal bonus payments and royalties and production-related taxes, as well as property, sales, and payroll taxes payable on 2013, 2014, and 2015 operations, respectively. This differs from the amounts actually paid in 2013, 2014, and 2015, which would have included payments for operations in other years.

(2) The bonus bid payment reflects the average bonus bid received on the last ten federal coal lease sales in the southern Powder River Basin from 2008 to 2012.

Finally, the United States government receives a far higher rate of return than any other country involved in the production of coal:

Table 3 – Comparative Global Coal Royalty Rates(3)

Country	Surface Royalties	Total Royalties, Taxes, and Other Governmental Fees
Australia	8.2%	8% - 12.5%
India	6.0%	6% - 14%
China	0.5% - 4%	4% - 14%
Republic of South Africa	0.5% - 7%	0.5% - 7%
Colombia	5% - 10%	Less than 10%
Canada	4% - 15%	4% - 15%
United States	12.5%	Federal 32% - 42% Federal 5% - 8% Private

(3) Information compiled from the World Coal Association, the National Coal Council, and the National Mining Association

Comment Number: 0002490\_Emrich\_20160728\_CloudPeakEnergy-42

Organization I: Cloud Peak Energy Inc.

Commenter I: Andrew C. Emrich, P.C.

Other Sections: I

Comment Excerpt Text:

Coal production on federal lands also provides high-paying jobs and related economic benefits to state and local communities. According to the Bureau of Labor Statistics, coal mining employed nearly 90,000 individuals in 2012. Id. As of May 2014, it was estimated that coal mining provided 74,000 direct jobs in the United States. Id. Of

those direct jobs, it was estimated that approximately 6,500 of those jobs were located in the State of Wyoming with an average salary of \$82,000 before benefits. *Id.*; Attachment 6, Wyoming Mining Association, “Coal’s Economic Impact.” The average salary of an employee in the Wyoming coal industry is nearly twice the statewide salary average. Attachment 6, Wyoming Mining Association, “Coal’s Economic Impact.”

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Comment Number: 0002491\_Weiskopf\_20160728\_NextGenClimateAmer-112

Organization I: NextGen Climate America

Commenter I: David Weiskopf

Other Sections: 1 10

Comment Excerpt Text:

Emissions associated with the coal leasing program impair the public interest through the health and welfare costs of air pollution and climate change. Of total nationwide emissions in 2013, 36% came from electric power generation, of which 76% was from coal combustion, of which 41% was from coal produced from federal lands.<sup>22</sup> A recent study by PSE Healthy Energy concludes that communities living near coal power plants are at higher risk of developing adverse health impacts. Emissions from coal combustion in Pennsylvania and Ohio caused more than 4,333 premature deaths nationwide in 2015 alone.<sup>23</sup> These premature deaths and illnesses also generated nearly \$38 billion in health impacts.<sup>24</sup> The per-capita impacts were most concentrated in areas near to and downwind of coal power plants – areas with higher than average concentrations of minority and/or low-income residents. By failing to consider these health effects, BLM misses the opportunity to interpret the public interest in a way that serves Americans.

[<sup>22</sup> U.S. Environmental Protection Agency, *Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990-2013* (April 15, 2015).]

[<sup>23</sup> This figure compiles the health burdens from Ohio and Pennsylvania power plants’ fine particle pollution, with 2,133 adult deaths in Ohio and 2,300 adult deaths in Pennsylvania (4,333 total) from coal and gas plants combined. Of these totals, 2,088 and 2,263, respectively, were attributable to coal power plants in each state. Krieger, E, et al., “The Clean Power Plan in Pennsylvania Analyzing power generation for health and equity,” June 2016. Available at <https://nextgenamerica.org/news-reports/our-air-pa-technical/> at viii; Krieger, E, et al., “Our Air: Healthy and Equity Impacts of Ohio’s Power Plants,” June 2016. Available at <https://nextgenamerica.org/news-reports/our-air-ohio/> at 6. Supplemental data specific to coal plants courtesy of the report’s author.]

[<sup>24</sup> *Id.*]

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Comment Number: 0002493\_Mead\_20160728\_GovWY-35

Organization I: Office of Governor Matthew H. Mead

Commenter I: MATTHEW H. MEAD

Comment Excerpt Text:

Wyoming relies heavily on its mineral wealth to support public education. Beginning in 1995 the State evaluated the needs of school facilities in all school districts across the state to determine how to provide adequate school facilities to all school districts whether they are large or small, urban or rural. A change in law resulting from the school finance litigation cases, known collectively as the Campbell cases, resulted in financial responsibility for capital construction being vested with the State, not local school districts. In 2001 the State created the School Facilities Commission to determine school facilities conditions and needs and to implement facilities remedies; counting on the State’s mineral wealth and more specifically coal lease bonuses to fund the maintenance, renovation and construction of schools. In 2011 the State created the School Facilities Department to work with local school districts to administer the program for improving school facilities; again counting on coal lease bonuses to fund the maintenance, renovation and construction of schools.

Since 2001 Wyoming has renovated/modernized 35 schools, constructed 75 new schools and established funding of a uniform major maintenance program for all school districts. In addition, there are 31 new schools and 6 additions/renovations currently being designed or under construction. On average, approximately \$217 million Dollars per year has been appropriated by the State legislature for the period 2003-2017. Projections of future funding for school facility improvements because of a drop in coal lease bonus payments, decrease to approximately \$17 million Dollars for 2018. Further projections indicate that there will be no available funds beyond 2018. While the need for additional school facilities improvements has been identified as well as the need for an ongoing major maintenance program for the foreseeable future, currently there is no funding mechanism in place to continue the Wyoming school facilities program.

Wyoming's school facility improvement program has played a major role in the State's planning, design, and construction industry. It has been a catalyst to create job opportunities and support a diversification of employment within the industry and across the State. The diversification of employment has been a welcome opportunity for a State whose economy is overwhelmingly dependent on agriculture, minerals, and tourism. The BLM must analyze the impacts to Wyoming's education system and its ability to meet the needs of students and communities along with the associated impact to the construction industry that will result from any reduction, significant modification or elimination of the coal leasing program.

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Comment Number: 0002493\_Mead\_20160728\_GovWY-36

Organization I: Office of Governor Matthew H. Mead

Commenter I: MATTHEW H. MEAD

Comment Excerpt Text:

The Unemployment Insurance (UI) wage and salary covered payroll is the single largest component of gross state product and represents a key component of Wyoming's contribution to the U.S. Gross Domestic Product. In the fourth quarter of 2015, the total UI covered payroll for the state was \$3.4 billion. One of Wyoming's few base export industries, private sector coal production, accounted for 4.2% of total payroll and 2.3% (6,515 jobs) of all wage and salary covered jobs. Clearly, this industry is an important component of Wyoming's labor market.

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Comment Number: 0002493\_Mead\_20160728\_GovWY-37

Organization I: Office of Governor Matthew H. Mead

Commenter I: MATTHEW H. MEAD

Comment Excerpt Text:

Table 4.2.1 summarizes the overall impact of the loss of 600 jobs in the mining industry. The direct effect on employment with a loss of 600 jobs is a loss of an additional 537 jobs lost (221 indirect and 316 induced). Collectively, this results in a total job loss of 1,137 jobs and a decrease in total economic output of nearly \$357 million per year.

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Comment Number: 0002493\_Mead\_20160728\_GovWY-38

Organization I: Office of Governor Matthew H. Mead

Commenter I: MATTHEW H. MEAD

Comment Excerpt Text:

According to the Wyoming Legislative Service Office, each one million ton decrease in coal sold equates to a \$1,800,000 reduction in state collected revenue. See Wyoming Legislative Service Office 2015 Budget Fiscal Data Book. [14] (WY0-04040 to 04173). This immediate reduction in revenue resulted in cuts across state and local government. Wyoming has lost over 1,300 jobs in the coal industry over the past year and the secondary impacts of this decrease in personal income are just beginning. Creating further uncertainty in the future of coal in the energy portfolio will accelerate the downward momentum of Wyoming's economy.

Comment Number: 0002493\_Mead\_20160728\_GovWY-58

Organization I: Office of Governor Matthew H. Mead

Commenter I: MATTHEW H. MEAD

Comment Excerpt Text:

BLM should also consider the direct and indirect benefits of federal coal use including the benefits of affordable, reliable energy to health, lifespan, safety, and housing stability, vulnerable populations such as the elderly and low income, the economy, income, employment rates, jobs and vulnerable communities. See *The Social Costs of Carbon? No, the Social Benefits of Carbon*, American Coalition for Clean Coal Electricity (Jan. 2014); (WY0-01827 to 02011); *The Global Value of Coal*, Coal Industry Advisory Board, International Energy Agency (2012); (WY0-02013 to 02051); *The Positive Externalities of Carbon Dioxide: Estimating the Monetary Benefits of Rising Atmospheric CO<sub>2</sub> Concentrations on Global Food Production*, Craig D. Idso, Ph.D., Center for the Study of Carbon Dioxide and Global Change (Oct. 21, 2013); (WY0-02053 to 02082).

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Comment Number: 0002493\_Mead\_20160728\_GovWY-72

Organization I: Office of Governor Matthew H. Mead

Commenter I: MATTHEW H. MEAD

Comment Excerpt Text:

The BLM must consider the potential impacts to all sources of revenue from coal mining activities including those on federal payroll and income taxes. The replacement of high paying jobs in the mining sector with lower paying careers impacts federal tax receipts through lower Federal Insurance Contributions Act (FICA), federal and state income taxes. For example, in one published case, a laid off coal miner found new employment as a prison guard. Davenport, C, *As Wind Power Lifts Wyoming Fortunes, Coal Miners Are Left in the Dust*, *The New York Times* (June 19, 2016).[2] In 2015, according to the Wyoming Mining Association the average salary for a coal miner was \$83,594 and Bureau of Labor Statistics data states the median salary for a correctional officer was \$40,580. See Wyoming Coal Information Committee, *The 2015-16 Concise Guide to Wyoming Coal* (August, 2015); [3] (WY0.:03521 to 03528); and Bureau of Labor Statistics, *Correctional Officers and Bailiffs* (Dec. 17, 2015); [4] (WY0-03530 to 03531). In this - instance, the lost taxable wages would be \$43,014, a loss of over 51%. This reduction in salary could also lead to the individual dropping into a lower IRS tax bracket, costing the federal government additional revenue.

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Comment Number: 0002493\_Mead\_20160728\_GovWY-75

Organization I: Office of Governor Matthew H. Mead

Commenter I: MATTHEW H. MEAD

Comment Excerpt Text:

The Wyoming School Foundation Program (Foundation Program) guarantees local school districts the necessary instructional and operational resources to provide each Wyoming student with an equal opportunity to receive a proper education. The Foundation Program is overwhelmingly dependent on the mineral industry for revenue. FMR from the production of minerals on federal land, most notably coal, make up a significant portion of the revenue to the School Foundation Program Account (SFPA). The amount the SFPA receives is dependent upon the actual mineral production and the state distribution policy. In total, FMRs account for approximately 23% of revenue to the SFPA. The impact of the moratorium and the BLM PEIS will result in fewer FMRs to the SFPA and shrinking enrollment in impacted districts.

The School Foundation Funding guarantee is based on a number of factors, the most important of which is the number of students enrolled in the district. Any future changes in the federal coal leasing program that would lead to the loss of job opportunities and the decline in families with school-aged children in areas with high activity in coal extraction will result in a reduction in K-12 funding for the impacted school districts. The loss of even a small number of students could have a significant impact on local school district resources and the ability



to deliver educational services. The BLM must consider how its actions will impact Wyoming's Foundation Program under any scenario considered in the PEIS.

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Comment Number: 0002493\_Mead\_20160728\_GovWY-80

Organization I:Office of Governor Matthew H. Mead

Commenter I:MATTHEW H. MEAD

Comment Excerpt Text:

It is also important for BLM to consider, as part of the PEIS process, the economic stimulus generated by supply chain spending and the geographical extent of expenditures by Wyoming coal companies for supplies and services. This includes expenditures on freight, consulting and contractor services, support services and equipment and other supply-chain spending. Id at p. 11; (WY0-02098). In 2008, these expenditures totaled \$2,272.54 million. Id. at p. 13; (WY0-2100). The geographical extent of expenditures associated with Wyoming coal production is illustrated in Figure 4.3.2. (Id

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Comment Number: 0002493\_Mead\_20160728\_GovWY-81

Organization I:Office of Governor Matthew H. Mead

Commenter I:MATTHEW H. MEAD

Comment Excerpt Text:

In addition to losses in income and total output, there are also tax impacts at the federal, state and local levels to consider. Table 4.2.3 displays the impact on federal tax revenue. Across all categories, federal tax revenue is projected to fall by \$28.6 million per year. Social security contributions will decrease by nearly \$9.5 million per year while personal income tax will decrease by \$7.7 million per year. At the state and local level (Table 4.2.4) tax revenues are projected to drop by over \$37 million per year. Taxes on production and imports accounts for \$36.3 million of this loss in revenue

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Comment Number: 0002494\_Smyth\_20160728-2

Commenter I:Joe Smyth

Comment Excerpt Text:

Rather than subsidize the past, we should invest in the future—especially in communities that rely on fossil fuels. We do them no favor when we don't show them where the trends are going. That's why I'm going to push to change the way we manage our oil and coal resources, so that they better reflect the costs they impose on taxpayers and on our planet.

In a speech presenting her energy vision, Interior Secretary Jewell sought input on how we can manage federal coal "in a way that is consistent with our climate change objectives?" (3)

(3) <https://www.doi.gov/news/pressreleases/secretaryjewelloffersvisionforbalancedprosperousenergyfuture>

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Comment Number: 0002497\_Johnson\_20160728-1

Commenter I:Kristine Johnson

Comment Excerpt Text:

Coal miners need to be nimble, learn new trades and not expect that they are owed jobs from a dying industry.

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Comment Number: 0002499\_Nichols20160728-2

Organization I:WildEarth Guardians

Commenter I:Jeremy Nichols

Other Sections: I

## Comment Excerpt Text:

The federal coal program, however, is doing more than just damaging our climate. Facing declining demand, the consequences of chronically poor business decisions, and increased competition from cleaner sources of energy, the coal industry is now in the midst of one of the most significant job killing and downsizing sprees in history, firing thousands of workers and leaving communities hanging.

In the past year, the first, second, and fourth largest coal companies, Peabody Energy, Arch Coal, and Alpha Natural Resources, filed for Chapter 11 bankruptcy in federal court. (12) All three of these companies have major mining operations in the western United States and rely heavily on federal coal to sustain their businesses. Further, in the western United States, more than 2,600 jobs have been lost in the coal industry since 2012. (13) In the wake of the industry's collapse, coal-dependent communities are struggling to stay afloat, with revenues declining and putting even local schools at risk. (14) Not surprisingly, coal production rates are hitting historic lows, particularly in the western United States.

(12) For information on Alpha Natural Resources bankruptcy, see <http://www.kccllc.net/alpharestructuring>. For information on Arch Coal's bankruptcy, see <http://www.archcoal.com/restructuring/>. For information on Peabody Energy's bankruptcy, see <http://www.kccllc.net/peabody>.

(13) See Blankenbuehler, P., "By the numbers: western coal mine layoffs," High Country News (July 6, 2016), available online at <https://www.hcn.org/articles/western-coal-miner-layoffs>.

(14) See e.g. Finley, B., "Coal giant's hiccup causes turmoil and dependent Colorado towns," Denver Post (June 23, 2016), available online at <http://www.denverpost.com/2016/06/23/coal-giants-hiccup-causes-turmoil-independent-colorado-towns/>.

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Comment Number: 0002499\_Nichols20160728-4

Organization I: WildEarth Guardians

Commenter I: Jeremy Nichols

Other Sections: 4.5 2 8.1 8.7 8.5 7.1 8.9

Comment Excerpt Text:

## 2. Just Transition Alternative

The "Just Transition Alternative" is meant to both wind down the federal coal program in order to keep fossil fuels in the ground and to ensure an orderly, effective, and fair transition of workers and communities away from coal to more prosperous and sustainable economies. The "Just Transition Alternative" is defined by the following key components:

1. An end to federal coal leasing: Consistent with authorities and discretion under the Mineral Leasing Act, the Just Transition Alternative imposes a permanent pause on the leasing of federal coal. The primary basis for adopting this permanent pause would be to ensure the protection of the public interest and the interests of the United States. Such justification for an end to leasing is clearly supported by the Mineral Leasing Act. This pause would apply to all competitive leases (including all leases by application, including emergency leases, as defined by 43 C.F.R. § 3425.1-4) and lease modifications. We further believe there is ample justification for applying a permanent pause to other forms of non-competitive leasing, such as preference right lease applications and lease exchanges. With regards to lease exchanges, the BLM has clear authority to reject exchanges that are not in the "public interest." 43 C.F.R. § 3435.4(a); see also 43 C.F.R. § 3436.0-2(b) (related to alluvial valley floor exchanges) and 43 C.F.R. § 2200.0-6 (generally related to exchanges). With regards to preference right lease applications, the BLM has the authority to reject such applications where there does not exist "commercial quantities" of coal. 43 C.F.R. § 3430.5-1(a)(1). Given the dismal state of the coal industry and the overwhelming climate costs that coal imposes on society, it would be dubious at best to claim that any commercial quantities of coal exist where there are preference right lease applications. Accordingly, the BLM has the authority to reject such applications. (20)

Furthermore, to ensure an orderly end to federal coal leasing, the BLM and the Department of the Interior should issue a rule or guidance requiring that as land management planning is undertaken pursuant to 43 C.F.R. § 1610, et seq., that all lands within a resource management area that are not currently leased for coal, be made

unavailable for leasing. The authority to impose such direction is set forth at 43 C.F.R. § 3420.1-4(e), which gives the BLM broad discretion to “eliminate additional coal deposits from consideration to protect other resource values.” 43 C.F.R. § 3420.1-4(e)(3).

(20) The only preference right lease applications that exist are in northwestern New Mexico, where Arch Coal, which is currently bankrupt, has the rights to acquire 21,000 acres of leases. Legislation was introduced in the U.S. House of Representatives that would allow the Secretary to retire these preference right lease applications. See HR-1820, available online at <https://www.congress.gov/bill/114th-congress/house-bill/1820/text>. If this legislation is passed, there would be no additional preference right lease applications requiring action. We support this legislation and urge the Secretary of the Interior to encourage its passage in the U.S. Senate and adoption into law.

Putting a permanent pause on leasing will not destroy the U.S. economy or otherwise endanger our energy security. As a recent report looking at leasing in the Powder River Basin found, existing leased reserves in the Powder River Basin are sufficient to meet demand and effectively contribute to limiting temperature increases.

(21) This report is instructive as the Powder River Basin is the largest coal producing region in the United States and imposes the greatest influence on energy supply and demand in the nation. If an end to federal leasing can be justified in the Powder River Basin, it can be justified for federal leasing elsewhere in the U.S.

21 See Exhibit 11, Fulton, M., D. Koplow, R. Capalino, and A. Grant, “Enough Already: Meeting 20C PRB Coal Demand Without Lifting the Federal Moratorium,” Report Prepared for Energy Transition Advisors, Earth Track, and Carbon Tracker Initiative (July 2016), available online at <http://www.carbontracker.org/report/enough-already-2c-powder-river-basin-coal-demand-federal-moratorium/>.

2. Increased royalty rates and rentals: Coal is exacting a tremendous toll on our nation, costing our society billions in climate damages, adverse health impacts from air pollution, and water contamination. Royalty rates from production on existing coal leases and rentals on existing leases must be increased to begin to recoup the costs of these externalities, which are currently shouldered by the public.

Although royalty rates are normally imposed through new leasing, we recommend that the Interior Department and BLM incorporate higher royalty rates into existing leases as existing leases are readjusted pursuant to 43 C.F.R. § 3451.1. To accomplish this, we urge the amendment of 43 C.F.R. § 3473.3-2(a)(1) and (2) to incorporate increased royalty rates for both surface and underground mining. As leases are readjusted, these royalty rates must be applied to existing leases pursuant to 43 C.F.R. § 3451.1(a)(2).

Increasing royalty rates has been recommended by the White House as both a means to generate revenue and address the costs of environmental externalities, including carbon costs. (22)

(22) See Exhibit 12, Executive Office of the President of the United States, “The Economics of Coal Leasing on Federal Lands: Ensuring a Fair Return to Taxpayers” (June 2016), available online at [https://www.whitehouse.gov/sites/default/files/page/files/20160622\\_cea\\_coal\\_leasing.pdf](https://www.whitehouse.gov/sites/default/files/page/files/20160622_cea_coal_leasing.pdf).

Furthermore, royalty rate reductions should not be approved. Currently, royalty rate reductions are routinely granted as companies claim poverty or difficulty in mining with little apparent scrutiny as to whether the reductions are justified. In Colorado, for example, BLM officials have approved royalty rate reductions to facilitate methane venting and most recently proposed to approve a retroactive royalty rate reduction for a mine that was not even producing coal. (23) See Exhibits 13 and 14.

Similarly, we urge Interior and BLM to amend 43 C.F.R. § 3473.3-1(a) to raise rental rates for federal coal leases. Currently, rental rates are set at \$3.00 per acre, a figure that has not been adjusted since 1979, if not earlier. This rental rate not only has failed to be adjusted to account for inflation, but fails to account for the fact that some leases may be of small acreage, yet yield significant amounts of coal. Rentals should reflect the value of the lease, which depends on the amount of coal a lease contains. In accordance with 43 C.F.R. § 3473.3-1(a), any increased rental rate must be applied to any readjusted coal lease.

3. Existing leases that are not producing must be canceled: Where a lease is not meeting continued operation requirements under 43 C.F.R. § 3483.1(a)(2), it is subject to cancellation pursuant to 43 C.F.R. § 3452.2. Where a lease is not meeting continued operation requirements, BLM and the Interior Department should make clear that cancellation of the lease must be pursued. To this end, discretionary avenues for avoiding cancellation should be prohibited. Thus, lease suspensions under 43 C.F.R. § 3483.3 and payment of advanced royalties in lieu of

continued operation under 43 C.F.R. § 3483.4 should be barred.

The justification for imposing such direction is very clear. Currently, BLM regularly grants lease suspensions and allows payment of royalties in lieu of continued operation with no assessment of whether such actions are appropriate or in the public interest. BLM appears to be under the impression that lease suspensions or advanced royalties are somehow mandated, and that the agency has no choice but to approve company requests. An egregious example of this is with regards to Arch Coal's Carbon Basin Lease in southern Wyoming (No. WYW-139975). Arch acquired this lease with the aim of developing a mine to fuel a proposed coal to liquids facility. However, this coal to liquids facility has never materialized or even shown any promise of materializing. Most recently, the Wyoming Department of Environmental Quality terminated the permit for the proposed facility. (24) Nevertheless, since 2010, Arch has failed to meet continued operation requirements. The BLM has allowed Arch to maintain its lease, however, by routinely allowing the company to pay advanced royalties in lieu of continued operation. (25) These decisions appear to be pro forma in nature, and do not reflect any consideration as to whether it is appropriate or remotely in the public interest to accept advance royalties in lieu of continued operation.

(24) See Exhibit 15, Wyoming Department of Environmental Quality, "Permit Termination, Medicine Bow Fuel and Power Coal to Liquid Project" (June 27, 2016).

(25) See Exhibit 16.

Furthermore, where an existing lease is not producing, yet is part of a producing logical mining unit, BLM and the Interior Department should use their discretion to modify the boundaries of logical mining units to eliminate the non-producing lease and facilitate its cancellation. BLM has such discretion under 43 C.F.R. § 3478.1.

Cancelling leases that are not producing will serve the goal of preventing any potential future development of existing leases and contribute to an orderly end to the federal coal program.

4. Accounting for carbon costs in coal management: It should be made clear, whether through new rules or guidance, that carbon costs must be analyzed, assessed and disclosed as federal coal management decisions are made. Such decisions are most likely to include mining plan modifications issued pursuant to the Mineral Leasing Act, 30 U.S.C. § 207(c), and the Surface Mining Control and Reclamation Act ("SMCRA"), 30 C.F.R. § 746, and lease readjustments. It is imperative that the BLM and Interior maintain close accounting of the carbon emissions and costs resulting from its coal management actions, to ensure full transparency around these emissions and costs, and to meaningfully act to address these emissions and costs. Particularly given that, pursuant to authorities under the Mineral Leasing Act and SMCRA, the Secretary of the Interior has full discretion to disapprove mining plans authorizing the development of leased federal coal, it is imperative that carbon emissions and costs factor into and influence such decisionmaking.

5. Reclamation must be guaranteed: To ensure an orderly end to the federal coal program, full and final reclamation must be guaranteed within a reasonable timeframe. We urge two regulatory changes to ensure this occurs.

First, Interior should amend regulations at 30 C.F.R. §§ 816.100 and 817.100 to provide clarification and specificity around contemporaneous reclamation. Current rules are vague and fail to ensure that reclamation proceeds in a manner that is as "contemporaneously as possible" with mining in accordance with 30 U.S.C. § 1202(e). These regulations should be amended to make clear that the success of contemporaneous reclamation must be measured based on a comparison of Phase III bond release acres, as defined under 30 C.F.R. § 800.40(c)(3), with disturbed acres and ensure that reclamation proceeds at a 1:1 rate, in other words for every acre disturbed, one acre should be fully reclaimed to meet Phase III bond release standards.

Second, just as current BLM rules require diligent development of federal coal, these rules should also require diligent reclamation. To this end, Interior and BLM should consider rule changes to ensure that nonproducing coal leases are fully reclaimed within two years of failing to meet continued operation requirements and set deadlines for the full reclamation of federal coal leases that are no later than 2035. This reclamation deadline should be established by rule and incorporated into lease terms as leases are readjusted.

Finally, Interior should amend self-bonding regulations at 30 C.F.R. § 800.23, and any other regulations, as

appropriate, to prohibit self-bonding whenever publicly owned coal is permitted to be mined. This will ensure that, as coal companies continue their decline, that American public resources are fully protected and fully guaranteed to be cleaned up.

6. Prioritizing transition: Above all, the BLM and Interior must make transition away from coal a foremost goal as the federal coal program comes to an end. To do this, the agencies should not only explicitly commit, to the extent possible, their leadership, resources, and expertise to ensure that workers and communities receive the support and assistance they need to transition to more sustainable and prosperous economies. Among the actions that Interior and BLM can and should undertake to ensure transition:

- Work to secure Congressional authorization to direct increased royalty and rental payments toward worker and community support. Under NEPA, agencies are required to rigorously explore and objectively evaluate reasonable alternatives “not within the jurisdiction of the lead agency.” 40 C.F.R. § 1502.14(c). Here, although BLM and Interior may not be able to direct royalties toward transition support, they can recommend that Congress pass legislation that provides such authorization.

- Establishing an Economic Transition Fund, which would be sustained by an increase in reimbursement fees charged by the Interior Department when processing coal-related applications. Under the Federal Land Policy and Management Act (“FLPMA”), Interior has authority to recover reasonable costs associated with its coal management program and to appropriate and spend such monies. Specifically, FLPMA provides the Secretary of the Interior with authority to “require a deposit of any payments intended to reimburse the United States for reasonable costs with respect to applications,” including coal lease application. See 43 U.S.C. § 1734(b). Such payments are “authorized to be appropriated and made available until expended” by FLPMA. Id. Funds from the Economic Transition Fund should be directed toward transition-oriented initiatives.

- Prioritizing support and assistance to help communities transition. In addition to securing funds and making them available, the Department of the Interior can play a key role in helping direct communities to support, steering resources to support conservation and research projects in or near communities, encouraging renewable energy development on public lands. Such leadership could be conveyed through a Secretarial Order that simply makes it an overarching priority of the Interior Department to advance transition

Overall, the Interior Department and BLM must move to keep our publicly owned coal in the ground. However, keeping coal in the ground should not mean that we turn our backs on the workers and communities that have been dependent on coal for so long. Embracing an alternative that ensures “Just Transition,” in other a fair, compassionate, and orderly transition away from coal, is the most effective way to both protect our climate and help our nation effectively move to more sustainable economies and reliable and affordable means of energy production.

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Comment Number: 0002506\_Nichols\_20160729-6

Organization I: Wild Earth Guardians

Commenter I: Jeremy Nichols

Comment Excerpt Text:

Transition must be a priority: Above all, you must make transition away from coal a foremost goal of reform. The coal industry is collapsing, already leaving communities and workers struggling. As the federal coal program comes to an end, it behooves your Interior Department to ensure resources, expertise, and leadership are provided to help communities move to more prosperous and sustainable economies. A “Just Transition,” one that is fair and helps workers move on from coal, must be embraced.

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Comment Number: 0002507\_Nettleton\_20160801-16

Commenter I: Jerry Nettleton

Comment Excerpt Text:

Both the proposed regulatory changes and the de-facto leasing moratorium will result in reduced federal, state, and local revenues, the loss of high-wage jobs, and inevitable increases in electric utility rates for American families and businesses. Please recognize and remember that any actions that reduce the viability and availability

of reliable, affordable coal-based electricity will impact not just coal miners and their communities, but every household and business that pays an electric bill, and the future prosperity of America.

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Comment Number: 0002510\_Cowan\_20160728-2

Organization I: Wyoming County Commissioners Association

Commenter I: Gregory Cowan

Comment Excerpt Text:

The PEIS must evaluate how changes to the Federal Coal Program impact the revenues of those communities that are dependent on federal coal resource extraction.

Collectively, Wyoming's counties rely heavily on the revenue generated from the production of federal coal resources in Wyoming. Accordingly, they are particularly situated to shoulder the worst of any detrimental economic impacts associated with changes in coal production or utilization based on changes in regulation. Counties' economic viability, as well as the economic viability of our entire state's economy, is dependent upon coal revenues to fund essential governmental services - most notably K-12 education.

For example, Campbell County's 2015 total assessed valuation was \$6.2 billion. Eighty-three percent of that assessment was from mineral production, with a majority (sixty-five percent) of that eighty-three percent represented by federal coal.<sup>1</sup> In 2016, Campbell County's assessed value is \$5.2 billion, a nearly fifteen percent reduction from last year.<sup>2</sup> A reduction of this kind can only result in reduced services to Campbell County residents. Additionally, a county like Niobrara, with an assessed value of only \$141 million<sup>3</sup>, is heavily dependent upon state-shared revenue sourced from the production and delivery of coal.

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Comment Number: 0002510\_Cowan\_20160728-3

Organization I: Wyoming County Commissioners Association

Commenter I: Gregory Cowan

Comment Excerpt Text:

The PEIS must evaluate impacts felt at the local level from the loss of jobs and revenue associated with severe declines in rail transport employment, as well as small mining service contractors.

The downturn in the oil and gas sector and previous downturns in auto manufacturing have shown to most significantly affect small suppliers and service contractors. However, too often federal regulatory analysis fails to account for jobs outside the direct employment of the large manufacturer or operator.

While some may argue that alternative fuel market forces have driven the value of Wyoming's coal downward, we believe that federal regulation affecting the production and use of coal have also had a measurable detrimental impact. We believe that revenue impacts and its effect on quality of life in Wyoming's counties must be fairly reviewed and evaluated for both its direct and indirect impacts.

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Comment Number: 0002513\_Lish\_20160707-8

Commenter I: Christopher Lish

Comment Excerpt Text:

Evaluating the Bureau of Land Management's authority and opportunities—as well as actions other agencies and Congress could take—to help ensure a Just Transition to a clean energy economy, including robust investment in community economic development, protecting worker livelihoods, and replacing any lost tax revenues to aid miners and coal communities.

Comment Number: 0002513\_Lish\_20160707-9

Commenter I: Christopher Lish

Comment Excerpt Text:

American taxpayers are propping up the dirty coal that is polluting our planet and negatively affecting our health. According to independent nonprofit research group Headwaters Economics, reforming the coal-leasing program would have generated \$900 million to \$5.6 billion more revenue between 2008 and 2012. That math doesn't even speak to the social costs of the climate change and health impacts of burning coal. Including those costs, the 522,443,982 metric tons of carbon dioxide emitted by the top three U.S. coal mining companies in 2014 alone amount to \$18 billion in damages to society, using the federal government's midrange social cost of carbon figures.

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Comment Number: 0002513\_Quinlan\_20160707-1

Commenter I: Alby Quinlan

Comment Excerpt Text:

And it is time to find ways to provide alternative employment for those workers who will be affected by the cessation of coal burning. There will be many jobs in the transition to clean energy and the coal workers should be retrained and helped to move to the clean energy sector.

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Comment Number: 0002942\_Harbine-2

Organization I: Earthjustice

Commenter I: Jenny Harbine

Other Sections: I

Comment Excerpt Text:

IV. THE PEIS SHOULD EVALUATE OPPORTUNITIES TO ENSURE AN ECONOMICALLY JUST TRANSITION OF COAL-DEPENDENT COMMUNITIES TO A RENEWABLE ENERGY FUTURE Through the PEIS process, BLM must evaluate opportunities and actions to help ensure an economically just transition to a clean energy economy for communities most affected by the downturn in the coal market. BLM must evaluate ways to promote economic diversification within those communities most directly affected by the essential and irreversible shift away from burning fossil fuels. The PEIS should explore, among other things, opportunities for robust investment in community economic development, protecting worker livelihoods, and replacing lost tax revenues to aid miners and coal communities. The measures should not be limited to what BLM alone can accomplish, but include actions that other agencies and Congress can take. 309 The opportunities that BLM identifies must help ensure a fair and just transition to a clean energy economy for all people. While the transition from dirty fuels to clean energy will create many more jobs than those lost, we must not ask workers and communities that have helped power our country to bear the burden of this energy transformation that will benefit everyone. Identified measures should drive sustainable investment and job creation in regions where the coal industry has abused and abandoned the land, air, water and people. On the most fundamental level, "just transition" refers to a path or plan for workers displaced by transformations in the economy. 310 The PEIS should identify measures for a fair and just transition in which affected workers, their unions, and communities are equal partners in a well-planned, carefully negotiated and managed transition from fossil fuels to clean energy. Such measures should bring good job opportunities to those traditionally left behind and job security and livelihood guarantees to affected workers. Workers' pensions and health care benefits should be preserved, and workers and members of affected 307 Id. 308 White House Fair Return Report, at 28. 309 Forty Questions, 46 Fed. Reg. at 18,031 ("All relevant, reasonable mitigation measures that could improve the project are to be identified, even if they are outside the jurisdiction of the lead agency or the cooperation agencies ...."). 310 Labor Network for Sustainability, Strategic Practice Grassroots Policy Project, "Just Transition" – Just What Is It?: An Analysis of Language, Strategies, and Projects, at 22 (2016), attached as Ex. 63; Caroline Farrell, A Just Transition:

Lessons Learned From the Environmental Justice Movement, 4 DUKE FORUM FOR LAW & SOCIAL CHANGE 45 (2012), attached as Ex. 64. 80 communities should receive right of first employment for any jobs that are created by power plant decommissioning or site reclamation. In addition, the PEIS should evaluate measures in which workers receive education and training for industries, ideally unionized, with similar pay and benefits. Measures for a fair and just transition also should engage every level of government and business in an effort to maximize public and private investments in economic development and diversification, provide workforce training, replace lost tax revenues, and create lasting, good jobs that strengthen the economy and sustain working families— especially jobs related to clean energy, energy efficiency, and climate-resilient infrastructure. Finally, such measures should ensure that the mining companies responsible for harmful pollution to be held accountable for cleaning it up so that communities are left with usable land and clean water.

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Comment Number: 0002942\_Harbine-30

Organization I:Earthjustice

Commenter I:Jenny Harbine

Other Sections: I

Comment Excerpt Text:

As explained in detail in the attached Power Consulting report on available energy-economy models, the model selected by BLM to evaluate impacts of competing alternatives in the PEIS should, at a minimum, have the following characteristics: 1. The ability to estimate GHG emissions with a high enough degree of precision to differentiate between emissions output from a reference scenario and adjusted scenarios where various levels of federal coal are allowed as inputs; 2. The ability to differentiate between coal with different properties both in supply and end user; 3. The ability to accurately account for changes in delivered coal prices, including changes in mine-mouth prices and transportation costs; 4 ICF International, Integrated Planning Model, available at <http://www.icfi.com/insights/products-and-tools/ipm> (last visited July 21, 2016). 42 Peter H. Howard, The Bureau of Land Management's Modeling Choice for the Federal Coal Programmatic Review, Institute for Policy Integrity (2016). 22 4. The ability to accurately account for price elasticity between supply and demand; 5. The ability to account for emissions reduction through fuel switching inherent in our current electric economy; 6. The ability to account for coal mine methane emissions; 7. The ability to account for changes in electricity demand as electricity prices change; and 8. Be transparent and independently verifiable. Of particular importance—and an aspect that the Forest Service did not account for when employing ICF's IPM in its 2015 Draft EIS to reinstate the coal mining loophole in the Colorado Roadless Rule—is the likelihood that policies that increase the supply of comparatively low-cost Powder River Basin coal may reduce the cost of electricity to Americans, and that this reduced cost may lead to an increase in the overall use of electricity. This is a significant oversight. Just as the lower coal prices are expected to lead to the increased use of coal, the lower electric prices should also increase the use of electricity. That would require the burning of additional fuel, the emission of more GHGs, and greater economic costs from damages caused by climate change. Any use of the IPM or another model by BLM here must not simply assume a fixed level of demand for electricity for each year no matter what happens to fuel and other electric generating costs. Accurate modeling must be able to reflect market adjustment to lower energy prices.

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Comment Number: 0002942\_Harbine-42

Organization I:Earthjustice

Commenter I:Jenny Harbine

Other Sections: 9

Comment Excerpt Text:

The PEIS Should Evaluate the Impacts of Mining and Burning Federal Coal on Downstream Communities, Including the Environmental Justice Impacts Associated with Each Considered Alternative BLM's Notice of Intent states that “[w]ith respect to the climate impacts of the Federal coal program, the Programmatic EIS will examine how best to measure and assess the climate impacts of continued Federal coal production, transportation, and combustion.”<sup>168</sup> We applaud this commitment. But the PEIS must go further: it must also analyze and disclose



the non-carbon environmental, health, and economic impacts of coal production, transport, and combustion. NEPA requires federal agencies to consider “any adverse environmental effects of their major actions.” 42 U.S.C. § 4332(2)(C). This consideration extends to both direct and indirect impacts. 40 C.F.R. § 1508.8. Indirect impacts are reasonably foreseeable impacts that are caused by the project but that occur later in time or at a greater distance. Id. A “reasonably foreseeable impact” is one that is “sufficiently likely to occur that a person of ordinary prudence would take into account in reaching a decision.” *Mid States Coal. for Progress*, 345 F.3d at 549 (citing *Sierra Club v. Marsh*, 976 F.2d 763, 767 (1st Cir. 1992)). Even if complete information is lacking on the extent of the foreseeable impact, “the agency may not simply ignore the effect.” 166 Leonard G. Pearlstine, Elise V. Pearlstine, & Nicholas G. Aumen, *A Review of the Ecological Consequences and Management Implications of Climate Change for the Everglade*, 29-4 *JOURNAL OF THE NORTH AMERICAN BENTHOLOGICAL SOCIETY*, 1510, 1513 (2010); E. Stabenau, J. Sadle, & L. Pearlstine, *Sea-level Rise: Observations, impacts, and proactive measures in Everglades National Park*, 28 *PARK SCIENCE*, 26-30 (2011). 167 Government Accountability Office, *Climate Change*, at 27. 168 81 Fed. Reg. at 17,725. 49 Id. If the nature of the effect is reasonably foreseeable, this effect must be addressed in the PEIS. Id. Given the scope and scale of the federal leasing program, it is undeniable that it has significant, adverse effects on water quality and access, air quality, health and climate. The activities directly and indirectly associated with coal leasing include, among other things, coal transport by rail, truck and sea, construction and operation of infrastructure and equipment related to storing, shipping and processing coal, coal combustion domestically and overseas, and disposal of coal ash. Each of these “downstream” activities negatively downstream communities, harming their health, threatening their safety and causing significant nuisance. More specifically, the federal coal program’s downstream activities generate coal dust and other air , reduce water access and worsen water quality, increase accident and hazard risk, induce growth that magnifies these affects, and hasten impacts from climate disruption, such as sea level rise. These impacts are particularly pernicious because many downstream communities, and low income communities and communities of color in particular, are already disproportionately impacted by pollution and hazards. Communities situated within two miles of rail lines, 169 in cities next to ports, those near coal terminals and plants, and communities that depend upon clean and accessible water for their livelihoods are most vulnerable. Since NEPA requires analysis of all foreseeable direct, indirect and cumulative impacts, the PEIS must analyze impacts to downstream communities.

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Comment Number: 0002942\_Harbine-46

Organization I:Earthjustice

Commenter I:Jenny Harbine

Comment Excerpt Text:

The PEIS should analyze the safety and economic impacts of traffic for downstream communities. The PEIS should analyze the impact that coal trains cause at rail grade crossings. Coal trains are frequently 120 cars long. 196 Consequently, these coal trains adversely impact traffic at grade crossings. 197 They can create traffic jams during rush hour and hours of after spills or rail accidents. Coal trains also cause traffic jams with other freight trains. A 2014 study showed that congestion from coal and oil trains is already displacing and harming other economic sectors. 198 These economic impacts should be analyzed. Most significantly, coal trains can delay emergency vehicles, such as ambulances and fire trucks. 199 The PEIS must consider the frequency and magnitude of these impacts on communities.

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Comment Number: 0002942\_Harbine-47

Organization I:Earthjustice

Commenter I:Jenny Harbine

Other Sections: I

Comment Excerpt Text:

The PEIS should analyze impacts to communities from train noise and vibration. Noise from trains and their vibration is a serious issue for those residing near train tracks. In addition to general affects to quality of life,

chronic noise exposure can affect effects including cardiovascular disease, cognitive impairment in children, sleep disturbance (which has many secondary effects) fatigue, hypertension, arrhythmia, increased rate of accidents and 195 75 Fed Reg. 35,547. 196 See Polly Wood, Another Voice: Coal Transport Comments Needed Now, HOOD RIVER NEWS, Friday, January 11, 2013, available at <http://www.hoodrivernews.com/news//jan/11/another-voice-coal-transport-comments-needed-now/> (last visited July 28, 2016); see also Hearing Transcript, July 29, 2010, Ar. Elec. Coop. Ass'n – Petition for Declaratory Order, Surface Transportation Board, Docket No. FD 35305, at 42:5 13. 197 Comments of Phyllis Fox, Environmental Health and Safety Impacts of the Proposed Oakland Bulk and Oversized Terminal, September 21, 2015, at 18 (Ex. 35); see also Scott Gutierrez, The bane of all drivers in Seattle's SODO neighborhood: train crossings, SEATTLE PI, May 21, 2011, available at <http://www.seattlepi.com/local/transportation/article/Getting-There-How-long-can-trains- legally-block-1403713.php> (last visited July 28, 2016). 198 Western Organization of Resource Councils, HEAVY TRAFFIC STILL AHEAD (2014), available at <http://heavytrafficahead.org/pdf/Heavy-Traffic-Still-Ahead-web.pdf> (last visited July 28, 2016). 199 Comments of Phyllis Fox, Environmental Health and Safety Impacts of the Proposed Oakland Bulk and Oversized Terminal, September 21, 2015, at 19 (Ex. 35). 55 injuries, exacerbation of mental health disorders, depression, stress and anxiety, and psychosis. 200 Federal rules require that engineers of all trains sound horns for at least 10-15 seconds at 96-110 decibels at all public crossings. At the lowest range, this is “very loud” and at the highest it is dangerous. Consequently, the PEIS should analyze the number of crossings within urban areas that coal trains pass through and the program’s cumulative impacts of noise on communities.

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Comment Number: 0002942\_Harbine-54

Organization I:Earthjustice

Commenter I:Jenny Harbine

Comment Excerpt Text:

7The PEIS should analyze induced growth and infrastructure. The coal market is deteriorating, yet in the past several years we have seen numerous proposed projects to construct new coal terminals and other infrastructure. The PEIS should analyze the impacts of increased infrastructure based on proposed and reasonably foreseeable projects catalyzed by the federal coal leasing program. See *Mid States Coal. for Progress*, 345 F.3d at 549 (emphasizing the need, particularly for large projects, to examine the impacts that may occur as result of reasonably foreseeable effects of the action, including induced infrastructure build-out, and increased demand and use). These projects have the greatest impact on downstream communities. The purpose of a PEIS is to fully understand these impacts before deciding to maintain the program that causes them.

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Comment Number: 0002942\_Harbine-56

Organization I:Earthjustice

Commenter I:Jenny Harbine

Comment Excerpt Text:

The PEIS Should Examine Significant Non-climate Costs Associated with the Federal Coal Leasing Program. Consistent with BLM’s commitment in its scoping notice to conduct a broad analysis of the federal coal program’s socioeconomic impacts, 214 the PEIS must examine the non-carbon English et al., *Racial and Income Disparities in Relation to a Proposed Climate Change Vulnerability Screening Method for California*, 4-2 THE INTERNATIONAL JOURNAL OF CLIMATE CHANGE: IMPACTS AND RESPONSES (Apr. 2013) at 1-18. 211 Clean Power Plan, 80 Fed. Reg. 64,662, 64,940 (Oct. 23, 2015). 212 Id. 213 Id. 214 Notice of Intent, 81 Fed. Reg. at 17,726. 58 environmental, health, and economic impacts of coal mining, transport, and combustion that are direct, indirect and cumulative impacts of federal coal leasing. As discussed above, the June 2016 report of the White House Council of Economic Advisors acknowledged significant health-based costs associated with the continued mining and burning of federal coal. 215 Numerous reviews in the past several years support the findings of the White House Report in its analysis of harms from the non-carbon emissions from coal-fired electric generators: sulfur and nitrogen oxides, particulate matter, volatile organic compounds, ammonia, and mercury. These reviews show damage to longevity, health, quality of life, and property. 216 In addition to

examining the harm that coal production, transport, and combustion cause to the environment and public health, the PEIS should calculate the economic impacts of this harm. Specifically, the PEIS should estimate the economic damage of costs associated with increased human mortality, increased human illness (morbidity), reductions in the productivity of forests, farms, and ranches, the accelerated deterioration of structures and equipment, and declines in quality of life due to reduced visibility and degraded recreation opportunities – all foreseeable impacts from coal production, transport, and combustion. The PEIS must address these environmental and socio-economic harms.

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Comment Number: 0002942\_Harbine-57

Organization I:Earthjustice

Commenter I:Jenny Harbine

Comment Excerpt Text:

The PEIS Must Objectively Evaluate the Socio-economic Impacts of the Federal Coal Program on Coal Mining Communities. The PEIS must take a hard look at the socio-economic impacts of federal coal leasing on local communities where mines are located. In doing so, the PEIS must disclose both the benefits and the damage that coal mining can cause. Only after understanding the characteristics associated with coal mining that can limit the industry's ability to support sustained economic development can a strategy to integrate coal mining into a local economic development strategy be crafted

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Comment Number: 0002942\_Harbine-58

Organization I:Earthjustice

Commenter I:Jenny Harbine

Other Sections: I

Comment Excerpt Text:

a. The PEIS Cannot Assume That Coal Mining Has Only Beneficial Economic Impacts Because History Shows Otherwise. Coal mining can in some instances pay relatively high wages, and those mines that are located on public lands can make substantial payments to local, state, and federal governments, helping them to fund important public services. But the financial contributions of coal mining are often the only economic characteristics mentioned in federal agency NEPA reviews. Concluding that expanded or continued coal mining will have a positive impact on coal-dependent communities or that declines in coal mining will have catastrophic impacts on such communities is incomplete and misleading, and cannot be used to guide public decision making. Recent empirical economic studies on the relationship between coal mining and local economic vitality and well-being paint contradict the rosy picture of coal mining's socio-economic impacts. For example, historical evidence shows that: coal and other metal mining 215 White House Fair Return Report, at 28 216 Power Consulting, Inc., The Economic Consequences of the Federal Coal Leasing Program: Improving the Quality of the Economic Analysis (July 27, 2016) at 49 (Ex. I). have often failed to bring sustained prosperity to adjacent communities; that counties that rely more heavily on natural resource extraction experience less economic growth than counties with more diverse economic portfolios; that while coal and mining booms result in few additional jobs outside the mining sector, busts cause a greater loss in local employment; that a high share in coal employment in a county was correlated with a lower rate of self-employment, indicating that reliance on mining may restrain entrepreneurial activity. The attached report by Power Consulting, Inc. et al. describes in detail studies supporting these conclusions. The PEIS must take this evidence into account in preparing its socio-economic analysis

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Comment Number: 0002942\_Harbine-59

Organization I:Earthjustice

Commenter I:Jenny Harbine

Comment Excerpt Text:

The PEIS Must Carefully Identify the Scale at Which it Analyzes Socio-economic Impacts. To take the “hard look” at the federal coal program’s socio-economic benefits, which NEPA requires, the PEIS must analyze the area where those impacts are likely to be most significant and measurable: the county in which the mine is located or the majority of impacts are likely to occur. Focusing solely on a larger area is likely to mask how coal mining can effect local communities, as the impacts from coal mining will be overwhelmed by other sectors of the economy. For this reason, the Powers Consulting report recommends focusing the analysis on the 51 rural counties where coal mining provided more than 5% of the employment in 1990.<sup>218</sup> The data Powers analyzed shows such coal dependent communities experienced slower job growth, lower real earnings, lost more population, and recovered from economic downturns more slowly, “reflect[ing] the instability of coal mining employment.” This is the type of information that should inform the PEIS’s analysis as the Interior Department attempts to understand how the federal coal program impacts local mining economies

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Comment Number: 0003002\_Master\_FormB\_CountOnCoalMontana-I

Organization I: Count on Coal Montana

Other Sections: 8.7

Comment Excerpt Text:

Further, the value of coal to the American people isn't just royalty revenue — the value of high paying jobs and reliable, affordable energy has to be taken into account as well. Increases in coal prices induced by higher royalty rates will flow through to the electricity market due to reduced production on federal lands. The states that rely on coal for the bulk of electric generation consistently enjoy lower electricity rates. Whatever incremental revenue the Department believes it will obtain from increasing the coal royalty rate will be at the expense of American businesses and families paying higher utility bills. The federal coal program has generated tens of billions of dollars of value for the American people in recent decades and additional billions of dollars for Colorado state and local governments and school districts, to the benefit of all the state's citizens. It's simple: I oppose new taxes that will only serve to drive coal further to the edge, will deprive public schools of an important source of revenue from federal leases, and ultimately increase electricity rates for hard working families.

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Comment Number: 0003003\_Master\_FormB2\_CountOnCoalMontana-I

Organization I: Count on Coal Montana

Other Sections: 8.7

Comment Excerpt Text:

Sec. Jewel is seeking to hike coal royalty rates, despite the fact that current royalty rates are above market, and if increased will only result in decreased production and return on investment for taxpayers. Increased rates will saddle the taxpayer with higher electricity prices and lower return from reduced coal production - also, the value of reliable affordable energy has to be taken into account, because if production on federal lands is decreased due to increased royalty rates, consumers will be forced to pay for more expensive forms of power generation. Increased energy taxes will kill jobs and state revenues, while ever-increasing electricity rates will hit all Americans in the checkbook.

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Comment Number: 0003004\_MasterFormD\_TheSierraClub-6

Organization I: The Sierra Club

Comment Excerpt Text:

Evaluating BLM’s authority and opportunities - as well as actions other agencies and Congress could take - to help ensure a Just Transition to a clean energy economy, including robust investment in community economic development, protecting worker livelihoods, and replacing any lost tax revenues to aid miners and coal communities.

Comment Number: 0003005\_MasterFormD2\_TheSierraClub-3

Organization I:The Sierra Club

Other Sections: 2

Comment Excerpt Text:

BLM must also make sure the federal coal program helps ensure a just transition for workers and communities that helped to power our country for generations. The President's Power Plus Plan provides a useful starting point, and BLM should include provisions that protect the livelihoods of coal workers and communities as part of its update of the federal coal leasing program.

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Comment Number: 0003007\_MasterFormF\_WEG-2

Organization I:WildEarth Guardians

Comment Excerpt Text:

Helping communities and workers dependent on coal transition: Programs and resources need to be mobilized to help communities develop more sustainable economies and to provide education and retraining for workers. Keeping coal in the ground needs to be coupled with an effective economic transition strategy.

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Comment Number: 0003011\_MasterFormJ\_KeepElecAfford-1

Organization I:Keep Electricity Affordable

Other Sections: 8.7

Comment Excerpt Text:

An increase in federal coal royalty rates would force consumers like me to pay more for the power we need at home and work. Raising royalty rates also would reduce coal production which means less revenue for pressing public needs.

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Comment Number: 0003012\_MasterFormK-2

Comment Excerpt Text:

Roughly 41 percent of US coal production comes from federal lands. Of that, 85 percent came from the Powder River Basin. Over the last ten years, coal leases on federal lands have generated \$10.3 billion in federal revenues from bonus bids, rental fees, and production royalties. Using these resources creates opportunities for businesses and individuals, and supports so much more than the miners and their families. In 2012, overall coal mining activities contributed nearly 2 million jobs across various sectors of the economy.

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Comment Number: 0003013\_MasterFormL-2

Organization I:Center for Biological Diversity

Other Sections: 2

Comment Excerpt Text:

The PEIS should also consider and adopt measures to support and assist coal industry workers and their communities through the coming energy transition.

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Comment Number: 0003014\_MasterFormM1-2

Other Sections: 8.7

Comment Excerpt Text:

an increase in the royalty rate will only create further uncertainty and put additional pressure on communities throughout the West and on essential state programs as well

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Comment Number: 0003015\_MasterFormM2-I

Other Sections: 8.7

Comment Excerpt Text:

The push by NGOs to "Keep It in the Ground" and seek "Coal Reform" have again caused a huge waste of taxpayer dollars by forcing the Bureau of Land Management to conduct a multi-year Programmatic EIS process and support the effort by the Department of the Interior to increase the cost of coal leasing and royalties. As a result, it will be even more expensive to operate a coal mine and subsequently raise the price of electricity for all consumers. It's a disastrous combination for everyone, from the miners whose jobs have been lost and are in jeopardy, to the ratepayers that will pay more each month for electricity and the communities that will have to go without the vital taxes and royalty dollars generated by coal mining.

The federal coal program has been a tremendous success story that has generated tens of billions of dollars of value for the American people in recent decades. If DOI must take action, we strongly encourage the department to take steps to improve the return to the American public by making coal on public lands more competitive, not less.

I oppose increased coal royalties and new taxes on our electricity.

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Comment Number: 0003016\_MasterFormO\_EarthJustice-6

Other Sections: 2

Comment Excerpt Text:

Creating opportunities and tools to help ensure a fair transition to a clean energy economy, including robust investment in community economic development and protecting worker livelihoods, in line with the president's commitment to help coalfield communities.

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Comment Number: 0003019\_MasterFormS-I

Other Sections: 8.7

Comment Excerpt Text:

I write today to voice my grave concerns with increasing coal royalty rates. Raising taxes on coal will add stress to coal markets and ultimately decrease the revenues accruing to the public. Simply put, a ton of coal never sold due to uncompetitive prices produces no revenue.

Too, American taxpayers are receiving more than owners of private coal. The federal royalty rate is above the prevailing royalty rates for private coal. As compared to private coal leases, federal coal rates are, in many cases, forty percent higher than the prevailing rate for private coal.

Federal lessees pay non-recoupable bonus bids, an additional upfront payment made prior to mining. Bonus bids are rarely if ever included in leases of private coal. Bonus bids are a significant expense. Over the last decade, lessees have paid over \$4.2 billion in bonus bids before any coal is even mined.

States and local communities also benefit from coal leasing and royalties. In 2014 Colorado coal producers paid nearly \$40 million in federal royalties, rents, and bonus payments. Almost half of this comes back to the State and is distributed to local communities, the State Public School Fund, the Higher Education fund, and the Water Conservation Board Construction fund.

The BLM can best carry out its responsibility to ensure that American taxpayers receive a fair return on the coal resources managed by the federal government by encouraging the growth of the coal industry and removing impediments to leasing coal.

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Comment Number: 0003020\_MasterFormT-I

Other Sections: 8.7

Comment Excerpt Text:

It concerns me that the DOI is modifying the current coal leasing program, including increasing the royalty rate on federal coal. While, on the surface, this may seem like a plan to increase revenue, it is obvious that it will in

fact have the opposite effect and be harmful to our economy.

As royalties increase, so will the price of coal. An industry such as this is very dependent on the price of the product, so as the prices increase, the amount of coal being sold will decrease due to market factors. Eventually this will trickle down to less coal being mined and less revenue going to the taxpayers and back into our communities. Not only will this damage local economies, but the increased energy prices will stress the lower and middle class nationwide.

It is obvious to me that the ultimate goal of raising royalty rates on federal coal is not to increase revenue, but to instead put more stress on the already burdened coal industry.

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Comment Number: 0003029\_Arrington\_J\_06032016-3

Organization I:Keep Electricity Affordable

Commenter I:Patrick Arrington

Comment Excerpt Text:

An increase in federal coal royalty rates would force consumers like me to pay more for the power we need at home and work

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Comment Number: 0003030\_Baker\_J\_06112016-1

Commenter I:Alicia Baker

Comment Excerpt Text:

Here in Northwest Colorado coal is the major economic factor for our small town. The coal mines employ hundreds of workers and pump thousands of dollars into our economy. If coal fired power plants were shut down it would completely devastate not just our community but all coal mining companies and communities. Consumers would not be able to afford to pay such high electrical bills, especially those on a fixed income.

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Comment Number: 0003034\_Cast\_J\_06112016-1

Organization I:Keep Electricity Affordable

Commenter I:Doug Cast

Comment Excerpt Text:

We need coal to keep electricity affordable! We need coal to utilize the production facilities we already have in place! We need coal to maintain jobs that are reliant on the coal industry!

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Comment Number: 0003036\_Crites\_J\_06112016-1

Organization I:Keep Electricity Affordable

Commenter I:Sarah Crites

Comment Excerpt Text:

An increase in federal coal royalty rates would force consumers like me to pay more for the power we need at home and work. And we will see an overall increase in consumer goods as business pass along there higher electricity bills to the consumer. If I'm spending more on electricity and food, then I will spend less on other things, thus hurting the economy even more.

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Comment Number: 0003041\_Goins\_06052016-2

Organization I:Keep Electricity Affordable

Commenter I:Denise Goins

Comment Excerpt Text:

"eliminating" the coal industry will put thousands of people out of work in an already struggling economy!

Comment Number: 0003044\_Hinkemeyer\_J\_06112016-1

Organization I:Keep Electricity Affordable

Commenter I:Stephen Hinkemeyer

Other Sections: 8.7

Comment Excerpt Text:

Raising royalty rates also would reduce coal production which means less revenue for pressing public (Federal and State) needs. Less funding would be available for DOLA grants as well that really help small communities.

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Comment Number: 0003047\_McAnally\_J\_06032016-1

Organization I:Keep Electricity Affordable

Commenter I:Roy McAnally

Comment Excerpt Text:

Less coal production will lead to work force reductions which will severely impact the economies of many communities across the nation where coal mining is the major employer and the driving force in a stable and strong economy. The human and economic impact of reduced coal production will be devastating to local economies and when considered in an aggregate will be devastating to the national economy in the long term analysis.

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Comment Number: 0003086\_Campbell\_H\_06182016-1

Organization I:Friends of the Earth

Commenter I:Mary Baine Campbell

Comment Excerpt Text:

People who make their living from coal (and I don't mean corporate executives, who will be fine no matter what happens-- and frankly deserve not to be!) are going to suffer from the death of that industry. But no one disagrees that the industry is going to die. Better to try to help the workers now, before climate change has so stretched federal and local budgets that no help is affordable.

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Comment Number: 0003088\_Biggart\_H\_06182016-1

Organization I:Friends of the Earth

Commenter I:Neal Biggart

Comment Excerpt Text:

coal workers who lose their jobs must be given monetary help and training to find other jobs. Let's do the right thing for the environment and for the workers.

---

Comment Number: 000761\_Bucks\_20160623-4

Commenter I:Dan Bucks

Comment Excerpt Text:

Finally, the PEIS should consider how Interior can support broader federal, state and local policies to meet the needs of coal dependent communities and workers as the nation undergoes an historic energy transition.

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Comment Number: 0020016\_Willims\_20160712-3

Commenter I:Raymond Willims

Comment Excerpt Text:

The leasing and mining of coal has social impacts that need to be evaluated, also.

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Comment Number: 0020031\_Parkins\_20160722-16

Commenter I:438596

Other Sections: 8.8

Comment Excerpt Text:

It is in the country's best interest to incent the export of coal from BLM coal lands. When coal is economically viable as an export commodity these exports provide a positive contribution to the nation's taxpayers in a number of ways:

1) The taxpayer is paid a royalty on the coal mined and sold as well as a Bonus Bid when new coal lands are leased. This income reduces the tax burden on individuals for the same level of services from government which enhances our standard of living or lowers the public debt. As mentioned before the basis for royalty needs to continue to be the net back price at the mine loading point to account for the costs to transport the coal to the port and port charges along with other costs to move the coal to the market. This method recognizes the geographic impacts due to the reserve location.

2) The sale of coal to other countries increases the demand for coal mined in the United States, which creates high quality jobs in the United States along with the income taxes from those jobs and jobs in the support industries associated with this production. This reduces the amount of taxpayer money paid out in unemployment or indigent support payments reducing the tax burden on individuals and enhancing our standard of living.

3) Export sales improve the balance of payments for the United States and put the nation in a stronger position financially.

4) Generally speaking the types of coal that are exported by the United States tend to be higher quality than those in the countries where it is imported. This has the potential to reduce emissions in those countries.

5) Energy produced by the United States and shipped to our allies provides a stable and reliable source of energy to those countries and can reduce their dependence on politically less stable sources. (Specifically Europe and the potential to reduce their exposure to gas produced in Russia).

6) Coal mines in the United States have safety records that are the envy of the world. With few exceptions coal mined in the United States results in fewer injuries and fatalities than coal mined in countries that import coal. Incenting the export of coal from the United States might displace coal mined with greater numbers of injuries or death. (Specifically China although the comment applies to other countries as well.)

7) The United States requires all coal mining operations to meet very high standards with respect to reclamation, much more rigorous than many of the nations that import coal. Coal exports from the United States might displace coal production from other countries that have less stringent reclamations standards thus netting cleaner air and water than the alternative.

8) Export of coal from the United States to other countries enables them to increase the number of households that have electrical power available to them. IEA reported recently that 1.2 billion people do not have access to electricity, and that 2.7 billion people do not have access to clean cooking facilities. Coal exports from the United States enables countries to expand their electric generation capacity to more households. The World Bank indicates that households with access to electricity and clean cooking facilities have longer life spans, so incenting coal exports from the United States can result in improving standards of living in countries where imports occur and increase life spans.

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Comment Number: 0020034\_Koontz\_TownofHotchkiss\_20160729-7

Organization I:Town of Hotchkiss

Commenter I:Wendell Koontz

Comment Excerpt Text:

Mine closures, additional government regulation, and market forces have severely impacted the local mines and our local economy. As noted herein, it is likely the Town will have to make serious and significant cuts to our 2017 budget to account lost mineral leasing, sales tax, and severance tax revenues projected to be at \$75,000 to \$95,000 or 10%- 12% of our General Fund all of which can be directly tied to the mine closures and lost

employment. Indirect losses of families and school students and all that means to our community are still in progress.

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Comment Number: 0020034\_Koontz\_TownofHotchkiss\_20160729-8

Organization I:Town of Hotchkiss

Commenter I:Wendell Koontz

Other Sections: I

Comment Excerpt Text:

the Board of Trustees of the Town of Hotchkiss requests the Department of Interior to include in the PEIS:

\*Social benefits of bonus bid payments, royalties, taxes, and continued employment for economic impacts to the US, states, and communities.

\*Social benefits of affordable reliable power to the health care industry print and digital media, recreation, and other industries that require power on demand 24/7.

\*Social impacts of lost jobs including the hundreds of lost jobs locally and thousands of lost jobs nationally on families, communities, and states.

\*Social cost of increasing prices on commodities and utilities that are the logical outcome on the proposed increases in royalties and taxes and decreasing production.

\*Social cost of the slow pace of federal leasing actions.

[5] (Secretary S. Jewell May 6, 2016) <http://www.desertsun.com/story/news/environment/2016/05/06/sally-jewell-keep-ground-protests-naive/83992074/>

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Comment Number: 0020049-1

Organization I:City of Casper

Commenter I:V.H. McDonald

Other Sections: I3

Comment Excerpt Text:

Many of Wyoming's local governments' economies are highly dependent upon the vitality of the coal industry. Local employment in those communities will likely be adversely affected by any regulatory changes and or increases of any tax or royalty rates. These modifications or additional cost burdens on coal producers can create disincentives to, or obstacles in, extracting this valuable energy resource. Consequently, it is essential that the extent of the economic impact of any changes in regulations and increases in tax and royalty rates upon state and local governments be determined and clearly reported.

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Comment Number: 0020052-2

Organization I:Tri-State Generation and Transmission Association, Inc.

Commenter I:Barbara A. Walz

Comment Excerpt Text:

Because Tri-State is a not-for-profit association of rural electric cooperatives, any increase in the cost to generate and deliver that electricity, such as increasing the cost of the fuel, is directly borne by the our member systems, many of whom serve consumers that can least afford increased electricity rates. Tri-State's member systems serve some the most rural and economically disadvantaged families in the western U.S. Member system residents typically pay a higher percentage of their income for electricity in the rural West because there are so few consumers per mile to share the cost of its development and delivery. An increase in the cost of coal production does not provide a more "fair return from the development of these publicly owned resources" for these taxpayers, but does add extra costs and the possible loss of jobs and community services.

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Comment Number: 0020052-5

Organization I: Tri-State Generation and Transmission Association, Inc.

Commenter I: Barbara A. Walz

Comment Excerpt Text:

The impacts of the cost to mine federal coal on the cost of the electricity it generates and the impact that the increased cost of electricity has on the American taxpayer in the rural West.

o The dependence of state and local governments on the royalty payments and taxes and the benefits that they provide for local communities in the rural west.

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Comment Number: 0020052-7

Organization I: Tri-State Generation and Transmission Association, Inc.

Commenter I: Barbara A. Walz

Comment Excerpt Text:

Production plays a vital role supporting rural communities and their ability to maintain key government services. Many of these rural communities have grown up around the implementation of the federal coal program. For example, Tri-State (Tri-State, through its ownership of Elk Ridge Mining and Reclamation) owns and operates the Colowyo Mine (Colowyo), located in northwest Colorado, about 26 miles southwest of the town of Craig. Colowyo has been conducting surface mining operations since 1977 and holds several federal coal leases from which it produces coal for sale. Since 2012, when Tri-State purchased the mine, Colowyo has generated over \$32 million in royalty payments. Much of this has gone to the state of Colorado and been distributed through various mechanisms to local communities. Coal mining and the electric power generation industry are major economic drivers for communities in northwest Colorado and benefit greatly from the revenues resulting from energy production. Another example was highlighted in a recent article in the Denver Post (June 23, 2016), which discussed how the loss of federal coal production revenue to the community of Oak Creek, Colorado has impacted to school, fire protection, library services and the local cemetery.

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Comment Number: 003071\_Caulfield\_1772016-1

Commenter I: A Dean Caulfield

Comment Excerpt Text:

we have an unprecedented opportunity to build a clean energy industry and bring everyone from the out of work miners all the way up to the owners of these energy companies who are currently exploiting these resources at the expense of the surrounding communities, into alignment with each others interests by employing miners in the new energy sectors of hydroelectric geothermal and solar. By providing them with the retraining they might need to move to the new energy sector (a one time expense that should be shared by the underfunded coal states and the Federal government- who's job and purpose is to provide the National infrastructure) we eliminate the problem of the the depressed economies of coal dependant states while creating a new energy sector with strong growth potential.

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Comment Number: 003072\_Stookey\_1072016-2

Commenter I: Jeff Stookey

Comment Excerpt Text:

Renewable energy already employs 2.7 million workers (more than the fossil fuel industry) and studies have shown that green energy will continue to create far more jobs than the fossil fuel industries. [see: Sizing the Clean Economy, A National and Regional Green Jobs Assessment by the Metropolitan Policy Program at the Brookings Institute, 2011. Also, One Million Climate Jobs, 3rd Edition, 2014, edited by Jonathan Neale, published by the Campaign Against Climate Change] A U.S.-led, green, industrial revolution will move our economy forward, create millions of new jobs, and help ensure a livable planet for future generations.

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Comment Number: WO\_CoalPEIS\_00000201\_\_REILLY\_20160517-1

Commenter I:Katie Reilly

Other Sections: 8.1

Comment Excerpt Text:

I ask that BLM take full advantage of this review process to protect coal impacted communities, our public lands, and our climate for generations to come, not just for the next few years. This PEIS must look at stopping coal production on taxpayer land, incorporating the cost of carbon into royalty rates, evaluating how federal coal impacts production of clean energy, re-evaluating self-bonding, which unfairly places a burden of reclamation on taxpayers, evaluating BLM's authority to ensure a just transition for coal-impacted communities.

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Comment Number: WO\_CoalPEIS\_0002437\_Downing\_20160727\_WyMineAssoc-26

Organization I:Wyoming Mining Association

Commenter I:Jonathan Downing

Comment Excerpt Text:

Wyoming is the top coal producing state in the nation with the vast majority of this production coming from federally leased coal. The financial contribution from this coal to state and local governments in the form of taxes, royalties and fees was about \$1 billion. Wyoming's share of federal mineral royalties – royalties paid to mine the leased coal - was over \$200 million. The industry employs nearly 6,000 individuals directly with a payroll of nearly \$700 million, and over 2,000 contractors. The average coal mining job pays over \$83 thousand per year, well above the state average. And every coal mining job supports another 2-3 jobs in the service and supply industry. Needless to say the coal industry is critical to Wyoming and the Nation's economy.

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Comment Number: WO\_CoalPEIS\_0003062\_Hoy\_G-2

Commenter I:Judy Hoy

Comment Excerpt Text:

In Montana, tourism and wildlife watching and wildlife photography provides more jobs and more money to the citizens of Montana than mining coal

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Comment Number: 000001202\_Meinhart\_20160623-6

Organization I:Office of Congressman Scott Tipton

Commenter I:Brian Meinhart

Comment Excerpt Text:

And those working in the coal industry will be left in the lurch. And we're already seeing those effects. Just a few weeks ago, we received news that the last coal mine standing in Delta County's [indiscernible] had to lay off another 80 workers. In just a few years, Delta County has lost about 900 of its once 1200-strong coal mining workforce.

---

Comment Number: 000001204\_Swartout\_20160623-2

Organization I:Governor Hickenlooper

Commenter I:John Swartout

Comment Excerpt Text:

You know Colorado has been a leader in balancing environmental protections with the health of our economy. Back, you know, almost 25 years ago, Governor Roy Romer said when he got industry together to reduce admissions, especially on the Front Range, he said I want to look at industry as a partner and not, you know, create an adversarial relationship. So, the other thing that we ask is that you treat industry and folks that are commenting as partners in this effort. I mean we all want to live on a healthy planet. We all want jobs. We all want that balance. And we think -- the Governor thinks that we can do both. We can have a healthy coal

industry that provides a portion of our energy generation into the future, while we protect the environment. And they're not exclusive. You know the politics that we live in today tends to be a duality. It's this or that. It's either/or. But, but Colorado has always found a way to balance those things and go forward. And we ask that this review -- you keep, you keep that in mind.

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Comment Number: 000001205\_Justman\_20160623-1

Organization I: Mesa County

Commenter I: John Justman

Comment Excerpt Text:

Recent mining job losses has had a severe and negative impact on this region's economy. A variety of factors, including State and Federal regulatory pressure, obstructive legal actions from special interest group, and unwise court rulings have resulted in the loss of jobs, income, workforce, and revenue for our region.

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Comment Number: 000001205\_Justman\_20160623-2

Organization I: Mesa County

Commenter I: John Justman

Other Sections: 19

Comment Excerpt Text:

We are all short of money on all government levels. It's interesting to me that recently in the paper there was an article how in some part of Canada when they went away from coal, their electric rates went up 300 percent. Germany had a project here a few years ago where they got rid of their nuclear and coal plants and were going to rely on wind and solar. And now they have energy poverty where people pay 10 percent of their household income for their energy bill -- for their household [indiscernible]. And that is not going to work well. Why do you think BMW relocated their manufacturing plant to America? Energy cost. The more energy we consume, the higher your standard of living.

---

Comment Number: 000001209\_Monger\_20160623-1

Organization I: Routt County

Commenter I: Doug Monger

Comment Excerpt Text:

You know our coal industry and our power industry, with the Hayden Power Plant, is the number 1 and number 2 taxpayers in Routt County. Twentymile Coal itself pays \$1.7 million to, to - not to the County, but to the County's -- all the taxing entities -- \$1.7 million. And the fact is for the Soroco South Routt School District, it -- the -- they get \$1 million out of their \$5 million total budget. So, as, as the Commissioner from Delta County has referred to, we're in a crisis right now because of the pending bankruptcy of Peabody Coal. You know we -- on top of that, you know, we -- the Federal mineral lease to Routt County is about \$350,000 a year. That -- probably 90 percent -- 95 percent, that comes from coal industry.

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Comment Number: 000001210\_Nichols\_20160623-1

Organization I: Wild Earth Guardians

Commenter I: Jeremy Nichols

Comment Excerpt Text:

I want to be clear that keeping coal in the ground doesn't mean that we turn our backs on the workers and communities that have worked very hard for many, many years to keep our lights on. We need to focus on transition. We need to help workers and communities transition to more prosperous and sustainable economies. This reform process provides an opportunity for the Interior Department to take a leadership role in helping to make that happen.

Comment Number: 000001229\_ REHN\_20160623-1

Organization I:

Commenter I:Maddie Rehn

Commenter Type: Individual

Comment Excerpt Text:

I urge the Interior Department to update the Federal Coal Program to ensure resources extracted on public land return a fair share to American taxpayers and account for the impacts to our environment. I also urge the Interior Department to diversify rural economies and create new jobs through investments and technology and infrastructure for both renewable energy and recreation outdoor economy.

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Comment Number: 000001235\_ SCHMIDT \_20160623-1

Organization I:

Commenter I:Phil Schmidt

Comment Excerpt Text:

I ask BLM to lift the, the moratorium on, on Federal coal leasing. And if the review of the Coal Leasing Program is needed, proceed. But, for the objective approach that is not punishing to responsible co-operators, their employees, and communities being so harshly impacted.

---

Comment Number: 000001242\_ SANDERSON \_Colorado Mining Association \_2016062-2

Organization I:Colorado Mining Association

Commenter I:Stuart Sanderson

Comment Excerpt Text:

We've already heard today about the unprecedented regulatory assault on coal through the [indiscernible] the mercury, air, toxics rules, and the other laws which have discouraged, and which have actually driven down production in Colorado. I would like to remind you that according to the most recent survey that the Colorado Mining Association performs, coalminers are among the highest paid industrial workers in the State, earning average wages and benefits in excess of \$135,000 annually. We pay above market royalty rates.

---

Comment Number: 000001243\_ COMPTON \_Utah Mining Association \_20160623-2

Organization I:Utah Mining Association

Commenter I:Mark Compton

Comment Excerpt Text:

Coal is still the backbone of our nation's and the world's energy supply. And restricting access to this affordable and abundant resource will destroy jobs and lead to higher and higher electric bills for every American.

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Comment Number: 000001243\_ COMPTON \_Utah Mining Association \_20160623-4

Organization I:Utah Mining Association

Commenter I:Mark Compton

Comment Excerpt Text:

Fifty percent of Federal coal lease revenues are returned to the States in which the coal is mined. And these funds are very important to local and county budgets, to directing community impacts, and developing infrastructure. And of course, this action has significant economic impacts on applicants who have borne the cost of environmental analysis, but now cannot proceed to a final decision on the lease.

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Comment Number: 000001245\_COFIELD\_20160623-2

Organization I:Wagner Equipment Company

Commenter I:Brad Cofield

Comment Excerpt Text:

What is the economic benefit of keeping Federal coal in the ground? By not developing coal resources on Federal lands, we will create zero return to taxpayers. We will put thousands of miners out of work, as well as kill jobs for the industries that support our mines. There's no way to examine the economic reality of this initiative and not conclude that this administration could care less about the economic impacts, but simply wants to kill coal as a fuel source.

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Comment Number: 000001245\_COFIELD\_20160623-4

Organization I:Wagner Equipment Company

Commenter I:Brad Cofield

Comment Excerpt Text:

How would decreasing coal production on Federal lands impact our electricity costs? Coal represents 33 percent of our country's energy. And it is the backbone of our electric grid. By eliminating coal, we rely on more expensive alternative sources. Consumers, no doubt, will carry the burden of higher electricity costs.

---

Comment Number: 000001245\_COFIELD\_20160623-5

Organization I:Wagner Equipment Company

Commenter I:Brad Cofield

Comment Excerpt Text:

By decreasing coal production on Federal lands, we will further impact the lives of miners in our communities, like Craig and Hayden, Paonia, and Hotchkiss, and potentially decimate their economies. These communities rely on the coal industry, that we heard today, to fund their schools, support their local businesses, and provide high-paying jobs.

---

Comment Number: 000001250\_SEGO\_20160623-2

Commenter I:Jeff Sego

Comment Excerpt Text:

acknowledge the profound affect that this will have on the future supply of low-cost, reliable coal, high-paying jobs, and revenue from Federal land. This administration does not seem to care about the moratorium's immediate impact or the long-term effects on coal production and cheap, reliable -- and energy production.

---

Comment Number: 000001252\_ANGELOVICH\_20160623-1

Organization I:Mayor of Paonia

Commenter I:Charles Stewart

Comment Excerpt Text:

Paonia is a town of roughly 1600 people in the North Fork Valley in Delta County. In the past, we had three mines that were operating -- Oxbow Valley and West Elk. At that time, the payroll for the three mines was in excess of \$100 million. The one mine that is left, West Elk, is in Chapter 11. Payroll has dropped less than \$30 million. We have lost a very substantial amount of income from our community. Quite frankly, if you had the same kind of loss in Denver, there would be a tremendous political uproar. From the town's perspective, we were receiving \$115,000 a year from severance and mineral leasing revenue when all three mines were operating. We're projecting \$45,000 for this year. If, in fact, West Elk is not able to survive, that amount will drop even further. Well, people have to understand, we're a small town. Our general fund budget is \$651,000. When you lose \$115,000, you're losing 17 percent of your budget. You are looking at layoffs. We are a town that went from

19 fulltime employees down to 10 fulltime employees, four part-time employees. If, in fact, we have to layoff additional people, we're looking at losing Police Officers, sanitation workers. And we're going to have a difficult time providing basic services to our community.

---

Comment Number: 000001252\_ ANGELOVICH\_20160623-2

Organization I: Mayor of Paonia

Commenter I: Charles Stewart

Comment Excerpt Text:

think what people don't also know is that we receive a significant amount of money from the energy [indiscernible] fund. The EPA, through the State, ordered us to filter our water to upgrade our filtration process. That project would not have been possible without \$1 million grant from the Mineral Impact Assistance Fund. We are also right now in a position where we have an aging water infrastructure. The bottom line is, again, it is my money that is paying for the replacement of pipes. It is my industry that's cleaned our water, that bring waters to our -- water to our households. So, you need to keep that in mind. The impact of the mines -- a very positive impact of the mines is substantial.

---

Comment Number: 000001252\_ ANGELOVICH\_20160623-3

Organization I: Mayor of Paonia

Commenter I: Charles Stewart

Comment Excerpt Text:

My hope is that we can find a way that the low sulfur, high-heat coal of the North Fork Valley can play a very significant role in the energy production of this country.

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Comment Number: 000001253\_ Stewart\_20160623-1

Organization I: Town of Paonia

Commenter I: Charles Stewart

Comment Excerpt Text:

In the past, we had

three mines that were operating -- Oxbow Valley and West Elk. At that time, the payroll for the three mines was in excess of \$100 million. The one mine that is left, West Elk, is in Chapter 11. Payroll has dropped less than \$30 million. We have lost a very substantial amount of income from our community. Quite frankly, if you had the same kind of loss in Denver, there would be a tremendous political uproar. From the town's perspective, we were receiving \$115,000 a year from severance and mineral leasing revenue when all three mines were operating. We're projecting \$45,000 for this year. If, in fact, West Elk is not able to survive, that amount will drop even further. Well, people have to understand, we're a small town. Our general fund budget is \$651,000. When you lose \$115,000, you're losing 17 percent of your budget. You are looking at layoffs. We are a town that went from 19 fulltime employees down to 10 fulltime employees, four part-time employees. If, in fact, we have to layoff additional people, we're looking at losing Police Officers, sanitation workers. And we're going to have a difficult time providing basic services to our community. I think what people don't also know is that we receive a significant amount of money from the energy [indiscernible] fund. The EPA, through the State, ordered us to filter our water to upgrade our filtration process. That project would not have been possible without \$1 million grant from the Mineral Impact Assistance Fund. We are also right now in a position where we have an aging water infrastructure. The bottom line is, again, it is my money that is paying for the replacement of pipes. It is my industry that's cleaned our water, that bring waters to our -- water to our households. So, you need to keep that in mind. The impact of the mines -- a very positive impact of the mines is substantial.



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Comment Number: 000001255\_Nettleton\_20160623-3

Organization I: Twenty Mile Coal

Commenter I: Jerry Nettleton

Comment Excerpt Text:

Market conditions. Decreases in coal production, extensive layoffs, coal company bankruptcies, and social impacts on affected communities and regions are very real and immediate impacts of the current policies and some of the proposed actions. These need to be considered, and deserve and should be considered in any objective analysis.

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Comment Number: 000001256\_Best\_20160623-3

Organization I: Greenpeace

Commenter I: Diana Best

Comment Excerpt Text:

The third piece reform that I would suggest here is that we also need a well-resourced plan to support a just transition for coal workers and traditional mining communities.

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Comment Number: 000001257\_Petersen\_20160623-1

Organization I: Associated Governments of Northwest Colorado

Commenter I: Bonnie Petersen

Comment Excerpt Text:

Our communities in Northwest Colorado depend on these jobs in the coal mines and the power plants they supply, as well as the economic benefits provided by the suppliers of goods and services to mines and power plants.

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Comment Number: 000001257\_Petersen\_20160623-3

Organization I: Associated Governments of Northwest Colorado

Commenter I: Bonnie Petersen

Comment Excerpt Text:

The Federal Coal Program provides substantial revenues to Federal and State governments, totally \$13.8 billion since 2003. Because coal bonus bids, rents, and royalties are shared with the States, the Colorado citizens receive \$22 million from Federal coal in 2015 alone. That represents 49 percent of the monies paid to the Federal Government. Our communities depend on these payments to provide for schools and infrastructures to benefit our citizens.

---

Comment Number: 000001258\_Inouye\_20160623-2

Commenter I: David Inouye

Comment Excerpt Text:

Third is job market changes. Now, if you think about Crested Butte, it was coal mining town. And when I first went there in 1971, it was a pretty shaky economy. The streets weren't paved. Now, probably a few people in this room could afford to live there. It was a booming economy, depended on tourism, recreation, on wildlife, on wildflowers, on view sheds. And I think that's an example of how there can be a successful transition from an economy town that's based primarily on coal to one that's now based on other factors.

---

Comment Number: 000001258\_Inouye\_20160623-3

Commenter I: David Inouye

Comment Excerpt Text:

Now, in Delta County, I think is a good example of how Federal programs could help support alternative careers. For instance, the Delta/Montrose Electric Association is starting this month to put gigabyte internet broadband service into the County. And that's going to open up a number of opportunities for additional jobs in that county.

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Comment Number: 000001259\_Johnson\_20160623-1

Organization I: Western Slope Conservation Center

Commenter I: Alex Johnson

Comment Excerpt Text:

The coalmines have invested in our communities. They have supported generations of families who built the homes and streets and irrigation canals that have made our Valley so productive. For more than a century, coal and agricultural -- agriculture have gone hand-in-hand. Farmers mined coal. And coal miners farmed. Together, the Western Slope Conservation Center, local coal mines, and community residents formed good neighbor partnerships that not only mitigated impacts, but directly supported conservation of the North Fork Valley. Offering just one example, over the last 15 years, the West Elk Mine and the Western Slope Conservation Center have worked together to put over 11,000 acres of private land into conservation easements, conserving our agricultural heritage forever. But, this is a difficult and historic moment for our Valley. In the last two years, the local coal mines have laid off nearly 900 well-paid employees. Two of the coal mines have shut down indefinitely, with Oxbow having just demolished its rail silo this past month. The reality of our community is that we are now looking into an unknown and scary future.

---

Comment Number: 000001259\_Johnson\_20160623-2

Organization I: Western Slope Conservation Center

Commenter I: Alex Johnson

Comment Excerpt Text:

I request that the Department of Interior should do everything in its power to support local coal miners, their families, and the communities in which they live. Laid off coal miners should be given adequate resources for retraining, so that they can stay in the communities which they have called home for generations. Coal communities also need Federal support to hasten new businesses and job. Our communities will thrive only with a balanced approach that safeguards our air, land, and water, supporting a diversified economic and energy future.

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Comment Number: 000001260\_Muhr\_20160623-1

Organization I: Outdoor Recreation Coalition

Commenter I: Chris Muhr

Comment Excerpt Text:

But, as the Outdoor Rec Coalition, we don't have really a horse in this race. What I'm doing here is we're actually wanting to offer our hand and our help as a coalition of manufacturers of outdoor goods to the people, the community, and the land managers of the North Fork Valley. We're looking at a diversification of the economy up there. We've done this in the past. We've done it with Fruita. We've done it with Cortez. We're doing it right now with Ridgeway, Colorado. In fact, a guy came down from Ridgeway, and after having ridden their mountain bike trails that were just put in, and he said it's going to be like printing money up there. But, I think what we're trying to do is we would like to help drive tourism up into the North Fork Valley. We would also like to drive entrepreneurs and manufacturers and people with higher educations. We would like to take and drive people into the area so that the people in the North Fork Valley can take advantage of those extra tourism dollars and those opportunities to start businesses of their own. You know we've seen this happen in Grand Junction. We've got businesses like Bonsai Designs, who design zip-lines that go -- send them all over the world. We've got Lightner Plummer [phonetic] who designs chair lifts and sends them all over the world. Mountain racing products. Cortez has osprey packs. So, certainly there's, there's life after minerals have been played out or did they lose their pricing. And I'm one of those people. I, I have a welding and fabrication shop here in Grand

Junction. You know one of the things that we started back when Oxbow had the accident which locked in their, their [indiscernible] equipment, was working with tourism officials, both at the State and the local level, to develop a plan. And we've had [indiscernible] work on this. Develop a plan to drive tourism into the area. And we hope that that plan and working with you in this room, we can additionally give some economic boost to the area.

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Comment Number: 000001261\_Beebe\_20160623-3

Organization I:Utah Sierra Club

Commenter I:Lindsay Beebe

Comment Excerpt Text:

As coal declines, we must ensure that coal workers and extraction communities are supported with sustainable economic opportunities. And the government must play a key role in helping drive a just transition towards clean energy economy that will maximize investments in economic development, provide workforce training, and create lasting jobs in impacted communities. If we choose to act now using all the capacity of our, as yet, unlimited human ingenuity, we can create the clean energy economy that will fuel both economic and spiritual prosperity.

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Comment Number: 000001288\_Stein\_20160623-2

Commenter I:Joe Stein

Other Sections: 19

Comment Excerpt Text:

Opponents of the coal moratorium correctly argue that the coal industry provides jobs and economic benefits to working class towns that need it. According to the U.S. Energy Information Administration, about 56,700 Americans are employed in coal mining; down from 80,000 in 2014. These workers are drawn to coal because jobs are a plenty. The U.S. still gets one-third of its energy from coal. Coal companies claim that we cannot replace the jobs that they provide with jobs in the green industry. The data says something different. Worldwide, there are more jobs in renewables than coal mining, oil, and gas combined. As fossil fuels dry up, workers are turning to the solar sector. There are already twice as many solar workers in the U.S. as there are coal miners. 31,000 new solar jobs were created in 2014 alone. With wise policies centered around green energy subsidies, we could create thousands of jobs, effectively nullifying the job loss experienced during the inevitable and necessary divestment from fossil fuel based energy.

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Comment Number: 000001291\_Ramey\_20160623-1

Organization I:Wilderness Society

Commenter I:Jim Ramey

Comment Excerpt Text:

I hope we can look to our public lands to support diversifying the local economy with alternative energy development and by growing the outdoor recreation economy.

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Comment Number: 000001298\_McIntosh\_20160623-1

Commenter I:Frankie McIntosh

Comment Excerpt Text:

I want to keep coal miners employed.

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Comment Number: 000001299\_Roeber\_20160623-1

Organization I:Delta County

Commenter I: Mark Roeber

Comment Excerpt Text:

Our economy is based on agriculture, coal mining, and tourism. We're 57 percent Federal land. So, whatever the BLM, Forest Service, does has a direct impact on our economy. Historically, as was previously stated, Delta County had 1200 jobs in the coal mining industry in 2012. We're down to about 250 now. That's a 42 percent decrease in four years, and our communities are suffering. We -- with a 42 percent decrease, if you relate that to jobs in the Denver area based on population, you'd be looking at 31,000 jobs. That would get national attention. And we ask that Delta County be considered with our job loss, that we be taken seriously. We -- you know it's not just our direct job mining losses. Losses to our schools, our communities. We're losing nurses out of the hospital as husbands have lost jobs in the mine. That affects all of our economy, all of our people, and the services they provide. We're losing the kids out of the schools. Our school district is looking at consolidation, closing the school.

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Comment Number: 00001267\_Mork\_20160623-2

Organization I: Interfairh worker Justice

Commenter I: Doug Mork

Comment Excerpt Text:

We call on the BLM to find new ways to hold coal companies accountable to the miners, to their workers, to make sure that promises made are kept

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Comment Number: 00001267\_Mork\_20160623-3

Organization I: Interfairh worker Justice

Commenter I: Doug Mork

Comment Excerpt Text:

Finally, we call on the BLM and the Federal government as a whole to pay special attention to good, living wage, to jobs in the communities' hardest hit by the inevitable changes in this industry

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Comment Number: 00001268\_Ortiz\_20160623-2

Organization I: Western Slope Conservation Center

Commenter I: Karen Ortiz

Other Sections: 8.12

Comment Excerpt Text:

You've heard about our very clean burning coal. North Fork communities have benefited from this wealth over many decades without sacrificing the other riches that our local land, water, and air provide. That, coupled with methane off-gassing from our closed and currently operating mines in our recapture project, puts us into an excellent position for the Federal Government to leverage our values of methane recapture methods [indiscernible] research and training site. It could create training and jobs for some displaced miners while diversifying our local economy and energy generation through methane recapture and other renewable sources at our disposal.

---

Comment Number: 00001270\_Smyth\_20160623-1

Commenter I: Joe Smyth

Commenter Type: Individual

Comment Excerpt Text:

The Federal Coal Program impacts communities in a wide variety of ways. Federal coal mining provides jobs and revenue for communities in Colorado, Utah, Montana, and particularly Wyoming. So, as we move away from coal in favor of cleaner forms of energy, the Federal government has a responsibility to help those communities

transition. This dependence on coal in the West exists largely because of the Federal program. So, the level of national support in this transition should be comparable to what we see when the Defense Department decommissions a military base. That could be financed with the Federal Government's share of coal royalties. Why should all the money go to the Federal Treasury? We owe these communities for what they've done to help power our nation

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Comment Number: 00001270\_Smyth\_20160623-3

Commenter I: Joe Smyth

Other Sections: 8.11

Comment Excerpt Text:

And transporting coal disrupts communities with mile-long trains.

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Comment Number: 00001270\_Smyth\_20160623-6

Commenter I: Joe Smyth

Commenter Type: Individual

Comment Excerpt Text:

And even they lead their companies into bankruptcy, these executives gave themselves multimillion dollar bonuses. We heard about \$8 million bonuses from Arch Coal. That was approved on Friday, January 8th. One business day before they filed for bankruptcy. Now, imagine if that money had been invested in communities and economic transition strategies.

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Comment Number: 00001272\_Armstrong\_20160623-2

Commenter I: Jeremiah Armstrong

Comment Excerpt Text:

I'd like to point out a little bit about hypocrisy. As we've talked about coal royalties and the amount of money that's supposedly is lost from the Federal government for not having higher royalty rates. It's, it's quite low compared to some other subsidies that, that are quite astounding. We know the ultimate goal of this administration is to keep coal in the ground. But, Federal coal in the ground -- but keeping Federal coal in the ground as a coal project, opponents suggest, would result in no return to the taxpayer. The Federal Coal Program provides [indiscernible] revenues. That's Federal and State Governments totaling roughly \$14 billion since 2003. Is zero really better than billions of dollars?

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Comment Number: 00001275\_Earl\_20160623-2

Commenter I: Taylor Earl

Commenter Type: Individual

Comment Excerpt Text:

The Coal Leasing Program is more than fair. And coal mines benefit the communities they affect in an overwhelmingly positive way

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Comment Number: 00001276\_Bear\_20160623-2

Commenter I: Bill Bear

Comment Excerpt Text:

Many local communities have built school systems and other needed infrastructure on the continued mining of coal. What, if any, alternative will be offered to replace this lost revenue from the leasing and the mining of coal? Limiting or denying the leasing of coal destroys coal companies, as well as other related industries, such as transportation systems, including railroads. What impact will the reduction of [indiscernible] put on the rail have

on the overall [indiscernible] and the cost of goods delivered to distant destinations? How will the Federal Government manage or pay to hold the cost related to transportation to what they are -- to what they were before the eliminating the lease of -- leasing of coal? Electric utilities have been able to supply low-cost power to their consumers, based on the fact that their two large users helped defray the utilities fixed cost. With the loss or the curtailing of these large users, the fixed costs are going to be dumped onto the little guy, driving up their cost. How many will be able to absorb the extra burden? The Programmatic EIS needs to address this and how the Federal Government and those driving this process are going to help pay for that.

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Comment Number: 00001276\_Bear\_20160623-3

Commenter I: Bill Bear

Comment Excerpt Text:

In Delta County, we are seeing vital support industries, such as medical, leaving. Doctors and their employees are leaving the area because they can no longer generate revenues to sustain their practices. A healthy mining community provides medical insurance to their employees as a benefit of their employee. With the diminishing job market for miners and subsequent cash flow streams to doctors and hospitals, these community resources are beginning to disappear. How will the Federal Government address this?

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Comment Number: 00001278\_Nilsen\_20160623-1

Organization I: Delta Rigging and Tools

Comment Excerpt Text:

hope you consider the number of jobs created and the tax revenue produced by these mines and their vendors. The coal industry is already in decline. And many communities are suffering. My company has made considerable cuts because of this downturn

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Comment Number: 00001281\_Monholland\_20160623-1

Commenter I: Landon Monholland

Comment Excerpt Text:

Recreation as an economic driver is only growing and can offer communities a solid structure around which to grow. The coal PEIS study, as announced by Secretary Jewell, will give communities a chance to look towards other economic drivers for their areas, while also addressing issues with the current leasing system. Recreation is the sustainable and obtainable option for communities in Southwest Colorado. And I urge our region to consider alternatives to resource-extraction-based economies

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Comment Number: 00001283\_Unknown\_20160623-1

Comment Excerpt Text:

As we look at these issues of the BLM and coal leases, there's so much at stake, so many lives that depend on these leases and jobs. These jobs are the life bloods of the communities where they're at.

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Comment Number: 00001284\_Sager\_20160623-3

Commenter I: Jennifer Sager

Commenter Type: Individual

Comment Excerpt Text:

In addition to making sure that Americans are receiving a fair return on Federal coal, I ask the BLM's leadership work with the President and Congress to ensure that those resources get directed to the most impacted

communities so that the transition away from fossil fuels is one that is fair to the communities and workers whose daily grind and kept our country running

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Comment Number: 00001285\_Abshire\_20160623-1

Commenter I: Jim Abshire

Comment Excerpt Text:

The one question that hasn't been asked today is what happens if there is no coal? A brief history of that. The Province of Ontario shut down their coal plants, resulting in the electricity cost increasing by over 318 percent and the loss of over 300,000 jobs. Manufacturing companies either went bankrupt or left.

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Comment Number: 00001286\_LeValley\_20160623-1

Organization I: Delta County

Commenter I: Robbie LeValley

Comment Excerpt Text:

I want to clearly state that we want you to also consider all of the taxes that the coal mine industry pays -- not just the royalty when it comes to this EIS. And I know that after reading hundreds of NEPA documents over my short tenure -- I know that you will, but I would ask specifically that you include all of them, including the dollars that are given to the Department of Local Affairs that fund our sewer, that fund the water, that fund the economic diversity projects, that fund the recreation projects. Include all of those information in this Programmatic EIS. All of those taxes -- again, not just the royalty taxes

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Comment Number: 00001286\_LeValley\_20160623-2

Organization I: Delta County

Commenter I: Robbie LeValley

Comment Excerpt Text:

I've got to cut out -- again, specifically for 2017, out of our County budget. I have to figure out a way to cut \$500,000 out just from Bowie Mine. I have to figure out how to cut 700,000 out of our road and bridge budget. Those are real numbers that have a real impact on Delta County. And that -- those come directly from the mines. That's not just the [indiscernible] business. That's just directly from the mine. And so, I ask you just to understand that at the local level, that's 20 percent of my budget

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Comment Number: 00001292\_Grako\_20160623-1

Organization I: Bowie Resources

Commenter I: Lou Grako

Comment Excerpt Text:

When the new mine opens up, the standard of living raises. For property taxes and other taxes, mining operations pay. Mining jobs can bring great earning opportunities for the community, as you can see here today. And great volunteerism by our miners. Bowie paid 1.1 million in property tax, 1 million in royalties and severance tax for schools and education last year alone.

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Comment Number: 00001292\_Grako\_20160623-4

Organization I: Bowie Resources

Commenter I: Lou Grako

Comment Excerpt Text:

As I near retirement, I fear the high cost of the utility bill due to the high cost of wind and solar and, and it will cut deeply into my ability to enjoy my retirement years.

Comment Number: WO\_CoalPEIS\_0003062\_Hoy\_G-2

Commenter I: Judy Hoy

Comment Excerpt Text:

In Montana, tourism and wildlife watching and wildlife photography provides more jobs and more money to the citizens of Montana than mining coal

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Comment Number: 0000730\_Rothfus\_USRep\_20160628-1

Commenter I: Keith Ross

Comment Excerpt Text:

As you consider possible changes to the Federal Coal Leasing Program, Congressman Rothfus urges you to be mindful of the overwhelming benefits provided to the American people. The coal industry supports family-sustaining jobs nationwide and fuels a significant portion of our country's energy supply. Any efforts to reduce the amount of coal produced on federal lands would have a significant and negative impact on American jobs and energy security

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Comment Number: 0000843\_Seltweiger\_PennFuture-1

Organization I: Penn Future

Commenter I: Larry Seltweiger

Comment Excerpt Text:

Communities here and throughout the nation have struggled to survive with scarred and subsided lands, poisoned waters and wide spread and severe ecological damage from coal mined on our public lands, often in a single bidder arrangement, causes great harm to the communities while ships go to China to produce cheap goods to undercut U.S. workers and harm our economy

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Comment Number: 0000847\_Mann\_SierraClub-3

Comment Excerpt Text:

I will just note that given the urgency of rapid progress in transitioning the economy off fossil fuels to clean, renewable energy, BLM must evaluate the alternative of ending the program all together to a planned transition that leaves the remaining coal in the ground and remaining lands in tact with their environmental and social benefits and provides a transition for the communities and workers dependent on it

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Comment Number: 0000850\_Mosley\_BluegreenAlliance-1

Organization I: Blue Green Alliance

Commenter I: Khari Mosley

Comment Excerpt Text:

The Blue Green Alliance believes that the concentrated overall of this program is not only an opportunity to fix a broken system, but also an opportunity to take a hard look at how coal-dependent communities, regional economies and individual workers can transition to new economic models

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Comment Number: 0000851\_Greuter\_CenterCoalfieldJustice-1

Organization I: Center for Coalfield Justice

Commenter I: Patrick Greuter

Comment Excerpt Text:

Washington and Greene Counties are communities where almost no one owns the rights to their coal. Greene

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County just in the past couple years was the third largest coal-producing county in the country, home to the largest underground coal mine in the country. These are frontline communities directly impacted by coal every single day for people who live there. So not having the rights to their coal means so many people are forced to live with the harms of the coal industry, destroyed streams, displaced communities, reduced tax base, destroyed property values.

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Comment Number: 0000871\_Kasserman-I

Commenter I: Krissy Kasserman

Comment Excerpt Text:

continued federal coal leasing diverts our attention from the real work, transitioning coal communities like mine to a clean energy future. The transition to a clean energy economy will create new jobs and new opportunities for those of us living in coal country. Some of these new jobs will be in reclamation, reclaiming and restoring old dangerous and polluted mine sites which foul our streams and create a danger to community. We want time and opportunity to assist communities in moving forward. And we can be using funds released by the U.S. government to manage the Federal Coal Leasing Program to enhance this transition or to restore these legacy sites. The Federal Coal Leasing program should be ended in order to save taxpayers money, protect public land and to begin the meaningful transition for coal communities here in Appalachian and beyond.

## **Issue 9 - Tribal interests and Native American religious concerns**

Total Number of Submissions: 15

Total Number of Comments: 18

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Comment Number: 00000175\_MORRIS\_20160517-2

Commenter I: R. Noah Morris

Comment Excerpt Text:

I would first implore the BLM to respect Article VI of the U.S. Constitution and honor the treaties with native nations where much of this land and this coal is being leased unlawfully by our own constitutional law

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Comment Number: 00000183\_MCKAY\_20160517-4

Commenter I: Don McKay

Other Sections: 16

Comment Excerpt Text:

Four, the coal in nearby communities or underwater systems or near -- in view sight of religious sites not be mined.

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Comment Number: 0000630-I

Organization I: Dine Citizens Against Ruining our Environment

Commenter I: Anna Marie Frazier

Excerpt Text:

am a resident of Navajo (Native American) reservation where there are 2 large coal mines active - one is closed. There are also 2 large coal burning power plants all located on Navajo land. Existing along border of Navajo land are two more large power plants. The coal mines were developed in 1930's and continuing today.

The health impacts from the coal has been devastating to our people - health has declined from the mines and

power plants operating year round 24/7 days a week for 364 days a year releasing 14,491,316 tons of carbon dioxide, 39,189 tons of Nitrogen Oxides, 11,144 tons of Sulfur Dioxide and 445.75 pounds of mercury.

The contaminants from coal mining have impacted our drinking water as well. Today we are fighting for our share of use of Colorado River and LC's although we have first residents rights to the water - the corporations don't acknowledge the initial agreements and laws that relate to Indian Country.

In the case of coal mining on Indian lands - federal review process leaves the Tribal Coal off the table, while it should be treated similar to any other states.

I encourage the Federal Government that has oversight over Tribal Lands to begin closure of coal mining so the land can heal as well as healing for all living species.

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Comment Number: 0001101-1

Organization I:Confederated Tribes of Warm Springs

Commenter I:Carina Miller

Comment Excerpt Text:

I just wanted to come today to make a statement from the Confederated Tribes of Warm Springs that we do not support any fossil fuels going over any indigenous lands which do include the Columbia River and the surrounding areas.

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Comment Number: 0001101-2

Organization I:Confederated Tribes of Warm Springs

Commenter I:Carina Miller

Comment Excerpt Text:

Continuing to let oil and coal go along the Columbia River or along any indigenous lands in this day goes directly against our treaty rights, which supersedes state and city incorporation rights. It goes against our ability to decolonize, to reclaim identities taken from us, to give us the ability to come out of an oppressive colonization identity that have been forced on us for 500 years.

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Comment Number: 0001122-1

Organization I:Yakama Nation

Commenter I:Raymond Estrada

Comment Excerpt Text:

And I come here as an eyewitness to the effects of coal and the effects of the climate change on a traditional level. This year alone we've had -- we've seen a -- the earliest harvest of our traditional foods. It's been about a month, month and a half early, and we've also seen the shortest harvest our foods, our traditional foods that we hold dear to us. It's only been about two weeks that we've been able to gather our foods that we rely on for many events throughout the year, many traditional funerals, traditional gatherings that we cannot support most of these gatherings anymore because the food is not there because of the climate change. And I am also a traditional fisherman and have witnessed many things happen on the Columbia River. I've seen a lot of fish and a lot of the effects that we, as people, have had on the salmon itself and on the sturgeon and all the other river ecosystem, and one being taking our Celilo Falls away to build a railroad bridge and the dams on the Columbia River for electricity. I encourage the Bureau of Land Management to have a hearing just for tribal leadership because we are nations within a nation. We are with the United States but we are separate. We reserved that right in our traditional treaties. And I would hope that you would hear my words and address our leaders through not only in the Yakama Nation but all the nations throughout the United States that are affected by this and our traditional foods that are affected by this.

Comment Number: 0001124-1

Organization I:Confederated Tribes of Warm Springs

Commenter I:Shayleen Macy

Comment Excerpt Text:

For the Warm Springs tribes, these rights to continue these practices are guaranteed by federal government treaties, yet these rights have been threatened and harmed by fossil fuels, exports and consumption. Coal export projects are having a negative impact on our fishing rights and traditions. Coal traffic poses a physical threat to our people on the river and an environmental threat.

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Comment Number: 0001133-1

Organization I:Confederated Tribes of Warm Springs

Commenter I:Musulcha Smith

Comment Excerpt Text:

The testing is proven, the documentation is there, the other people that speak of this, you know, that it definitely is a negative. So we are stewards of the lands. We waste not, want not. I strongly object to coal transport due to contamination of the air, land, and water, the negative impacts, coal dust, noise effect, the water, a special concern as we're saying, you know, we're here to set an example, the responsibility of family, tribal elders to teach gathering and care of our revered ceremonial traditional foods, our salmon, deer, elk, roots, the chokecherries and the berries that are in our traditional lineup of gatherings.

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Comment Number: 0001138-1

Organization I:Northern Cheyenne Tribe

Commenter I:Kaden Walksnice

Comment Excerpt Text:

Our reservation is almost surrounded by coal mines, and we're fighting to protect our land. And in fact, the Powder River coal basin is all ancestral Cheyenne territory from Montana all the way down into Colorado. So anything that happens affects our people.

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Comment Number: 0001195-1

Commenter I:Ramona Owen

Comment Excerpt Text:

It's important to remember that industrialized nations have made decisions regarding the use of natural resources that not only impacts citizens of that nation but eventually small, nonindustrialized nations all around the world. Right now the Pacific Ocean is rising and encroaching on the homes of Belauan people. Recently a large and important taro plant garden that provides a traditionally sacred and critical food supply to an entire village has begun dying. This is due to the elevation of sea levels and acidification impacting coasts and islands.

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Comment Number: 0002009\_CenterBioDiversity\_20160329-13

Organization I:WildEarth Guardians

Commenter I:Jeremy Nichols

Comment Excerpt Text:

We also strongly urge that as you undertake reforms to modernize the way federal coal is managed, that you also give considerations to the way tribal coal is managed. We understand there are significant differences between the management regimes and fully support the sovereign authority of tribal nations. At the same time and recognizing the broader impacts of coal, we urge Interior and tribal nations to work together to ensure the management of tribal coal is also modernized with full consideration of climate impacts. At a minimum, we urge

you to ensure that tribal interests are consulted as federal coal reforms, are undertaken. The concerns raised during last summer's listening sessions highlight the impacts of the federal coal program to tribal interests, and the corresponding need for consultation.

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Comment Number: 0002285\_Gordon\_20160719-1

Commenter I: Thomas Gordon

Comment Excerpt Text:

According to testimony in Seattle June 21, 2016, the Confederated Tribes of Warm Springs want no coal trains going over their land.

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Comment Number: 0002285\_Gordon\_20160719-2

Commenter I: Thomas Gordon

Comment Excerpt Text:

Indian treaties should be taken into consideration and the Indians' present desires should both be included in the PEIS scoping.

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Comment Number: 0002383\_Wilson\_20160721-1

Organization I: Crow Nation Executive Branch

Commenter I: Dana Wilson

Comment Excerpt Text:

What does it mean to me as a tribal official? 2/3 of my budget comes from coal mining. That's depending on coal sales but that averages out to about \$17 million a year. That supports a lot of jobs and a lot of people are dependent on that. Also, every single tribal member gets a capital payment that is similar to a dividend, they reap the benefits, every tribal member does – that's our rule they get a check every quarter from coal. So I am a little worried about this moratorium. It doesn't affect the leasing of Crow coal, however, it could have some spillover effects that can affect me.

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Comment Number: 0002383\_Wilson\_20160721-2

Organization I: Crow Nation Executive Branch

Commenter I: Dana Wilson

Comment Excerpt Text:

There is a set of regulatory hurdles. Especially the unreasonable restrictions the development on our coal it's not only making it hard on us but what the coal companies do to export coal. Suspending or further impeding Indian coal leasing would be an infringement on tribal sovereignty.

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Comment Number: 0002449\_Lyon\_20160727\_NWF-41

Organization I: National Wildlife Federation Action Fund

Commenter I: Jim Lyon

Comment Excerpt Text:

In addition, NWF has significant concerns about the environmental and cultural impacts of mining to our tribal partners. We have worked with the Northern Cheyenne Tribe, and many other tribes, for over a decade to prevent the development of the largest proposed coal mine in the U.S., the Otter Creek Mine. The threat of this mine to tribal communities is immense and is dramatically amplified by the fact that mining companies are subject to a low royalty rate and that federal lands are opened up to new coal development prior to the companies meeting their obligations for reclamation of existing mines. Taxpayers should not be left on the hook for the

costs of mine cleanup, nor should tribes and other Americans suffer the brunt of new mines before existing mines are reclaimed

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Comment Number: 0020001\_Murnion\_20160712-2

Commenter I: David Murnion

Comment Excerpt Text:

There needs to be big changes in the way the land is stripmined for coal, so that ancient cultural sites are protected and significant landmarks are preserved.

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Comment Number: 000001254\_Fraser\_20160623-1

Organization I: Navajo Nation

Commenter I: Anna Fraser

Comment Excerpt Text:

And the problem with that is that the Federal regulations that are supposed to have been protecting the citizens of the communities throughout our nation, does not really have that strength or whatever. I mean it's not being utilized enough to protect the people that are impacted. Because we have on our Reservation, there's two [indiscernible]. One on Black Mesa, that produces coal. And it transports it over to a Navajo generating station right along the [indiscernible] right along the Colorado River. And that, that power plant pumps water from Parker, Arizona. And then, it, it sends the water to Phoenix, Arizona, where they water their plants and build swimming pools and, and golf courses and whatnot. But, here on our Reservation, we are -- you know we, we're fighting for the water, as well, because we're in a drought area. So, those at the things that are, are very concerning for us. And there's also another power plant over at the Navajo, Navajo Mine. There's a Navajo Mine, a coal mine. And then, right next to it, is the San Juan generator station that's near Farmington, New Mexico. And, and from that, power is also going down to [indiscernible] City, Arizona, and then on to Phoenix, too. So, we don't see any of the power that, that is going off of our Reservation at all. So, in the -- and, and what happens there with that is that the power is -- it goes down to Phoenix. And our Navajo Tribe has to buy the power back to Navajo Tribal Utility Authority, which is the only utility company for our Reservation. So, we have to almost like double -- it's a double pay -- oh, goodness, it's [indiscernible]. Anyway, I just wanted to say that it's really devastating for our, our Navajo people to be in that situation.

## Issue 10 - State's interests and concerns

Total Number of Submissions: 13

Total Number of Comments: 15

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Comment Number: 00000111\_Deutsch\_20160517-1

Organization I: North Dakota Public Service Commission

Commenter I: Jim Deusch

Comment Excerpt Text:

I think the BLM needs to understand the federal coal situation is different in North Dakota. It's only about 15 percent of the lands that are on federal land and BLM does not own any of the surface. The rest of it is all either private or state-owned coal. Mining companies when they -- before they sign their contracts, they typically lease all that federal coal or not just the federal coal, but the private coal that is necessary for the life of those contracts. The federal coal leasing comes later, and if they're unable to get the federal coal, they need to bypass those federal coal tracts. But they still have a surface lease to disturb the surface of that, and typically it is for roads, soil stockpiles, and sedimentation piles. If the federal coal ends up getting bypassed in these situations, the federal coal will never be mined in the future, and as a result of this, the federal government and the State of North Dakota loses this royalty and other revenues from that, and the rate of return to the taxpayers becomes

zero. Also mining around federal coal, it basically means more private coal has to be mined. So instead of eliminating or reducing the amount, the total amount of coal mined, it's just increasing the cost because typically what happens is they have to close the pit, open a new pit, go around the federal coal tracts, and that increases the cost significantly, and those costs then get passed on to rate-payers.

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Comment Number: 00000131\_Rammell\_20160517-1

Commenter I: Rex Rammell

Comment Excerpt Text:

I think the only solution to this whole problem is to the transfer of public lands from the federal government back to the state.

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Comment Number: 0002076\_Haslam\_20160623-1

Commenter I: Michele Haslam

Comment Excerpt Text:

It is vital that you include Montana's elected officials in the policy discussions regarding the future of coal. These decisions affect thousands of Montana citizens and could jeopardize millions of tax dollars.

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Comment Number: 0002078\_Hilton\_20160622-1

Commenter I: Reine Hilton

Comment Excerpt Text:

Montanans should have a big say in what the EPA is proposing for the coal industry since we are the largest coal producer in the country.

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Comment Number: 0002128\_Walter\_20160623-1

Commenter I: Marlis Walter

Comment Excerpt Text:

The federal government needs to stop its interference of states rights to develop and use our natural resources. We are sick of federal over-reach and efforts to control matters which should be left to the states.

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Comment Number: 0002195\_DeWitt\_20160519-1

Commenter I: Jordan DeWitt

Comment Excerpt Text:

I believe that the federal coal moratorium should have had involvement of state representatives. Congress was not given a chance to give their input of the matter.

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Comment Number: 0002329\_Segger\_20160724\_CambellCntyWY-1

Organization I: County and Prosecuting Attorney's Office, Campbell County, Wyoming

Commenter I: Carol Seeger

Other Sections: 11

Comment Excerpt Text:

The potential impacts to state and local government resulting from a proposed change to the federal coal leasing program are not identified as being an issue that will be addressed in the environmental assessment. We specifically request that the economic impacts to state and local governments be included. Currently, there is an estimated 25 billion tons of economically recoverable coal located in the Powder River Basin with 343 million tons of coal being produced in Campbell County in 2013 accounting for 88% of the state's total production. Eighty percent of all coal in Wyoming is produced from federal and Indian lands.

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Comment Number: 0002329\_Segger\_20160724\_CambellCntyWY-2

Organization I: County and Prosecuting Attorney's Office, Campbell County, Wyoming

Commenter I: Carol Seeger

Other Sections: 11

Comment Excerpt Text:

Campbell County generated 120 million in revenue in FY2014 stemming from coal resources valued at 3.5 billion. In 2013, Campbell County collected 64.7 million in ad valorem tax with 85% coming from natural resource production. This percentage does not include the revenue generated by the service industries that support coal production nor the fact that 5,195 people representing approximately 11% of the county residents and 24% of total employment are directly employed by the coal mining industry. In addition to the revenue generated to support Campbell County government, a mill levy is also applied to the taxable value of the coal to support the Campbell County Hospital District, the Campbell County Cemetery District, the Campbell County School District, the Campbell County Weed & Pest District, the Campbell County Conservation District, the City of Gillette and the Town of Wright. Any EIS intended to evaluate the federal coal leasing program must address the economic impacts to state and local governments. Such impacts are without question relevant in evaluating the federal coal program.

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Comment Number: 0002356\_Kary\_20160721-1

Organization I: State of Montana

Commenter I: Doug Kary

Comment Excerpt Text:

our federal government needs to look at each state individually because we are individual states and not take us all as one

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Comment Number: 0002390\_Pfister\_20160721-11

Organization I: Northern Plains Resource Council

Commenter I: Ellen Pfister

Comment Excerpt Text:

The State should have a long-term interest in how well and how soon reclamation of mined land is accomplished in order to return that mined land to productive taxable property.

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Comment Number: 0002493\_Mead\_20160728\_GovWY-42

Organization I: Office of Governor Matthew H. Mead

Commenter I: MATTHEW H. MEAD

Comment Excerpt Text:

The security of critical infrastructure data collected in support of risk, vulnerability, or threat assessments is of vital concern to facility owners, operators, managers, and responders across Wyoming. Therefore is of the utmost importance that all precautions are taken to protect the data during the assessment process. Best practices dictate that plans and procedures are in place to ensure their security.

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Comment Number: 0002493\_Mead\_20160728\_GovWY-77

Organization I: Office of Governor Matthew H. Mead

Commenter I: MATTHEW H. MEAD

Comment Excerpt Text:

The DEQ, Land Quality Division (LQD), the BLM, USFS and OSMRE coordinate processes necessary to assure that all federal regulatory requirements are fulfilled during the State's permitting actions. This interagency

coordination is defined through the Working Agreement for the Wyoming State-Federal Cooperative Agreement Surface Mining Control and Reclamation Act (Working Agreement) (WY0-03045 to 03050) signed by all agencies which is applicable to mining of federal coal in Wyoming. The USFS is a cooperating agency in the federal coal leasing process.

BLM must acknowledge the established Working Agreement with the DEQ, LQD and not step outside of the boundaries established by the Working Agreement in its analysis of the federal coal program in the PEIS

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Comment Number: 0002505\_Brooke\_20160729-5

Organization I:Black Warrior River Keeper

Commenter I:Nelson Brooke

Other Sections: 5

Comment Excerpt Text:

Additionally, we have concerns with the use of Powder River Basin coal from out West being burned at Alabama Power Company's Miller Steam Plant on the Locust Fork in Jefferson County. This massive coal-fired power plant burns a lot of coal – predominantly from the Powder River Basin – coal which has elevated levels of mercury and potentially radionuclides (radioactive isotopes). These contaminants are better left in the ground than put into our air and water near Birmingham, Alabama. Miller Steam Plant is one of the largest CO<sub>2</sub> emitting power plants in the entire U.S., and the BLM does not need to be feeding this beast.

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Comment Number: 0020012\_Holmes\_UCARE\_20160712-10

Organization I:Utah Citizens Advocating Renewable Energy

Commenter I:Stanley Holmes

Comment Excerpt Text:

The PEIS should revisit the federal state lease profits split and consider setting "appropriate use" parameters for monies generated by federal coal leasing.

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Comment Number: 0020049-1

Organization I:City of Casper

Commenter I:V.H. McDonald

Other Sections: 11

Comment Excerpt Text:

Many of Wyoming's local governments' economies are highly dependent upon the vitality of the coal industry. Local employment in those communities will likely be adversely affected by any regulatory changes and or increases of any tax or royalty rates. These modifications or additional cost burdens on coal producers can create disincentives to, or obstacles in, extracting this valuable energy resource. Consequently, it is essential that the extent of the economic impact of any changes in regulations and increases in tax and royalty rates upon state and local governments be determined and clearly reported.

## **Issue 11 - Visual resources**

Total Number of Submissions: 2

Total Number of Comments: 2

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Comment Number: 0002449\_Lyon\_20160727\_NWF-7

Organization I:National Wildlife Federation Action Fund

Commenter I:Jim Lyon

Other Sections: 17



**Comment Excerpt Text:**

Surface coal mining severely alters the landscape, disrupting virtually all ecological and aesthetic elements of the landscape and reducing the value of the natural environment in the mined area and surrounding land. Strip mining destroys the genetic soil profile, eliminates existing vegetation, displaces or destroys wildlife and habitat, and to some extent permanently changes the general topography of the area mined. This often results in a scarred landscape with no scenic value. Soil disturbance results in conditions conducive to erosion. Soil removal from the area to be mined alters or destroys many natural soil characteristics and reduces its biodiversity and productivity for revegetation and agriculture. Paleontological, archeological, cultural, and other historic features and values may be endangered due to the disruptive activities of mining coal.

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Comment Number: 0003129\_Takacs\_06042016-1

Commenter I: Carla Takacs

**Comment Excerpt Text:**

The scars

from coal mining are insanely grotesque and virtually impossible to repair!

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**Issue 12 - Water resources**

Total Number of Submissions: 33

Total Number of Comments: 40

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Comment Number: 00000106\_Newell\_20160517-2

Commenter I: Kevin Newell

**Comment Excerpt Text:**

Coal trains. We already got a couple coming down the Columbia River. So we know what's happening. Coal flies out of the cars. It's deposited on the railroad tracks and in the riparian zone next to the river, and it also goes in the river. It acidifies when it gets in the river. Our baby salmon, sturgeon, and steelhead are supposed to live in this water.

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Comment Number: 00000158\_FRENCH\_20160517-2

Organization I: Northern Plains Resource Council

Commenter I: Kate French

**Comment Excerpt Text:**

Most of the coal mined in the PRB is federal coal, as you saw earlier. Strip mining that coal severely threatens water quality, water quantity, and the viability of our agricultural sector. The runoff from unreclaimed mine lands pollutes our water, and this contamination often leaves streams too salty to use for irrigation or cattle production. Coal seams also serve as vital aquifers for the area, and mining that coal often severs these aquifers, and that dries up natural springs and leaves many wells able to be dried up. Excuse me. Even underground (Inaudible) mining has an effect in cases of (Inaudible). There are oftentimes subsidence cracks and that leaves land no longer intact and affects the underlying hydrologic balance in these areas. This severely affects the insurance viability in the area.

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Comment Number: 00000172\_TERRY\_20160517-1

Commenter I: Vicky Terry

Other Sections: 10

**Comment Excerpt Text:**

I became aware of all the health effects and the water quality. And we water test. We monitor our own water

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because we have been able to the coal mine and the regulations that are in place isn't the violations up there. I can show you with -- I can show you violations. And they are not being enforced. Nobody is enforcing any regulations. We are watching our water quality go down. We don't eat fish out of the creeks anymore. We are scared of the fish. And we have to watch where we go swimming now.

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Comment Number: 00000179\_ FUSAN\_20160517-2

Commenter I:Lynn Fusan

Comment Excerpt Text:

On January 1, 2009, the first independent tests were conducted following the coal ash spill at the Environmental Toxicology and Chemistry Laboratories at Appalachian State University. Results show significantly elevated levels of toxic metals in with the slurry and river water. These toxic metals included arsenic, copper, barium, cadmium, chromium, lead, mercury, nickel, and thallium.

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Comment Number: 00000182\_ BANBURY\_20160517-2

Commenter I:Scott Banbury

Comment Excerpt Text:

They impact water quality. The fluent that comes out of the coal ash ponds at our plant and other plants, these things should be included in the calculations.

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Comment Number: 00000183\_ MCKAY\_20160517-4

Commenter I:Don McKay

Other Sections: 12

Comment Excerpt Text:

Four, the coal in nearby communities or underwater systems or near -- in view sight of religious sites not be mined.

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Comment Number: 00000357\_ Walsh\_20160519-3

Organization I:Sierra Club (National)

Commenter I:Elizabeth Walsh

Comment Excerpt Text:

At the same time, we're faced with another challenge, water quality. If we continue to pollute our fresh water resources by burning dirty fuels like coal, we have even less high-quality fresh water available for human consumption, crop irrigation, and to support wildlife and aquatic life such as fisheries.

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Comment Number: 0000587-1

Organization I:Littlelead Guides

Commenter I:Elke L. Kirk

Comment Excerpt Text:

As a tribal fishing guide from Warm Springs Ore, Im against any kind of hazzardous materials along our river channels.

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Comment Number: 0002152\_ Bruse\_20160518-2

Commenter I:Debbie Bruse

Comment Excerpt Text:

The idea that coal mining is polluting the water is simply not true. An array of water type permits are required before mining can commence and most of these permits come with regular reporting and inspections. The

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National Pollution Discharge Elimination System (NPDES) permit that each mine has, regulates specific criteria that water must meet to be discharged off permit area. Any mine in Wyoming that discharges water, completes testing prior to each and every discharge to make sure that standards are met (some exceptions may apply, but an exception would be atypical).

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Comment Number: 0002321\_Gordon\_20160722-2

Commenter I: Thomas Gordon

Other Sections: 6

Comment Excerpt Text:

As the acidity the oceans increase, coral reefs die and harvestable fish die; here in the Northwest, oyster growers are moving their oyster start operations to Hawaii. The acidic sea water here on our coasts dissolve the fragile beginning calcium shells of the oysters and the starts die. This industry is in danger of disappearing.

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Comment Number: 0002326\_Moench\_20160724\_UtahPhysicHealthyEnviron-34

Organization I: Utah Physicians for a Healthy Environment

Commenter I: Malin Moench

Other Sections: 19

Comment Excerpt Text:

Continuing such subsidies will also artificially widen the permanent damage that strip mining does to the rangelands and aquifers of the PRB.

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Comment Number: 0002326\_Moench\_20160724\_UtahPhysicHealthyEnviron-43

Organization I: Utah Physicians for a Healthy Environment

Commenter I: Malin Moench

Other Sections: 10

Comment Excerpt Text:

When coal is burned, toxins in the coal are released into the smokestack. If modern air pollution controls are in place, airborne toxins are captured through filtration systems before they can become airborne. The captured toxins end up in coal ash. As a result, heavy metals such as mercury are concentrated in what the EPA considers "recycled air pollution control residue." This only delays the exposure of the public to these toxins. The EPA concedes that all coal ash landfills eventually leak, and Federal regulation of coal ash landfills is minimal. Rain falling on ash piles leaches out these heavy metal compounds. The heavy metals eventually end up in ground water, or in lakes and streams, contaminating drinking water sources.

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Comment Number: 0002328\_Paddock\_20160724-15

Commenter I: Brian Paddock

Comment Excerpt Text:

Coal mining and coal burning for electricity pollutes and misuses water. This is particularly a problem in the West which is already suffering from water scarcity which is likely to increase a the global temperature increases.(17)

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Comment Number: 0002335\_Webber\_20160725\_HealthActionNM-8

Organization I: Health Action New Mexico

Commenter I: Barbara Webber

Other Sections: 1

Comment Excerpt Text:

And here in New Mexico, the primary aquifers serving the Navajo Nation have been degraded by decades of

irresponsible and rampant coal mining. A 2011 study by the University of Arizona found that one company's decades of coal mining had depleted Navajo Aquifer storage by 21,000 to 53,000 acre feet of water, well above what the company's environmental consultants predicted.

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Comment Number: 0002342\_Etter\_20160726-5

Organization I: Bowie Resources, LLC

Commenter I: Art Etter

Comment Excerpt Text:

The EIS must consider that increased restrictions and/or reductions placed on the coal industry directly benefit the gas industry and have little impact on renewable use. One could argue that increased renewable use is driven more by federal incentives than market competitiveness. Although, power generation from coal produces more carbon dioxide than natural gas, gas development poses substantially more long term risk to groundwater quality with the injection of production fluids and wastewater.

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Comment Number: 0002392-1

Commenter I: Mary Fitzpatrick

Comment Excerpt Text:

Strip mining of coal severely threatens water quality and quantity, and therefore the viability of agricultural production in this region. Water is our most valuable resource, and we must protect it or risk losing our lifeblood.

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Comment Number: 0002436-1

Commenter I: Sharon St Joan

Other Sections: 8.4

Comment Excerpt Text:

A tributary of Kanab Creek has already been relocated by the mine and has been polluted with coal dust. Kanab Creek provides the drinking water for the city of Kanab. New expansion of coal on to public lands would further contaminate Kanab Creek, which is also the main source of water for wildlife.

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Comment Number: 0002441\_Hyche\_20160724-3

Commenter I: Roe Hyche

Comment Excerpt Text:

Coal ash must be stored in completely secure ponds where no leakage occurs. This is not happening. Not only that, but the more the coal is mined, the harder it will be to contain the pollution it causes. Our taxpayer-owned public lands need protection, not exploitation.

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Comment Number: 0002449\_Lyon\_20160727\_NWF-56

Organization I: National Wildlife Federation Action Fund

Commenter I: Jim Lyon

Other Sections: 1

Comment Excerpt Text:

Another aspect of reclamation is restoration of water resources, including surface and groundwater hydrology. SMCRA requires coal operators to: assure the protection of the quality and quantity of surface water systems from the adverse effects of mining; restore the recharge capacity of the mined area to approximate pre-mining conditions; and, in Western states, preserve the essential hydrologic functions of most alluvial valley floors. (156) Where they cannot assure that the quantity of water will be protected, surface mine operators must provide an

alternative water source. (157) Since coal seams serve as aquifers in much of the western United States, such as in the Powder River Basin, demonstrating the ability of water (both pre-mining quality and quantity) to return to mined lands can be the most difficult reclamation requirement.

(156) Mark Squillace, THE STRIP MINING HANDBOOK at Ch. 7 (Participating in Bond Release Proceedings), available at <https://sites.google.com/site/stripmininghandbook/>

(157) Id. at Ch. 5 (Reviewing a Permit Application).

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Comment Number: 0002449\_Lyon\_20160727\_NWF-8

Organization I: National Wildlife Federation Action Fund

Commenter I: Jim Lyon

Comment Excerpt Text:

Surface coal mining adversely affects surface water and groundwater. Coal beds often contain underground aquifers, which are dewatered or destroyed during mining, which in turn leads to lowering of water levels in adjacent areas and changes in flow direction within aquifers. Other adverse impacts include contamination of usable aquifers below mining operations due to infiltration (percolation) of poor-quality mine water as well as increased infiltration of precipitation on spoil piles, which can result in increased runoff of poor-quality water and erosion from spoil piles, recharge of poor-quality water to shallow groundwater aquifers, and poor-quality water flow to nearby streams. Infiltration may contaminate both groundwater and nearby streams for long periods. Deterioration of stream quality results from acid mine drainage, toxic trace elements, high content of dissolved solids in mine drainage water, and increased sediment loads discharged to streams. When coal surfaces are exposed, pyrite comes in contact with water and air and forms sulfuric acid, which moves into waterways during precipitation events. Also, waste piles and coal storage piles can yield sediment, acid, and toxic trace elements to streams that can harm wildlife. Surface waters may be rendered unfit for agriculture, human consumption, bathing, or other household uses.

Open-pit mining requires large amounts of water for coal preparation plants and dust suppression. To meet this need, mines acquire (and remove) surface or groundwater supplies from nearby agricultural or domestic users, which reduces the productivity of these operations or halts them. These water resources, once separated from their original environment, are rarely returned after mining, presenting flow harms for wildlife and harming other water uses. This can be a significant problem in places like the arid west, which comprise the vast majority of federal coal leasing.

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Comment Number: 0002459\_Ball\_20160728-2

Commenter I: Connie Ball

Comment Excerpt Text:

Coal fired power plants consume enormous quantities of water, and in the West, water is scarce and becoming a very big problem for a growing population.

Water used in producing electricity becomes a contaminant to the environment and as coal companies go bankrupt, taxpayers have to pick up the enormous tab of cleanup.

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Comment Number: 0002461\_breen\_20160728-6

Organization I: The Wilderness Society

Commenter I: Katie Breen

Comment Excerpt Text:

Federal coal reform improves our access to water. Coal mining companies have drained aquifers once used for drinking water and livestock water.

Comment Number: 0002467\_Fettus\_20160728-16

Organization I: Natural Resources Defense Council

Other Sections: I

Comment Excerpt Text:

Groundwater Depletion

Western coal mining often takes place in very arid environments, with limited rainfall and surface water resources. Thus, successful reclamation of rangeland requires not only establishing surface vegetation, but also replacement and restoration of pre-mining water resources, the impacts on which must also be fully considered.

As such, BLM should analyze and disclose the bond release status of previously leased acreage, and assess associated impacts related to water resources. OSMRE dictates that, “[a]chievement of surface water quality and quantity restoration can be measured by acres of Phase III bond release.” OSMRE Wyoming 2009 Report at 9. There is no other objective measure of water quality and quantity restoration (sufficient to allow post-mining land uses) that BLM could substitute for its evaluation.

Additionally, BLM should review previous NEPA analyses for federal coal leases, analyses which have disclosed significant – and irreversible – impacts to groundwater resources. For instance, the Wright Area Leases Final Environmental Impact Statement for the Powder River Basin in Wyoming disclosed: “[t]he overburden and coal aquifers within the leased tracts would be completely dewatered and removed, and the area of drawdown caused by overburden and coal removal would be extended...” Bureau of Land Mgmt., Final EIS For the Wright Area Coal Lease Applications, 3-111 (July 2010). According to the EIS, “the effect of coal mine dewatering on the Upper Fort Union from 1990 to 2010...is a cumulative drawdown ranging from...50 to 150 feet in the vicinity of the Black Thunder” mine. Id. at 4-62. BLM states that “[t]he rate and extent of the actual drawdown in the coal is currently much greater than the life-of-mine drawdown predictions,” and that “[r]oughly 30 years of surface mining and the more recent CBNG development have resulted in complete dewatering of the coal aquifer in localized areas...” Id. at ES-40, 3-118. Additionally, the agency discloses that “resaturation of coal mine pit backfill to form backfill aquifers may take approximately 100 years after cessation of mining.” Id. at ES-67 (emphasis added).(24)

(24) These statements essentially acknowledge that coal mining is resulting in material damage to the hydrologic balance of ground and surface water and that compliance with SMCRA’s statutory requirement to restore the regional Fort Union coal aquifer to “pre-mining conditions” may in fact be impossible.

Coal mining also uses substantial amounts of water for dust control, extraction (i.e., to cool equipment and prevent fire), and processing (e.g., coal washing). The Department of Energy estimates that U.S. coal mining uses approximately 70 to 260 million gallons of water per day, with average uses of 10 gallons per ton of coal mined on the surface in the West. See Hein and Howard at 10. Most, if not all, of this water comes from underground sources. The PEIS should provide a cumulative analysis of these impacts and direction for considering these impacts in future site-specific EISs.

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Comment Number: 0002467\_Fettus\_20160728-5

Organization I: Natural Resources Defense Council

Commenter I: Geoffrey Fettus

Other Sections: I

Comment Excerpt Text:

Groundwater Depletion: Coal mining has caused complete dewatering of aquifers formerly used for drinking water and livestock watering. The Surface Mining Control and Reclamation Act (SMCRA), 30 U.S.C. §1201 et seq., creates responsibilities to restore both the quality and quantity of aquifers; however, companies are far behind on meeting these obligations, especially at a landscape scale.

Delayed Reclamation and Corresponding Impacts to Other Land Uses: The gap between disturbed and reclaimed lands continues to grow. After decades of mining, across 562 square miles of land in Colorado, Montana, New Mexico, North Dakota, Utah, and Wyoming, only 77 square miles have been fully reclaimed and released from bond, meaning that the vast majority of lands have not met regulatory requirements for re-vegetation and water restoration necessary to sustain pre-mining land uses. Western Organization of Resource Councils, et al., *Undermined Promise II*, available at [www.underminedpromise.org](http://www.underminedpromise.org). This lack of reclamation prevents land from being returned to its prior use of habitat for wildlife and livestock. Unreclaimed lands can also lead to the spread of noxious weeds and can contribute to air quality impacts. Due to down market conditions for coal, the threat of failed and untimely reclamation is becoming even more prevalent for companies that are “self-bonded.”

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Comment Number: 0002467\_Fettus\_20160728-60

Organization I: Natural Resources Defense Council

Commenter I: Geoffrey Fettus

Other Sections: I

Comment Excerpt Text:

The PEIS must also address the substantial hydrological impacts of coal leasing. In the water-scarce western U.S., groundwater, intermittent surface water and sub-irrigation are vital to the environment and the economic base. Mined coal seams often contain groundwater aquifers that nourish springs, wells, streams, and natural systems. Coal mining pollutes both surface and groundwater resources, often increasing levels of suspended solids and sediment load in streams and wetlands nearby. This in turn can increase ventilation rates, reducing oxygen levels for aquatic life. Suspended solids can also diminish light penetration through water, limiting aquatic plant productivity. See *Undermined Promise II* at 30.

Surface waters can become contaminated from the leaching of toxic substances from exposed ore, waste rock, and overburden. In Wyoming and Idaho, for example, dust from the surface mining of coal in areas with selenium containing overburden was found to cause selenium levels to increase in the environment. Selenium leaches from coal ash and coal mine waste into nearby water and soil and heavily impacts aquatic ecosystems, where it can easily reach toxic concentrations and bio-accumulate through the food chain. In several lakes and reservoirs, selenium has been linked to reproductive impairment in fish and waterfowl. Contamination of groundwater usually occurs as the result of the leaching of ions from soils or the leakage of chemicals from waste-management facilities. See Helmut Meuser, *Contaminated Urban Soils* (Springer Sciences 2010) at 39; see also Richard S. Ogle et al., *Bioaccumulation of Selenium in Aquatic Ecosystems*, 4 *Lake and Reservoir Management* 2 (1988).

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Comment Number: 0002477\_Saul\_20160728\_CBD\_UPHE-16

Organization I: Center for Biological Diversity

Commenter I: Michael Saul

Other Sections: I

Comment Excerpt Text:

Before coal can be transported to power plants, it must be washed to remove soil and rock impurities. Coal washing uses polymer chemicals and large quantities of water and creates a liquid waste called slurry. Slurry ponds can leak or fail, leading to injury and death, and slurry injected underground into old mine shafts can release arsenic, barium, lead, and manganese into nearby wells, contaminating local water supplies. 160 (160) See A. Lockwood, et al., *Coal's Assault on Human Health* at 4; E. Burt, et al., *Health Effects from Coal Use* at 3.

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Comment Number: 0002477\_Saul\_20160728\_CBD\_UPHE-23

Organization I: Center for Biological Diversity

Commenter I: Michael Saul

Other Sections: I 10

Comment Excerpt Text:

The storage of post-combustion wastes from coal plants also threatens human health. After combustion, some coal ash is recycled into cement and other engineering products, but most of it is disposed of in dry or wet landfills.<sup>217</sup> There are 584 coal ash dump sites in the U.S., and toxic residues have migrated into water supplies and threatened human health at dozens of these sites.<sup>218</sup> Landfills that leak fly-ash waste can contaminate ground and surface water with arsenic, cadmium, barium, thallium, selenium, and lead.<sup>219</sup>

(217) See E. Burt, et al., Health Effects from Coal Use at 3.

(218) See Methane as a Greenhouse Gas, U.S. Climate Change Science Program (2006) available at: <http://www.climatechange.gov/infosheets/highlight/CCSP-HI-methane18jan2006.pdf>; Coalbed methane—An Untapped Energy Resource and an Environmental Concern—USGS Fact Sheet, U.S. Geological Survey, FS-019-97 (1997) available at: <http://energy.usgs.gov/factsheets/Coalbed/coalmeth.html>.

(219) See E. Burt, et al., Health Effects from Coal Use at 3.

Comment Number: 0002477\_Saul\_20160728\_CBD\_UPHE-5

Organization I: Center for Biological Diversity

Commenter I: Michael Saul

Other Sections: 6

Comment Excerpt Text:

Impacts to water resources: “Water resources across large areas of the country are at serious risk from climate change, with effects on water supplies, water quality, and adverse effects from extreme events such as floods and droughts. Even areas of the country where an increase in water flow is projected could face water resource problems from the supply and water quality problems associated with temperature increases and precipitation variability, as well as the increased risk of serious adverse effects from extreme events, such as floods and drought. The severity of risks and impacts is likely to increase over time with accumulating greenhouse gas concentrations and associated temperature increases.”<sup>22</sup>

Impacts from sea level rise: “The most serious potential adverse effects are the increased risk of storm surge and flooding in coastal areas from sea level rise and more intense storms. Observed sea level rise is already increasing the risk of storm surge and flooding in some coastal areas. The conclusion in the assessment literature that there is the potential for hurricanes to become more intense (and even some evidence that Atlantic hurricanes have already become more intense) reinforces the judgment that coastal communities are now endangered by human-induced climate change, and may face substantially greater risk in the future. Even if there is a low probability of raising the destructive power of hurricanes, this threat is enough to support a finding that coastal communities are endangered by greenhouse gas air pollution. In addition, coastal areas face other adverse impacts from sea level rise such as land loss due to inundation, erosion, wetland submergence, and habitat loss. The increased risk associated with these adverse impacts also endangers public welfare, with an increasing risk of greater adverse impacts in the future.”<sup>23</sup>

(22) Final Endangerment Finding at 66,498.

(23) Final Endangerment Finding at 66,498

Comment Number: 0002493\_Mead\_20160728\_GovWY-50

Organization I: Office of Governor Matthew H. Mead

Commenter I: MATTHEW H. MEAD

Comment Excerpt Text:

Unlike most states, Wyoming has laws and regulations that address all aspects of surface and groundwater within coal mining permit areas as well as offsite. In this capacity, the State Engineer's Office regularly coordinates with the DEQ, LQD to prepare cumulative hydrologic impact assessments for the coal production permitting process under provisions of the Wyoming Environmental Quality Act. This Act requires that no coal mining activity is to



be approved in Wyoming unless the operation is designed to prevent material damage to the hydrologic balance outside the permit area.

It is important that the BLM analyze the regulatory control exerted by Wyoming in any consideration of the quantity and quality of water resources, including aquifer drawdown and impacts on streams and alluvial valley floors.

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Comment Number: 0002499\_Nichols20160728-14

Organization I: WildEarth Guardians

Commenter I: Jeremy Nichols

Comment Excerpt Text:

Water quality and quantity impacts: Burning coal requires massive amounts of water for cooling and impacts water quality through the discharge of pollutants. The PEIS must address the impacts of coal combustion to water quality and quantity and provide information and analysis disclosing to what extent the federal coal program contributes to depletion of water supplies, particularly in the western United States, and to what extent water quality problems are linked to the federal coal program.

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Comment Number: 0002505\_Brooke\_20160729-1

Organization I: Black Warrior River Keeper

Commenter I: Nelson Brooke

Other Sections: 8.4

Comment Excerpt Text:

A recent BLM lease (ALES-055199) of 160 acres was awarded to Narley Mine No. 3 utilizing the “emergency lease” qualification, under the premise that the 868,423 tons of recoverable federal coal were needed within a three-year timeframe to maintain an existing mining operation – the adjacent Narley Mine. Operated by Best Coal, Inc., Narley Mine No. 3 (surface mine) is permitted by the U.S. Army Corps of Engineers (NWP 21: SAM-2012-00615-CMS), the Alabama Surface Mining Commission (P-3954) and the Alabama Department of Environmental Management (NPDES: AL0075752). NPDES AL0075752 allows discharges through six sediment basins to an unnamed tributary to Trouble Creek, which flows into Trouble Creek, and then into the Locust Fork of the Black Warrior River in Jefferson County, AL. Sediment basins are allowed to be placed within streams in Alabama by utilizing a grandfather provision to exercise use of the old Nationwide Permit 21. This Corps permitting system is outdated and destructive – its use was discontinued in all other Appalachian coal mining states years ago. Sadly, its use has been allowed to continue in Alabama. It is stated that fill impacts would not be had by this operation on Trouble Creek, but there will be fill impacts to Trouble Creek’s tributaries. For this mine, SAM-2012-00615-CMS allows for the destruction and fill of 4,080 linear feet of intermittent streams and 7,106 linear feet of ephemeral streams. Headwater tributaries and their critical ecosystem functions should not and cannot be overlooked when considering the cumulative impacts of an operation within a watershed. Placement of fill and sediment ponds in drainages and tributaries is a key concern of Black Warrior Riverkeeper, and we believe this is a practice allowed by NWP 21 that should be expressly banned. These streams are headwater tributaries, and any impacts to them eventually have a downstream cumulative impact on the Locust Fork. A 100 foot Stream Buffer Zone cannot and should not be touted as a sufficient measure to protect water quality and aquatic species, as it is in the EA on page 46.

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Comment Number: 0002942\_Harbine-40

Organization I: Earthjustice

Commenter I: Jenny Harbine

Other Sections: 1

Comment Excerpt Text:

Impacts to Water Coal mining depletes aquifers and pollutes groundwater and surface water. The PEIS should

examine these direct effects of coal mining, as well as the indirect impact on water resources due to climate change spurred by the mining and burning of federal coal. As with land, water resources are permanently altered by coal mining. BLM has acknowledged that mining coal means removing aquifers that are never reclaimed, but instead are replaced with homogeneous backfill material. 137 As mines are dewatered, groundwater levels decline under surrounding lands. 138 The cumulative effect of mining-related drawdown and groundwater depletion from coalbed natural gas development in the same areas can be substantial. In addition to groundwater depletion, coal mining impairs water quality. BLM has observed that, as a general matter, concentrations of total dissolved solids, calcium, magnesium, and sodium sulfates all are elevated in mined areas compared to undisturbed areas. 139 These same pollutants may discharge to surface waters. In addition, coal mining can pollute surface waters with selenium, which is naturally present in coal and mobilized into the environment when coal-bearing strata are exposed to air and water. 140 Because selenium is toxic to aquatic 134 U.S. Government Accountability Office, *Climate Change*, at 3. 135 National Climate Assessment and Development Advisory Committee, *CLIMATE CHANGE IMPACTS IN THE UNITED STATES* at 4 (2014). 136 See U.S. Government Accountability Office, *Climate Change*, at 23. 137 Bureau of Land Management, *Wright Area FEIS*, at ES-40; see also *Alton Coal Tract Lease by Application Draft Environmental Impact Statement*, at ES-14 (Nov. 2011), available at [http://www.blm.gov/ut/st/en/prog/energy/coal/alton\\_coal\\_project/alton\\_coal\\_eis.html](http://www.blm.gov/ut/st/en/prog/energy/coal/alton_coal_project/alton_coal_eis.html) (last visited July 27, 2016). 138 Bureau of Land Management, *Wright Area FEIS*, at ES-40. 139 Bureau of Land Management, *Wright Area FEIS*, at 3-115. 140 D. Lemly, *AQUATIC HAZARD OF SELENIUM POLLUTION FROM COAL MINING*, Fosdyke, Gerald B. ed. *Coal Mining: Research, Technology and Safety* (2009), available at <http://www.srs.fs.usda.gov/pubs/33826> (last visited July 26, 2016). 44 life and bioaccumulates in food chains, even “a small amount of selenium in water can translate to a significant environmental hazard.” 141 The PEIS must examine these and other direct impacts to ground and surface waters due to mining federal coal. Further, the nation’s bodies of water are vulnerable to the impacts of climate change catalyzed and accelerated by fossil fuel development. 142 These existing and future impacts are broad and can range from drought, to altered runoff patterns, to a lack of drinking water and adverse effects on that dwindling water supply, to ocean acidification, and even to damage to national marine sanctuaries. While rising sea levels due to climate change will affect enormous portions of coastal lands, 143 the impact on water will persist far inland as well. A common problem will be drought, which is expected to become worse in broad regions ranging from California, to South Dakota, to Georgia. 144 As these droughts worsen surface and groundwater supplies will begin to steadily decrease, resulting in widespread water shortages. 145 These shortages affect not only the human population, but can be harmful to aquatic and terrestrial ecosystems and may even cause land subsidence. 146 As these natural processes are adversely impacted by climate change the quality of the available water will also begin to decrease. 147 Poor water quality can be hugely detrimental to the health of human populations, wildlife populations, and vegetation. 148 To make matters worse, these impacts on water quality will not be restricted to those areas facing drought. Many areas will face increased flooding due to climate change which in turn can also contribute to contaminated water supplies. 149 141 Id. 142 See U.S. Environmental Protection Agency, *Water and Climate Change Research*, at <https://www.epa.gov/water-research/water-and-climate-change-research> (last visited July 21, 2016). 143 National Oceanic and Atmospheric Administration, *Sea Level Rise and Coastal Flooding Impacts*, at <https://coast.noaa.gov/slr/> (last visited July 21, 2016). 144 Center for Climate and Energy Solutions, *Drought and Climate Change*, at <http://www.c2es.org/science-impacts/extreme-weather/drought> (last visited July 21, 2016). 145 National Climate Assessment and Development Advisory Committee, *CLIMATE CHANGE IMPACTS IN THE UNITED STATES* at 70. 146 United States Geological Survey, *Groundwater and Drought*, at <http://water.usgs.gov/ogw/drought/> (last visited July 21, 2016). 147 National Climate Assessment and Development Advisory Committee, *CLIMATE CHANGE IMPACTS IN THE UNITED STATES* at 86-88. 148 See generally Peter S. Murdoch, Jill S. Baron, & Timothy L. Miller, *Potential Effects of Climate Change on Surface-water Quality in North America*, 36-2 *JOURNAL OF THE AMERICAN WATER RESOURCES ASSOCIATION* (2007) (broadly discussing the various impacts of poor water quality on various populations and ecosystems). 149 National Climate Assessment and Advisory Committee, *CLIMATE CHANGE IMPACTS IN THE UNITED STATES* at 80-81; U.S. Environmental Protection Agency, *Natural Disasters – Flooding* at <https://www.epa.gov/natural-disasters/flooding> (last visited July 21, 2016). 45 Consequently, largely varied regions

from southern Florida to northern Arizona will be exposed to water-related and climatologically caused risks. 150 These negative impacts are not limited to coastal water, as even the oceans themselves face increased temperatures and acidity. 151 As ocean acidity and temperature continue to stray further away from their norms they will create a variety of problems for aquatic and coastal areas. 152 Even minor fluctuations in ocean pH levels or temperature can lead to more severe hurricane seasons, tidal patterns, and coastal precipitation. 153 These impacts also persist deep below the ocean's surface. 154 This in turn threatens national marine sanctuaries. 155 As these sanctuaries provide a stable environment for marine ecosystems, a disruption of the sanctuary due to acidification, water temperature, current patterns, or any other oceanographic element of climate change, would not only adversely affect the ecosystem itself, but may also inhibit scientific research being done within the sanctuary that may otherwise help stem the tide of these negative impacts. 156 Like land-based indirect impacts, water-based indirect impacts of climate change are not easily contained, and their harm cannot easily be mitigated once the damage is done and current management practices may become insufficient. 157 As a result, it is imperative that actions be taken to reduce the harm to the nation's water resources before mitigation becomes improbable.

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Comment Number: 0003126\_McLaughlin\_20160608-2

Commenter I: Michael McLaughlin

Comment Excerpt Text:

Coal mining and burning bring several toxic materials to the surface, which are then leached by rain into watersheds and groundwater

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Comment Number: 0020008\_Hoem\_20160712-3

Commenter I: Harold Hoem

Comment Excerpt Text:

Damage to groundwater. Montana strip mining severely pollutes groundwater and damages aquifers by disturbing the ground and previously inert toxins such as mercury, arsenic and other heavy metals. Damage to aquifers is inevitable, as the aquifer is often within the coal bed. Furthermore, burning of coal for power leaves you with coal ash problems and on-going coal ash contamination. Colstrip, Montana, is a poster child for ongoing ash pond pollution. Efforts to stop ash pond water seepage have been unsuccessful for years.

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Comment Number: 0020013\_Hyndman\_20160712-3

Commenter I: Donald Hyndman

Comment Excerpt Text:

Montana strip mining severely pollutes groundwater with heavy metals even after reclamation.

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Comment Number: 0020013\_Hyndman\_20160712-5

Commenter I: Donald Hyndman

Comment Excerpt Text:

Coal burning for power generates huge amounts of coal ash, disposal ponds cause ongoing awful water pollution and heavy waste of clean water.

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Comment Number: 0020039-2

Commenter I: Bonnie Miller

Comment Excerpt Text:

Protection of streams and rivers and lakes and other bodies of water must be paramount

Comment Number: 0020040-1

Commenter I: Susan M. Patton

Comment Excerpt Text:

Per USGS Fact Sheet 073-02 serious problems exist in contaminated coal mine drainage. Acids draining from closed and abandoned mines have far-reaching effects on fish and wildlife and water quality.

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Comment Number: 00001270\_Smyth\_20160623-2

Commenter I: Joe Smyth

Commenter Type: Individual

Comment Excerpt Text:

After it's burned, coal ash waste threatens the drinking water supplies of communities all across the country.

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Comment Number: 0000725\_Kirchner\_NWF-1

Organization I: National Wildlife Federation

Commenter I: Jane Kirchner

Comment Excerpt Text:

Degradation of aquatic habitats is a major impact of coal mining, and may be apparent many miles from a mining site. Sediment contamination of surface water is common with mining. Sediment yields may increase to a thousand times their former level as a result of strip mining. The heaviest sediment pollution of a drainage normally comes within 5 to 25 years after mining. In some areas, unreclaimed spoil piles continue to erode even 50 to 65 years after the area has been mined.

### **Issue 13 - Biological resources**

Total Number of Submissions: 45

Total Number of Comments: 91

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Comment Number: 00000102\_Rees\_Association of Northwest Steelheaders \_ 20160517-1

Organization I: Association of Northwest Steelheaders

Commenter I: Bob Rees

Comment Excerpt Text:

When developing the EIS on BLM's coal leasing program, we ask that you take into account the true cost of coal including the consumption of this fossil fuel on ocean acidification. The shellfish on the Pacific Coast are our "canary in a coal mine," and our Pacific shellfish are on the brink of a major disaster. The Whiskey Creek Shellfish Hatchery on Netarts Bay, our state's cleanest estuary, has recently invested hundreds of thousands of dollars in water quality equipment just to ensure that their oyster juveniles survive. Prior to the water quality equipment, they were losing up to 80 percent of their juvenile oysters that fuel a multi-million dollar industry on the Pacific Coast. That water quality equipment deals with ocean acidification. The Dungeness Crab Fishery on the Pacific Coast is worth million of dollars. The pacific shrimp harvest this year has closed off the Oregon coast. We have serious deterioration of the plankton that feeds our juvenile salmon as well as our forage fish. And probably most alarming is that now we're realizing ocean acidification from the effects of fossil fuel consumption 30 years ago, and we've more than tripled our consumption since then. We also need to take into account the chemical reaction that takes place from the coal dust that's left along our 150-mile drain system along the Columbia River affecting the chemical makeup of the waters that our salmon swim in.

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Comment Number: 00000104\_Lindlief Hal\_National Wildlife Association\_20160517-1

Organization I:National Wildlife Federation

Commenter I:Brenda Lindlief Hal

Comment Excerpt Text:

Coal mining on federal lands occurs on some of the West's most fragile and important fish wildlife habitats. Strip mining threatens our public land, water, wildlife, and our way of life throughout the West.

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Comment Number: 00000114\_Laakso\_20160517-1

Organization I:Friends of Coal

Commenter I:Jack Laakso

Comment Excerpt Text:

I guarantee you if you want to see some of the largest mule deer and some of the largest elk, you go to some of reclaimed areas on the mine sites

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Comment Number: 00000355\_Thomas\_20160519-2

Commenter I:Ann Thomas

Comment Excerpt Text:

Not only is mining itself destructive, displacing species such as the sage grouse, along with air, water, noise, and pollution, have adverse effects on surrounding ecological communities.

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Comment Number: 00000357\_Walsh\_20160519-4

Organization I:Sierra Club (National)

Commenter I:Elizabeth Walsh

Comment Excerpt Text:

As compounds like mercury are deposited in local water bodies by the use of fossil fuels, it accumulates up the food web and is concentrated into our predators like our trout and other fishes, making them unhealthy and unfit for human consumption.

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Comment Number: 0000081\_Lempke\_20160517-3

Organization I:Tri-State Generation and Transmission Association

Commenter I:Doug Lempke

Comment Excerpt Text:

Consider the long-term benefits that coal mining can have for the environment, specifically reconfiguration of wildlife habitats which may be in decline or of poor quality to start.

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Comment Number: 0000092\_Bradley\_MtWildFed\_20160517-1

Organization I:Montana Wildlife Federation

Commenter I:John Bradley

Comment Excerpt Text:

Coal mining impacts the habitats of wildlife by polluting water sources and air with sulfide dioxide, nitrous oxide, and toxic trace metals such as lead. Carbon pollution from burning of fossil fuel clearly presents impacts to wildlife.

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Comment Number: 0000542-1

Organization I:Vulcan Inc.

Commenter I:Dave Stewart

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**Comment Excerpt Text:**

Rising acidification in Puget Sound is dissolving our oyster beds; Sea rise and storm surges are buffeting our coast line; Rising, record temperatures are melting our glaciers; and Climate-aided pest infestations are ravaging our forests

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Comment Number: 0000546-1

Organization I:City of Gillette

Commenter I:Louise Carter King

Comment Excerpt Text:

In Gillette, we cherish the abundant wildlife that exists right alongside the coal mines. Pronghorn, mule deer, Canada geese ... They co-exist peacefully with our mineral extraction industries, and flourish on reclaimed lands.

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Comment Number: 0000556-3

Organization I:Conservation Northwest

Commenter I:Jeff Baierlein

Comment Excerpt Text:

The BLM should also consider disease and premature mortality caused by air and water pollution from coal burning and coal ash, and the massive threat to our economy and well-being caused by climate change.

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Comment Number: 0000567-1

Organization I:Conservation Committee of Tahoma Audubon

Commenter I:Bruce Hoeft

Comment Excerpt Text:

In 2014, after seven years of compiling research, the National Audubon Society published a report which warns that 314 North American bird species are likely to lose more than half their current ranges by 2080, due to rising temperatures. This is a field guide, which shows which avian species are found in what locations. We now have a field guide of future North American bird populations. A third of the birds are missing. Though there are many variables to consider, the lead cause is habitat loss due to climate change.

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Comment Number: 0000567-2

Organization I:Conservation Committee of Tahoma Audubon

Commenter I:Bruce Hoeft

Comment Excerpt Text:

Also last month the NABCI, a commission created by the governments of Canada, the US, and Mexico in 1999, published a totally different study, using an entirely different methodology. It concluded that of the 1154 bird species in North America, 432 are in danger of extinction, and again, climate change was a major cause.

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Comment Number: 0000595-1

Commenter I:Diane Gordon

Comment Excerpt Text:

Ocean acidification is a huge problem for the economy of our state. It affects one of our major industries, one that earns an estimated \$270 million a year for the state coffers every year, the shellfish industry. Acidic water affects oysters and, even more important, shell-forming marine plankton which is critical in basic marine food chains. These effects start in the higher latitudes and gradually move toward the equator. The burning of coal in Asia will affect ocean acidification all over the world, especially having an impact on ecosystems such as coral reefs, an important support system for fish stocks.

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Comment Number: 0000611\_Leahy\_NMWF-3

Organization I: New Mexico Wildlife Federation

Commenter I: Todd Leahy

Comment Excerpt Text:

the vast majority of federal coal lies under prairies, ranch lands, and valuable wildlife habitat in the Powder River basin in Wyoming and Montana. More of these lands would have to be strip-mined to extract the coal that is underneath them, causing widespread pollution and habitat fragmentation. A full review of the federal coal program will ensure that future development safeguards not only public lands, but also watersheds and wildlife so American sportsmen and women can continue to enjoy their American outdoor traditions for generations to come.

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Comment Number: 0000782-4

Commenter I: Lawson LeGate

Comment Excerpt Text:

I would urge BLM to take special note of the leasing program effects on sage grouse habitat. No coal should be leased within the boundaries of America's Redrock Wilderness Act (S.1375/H.R. 2430) as introduced in the 114th Congress.

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Comment Number: 0000812-3

Organization I: National Parks Conservation Association

Commenter I: Cory MacNulty

Comment Excerpt Text:

Coal combustion, particularly at outdated coal-fired power plants, contributes to dirty air in our national parks that ruins scenic views, harms wildlife and historic sites, and affects the health of visitors.

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Comment Number: 0002081\_Inouye\_20160626-3

Organization I: University of Maryland

Commenter I: David Inouye

Comment Excerpt Text:

Disturbance associated with expansion of existing leases or new ones can fragment habitats critical for wildlife and wildflower.

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Comment Number: 0002081\_Inouye\_20160626-4

Organization I: University of Maryland

Commenter I: David Inouye

Comment Excerpt Text:

Habitat loss from disturbance can have major impacts on wildlife ranging from insect pollinators to big game populations, as well as impacting wildflowers. It can exacerbate conflicts between ranchers and wildlife, which is already a significant factor in Gunnison and Delta counties.

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Comment Number: 0002119\_Stensaas\_20160504-2

Commenter I: Suzanne Stensaas

Comment Excerpt Text:

The ugliness of the process and destruction of habitat is also a big consideration. Let us learn from our past mistakes.

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Comment Number: 0002139\_Simonsen\_20160519\_MESA-2

Organization I: Mormon Environmental Stewardship Alliance (MESA)

Commenter I: Soren Simonsen

Comment Excerpt Text:

Wildlife and habitat have been destroyed beyond nature's ability to repair and replenish.

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Comment Number: 0002239\_Baierlein\_20160621-1

Organization I: Conservation Northwest

Commenter I: Jeff Baierlein

Comment Excerpt Text:

the BLM should consider socioeconomic and other externalities such as destruction of the habitat of some of the West's most beloved wildlife including mule deer, pronghorn antelope, and the greater sage-grouse, and damage to outdoor recreation opportunities and the tourism economy, caused by coal mining.

The BLM should also consider disease and premature mortality caused by air and water pollution from coal burning and coal ash, and the massive threat to our economy and wellbeing caused by climate change.

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Comment Number: 0002239\_Baierlein\_20160621-2

Organization I: Conservation Northwest

Commenter I: Jeff Baierlein

Comment Excerpt Text:

At Conservation Northwest we work to preserve the Pacific Northwest's iconic wildlife that the American people treasure, such as lynx, caribou and wolverine. These species are snow-dependent:

for example, wolverine require snow for denning and reproduction. Greenhouse gasses from coal reduce snowpack, so with climate change Washington's wolverines may no longer have a home in which to raise their family, and the species may be extirpated from the lower 48.

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Comment Number: 0002310\_Payne\_20160721-5

Commenter I: Steven Payne

Comment Excerpt Text:

irreversible impacts to water, wildlife and other resources

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Comment Number: 0002314\_Beres\_EarthMinWAInterfaithPower\_20160722-1

Organization I: Creation Justice Ministries

Commenter I: Shantha Alonso

Comment Excerpt Text:

Coal mining's impact on land, water, and creatures has not been adequately accounted for

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Comment Number: 0002323\_Gordon\_20160722-2

Commenter I: Thomas Gordon

Other Sections: 8.9

Comment Excerpt Text:

At the PEIS hearing in Seattle, June 21, 2016, several people spoke.

A spokesman for NW Steelheaders said 80% of the oysters larvae die in Netarts Bay and only 10% of the coal-mined land in Wyoming is reclaimed.

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Comment Number: 0002323\_Gordon\_20160722-3

Commenter I: Thomas Gordon

Comment Excerpt Text:

A man from Audubon forecasts up to 1/3 of bird species will die in the next 65 years.

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Comment Number: 0002323\_Gordon\_20160722-4

Commenter I: Thomas Gordon

Other Sections: 8.7

Comment Excerpt Text:

Another man from Conservation Northwest said the royalties for coal should be the same as for oil. He also mentioned that lynx, wolverine, and caribou need snow.

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Comment Number: 0002436-3

Commenter I: Sharon St Joan

Other Sections: 8.4

Comment Excerpt Text:

A “lek,” or breeding ground, of the severely threatened sage grouse lies at the exact location of planned new coal expansion onto BLM land. Although the sage grouse species should have been listed for protection under the Endangered Species Act, it was not. Instead, an impractical plan has been agreed to by eleven western states to “manage” sage grouse habitat. This plan involves allowing key, essential sage grouse habitat to be taken over by coal strip--mining and other industrialization, while at the same time attempting to design new habitat, which, it is hoped, any sage grouse that survive may move on to.

This new habitat is being created by having machines crunch up miles and miles of beautiful native pinion and juniper trees, leaving the dead remains of the trees littering the ground, so that it is impossible even for a human to walk over them. It is hard to imagine the sage grouse doing their beautiful mating dance on top of broken, splintered trees. In some cases, nonnative grasses have been planted at these sites, which is ecologically inappropriate.

There is no proof that the sage grouse will move onto these miles and miles of destroyed trees, which do not in any way resemble sage grouse habitat. In the meantime, the habitat of all the native species who used to live there – the coyotes, the deer, the elk, the rabbits, the beavers, foxes, cougars, bobcats, and the many small mammal and avian species -- has been eradicated.

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Comment Number: 0002436-5

Commenter I: Sharon St Joan

Other Sections: 8.4

Comment Excerpt Text:

these public lands being considered for new coal expansion are right on a wildlife corridor that runs up through the Grand Canyon, through the Kaibab forest, through Kane County, Utah, and farther north on up to Canada. This is a key wildlife corridor for the annual mule deer migration, along with the animals that travel with them – including cougars and coyotes.

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Comment Number: 0002449\_Lyon\_20160727\_NWF-1

Organization I: National Wildlife Federation Action Fund

Commenter I: Jim Lyon

Other Sections: 1

Comment Excerpt Text:

Coal mining also harms wildlife by polluting nearby water and air. Mining equipment emits sulfur dioxide, nitrous

oxide, and toxic trace metals such as lead in areas that oftentimes would otherwise be relatively free of these pollutants. In areas near access roads and other locations with heavy traffic, “increased levels of lead in vegetation and wildlife have been observed.” (15) Over time, increased exposure of wildlife to trace elements through dust from various mining activities can cause animals to “suffer from disorders of the mucous membranes and pulmonary complication.” (16) Surface water contamination from increased sediment loads and the leaching of toxic elements from exposed ores and rocks can cause decreases in aquatic oxygen content and light penetration, reducing the growth of aquatic plants and resulting in fish mortality as well as habitat degradation and destruction in streams. (17)

(15) U.S. Forest Service General Technical Report INT-126, “Wildlife: User guide for mining and reclamation,” (July, 1982), available at <http://babel.hathitrust.org/cgi/pt?id=umn.31951d03009787s>.

(16) Id.

(17) Id.

Comment Number: 0002449\_Lyon\_20160727\_NWF-10

Organization I: National Wildlife Federation Action Fund

Commenter I: Jim Lyon

Other Sections: 1

Comment Excerpt Text:

The study finds that both mule deer and pronghorn antelope in the Powder River Basin have “shown declines in population size or productivity or both in the past 32 years.” (89) For example, of eight mule deer herds examined, only one was found to be in good condition, three in fair condition, and half in poor condition. The report concludes that “[mule deer] populations are especially vulnerable to additional habitat loss or degradation.” (90) Similarly, of twelve pronghorn herds examined, none received a good rating. The rest were either fair or poor and one could not be rated for lack of data. (91) At-risk herds were again determined to be “especially vulnerable to loss of habitat.” (92)

(89) Id. at 4.

(90) Id.

(91) Id. at 6.

(92) Id.

Comment Number: 0002449\_Lyon\_20160727\_NWF-12

Organization I: National Wildlife Federation Action Fund

Commenter I: Jim Lyon

Other Sections: 6 1

Comment Excerpt Text:

Likewise, in western Montana and the northwestern United States, “warmer and drier conditions have helped increase the number and extent of wildfires .... Higher temperatures and drought stress [] contribut[e] to outbreaks of mountain pine beetles that are increasing pine mortality.” (119) Climate change also threatens western fisheries by “increas[ing] disease and/or mortality in several iconic salmon species,” (120) as well as “lead[ing] to increasing fragmentation of remaining habitats and accelerated decline” of Montana’s native Bull trout. (121) To reduce other stressors, fishing restrictions during periods of high water temperatures are being put in place for trout fisheries like the Bitterroot, Blackfoot, and Clark Fork Rivers due to warm water conditions. The average number of days each year that are thermally stressful for trout has nearly tripled in Montana’s Madison River since the 1980s. (122) Closures of these popular fishing locations during summer vacations can have major economic implications. The fishing opportunities in Yellowstone National Park, where there have also been closures, are valued at between \$67.5 and \$385 million annually. (123)

(119) U.S. National Climate Assessment, *supra*, at 495.

(120) Id. at 491.

(121) Bruce E. Reiman et al., *Anticipated Climate Warming Effects on Bull Trout Habitats and Populations Across*

the Interior Columbia River Basin, 136 TRANSACTIONS AM. FISHERIES SOC'Y 1552 , 1552 (2007).  
 (122) NWF, Wildlife in Hot Water, at 8.  
 (123) Id.

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Comment Number: 0002449\_Lyon\_20160727\_NWF-28

Organization I: National Wildlife Federation Action Fund

Commenter I: Jim Lyon

Other Sections: I

Comment Excerpt Text:

It is of utmost importance that this PEIS provide the basis to reform the coal leasing program in a manner that protects wildlife from the vast impacts of federal coal mining and use. Wildlife are too often the first to be impacted by poor land management actions, unbridled energy development, and an increasingly warming world that threatens species extinction and decline. It is essential that the federal coal program be in sync with where this country is going toward building a clean energy future that is oriented to sustainable land and water conservation, and managed for the public's long term interest. It is also important that the federal coal program be updated to reflect the realities of the modern coal industry: an industry that is in a state of extreme instability and long-term decline, and one that has a standing legacy of failure to achieve basic promised and required environmental, wildlife and land use outcomes.

Wildlife is affected by coal mining in many ways. Mining and related activities cause direct wildlife mortalities and disturb and displace wildlife. Reptiles, amphibians and small mammals are generally not mobile enough to avoid mining equipment and are often directly killed during mining. Birds die when they collide with electrical transmission lines and other mine support structures. Fish and other aquatic wildlife are killed when streams are re-routed, and from construction and mining activities that occur near stream channels. (12)

(12) U.S. Forest Service General Technical Report INT-126, "Wildlife: User guide for mining and reclamation," (July 1982), available at <http://babel.hathitrust.org/cgi/pt?id=umn.31951d03009787s>.

Coal mining also fragments habitat and causes extreme disturbances that displace larger, more mobile wildlife. Displaced wildlife are placed at risk because, among other impacts like road crossings, they must move to locations already occupied by other wildlife and will experience greater competition for resources they need to survive.

Wildlife in habitat near mines like pronghorn and raptors are often forced to move given the intense noise and destructive activity associated with mining. For example, it has been shown that energy development taking place within 3 kilometers (1.86 miles) or less of greater sage grouse leks – areas where male sage grouse perform in front of females as part of the birds' mating ritual – can cause an increase in the distance females travel to nesting sites and result in lower rates of nest initiation. (13, 14)

(13) A.G. Lyon and S.H. Anderson, "Potential gas development impacts on sage grouse nest initiation and movement," *Wildlife Society Bulletin* 31(2)486-491 (2003), available at <http://www.jstor.org/stable/3784329>.

(14) U.S. Department of Interior, Bureau of Land Management Instruction Memorandum No. 2014-100, "Gunnison Sage-grouse Habitat Management Policy on Bureau of Land Management-Administered Lands in Colorado and Utah," (May 30, 2014), available at [http://www.blm.gov/wo/st/en/info/regulations/Instruction\\_Memos\\_and\\_Bulletins/national\\_instruction/2014/IM\\_2014-100.html](http://www.blm.gov/wo/st/en/info/regulations/Instruction_Memos_and_Bulletins/national_instruction/2014/IM_2014-100.html).

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Comment Number: 0002449\_Lyon\_20160727\_NWF-37

Organization I: National Wildlife Federation Action Fund

Commenter I: Jim Lyon

Other Sections: I

Comment Excerpt Text:

Despite federal laws passed in the 1970s that stopped some of the worst practices and put in place protections,

coal mining on federal lands – and the resulting combustion of that coal – continues to result in long-term damage to the soil, water, air, climate and wildlife. The major direct impacts of surface mining – the primary method used to extract most federally leased coal, particularly in the arid west –are massive disturbances of large areas of land and disruption of surface and groundwater patterns. Other significant impacts include emissions of fugitive dust and other air pollutants, carbon pollution emissions, disposal of overburden/waste rock, and water pollution. The disturbances have both immediate and long term impacts on people and wildlife populations.

Impacts on Land Resources (82)

(82) Much of this description of environmental impacts is taken from Mark Squillace, THE STRIP MINING HANDBOOK at Ch. 2 and Ch. 4 (Common Problems), available at <https://sites.google.com/site/stripmininghandbook/>. For a review of the environmental impacts of coal development, from mine to power plant, see Clean Air Task Force, CRADLE TO GRAVE: THE ENVIRONMENTAL IMPACTS FROM COAL (June 2001), available at [http://www.catf.us/resources/publications/files/Cradle\\_to\\_Grave.pdf](http://www.catf.us/resources/publications/files/Cradle_to_Grave.pdf).

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Comment Number: 0002449\_Lyon\_20160727\_NWF-38

Organization I: National Wildlife Federation Action Fund

Commenter I: Jim Lyon

Other Sections: I

Comment Excerpt Text:

A recent study detailing population trends of big game and greater sage-grouse in Southeast Montana and Northeast Wyoming, which is the heart of federal coal leasing, found big game not faring well. (85) Studying trends starting in the 1980s and continuing through 2012 and 2013, the report demonstrates the vulnerability of mule deer, pronghorn antelope, and sage-grouse populations in the area to events like habitat fragmentation and climate change that are being exacerbated by federal coal mining. (86) The report specifically cites “human development” as causing “additional impacts” on the species in this area. (87) The impacts the study examines include coal mining and habitat conversion. (88)

(85) John Ellenberger and A. Eugene Byrne, Population Status and Trends of Big Game and Greater Sage-Grouse in Southeast Montana and Northeast Wyoming (Jan. 2015) at 3 (attached hereto).

(86) Id. at 3

(87) Id.

(88) Id.

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Comment Number: 0002449\_Lyon\_20160727\_NWF-7

Organization I: National Wildlife Federation Action Fund

Commenter I: Jim Lyon

Other Sections: I5

Comment Excerpt Text:

Surface coal mining severely alters the landscape, disrupting virtually all ecological and aesthetic elements of the landscape and reducing the value of the natural environment in the mined area and surrounding land. Strip mining destroys the genetic soil profile, eliminates existing vegetation, displaces or destroys wildlife and habitat, and to some extent permanently changes the general topography of the area mined. This often results in a scarred landscape with no scenic value. Soil disturbance results in conditions conducive to erosion. Soil removal from the area to be mined alters or destroys many natural soil characteristics and reduces its biodiversity and productivity for revegetation and agriculture. Paleontological, archeological, cultural, and other historic features and values may be endangered due to the disruptive activities of mining coal.

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Comment Number: 0002449\_Lyon\_20160727\_NWF-9

Organization I: National Wildlife Federation Action Fund

Commenter I: Jim Lyon

Comment Excerpt Text:

Surface mining of coal causes direct and indirect damage to wildlife. The impact on wildlife stems primarily from disturbing, removing, and redistributing the land surface. Some impacts are short-term, and confined to the mine site; others have far-reaching, long-term effects. The most direct effect on wildlife is destruction or displacement of species in areas of excavation and spoil piling. Pit and spoil areas are not capable of providing food and habitat for most species of wildlife. Mobile wildlife species like game animals, birds, and predators leave these areas. More sedentary animals like invertebrates, reptiles, burrowing rodents, and small mammals may be destroyed. The community of microorganisms and nutrient-cycling processes are upset by movement, storage, and redistribution of soil.

Degradation of aquatic habitats is a major impact by surface mining, and may be apparent many miles from a mining site. Sediment contamination of surface water is common with surface mining. Sediment yields may increase to a thousand times their former level as a result of strip mining. The heaviest sediment pollution of a drainage normally comes within 5 to 25 years after mining. In some areas, unreclaimed spoil piles continue to erode even 50 to 65 years after mining.

The effects of sediment on aquatic wildlife vary with the species and the amount of contamination. High sediment levels can kill fish directly, bury spawning beds, reduce light transmission, alter temperature gradients, fill in pools, spread stream flows over wider, shallower areas, and reduce production of aquatic organisms used as food by other species. These changes destroy the habitat of valued species, and may enhance habitat for less-desirable species.

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Comment Number: 0002454\_Hoeft\_20160727-1

Organization I: Tahoma Audubon

Commenter I: Bruce Hoeft

Other Sections: I

Comment Excerpt Text:

In 2014, after seven years of compiling research, the National Audubon Society published a report (<http://climate.audubon.org/>), which warns that 314 North American bird species could lose more than half their current ranges by 2080, due to rising temperatures. We now have a field guide of future North American bird population locations and sizes. A third of the birds are missing. Though there are many variables to consider, the lead cause is habitat loss due to climate change.

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Comment Number: 0002454\_Hoeft\_20160727-2

Organization I: Tahoma Audubon

Commenter I: Bruce Hoeft

Other Sections: I

Comment Excerpt Text:

NABCI (North American Bird Conservation Initiative) created by the governments of Canada, the US, and Mexico in 1999, published a different study in mid-May, entitled "The State of North America's Birds" ([http://www.stateofthebirds.org/2016/wp-content/uploads/2016/05/SotB\\_16-04-26-ENGLISH-BEST.pdf](http://www.stateofthebirds.org/2016/wp-content/uploads/2016/05/SotB_16-04-26-ENGLISH-BEST.pdf)). The work concluded that of the 1154 species found in the three countries, 432 (one third) are in danger of extinction. NABCI's work focused on the North American Breeding Bird Survey (BBS) and eBird submissions, and sought to identify annual trends among all bird populations in North America.

The two studies, performed by different groups of scientists, using different methodologies and different data sets, came out with the same quantitative conclusions. Species in arid, grassland, and coastal habitats showed the greatest decline, especially those with small populations or ranges. The NABCI study identifies that "climate change, pollution, habitat loss, and predation are risks to these vulnerable populations."

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Comment Number: 0002459\_Ball\_20160728-4

Organization I:

Commenter I: Connie Ball

Comment Excerpt Text:

Transport of coal kills much wildlife including deer and birds of prey as they feed on deer kill.

Subsurface mining requires venting methane gas to the environment, and when it is flared it may also kill birds of prey who perch on vent pipes.

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Comment Number: 0002467\_Fettus\_20160728-19

Organization I: Natural Resources Defense Council

Commenter I: Geoffrey Fettus

Other Sections: I

Comment Excerpt Text:

Habitat and Wildlife Impacts

Coal mining – and particularly mining in the context of inadequate reclamation – also can have severe adverse impacts on habitats, wildlife, and ecosystems. The PEIS must provide a cumulative impacts analysis of these issues, and also provide guidance on how they should be addressed further in site-specific reviews.

For instance, the PEIS should disclose wildlife population trends in coal mining regions and generally discuss impacts to population and habitat as a result of coal leasing and mining activity.

Among the mining activities that impact wildlife and plant species, and must be examined in the PEIS, are: (a) exhaust from heavy equipment and transport vehicles, which contain sulfur dioxide, nitrous oxide, and lead; and (b) exposure of ores and rocks, which causes surface water contamination from increased sediment loads and the leaching of toxic elements, leading to decreases in aquatic oxygen content and light penetration, reductions in growth of aquatic plants, and consequent mortality of fish and other aquatic species dependent on those plants. Undermined Promise II at 25. As explained in Undermined Promise II (at 24):

Wildlife is affected by coal mining in a variety of ways. Construction and mining activities cause direct wildlife mortalities in addition to the disturbance and displacement of wildlife populations. Direct mortalities from mining activities occur primarily as the result of interactions between wildlife species and mining equipment, increased traffic and other development. Reptiles, amphibians and small mammals are generally not mobile enough to avoid mining equipment. Mortalities of birds are caused by collisions with electrical transmission lines and other mine support structures while fish mortalities result from the rerouting of streams or the activity from heavy construction near stream channels.

Because mined areas are also susceptible to non-native plants and weeds, the PEIS should also examine these habitat impacts. Id. at 28.

The PEIS must also address brush lands protection. Brush lands are very difficult to reestablish, and very little acreage of brush lands has been reclaimed at western coal mines. Schuman, Richmond, and Neuman, Sagebrush Establishment on Mined Lands: Ecology and Research, 2000. (26) Lack of brush land reclamation has adverse impacts to brush-dependent wildlife species, including the Greater Sage-grouse and mule deer, and an overall reduction in sagebrush results in a long term reduction of habitat for some species.

(26) This paper was a compilation of proceedings at a workshop held by OSMRE in 2000. The paper is available at: <http://www.osmre.gov/resources/library/proceedings/Sagebrush.pdf>

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Comment Number: 0002467\_Fettus\_20160728-56

Organization I: Natural Resources Defense Council

Commenter I: Geoffrey Fettus

Comment Excerpt Text:

Federal coal leasing imposes significant adverse impacts on water and air resources, habitats and wildlife in the immediate regions where coal is mined. Climate change will further exacerbate many of these threats in decades to come. BLM's existing regulatory scheme fails to insure that operators fulfill the reclamation obligations necessary to ameliorate these impacts. To address these issues, BLM must perform a detailed NEPA analysis that considers several alternatives to improve decision-making concerning where mining occurs, and to improve the reclamation process.

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Comment Number: 0002467\_Fettus\_20160728-7

Organization I: Natural Resources Defense Council

Commenter I: Geoffrey Fettus

Comment Excerpt Text:

Impacts to Wildlife : The grasslands and forests of the Western U.S. are home to abundant wildlife, including big game, songbirds, raptors, and the iconic greater sage-grouse. Coal mining, especially strip mining, disrupts this important wildlife habitat. The PEIS must fully assess impacts to all wildlife species.

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Comment Number: 0002471\_Reed\_20160728-9

Organization I: High Country Conservation Advocates

Commenter I: Matt Reed

Other Sections: 6

Comment Excerpt Text:

In the western United States, higher temperatures and lower precipitation are expected to lead to drought conditions that will exacerbate forest stressors, especially fire and insect disturbance. The majority of land in Gunnison County is managed by the U.S. Forest Service as part of the Gunnison National Forest, which is administered jointly with the Grand Mesa and Uncompahgre National Forests. Over the course of only a decade on the Grand Mesa, Uncompahgre and Gunnison (GMUG) National Forests, approximately 223,000 acres of spruce forest have been affected by spruce beetle and 229,000 acres of aspen by Sudden Aspen Decline (SAD).<sup>13</sup> These disturbances are occurring because of and in the context of a changing climate. Higher summer temperatures can foster spruce beetle outbreaks by allowing beetles to reproduce every year rather than every two years. Anticipated more frequent drought conditions make stands more vulnerable to insect and disease. And wildfire behavior in recently dead spruce-fir and areas with heavy fuel loadings can create more unpredictable fire behavior that is more hazardous to manage.<sup>14</sup>

(13) Supra note 7, at 2.

(14) Id. at 6.

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Comment Number: 0002477\_Saul\_20160728\_CBD\_UPHE-29

Organization I: Center for Biological Diversity

Commenter I: Michael Saul

Organization 2: Utah Physicians for a Healthy Environment

Other Sections: 2

Comment Excerpt Text:

Furthermore, 43 C.F.R. § 3461.4 allows for exploration on lands that have been deemed unsuitable under the current criteria. This is illogical and dangerous.<sup>246</sup> Not only does this allow exploration activities that have the potential to cause harm to the environment and local habitats on lands already deemed unsuitable (potentially because of the presence of features or species that make the area sensitive to such activities), but this provision

can only be meant to allow mining companies the opportunity to find economic reserves in order to exert pressure on BLM to release lands already deemed unacceptable by finding some exemption. Encouraging the development of lands that have already been deemed unsuitable for mining is inconsistent with the best interests of the public and can only lead to unnecessary environmental harm.

(246) For example, the regulations state that all areas within 300 feet of any public building, school, church, community or institutional building or public park or within 300 feet of an occupied dwelling are unsuitable, yet this provision would allow exploration in these sensitive areas regardless.

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Comment Number: 0002477\_Saul\_20160728\_CBD\_UPHE-31

Organization I: Center for Biological Diversity

Commenter I: Michael Saul

Other Sections: 2 8.10 I

Comment Excerpt Text:

To date, restoration and mitigation efforts have largely failed when it comes to protecting water quality and species. For this reason, we ask BLM to focus on protection of essential habitat areas and waterways first, and to rely on mitigation only in certain limited situations – i.e., when ESA-listed or proposed species or designated critical habitats are not present downstream or in the mine site area, and it can be shown with sufficient evidence that the functions and values of the impacted streams and native ecosystems can be fully restored.

Numerous studies document the failure of restoration to protect water quality, species, and local communities from the impacts of coal mining. These studies are too numerous for us to list in total so we provide relevant excerpts of scientific conclusions:

-“Overall, the data show that mitigation efforts being implemented in southern Appalachia for coal mining are not meeting the objectives of the Clean Water Act to replace lost or degraded streams ecosystems and their functions”<sup>269</sup>

-“Mitigation actions being undertaken are primarily geomorphic projects to enhance perennial streams yet the majority of streams impacted are intermittent and fewer linear feet of stream have been restored than impacted. Compliance is primarily based on visual habitat assessments performed by the mining company or their consultants which typically report marginal or suboptimal habitat status post restoration. Projects were not required to meet specified biological or water quality standards yet for the projects that reported such data, most were impaired.”<sup>270</sup>

-“The disturbance caused by MTR/VF is drastically changing the central Appalachian landscape, compromising the natural ecological and functional state of both terrestrial and aquatic environments. The reclamation process, emphasizing soil compaction and the establishment of non-native herbaceous species, has hindered the establishment of native tree species on MTR sites (Zipper et al., 2011). These terrestrial impacts in combination with changes in water chemistry and stream geomorphology lead to long-lasting changes to terrestrial and aquatic ecosystem function (Simmons et al., 2008). Full recovery of species diversity in streams impacted by MTR/VF has not been documented”<sup>271</sup>

-“Indeed, the MTR/VF streams had, on average, 75% less forest cover than control streams”<sup>272</sup>

-“Reclaimed mine sites have soils containing unweathered rock that is heavily compacted to reduce erosion, resulting in altered water tables and disturbed flow paths (Bonta et al., 1992; Bernhardt and Palmer, 2011). In particular, compacted soils lead to high rates of storm water runoff. Negley and Eshleman (2006) and Ferrari et al. (2009) found that MTR/VF streams had tripled storm runoff and doubled flow rates compared to reference catchments.”



-“The extent to which these constructed channels provide important ecosystem services lost by burial of natural headwater streams as a result of mining is not well known. Fritz et al. (2010) reported significantly lower rates of litter breakdown and higher levels of iron, manganese, sulfate, and conductivity in constructed channels draining VF watersheds than in natural channels draining forested watersheds. Petty et al. (2013) observed lower organic matter (OM) decomposition rates and higher levels of conductivity, dissolved solids, and dissolved organic carbon (DOC) in West Virginia MTR/ VF constructed channels than in nearby reference channels. Based on their database containing descriptions of 38,000 stream and river restoration projects, Bernhardt and Palmer (2011) stated that they did not know of a single case where a constructed channel recreated the hydrology or ecological functions of natural streams.”<sup>273</sup>

As these examples illustrate, mitigation of coal mining activities has failed to reclaim the functions and values of impacted waterways. In particular, it has failed in Appalachia to restore water quality and fish, wildlife, and other species. Moreover, as discussed above coal mining has been one of several threats that has led to the need to protect species under the ESA, indicating that mitigation efforts have not been successful in protecting species, and should not be relied on by BLM to protect the environment.

Therefore, in light of the record before it, it is critical that BLM ensure that waterways affected by proposed mines with ramifications for species listed or proposed for listing under the ESA and their critical habitat are protected, rather than rely on mitigation plans to justify destruction of these important habitat areas, since restoration plans may not adequately address impacts to imperiled species and their habitat.<sup>274</sup>

(269) Palmer, M. A., & Hondula, K. L. (2014). Restoration as mitigation: analysis of stream mitigation for coal mining impacts in southern Appalachia. *Environmental science & technology*, 48(18), 10552-10560.

(270) Id.

(271) Brenee’L, M., Price, S. J., Bonner, S. J., & Barton, C. D. (2014). Mountaintop removal mining reduces stream salamander occupancy and richness in southeastern Kentucky (USA). *Biological Conservation*, 180, 115-121.

(272) Id.

(273) Burke, R. A., Fritz, K. M., Barton, C. D., Johnson, B. R., Fulton, S., Hardy, D., ... & Jack, J. D. (2014). Impacts of mountaintop removal and valley fill coal mining on C and N processing in terrestrial soils and headwater streams. *Water, Air, & Soil Pollution*, 225(8), 1-17.

(274) According to the DOI Energy and Climate Change Task Force, avoidance should be the first goal: “If a project can reasonably be sited so as to have no negative impacts to resources of concern then that is generally the most defensible approach. By avoiding adverse impacts in the first place, there is no need to take further action to minimize or offset such impact.” See *A Strategy for Improving the Mitigation Policies and Practices of The Department of the Interior* at 2 (April, 2014).

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Comment Number: 0002477\_Saul\_20160728\_CBD\_UPHE-33

Organization I: Center for Biological Diversity

Commenter I: Michael Saul

Other Sections: I

Comment Excerpt Text:

BLM Must Undertake ESA Consultation on the Coal Program

Congress enacted the ESA in 1973 to provide for the conservation of endangered and threatened fish, wildlife, plants and their natural habitats.<sup>280</sup> The ESA imposes and procedural obligations on all federal agencies with regard to listed and proposed species and their critical habitats.<sup>281</sup>

Under section 7 of the ESA, federal agencies must “insure that any action authorized, funded, or carried out by such agency ... is not likely to jeopardize the continued existence of any endangered species or threatened species or result in the destruction or adverse modification of habitat of such species which is determined ... to be

critical.”<sup>282</sup>

The definition of agency “action” is broad and includes “all activities or programs of any kind authorized, funded, or carried out, in whole or in part, by Federal agencies,” including programmatic actions, such as the BLM action at issue here.<sup>283</sup>

The duties in ESA section 7 are only fulfilled by an agency’s satisfaction of the consultation requirements that are set forth in the implementing regulations for section 7 of the ESA, and only after the agency lawfully complies with these requirements may an action that “may affect” a protected species go forward.<sup>284</sup> Here, BLM is considering broad changes to the Federal coal program, which “includes land use planning, processing applications (e.g., for exploration licenses and lease sales), estimating the value of proposed leases, holding lease sales, and post-leasing actions....”<sup>285</sup> According to BLM’s Notice, “[t]he Federal coal program has other potential impacts on public health and the environment, beyond climate impacts, that will also be assessed in the Programmatic EIS. These include the effects of coal production on . . . wildlife, including endangered species. . . .”<sup>286</sup> Based on this admission, it is clear that BLM must undertake programmatic consultation in order to fulfill its duties pursuant to Section 7 of the ESA.

However, while formal programmatic consultation is required on BLM’s coal program, it would be improper and unlawful for any incidental take statement to be issued as part of the biological opinion.<sup>287</sup> Numerous different ESA-protected species and their designated critical habitats are likely to be adversely affected. It remains unclear whether sufficient protections will be implemented to ensure that listed species are not jeopardized by cumulative impacts.

Moreover, there is no feasible way that the Services can predict, let alone quantify, the amount of incidental take of currently-listed species that will result from coal mining throughout the country under BLM’s program in the years to come. Further, the biological opinion cannot possibly analyze or quantify incidental take for future-listed species that will be adversely affected by coal mining. Rather, incidental take can only occur, and can only be analyzed an appropriately permitted, at the site-specific and species-specific level. Therefore, consistent with the Services’ revised regulations defining “framework programmatic action,” the programmatic consultation on BLM’s revised coal program should acknowledge that it is a framework programmatic consultation under which any incidental take will be subsequently authorized under a permit-specific Section 7 or Section 10 process.<sup>288</sup>

(280) *Id.* §§ 1531, 1532.

(281) See *id.* §§ 1536(a)(1), (a)(2) and (a)(4) and § 1538(a); 50 C.F.R. § 402.

(282) 16 U.S.C. § 1536(a)(2).

(283) 50 C.F.R. § 402.02. Likewise, the “action area” includes “all areas to be affected directly or indirectly by the Federal action and not merely the immediate area involved in the action.” *Id.*

(284) *Pac. Rivers Council v. Thomas*, 30 F.3d 1050, 1055-57 (9th Cir. 1994).

(285) 81 Fed. Reg. at 17722.

(286) *Id.* at 17726.

(287) It is well-settled that programmatic biological opinions do not require an incidental take statement where those opinions explicitly mandate future site-specific consultations for take authorizations. See *Gifford Pinchot Task Force v. USFWS*, 378 F.3d 1059, 1067–68 (9th Cir.) *am. by* 387 F.3d 968 (9th Cir. 2004); *Forest Serv. Employees for Env’tl. Ethics*, 726 F. Supp. 2d at 1224–1225; *W. Watersheds Project v. BLM*, 552 F. Supp. 2d 1113, 1139 (D.

*Nev.* 2008); *Swan View Coal, Inc. v. Turner*, 824 F. Supp. 923, 934–35 (D. Mont. 1992). Here, should the Services issue a no-jeopardy opinion on OSMRE’s regulations, it should not be accompanied by an incidental take statement because all incidental take (including any resulting from OSMRE-issued SMCRA permits) should only be authorized, if at all, via a Section 10 permit or Section 7 consultation.

(288) See 80 Fed. Reg. 26,832 (May 11, 2015) (adding definition of “framework programmatic action” to 50 C.F.R. §

402.02 and adding 50 C.F.R. § 402.14(i)(1)(6) on incidental take statements not being required at the programmatic level where subsequent actions resulting in incidental take will be separately consulted on).

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Comment Number: 0002477\_Saul\_20160728\_CBD\_UPHE-34

Organization I:Center for Biological Diversity

Commenter I:Michael Saul

Comment Excerpt Text:

Moreover, any to defer analysis of the potential impacts to listed species to a later decision would violate BLM's regulations regarding special status species as set forth in BLM Manual 6840 - Special Status Species Management. Pursuant to Manual 6840, it is the responsibility of State Directors to not only inventory BLM lands to determine the occurrence of BLM special status species, but also to determine "the condition of the populations and their habitats, and how discretionary BLM actions affect those species and their habitats."<sup>290</sup> The leasing of federal lands for coal extraction is a discretionary BLM action that has the potential to adversely affect listed species. Deferring an analysis of the potential effects of selling coal leases to the \_\_\_ stage is entirely inconsistent with the requirements of Manual 6840. If a lease is sold, the lessee acquires certain contractual rights constraining BLM authority. For example, according to 43 C.F.R. § 3101.1-2, once a lease is issued to its owner, that owner has the "right to use as much of the lease lands as is necessary to explore for, drill for, mine, extract, remove and dispose of the leased resource in the leasehold" subject to specific nondiscretionary statutes and lease stipulations. Therefore, once the lease is sold, it will be too late for BLM to ensure that sufficient protections will be in place to protect this species from the cumulative impacts of extraction-related activities.

The development of species-specific and ecosystem-based conservation strategies implicitly necessitates a more holistic review of the cumulative impacts of the proposed lease sale, which cannot be accomplished through site-specific analysis alone. And, piecemeal analyses of individual lease sales do not provide the appropriate perspective for examining the cumulative effects of hydraulic fracturing and climate change impacts at the regional and landscape scale and for making land management decisions.

Where activities have the potential to adversely impact listed species, those impacts must be addressed "at the earliest possible time," in order to avoid delay, ensure that impacts are avoided and opportunities for mitigation are not overlooked.<sup>291</sup> Furthermore, under the ESA an analysis of the effects of an action must consider actions that are interrelated or interdependent.<sup>292</sup> This suggests that BLM should consider the effects of coal mining, transport, combustion and disposal activities at the lease sale stage, since those actions are inherent in leasing land for such purposes. It is therefore evident that in order to effectuate the policy of protecting Bureau sensitive species set forth in Manual 6840,<sup>293</sup> and consistent with the established practice of early, comprehensive review of potential impacts to sensitive species, BLM must consider impacts to listed species at the lease sale, rather than waiting until the APD stage for project specific review.

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Comment Number: 0002477\_Saul\_20160728\_CBD\_UPHE-35

Organization I:Center for Biological Diversity

Commenter I:Michael Saul

Comment Excerpt Text:

In reviewing the federal coal leasing program, the Bureau of Land Management must consider the impacts, including climate impacts, on threatened and endangered species. Specifically, the Bureau must consult with the Fish and Wildlife Service and National Marine Fisheries Service as required by section 7 of the Endangered Species Act.

Comment Number: 0002477\_Saul\_20160728\_CBD\_UPHE-45

Organization I: Center for Biological Diversity

Commenter I: Michael Saul

Other Sections: I 6

Comment Excerpt Text:

Impacts to Biodiversity and Ecosystems: Across the United States ecosystems and biodiversity, including those on public lands, are directly under siege from climate change—leading to the loss of iconic species and landscapes, negative effects on food chains, disrupted migrations, and the degradation of whole ecosystems.<sup>31</sup> Specifically, scientific evidence shows that climate change is already causing changes in distribution, phenology, physiology, genetics, species interactions, ecosystem services, demographic rates, and population viability: many animals and plants are moving poleward and upward in elevation, shifting their timing of breeding and migration, and experiencing population declines and extirpations.<sup>32</sup> Because climate change is occurring at an unprecedented pace with multiple synergistic impacts, climate change is predicted to result in catastrophic species losses during this century. For example, the IPCC concluded that 20% to 30% of plant and animal species will face an increased risk of extinction if global average temperature rise exceeds 1.5°C to 2.5°C relative to 1980-1999, with an increased risk of extinction for up to 70% of species worldwide if global average temperature exceeds 3.5°C relative to 1980-1999.<sup>33</sup>

As greenhouse gas emissions and the resulting harms from climate change grow, the Fish and Wildlife Service and National Marine Fisheries Service are increasingly recognizing climate change as a significant threat to listed species. The Services determined that climate change is a threat (and a listing factor) in the listing rules for the vast majority of species listed as threatened and endangered in recent years. Our analysis of listing rules found that climate change was determined to be a threat for 96% and 91% of all species listed in 2012 and 2013, respectively.

In recent years, several species have been listed primarily because of climate change threats resulting from continued greenhouse gas emissions, including the polar bear in 2008, the bearded seal and ringed seal in 2012, and 20 coral species in 2014. The best-available science has concluded that the survival and recovery of these climate-vulnerable species depends on a return to lower atmospheric CO<sub>2</sub> concentrations than the present level of 400 ppm. As such, the massive greenhouse gas emissions stemming from the federal coal program are clearly not consistent with the survival and recovery of these species.

from the permafrost carbon feedback, 5 *Nature Geoscience* 719-721 (2012), doi:10.1038/ngeo1573.

(30) See National Climate Assessment at 592; Foti, R., Met al., Signs of critical transition in the Everglades wetlands

in response to climate and anthropogenic changes, 110 *Proceedings of the National Academy of Sciences* 6296-6300, (2013), doi:10.1073/pnas.1302558110.

(31) National Climate Assessment at 13.

(32) See Parmesan, C. and G. Yohe, A globally coherent fingerprint of climate change impacts across natural systems, 421 *Nature* 37 (2003); Root, T. et al., Fingerprints of global warming on wild animals and plants, 421 *Nature* 57 (2003); Chen, I. et al., Rapid range shifts of species associated with high levels of climate warming, 333 *Science* 1024 (2011).

(33) IPCC, *Climate Change 2007: Synthesis Report. Contribution of Working Groups I, II and III to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change* 48 [Core Writing Team, Pachauri, R.K and Reisinger, A.(eds.)] (2007). Other studies have predicted similarly severe losses: 15%-37% of the world's plants and animals committed to extinction by 2050 under a mid-level emissions scenario, see Thomas et al., Extinction risk from climate change, 427 *Nature* 145 (2004)); the potential extinction of 10% to 14% of species by 2100 if climate change continues unabated, see Maclean, I. M. D. and R. J. Wilson, Recent ecological responses to climate change support predictions of high extinction risk, 108 *Proc. Natl. Acad. Sci.* 12337-12342 (2011); and the loss of more than half of the present climatic range for 58% of plants and 35% of animals by the 2080s under the

current emissions pathway, in a sample of 48,786 species, see Warren, R. J. et al., Increasing Impacts of Climate Change Upon Ecosystems with Increasing Global Mean Temperature Rise, 106 *Climatic Change* 141 (2011).

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Comment Number: 0002477\_Saul\_20160728\_CBD\_UPHE-46

Organization I: Center for Biological Diversity

Commenter I: Michael Saul

Other Sections: I 6

Comment Excerpt Text:

Corals: For example, NMFS' 2015 Final Recovery Plan for Elkhorn and Staghorn Coral includes a recovery criterion with specific targets for ocean temperature and ocean acidification conditions that must be achieved for these corals to survive and recover. As noted in the Final Recovery Plan, meeting this criterion is consistent with a return to an atmospheric CO<sub>2</sub> concentration of less than 350 ppm, as concluded by numerous scientific studies that have examined coral species viability in response to ocean warming and ocean acidification. Recognizing the responsibility of all federal agencies to promote listed species' conservation, the Final Recovery Plan further includes a recovery criterion calling for the adoption of "adequate domestic and international regulations and agreements" to abate threats from increasing atmospheric CO<sub>2</sub> concentrations. The plan also includes a recovery action to "develop and implement U.S. and international measures to reduce atmospheric CO<sub>2</sub> concentrations to a level appropriate for coral recovery."

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Comment Number: 0002477\_Saul\_20160728\_CBD\_UPHE-47

Organization I: Center for Biological Diversity

Commenter I: Michael Saul

Other Sections: I 6

Comment Excerpt Text:

Polar Bears: Similarly, the 2015 Draft Polar Bear Conservation Plan acknowledges that the polar bear cannot be recovered without decisive action to mitigate the primary threat to the species—greenhouse gas ("GHG") emissions driving sea-ice loss:

The single most important step for polar bear conservation is decisive action to address global warming (Amstrup et al. 2010, Atwood et al. 2015), which is driven primarily by increasing atmospheric concentrations of greenhouse gases. Short of actions that effectively addresses the primary cause of diminishing sea ice, it is unlikely that polar bears will be recovered.

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Comment Number: 0002477\_Saul\_20160728\_CBD\_UPHE-48

Organization I: Center for Biological Diversity

Commenter I: Michael Saul

Organization 2: Utah Physicians for a Healthy Environment

Other Sections: I 6

Comment Excerpt Text:

Loggerhead sea turtles: Other marine species are also at risk from numerous consequences of GHG emissions and ensuing ocean temperature increase, sea level rise, disruption of ocean currents, and extreme weather events. The 2011 listing rule for the loggerhead sea turtle found climate change and sea level rise to be a significant threat to multiple distinct population segments of the loggerhead sea turtle, including the North and South Pacific populations.<sup>34</sup> The Services found that "Similar to other areas of the world, climate change and sea level rise have the potential to impact loggerheads in the North Pacific Ocean."<sup>35</sup> This includes beach erosion and loss from rising sea levels, skewed hatchling sex ratios from rising beach incubation temperatures, and abrupt disruption of ocean currents used for natural dispersal during the complex life cycle (Hawkes et al., 2009; Poloczanska et al., 2009). Scientific reviews of the impacts of climate change on sea turtles confirm that

climate change poses significant threats to the loggerhead (Fuentes et al. 2009, Hawkes et al. 2009, Witt et al. 2010). Hawkes et al. (2009) concluded that “[o]verall, climate change could supersede current documented threats posed to marine turtle populations” including bycatch, habitat destruction, and pollution (p.146). Fuentes et al. (2010) highlighted that sea turtles will be affected simultaneously by changes in multiple climatic processes which will create amplifying effects, especially in combination with other threats. Furthermore, many researchers have cautioned that sea turtles are especially vulnerable to climate change because they are slow to recover from disturbances due to their life history characteristics. The best available science on the impacts of observed and projected climate change on loggerhead sea turtles, reviewed below, clearly indicates that climate change--including sea level rise, increasing sand temperatures, increasing storm activity, rising ocean temperatures and changes in circulation pattern, and ocean acidification—is a significant threat to the survival of the species.

(34) Fish and Wildlife Service, Determination of Nine Distinct Population Segments of Loggerhead Sea Turtles and Endangered or Threatened, 76 Fed. Reg. 58,868, 58,909 (Sept. 22, 2011).

(35) Id.

Comment Number: 0002477\_Saul\_20160728\_CBD\_UPHE-49

Organization I: Center for Biological Diversity

Commenter I: Michael Saul

Other Sections: I 6

Comment Excerpt Text:

Monarch Butterfly: The Monarch butterfly, due to its narrow thermal requirements and specific microhabitat requirements, is also at exceptional risk due to climate change:36

The monarch is threatened by several other factors including global climate change, severe weather events, pesticides, and the spread of invasive species. Unfavorable weather conditions have been identified as a primary factor contributing to the recent drastic declines in monarch populations. Weather that is too hot or too cold at critical times in monarch development can cause massive mortality of caterpillars and adults. A single winter storm event in Mexican overwintering habitat in 2002 killed an estimated 450-500 million monarchs. This high death toll from a single storm event is particularly staggering given that the entire monarch population now numbers only about 35 million butterflies. Because of their narrow thermal tolerance and specific microhabitat requirements, climate change threatens monarchs in their summer and winter ranges. The threat from climate change in the monarch’s overwintering habitat in Mexico is so dire that monarchs may no longer occur in the Monarch Butterfly Biosphere Reserve by the end of the century due to climatic changes. The monarch’s summer breeding habitat in the United States is also predicted to become too hot in many areas for monarch’s to be able to successfully reproduce.37

(36) Center for Biological Diversity, PETITION TO PROTECT THE MONARCH BUTTERFLY (DANAUS PLEXIPPUS LEXIPPUS) UNDER THE ENDANGERED SPECIES ACT.

(37) Id. at 10-11.

Comment Number: 0002477\_Saul\_20160728\_CBD\_UPHE-50

Organization I: Center for Biological Diversity

Commenter I: Michael Saul

Other Sections: I 6

Comment Excerpt Text:

Colorado River listed fishes (Colorado pikeminnow, bonytail chub, humpback chub, and razorback sucker): Anthropogenic climate change is profoundly impacting the Colorado River in ways that are altering temperature, streamflow, and the hydrologic cycle. As detailed below, changes observed to date include rising temperatures, earlier snowmelt and streamflow, decreasing snowpack, and declining runoff and streamflow. Modeling studies project that these changes will only worsen, including continued declines in streamflow and intensification of drought. Climate change is likely to have significant effects on the endangered fish and the Colorado River

ecosystem.<sup>38</sup>

(38) Impacts of Climate Change on the Colorado River Basin, Shaye Wolf, Ph.D., Climate Science Director, Center for Biological Diversity (March 10, 2016).

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Comment Number: 0002477\_Saul\_20160728\_CBD\_UPHE-51

Organization I: Center for Biological Diversity

Commenter I: Michael Saul

Other Sections: I 6

Comment Excerpt Text:

Impacts from Algal Blooms: Toxic algal blooms are a public health menace and they have an obvious and distinct relationship with global warming.<sup>39</sup> Many types of algae release toxic compounds, or harbor other deadly bacteria, that can have a wide range of health consequences, especially neurotoxicity, and can even be fatal if swallowed.<sup>40</sup> The public health threat is enhanced because the toxicity of the blooms is not always proportional to their visibility.<sup>41</sup> In fact, the blooms can be dilute and inconspicuous and still highly toxic to wildlife and human health.<sup>42</sup>

(39) U.S. Environmental Protection Agency, Impacts of Climate Change on the Occurrence of Harmful Algal Blooms, EPA Office of Water 820-S-13-001 (May 2013), found at <https://www.epa.gov/sites/production/files/documents/climatehabs.pdf>.

(40) Anderson, M. Donald et al., Estimated Annual Economic Impacts from Harmful Algal Blooms (HABs) in the United States, Woods Hole Oceanographic Institution (September 2000) pg. 5-6, found at <https://www.whoi.edu/files/server.do?id=24159&pt=10&p=19132>.

(41) Id.

(42) Id.

Algae feed on nutrients like nitrogen and phosphorus whose presence in water may be the result of reckless agricultural practices, inadequate regulations, and leaky sewage systems.<sup>43</sup> But warmer temperatures ignite the process.<sup>44</sup> In fact, climate change promotes the growth and dominance of harmful algal blooms through a cascade of multiple mechanisms, including: warmer water temperatures, changes in rainfall patterns, increases in the acidity of ocean waters, and sea level rise.<sup>45</sup>

(43) U.S. Environmental Protection Agency, Nutrient Pollution Sources and Solutions, EPA Office of Water (January 2016), found at <https://www.epa.gov/nutrientpollution/sources-and-solutions>.

(44) See generally EPA, Impacts of Climate Change.

(45) See Id.

Algae need carbon dioxide to survive. Higher levels of carbon dioxide in the air and water accelerate algae growth, especially toxic blue-green algae which can float to the water's surface, depriving other marine life of oxygen and sunlight.<sup>46</sup> When global warming unleashes heavy rainfall and flooding more nitrogen/phosphorus pollution from farms and sewage seeps into waterways, serving up the nutrient banquet for the algae to thrive on.<sup>47</sup> Where global warming leads to drought, the salinity of fresh water bodies is increased.<sup>48</sup> This can cause marine algae to invade freshwater ecosystems. In the southwestern and south central United States, toxic marine algae have been killing fish in freshwater lakes since 2000.<sup>49</sup>

(46) See Id.

(47) See Id.

(48) See Id.

(49) See Anderson, Estimated Annual Economic Impacts, at 24.

Warmer temperatures inhibit mixing of water layers, allowing stagnation of warmer layers near the surface, promoting thicker and faster algae growth.<sup>50</sup> Algal blooms actually increase water surface temperatures by

absorbing more sunlight, creating a feed-back spiral of more blooms, absorbing more sunlight, warming the water further, and promoting more blooms.<sup>51</sup>

(50) See generally EPA, Impacts of Climate Change.

(51) See Id.

Warmer temperatures reduce the viscosity of water, increasing the speed at which small aquatic organisms can vertically migrate.<sup>52</sup> This makes it easier for the small, toxic, cyanobacteria to float to the surface to form the dangerous blooms.<sup>53</sup>

(52) See Id.

(53) See Id.

While algal blooms are not new, there has been a worldwide increase in their frequency, severity and geographic distribution, in concert with the rise in global temperatures.<sup>54</sup> Significant outbreaks have occurred in the last few years in Ohio, Florida, New York, and Utah. Last year, a mass of record breaking warm water triggered a bloom that extended from southern California to Alaska, damaging the entire marine food web throughout the West Coast, especially the crab industry.<sup>55</sup> The bloom was 40 miles wide and 650 ft deep in some places.<sup>56</sup> Marine scientists said last year's toxic algal bloom was "unprecedented" and "diagnostic of what we can expect more of in the future."<sup>57</sup> The EPA notes that these blooms are now a serious environmental problem plaguing all 50 states, not just those on the coasts.<sup>58</sup>

(54) See Id.

(55) Mapes, Lynda V., Toxic Algae Creating Deep Trouble on West Coast, The Seattle Times, November 15th, 2015,

<http://www.seattletimes.com/seattle-news/environment/toxic-algae-creating-deep-trouble-on-west-coast/> (last visited July 28th, 2016).

(56) See Id.

(57) See Id.

(58) See generally U.S. EPA, Nutrient Pollution Sources and Solutions.

The blooms also have a significant economic impact. In 2000, the Woods Hole Oceanographic Institution estimated that the annual economic cost to the US economy at that time was about \$450 million dollars.<sup>59</sup> That figure would be markedly increased today.

(59) See Anderson, Estimated Annual Economic Impacts at 4.

Comment Number: 0002477\_Saul\_20160728\_CBD\_UPHE-52

Organization I: Center for Biological Diversity

Commenter I: Michael Saul

Other Sections: I 6

Comment Excerpt Text:

Impacts to oceans: Oceans have absorbed the vast bulk of warming to date, and will continue to suffer increasingly severe impacts on temperature, acidity, circulation, and marine ecosystems from climate change.<sup>60</sup> A recent survey of science regarding climate change impacts to the world's oceans finds that:

Marine ecosystems are centrally important to the biology of the planet, yet a comprehensive understanding of how anthropogenic climate change is affecting them has been poorly developed. Recent studies indicate that rapidly rising greenhouse gas concentrations are driving ocean systems toward conditions not seen for millions of years, with an associated risk of fundamental and irreversible ecological transformation. The impacts of anthropogenic climate change so far include decreased ocean productivity, altered food web dynamics, reduced abundance of habitat-forming species, shifting species distributions, and a greater incidence of disease. Although there is considerable uncertainty about the spatial and temporal details, climate change is clearly and fundamentally altering ocean ecosystems. Further change will continue to create enormous challenges and costs for societies worldwide, particularly those in developing countries.<sup>61</sup>



(60) See National Climate Assessment at 558-59.

(61) Ove Hoegh-Guldberg et al., *The Impact of Climate Change on the World's Marine Ecosystems*, *Science* 328, 1523 (2010), DOI: 10.1126/science.1189930

Comment Number: 0002477\_Saul\_20160728\_CBD\_UPHE-53

Organization I: Center for Biological Diversity

Commenter I: Michael Saul

Other Sections: I 6

Comment Excerpt Text:

The IPCC's Fifth Assessment Report on Climate Change Impacts, Adaptation, and Vulnerability similarly summarizes the state of scientific research on foreseeable impacts to marine systems and reaches the following conclusions:

Due to projected climate change by the mid 21st century and beyond, global marine-species redistribution and marine-biodiversity reduction in sensitive regions will challenge the sustained provision of fisheries productivity and other ecosystem services (high confidence). Spatial shifts of marine species due to projected warming will cause high-latitude invasions and high local-extinction rates in the tropics and semi-enclosed seas (medium confidence). Species richness and fisheries catch potential are projected to increase, on average, at mid and high latitudes (high confidence) and decrease at tropical latitudes (medium confidence). . . . The progressive expansion of oxygen minimum zones and anoxic "dead zones" is projected to further constrain fish habitat. Open-ocean net primary production is projected to redistribute and, by 2100, fall globally under all RCP scenarios. Climate change adds to the threats of over-fishing and other nonclimatic stressors, thus complicating marine management regimes (high confidence).

For medium- to high-emission scenarios (RCP 4.5, 6.0, and 8.5), ocean acidification poses substantial risks to marine ecosystems, especially polar ecosystems and coral reefs, associated with impacts on the physiology, behavior, and population dynamics of individual species from phytoplankton to animals (medium to high confidence). Highly calcified mollusks, echinoderms, and reef-building corals are more sensitive than crustaceans (high confidence) and fishes (low confidence), with potentially detrimental consequences for fisheries and livelihoods. . . . Ocean acidification acts together with other global changes (e.g. warming, decreasing oxygen levels) and with local changes (e.g. pollution, eutrophication) (high confidence). Simultaneous drivers, such as warming and ocean acidification, can lead to interactive, complex, and amplified impacts for species and ecosystems.<sup>62</sup>

(62) IPCC, 2014: Summary for Policymakers 17, in: *Climate Change 2014: Impacts, Adaptation, and Vulnerability. Part A: Global and Sectoral Aspects. Contribution of Working Group II to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change* [Field, C.B., V.R. Barros, D.J. Dokken, K.J. Mach, M.D. Mastrandrea, T.E. Bilir, M. Chatterjee, K.L. Ebi, Y.O. Estrada, R.C. Genova, B. Girma, E.S. Kissel, A.N. Levy, S. MacCracken, P.R. Mastrandrea, and L.L. White (eds.)]. Cambridge University Press, Cambridge, United Kingdom and New York, NY, USA, pp. 1-32.

Comment Number: 0002477\_Saul\_20160728\_CBD\_UPHE-55

Organization I: Center for Biological Diversity

Commenter I: Michael Saul

Other Sections: I 6

Comment Excerpt Text:

Impacts from Ocean Acidification: The ocean's absorption of anthropogenic CO<sub>2</sub> has already resulted in more than a 30% increase in the acidity of ocean surface waters, at a rate likely faster than anything experienced in the past 300 million years, and ocean acidity could increase by 150% to 200% by the end of the century if CO<sub>2</sub> emissions continue unabated.<sup>64</sup> Ocean acidification negatively affects a wide range of marine species by hindering the ability of calcifying marine creatures to build protective shells and skeletons and by disrupting metabolism and

critical biological function.<sup>65</sup> The adverse effects of ocean acidification are already being observed in wild populations, including reduced coral calcification rates,<sup>66</sup> reduced shell weights of foraminifera in the Southern Ocean,<sup>67</sup> and mass die-offs of larval Pacific oysters in the Pacific Northwest.<sup>68</sup>

Coral reef ecosystems, which are estimated to harbor one-third of marine species and which support the livelihoods of a half billion people, are particularly threatened by ocean acidification. Some corals are already experiencing reduced calcification.<sup>69</sup> Due to the synergistic impacts of ocean acidification, mass bleaching, and other stresses, reefs are projected to experience “rapid and terminal” declines worldwide at atmospheric CO<sub>2</sub> concentrations of 450ppm.<sup>70</sup> Prominent coral scientists have called for reducing atmospheric CO<sub>2</sub> to less than 350 ppm to protect coral reefs from collapse.<sup>71</sup>

Numerous U.S. and international scientific and policy bodies have identified ocean acidification as an urgent threat to ocean ecosystems, food security, and society.<sup>72</sup> The United Nations Environment Program concluded that ocean acidification’s impact on marine organisms poses a threat to food security and the billions of people that rely on a marine-based diet.<sup>73</sup> Moreover, a recent study estimated that the damage our oceans will face from emissions-related problems will amount to \$428 billion a year by 2050 and nearly \$2 trillion per year by the century’s end.<sup>74</sup>

(64) Orr, J. C., V. J. Fabry, O. Aumont, L. Bopp, S. C. Doney, R. a Feely, A. Gnanadesikan, N. Gruber, A. Ishida, F. Joos, R. M. Key, K. Lindsay, E. Maier-Reimer, R. Matear, P. Monfray, A. Mouchet, R. G. Najjar, G.-K. Plattner, K. B. Rodgers, C. L. Sabine, J. L. Sarmiento, R. Schlitzer, R. D. Slater, I. J. Totterdell, M.-F. Weirig, Y. Yamanaka, and A. Yool. 2005. Anthropogenic ocean acidification over the twenty-first century and its impact on calcifying organisms. *Nature* 437:681–6; . Feely, R., S. Doney, and S. Cooley. 2009. Ocean acidification: Present conditions and future changes in a high CO<sub>2</sub> world. *Oceanography* 22:36–47; Hönlisch, B., A. Ridgwell, D. N. Schmidt, E. Thomas, S. J. Gibbs, A. Sluijs, R. Zeebe, L. Kump, R. C. Martindale, S. E. Greene, W. Kiessling, J. Ries, J. C. Zachos, D. L. Royer, S. Barker, T. M. Marchitto, R. Moyer, C. Pelejero, P. Ziveri, G. L. Foster, and B. Williams. 2012. The geological record of ocean acidification. *Science* 335:1058–63.

(65) Fabry, V., B. Seibel, R. Feely, and J. Orr. 2008. Impacts of ocean acidification on marine fauna and ecosystem processes. *ICES Journal of Marine Science* 65:414–432; Feely et al 2009; Kroeker, K.J, R.L. Kordas, R. Crim, I.E. Hendriks, L. Ramajo, G.S. Singh, C.M. Duarte, and J-P Gattuso. 2013. Impacts of ocean acidification on marine organisms: quantifying sensitivities and interactions with warming. *Global Change Biology* 19: 1884-1896.

(66) De’ath, G., J. M. Lough, and K. E. Fabricius. 2009. Declining coral calcification on the Great Barrier Reef. *Science* 323:116–119.

(67) Moy, A. D., W. R. Howard, S. G. Bray, and T. W. Trull. 2009. Reduced calcification in modern Southern Ocean planktonic foraminifera. *Nature Geoscience* 2: 276-280

(68) Barton, A., B. Hales, G. G. Waldbusser, C. Langdon, and R. A. Feely. 2012. The Pacific oyster, *Crassostrea gigas*, shows negative correlation to naturally elevated carbon dioxide levels: Implications for near-term ocean acidification effects. *Limnology and Oceanography* 57:698–710.

(69) Cooper, T. F., G. De’Ath, K. E. Fabricius, and J. M. Lough. 2008. Declining coral calcification in massive *Porites* in two nearshore regions of the northern Great Barrier Reef. *Global Change Biology* 14:529–538; Gledhill, D. K., R. Wanninkhof, F. J. Millero, and M. Eakin. 2008. Ocean acidification of the greater Caribbean region 1996–2006. *Journal of Geophysical Research* 113:C10031; De’ath et al. 2009; Bates, N., A. Amat, and A. Andersson. 2010.

Feedbacks and responses of coral calcification on the Bermuda reef system to seasonal changes in biological processes and ocean acidification. *Biogeosciences* 7:2509–2530. Human-caused climate change is already causing widespread damage from intensifying global

food and water insecurity, the increasing frequency of heat waves and other extreme weather

(70) Veron, J. E. N., O. Hoegh-Guldberg, T. M. Lenton, J. M. Lough, D. O. Obura, P. Pearce-Kelly, C. R. C. Sheppard, M. Spalding, M. G. Stafford-Smith, and A. D. Rogers. 2009. The coral reef crisis: the critical importance of <350 ppm CO<sub>2</sub>. *Marine Pollution Bulletin* 58:1428–36.

(71) Veron et al. 2009; Frieler, K., M. Meinshausen, A. Golly, M. Mengel, K. Lebek, S.D. Donner, and O. Hoegh-Guldberg. Limiting global warming to 2°C is unlikely to save most coral reefs. *Nature Climate Change*. Published Online. doi: 10.1038/NCLIMATE1674.

(72) NRC. 2010. *Ocean Acidification: A National Strategy to Meet the Challenges of a Changing Ocean*. National Academies Press; UNEP. 2010. *UNEP Emerging Issues: Environmental Consequences of Ocean Acidification: A Threat to Food Security*; Rogers, A. D., and D. d'A. Laffoley. 2011. *International Earth system expert workshop on ocean stresses and impacts Summary Report*. IPSO Oxford.

(73) UNEP 2010.

(74) Noone, K., R. Sumaila, and R. Diaz. 2012. *Valuing the Ocean : Executive Summary*, Stockholm Environment Institute. Stockholm Environment Initiative

Comment Number: 0002477\_Saul\_20160728\_CBD\_UPHE-7

Organization I:Center for Biological Diversity

Commenter I:Michael Saul

Comment Excerpt Text:

Impacts to wildlife: “Over the 21st century, changes in climate will cause some species to shift north and to higher elevations and fundamentally rearrange U.S. ecosystems. Differential capacities for range shifts and constraints from development, habitat fragmentation, invasive species, and broken ecological connections will likely alter ecosystem structure, function, and services, leading to predominantly negative consequences for biodiversity and the provision of ecosystem goods and services.”<sup>25</sup>

(25) Final Endangerment Finding at 66,498 see also Third National Climate Assessment at 195-219.

Comment Number: 0002477\_Saul\_20160728\_CBD\_UPHE-70

Organization I:Center for Biological Diversity

Commenter I:Michael Saul

Other Sections: I

Comment Excerpt Text:

The Impacts of Coal Mining on Species and Habitats

There are myriad environmental impacts from mining coal, transporting it by rail, burning it, and disposing of the resulting waste, all which must be fully analyzed in the EIS. Exploiting coal resources causes a broad array of environmental harms through contamination of air, surface and groundwater, and publicly owned lands.<sup>240</sup> The EIS must include an analysis of impacts to biological, marine, and aquatic resources on both public and private lands and waters affected by coal mining, transportation and combustion ? that is, in the areas where mining of the coal takes place, through rail or other corridors, through the loading and shipping of the coal, to its final destination, burning, and disposal. Such resources include marine and terrestrial mammals, game and non-game resident and migratory bird species, raptors, songbirds, amphibians, reptiles, fisheries, aquatic invertebrates, wetlands, and vegetative communities ? including species listed pursuant to the Endangered Species Act (ESA). For species protected under the ESA, BLM must consult with the U.S. Fish and Wildlife Service (FWS) and the National Marine Fisheries Service (NMFS) under § 7 of the Act to determine whether BLM regulated coal mining activities will adversely affect these species or their designated critical habitat.<sup>241</sup> Because this programmatic decision implicates a significant share of not only domestic but global greenhouse gas emissions whose effects occur globally, the relevant “action area” for purposes of consultation is global.

The BLM must ensure that up-to-date information on all potentially impacted flora and fauna is made available in the Draft PEIS, so that adequate impact analyses can be completed and to ensure robust public participation. Habitat degradation, fragmentation, and loss must all be assessed, along with any resulting impacts to wildlife and marine species. Cumulative impacts, such as increased wildlife mortality from mining related activities (including, but not limited to, increased human conflicts, habitat loss, and increased hunting pressure), transport of coal, pollution from coal combustion, and coal combustion waste disposal, must be fully analyzed. Impacts to wildlife

migration corridors must also be evaluated.

The PEIS must also consider all potential water quality impacts (e.g., increased sediment loads, possible spills, coal dust impacts, mercury deposition, changes to alluvial groundwater quality, degradation of drinking well water) and water quantity impacts (e.g., drawdown of aquifers, diversions or diminutions of surface flow, hydrologic changes affecting seeps and springs, drinking water impacts), as well as impacts to water resources that would be expected from burning the coal and disposing of coal combustion waste, whether domestically or overseas, and the impacts that potential alterations in water quality and quantity will have on listed species.

Transportation of coal over long distances also has significant environmental impacts, including the fossil fuel consumption of moving large volumes of material over long distances. Data shows that open coal trains lose huge volumes of coal dust during transportation. Such discharges add to air quality problems along the rail route, and cause contamination of waterbodies and other habitat areas. According to BNSF studies, 500 to 2,000 lbs of coal can be lost in the form of dust for each rail car, and coal trains are typically composed of at least 120 cars per train. In other studies, again according to BNSF, as much as three percent of the coal in each car (around 3,600 lbs per car) can be lost in the form of dust.<sup>242</sup> This is a huge volume of coal that will escape into the air and water, potentially affecting many listed species and essential habitat areas, which must be fully analyzed in the EIS. Moreover, as with the greenhouse gas impacts, this analysis must be viewed in the context of all existing and reasonably foreseeable similar impacts.

The PEIS's analysis of coal dust should also include a discussion of the efficacy of surfactants to control coal dust, potential impacts of the use of surfactants to control dust emissions, as well as consequences from not using surfactants. Although use of surfactants in some contexts is common, their efficacy and safety for use on coal-carrying trains is unproven. Further, surfactants contain myriad undisclosed chemicals, many of whose biological and ecological effects have not yet been adequately studied. Surfactants could cause a number of potential harms, including: danger to human health during and after application; surface, groundwater and soil contamination; air pollution; changes in hydrologic characteristics of the soils; and impacts on native flora and fauna populations. See Environmental Protection Agency, Potential Environmental Impacts of Dust Suppressants: Avoiding another Times Beach § 3 (May 30-31, 2002).

The net results of the impacts of coal mining have been significant water pollution, loss of natural areas, and great reductions in biological diversity in mined places. We thank BLM for recognizing that the current implementation of the Federal coal program has failed to protect our waterways, wildlife, and natural ecosystems from coal mining and related pollution. We provide the following information to support the need for more protective regulations to ensure that mining operations are conducted so as to minimize disturbances and adverse impacts on fish, wildlife, and related environmental values.

(240) See generally Paul R. Epstein et al, Full cost accounting for the life cycle of coal in "Ecological Economics Reviews," Ann. N.Y. Acad. Sci. 1219: 73-98 (2011); Jayni Foley Hein and Peter Howard, Illuminating the Hidden Costs of Coal (Dec. 2015); A Hidden Cost of Coal, Northern Plains Resource Council; Exporting Powder River Basin Coal: Risks and Costs, Western Organization of Resource Councils (Sept. 2011).

(241) 16 U.S.C. § 1536(a)(2).

(242) Hearing Transcript, July 29, 2010, Arkansas Electric Cooperative Association – Petition for Declaratory Order, Surface Transportation Board, Docket No. FD 35305, at 42:5-13.

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Comment Number: 0002477\_Saul\_20160728\_CBD\_UPHE-72

Organization I: Center for Biological Diversity

Commenter I: Michael Saul

Other Sections: I

Comment Excerpt Text:

Home to the greatest freshwater biological diversity in the U.S., Appalachia is a true species hot spot. Yet, coal mining is contributing to the alarming loss of biological diversity in the Appalachian Mountains. This has been evidenced by the vast upswing in aquatic dependent species requiring ESA protection in the southeast region. The USFWS's findings in protecting such species illustrate that coal mining is a significant threat leading to species listings. Further, already listed species in the region are also experiencing ongoing declines due to downstream impacts from surface mining, such as sedimentation, and existing regulations are utterly failing to protect species from these impacts.

For example, in listing the Cumberland darter as endangered, the USFWS found that sediment/siltation is “the most common stressor of aquatic communities in the upper Cumberland River basin” and the “primary source of sediment” is “resource extraction” – i.e., coal mining and logging.<sup>259</sup> The USFWS identified “water quality degradation” and the addition of “high concentrations of dissolved metals and other solids that lower stream pH or lead to elevated levels of stream conductivity” as another “significant threat” to the Cumberland darter.<sup>260</sup> Likewise, in listing the blackside dace, the USFWS recognized “that impacts associated with the development of [coal and timber] resources in the past has caused the loss of many blackside dace populations.”<sup>261</sup>

Coal mining was also identified as a threat to, and among the reasons for listing, rayed bean and snuffbox mussels. The USFWS found that “low pH commonly associated with coal mine runoff can reduce glochidial encystment rates, thus impacting mussel recruitment” and that adverse impacts from heavy-metal-rich drainage from coal mining and associated sedimentation have been documented in portions of historical rayed bean and snuffbox habitat in the upper Ohio River system in western Pennsylvania, West Virginia, and southeastern Ohio. Likewise, coal mining has impacted rayed bean habitat in the upper Tennessee River system, Virginia, and snuffbox habitat in eastern Kentucky (lower Ohio and Mississippi River systems in southeastern Illinois and western Kentucky; upper Cumberland River system in southeastern Kentucky and northeastern Tennessee; and upper Tennessee River system in southwestern Virginia).<sup>262</sup>

Similar conclusions were reached in listing the sheepsnose and spectaclecase mussels.<sup>263</sup> Water quality degradation from surface coal mining also contributed to the need to list the diamond darter in West Virginia,<sup>264</sup> the addition of the Kentucky arrow darter to the candidate list,<sup>265</sup> and the proposed listing for the Big Sandy and Guyandotte River crayfishes.<sup>266</sup>

The biological impacts of coal mining are not limited to the Powder River Basin. These impacts are felt in coal mining areas throughout our country. For example, recent coal leasing proposals in Utah also highlight the ongoing failure to address impacts to species, including greater sage-grouse and Utah prairie dog, that are vulnerable to habitat loss.<sup>267</sup> Thus, coal mining activities are impacting species that have been recognized as vulnerable to such activities across the country, and efforts to mitigate these impacts have not been successful.

This is due to the basic fact that effectively mitigating the impacts of coal mining is fundamentally not possible. Surface coal mining is accomplished by logging or clearing the mine site, then removing overburden from the coal seam and then blasting and removing the coal. This includes strip mining and open pit mining practices, as well as mountain top removal mining, wherein excess mining waste is dumped into fills in nearby hollows or valleys, smothering streams and habitat. Surface coal mining requires large areas of land to be disturbed, destroying mountains and forest habitat, and results in deposition of sediment and heavy metals into water bodies, which results in adverse impacts on streams and local biodiversity.<sup>268</sup> It is the height of human arrogance to suggest that these impacts can be sufficiently mitigated. Rather, it is clear that the lost functions and values of the areas decimated by coal mining are near impossible to recover.

(259) Endangered status for the Cumberland Darter, Rush Darter, Yellowcheek Darter, Chucky Madtom, and Laurel Dace, Final Rule. 76 Fed. Reg. 48,722, 48,732 (2011). Although federal coal holdings are not as pervasive as in the Powder River Basin, federal coal leases affect Cumberland Basin waters and species. See BLM and USFS,

Environmental Assessment, Bledsoe Coal Lease.

(260) 76 Fed. Reg. at 48,732.

(261) Determination of threatened species status for the blackside dace, Final Rule. 52 Fed. Reg. 22,580 (1987).

(262) Determination of endangered status for the rayed bean and snuffbox mussels throughout their ranges. 77 Fed. Reg. 08632 (2012) (internal citations omitted).

(263) Determination of endangered status for the Sheepnose and Spectaclecase mussels throughout their range, final rule. 77 Fed. Reg. 14914 (2012). In addition, the FWS designated 27 miles of the main stem of the Big South Fork and 9 miles of the New River in Tennessee as critical habitat for three endangered mussels: Cumberland elktoe, oyster mussel, and Cumberlandian combshell. 60 Fed. Reg. at 53,148.

(264) U.S. Fish and Wildlife Service (FWS). (2013). Endangered species status for diamond darter, final rule. 78 FR 45079 (“While the overall percentage of the entire Elk River watershed subjected to mining activities may be small, watersheds of some Elk River tributaries, such as Leatherwood Creek, are highly dominated by mining activity and include mining permits encompassing 81 to 100 percent of the subwatersheds (WVDEP 2011b, p. 37). Mining is

likely a significant factor affecting the water quality of streams, such as Leatherwood Creek, that are principle tributaries to the Elk River. The effects of these mining activities conducted both within the Elk River mainstem and in Elk River tributaries, coupled with the effects from other activities described in Factor A, are continuing threats to the diamond darter.”).

(265) U.S. Fish and Wildlife Service FWS. (2010). Candidate Notice of Review. 75 Fed. Reg. 69,224 (“The subspecies’ habitat and range have been severely degraded and limited by water pollution from surface coal mining and gas-exploration activities; removal of riparian vegetation; stream channelization; increased siltation associated with poor mining, logging, and agricultural practices; and deforestation of watersheds. The threats are high in

magnitude because they are widespread across the subspecies’ range. In addition, the magnitude (severity or intensity) of these threats, especially impacts from mining and gas- exploration activities, is high because these activities have the potential to alter stream water quality permanently throughout the range by contributing sediment, dissolved metals, and other solids to streams supporting Kentucky arrow darters, resulting in direct mortality or

reduced reproductive capacity. The threats are imminent because the effects are manifested immediately and will continue for the foreseeable future.”).

(266) U.S. Fish and Wildlife Service. (2015). Endangered species status for the Big Sandy and Guyandotte River Crayfishes, proposed rule. 80 Fed. Reg. 18,726 (“Coal mining—The past and ongoing effects of coal mining in the Appalachian Basin are well documented, and both underground and surface mines are reported to degrade water quality and stream habitats. Notable water quality changes associated with coal mining in this region include increased concentrations of sulfate, calcium, and other ions (measured collectively by a water’s electrical conductivity); increased concentrations of iron, magnesium, manganese, and other metals; and increased alkalinity and pH, depending on the local geology. The common physical changes to local waterways associated with coal mining include increased erosion and sedimentation, changes in flow, and in many cases the complete burial of headwater streams. These mining-related effects are commonly noted in the streams and rivers within the ranges of the Big Sandy and the Guyandotte River crayfishes. The response of aquatic species to coal mining-induced degradation are also well documented, commonly observed as a shift in a stream’s macroinvertebrate (e.g., insect larva or nymphs, aquatic worms, snails, clams, crayfish) or fish community structure and resultant loss of sensitive taxa and an increase in tolerant taxa. As mentioned above, coal mining can cause a variety of changes to water chemistry and physical habitat; therefore, it is often difficult to attribute the observed effects to a single factor. It is likely that the observed shifts in community structure (including the extirpation of some species) are, in many cases, a result of a combination of factors.” (internal references omitted)).

(267) BLM, Alton Coal Lease Tract Lease By Application, Supplemental Draft Environmental Impact Statement, DOI-BLM-UT-C040-2015-011-EIS (June 2015).

(268) See e.g. U.S. DEPARTMENT OF THE INTERIOR, DRAFT STREAM PROTECTION RULE ENVIRONMENTAL IMPACT

STATEMENT 4-95 (2015) (stating that the removal of trees and habitat fragmentation associated with coal mining “may cause species to become threatened or endangered, and can contribute to species extinction”); *Id.* at 4-113 (“The negative effects of mining on specific features of habitats (soils, topography, water quality, and vegetation) may make it more difficult for wildlife species to reestablish after a mining disturbance and may increase the proliferation of non-native species on reclaimed landscapes.”); *Nat’l Parks Conservation Ass’n v. Jewell*, 62 F. Supp. 3d 7, 16 (D.D.C. 2014) (noting that “[d]irect effects of surface coal mining and reclamation operations on threatened, endangered, or proposed species or critical habitat consists [sic] primarily of habitat alteration by land clearing and earthmoving operations.... If a species of concern lacks individual mobility, land clearing and excavation activities may result in a direct take”).

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Comment Number: 0002477\_Saul\_20160728\_CBD\_UPHE-73

Organization I: Center for Biological Diversity

Commenter I: Michael Saul

Other Sections: I

Comment Excerpt Text:

It is well-established that programmatic decisions are subject to the ESA’s consultation requirement.<sup>289</sup> A programmatic decision to continue or modify the federal coal leasing program is an “agency action” for purposes of the ESA. The ESA defines agency action as “any action authorized, funded, or carried out” by a federal agency. 16 U.S.C. § 1536(a)(2). The phrase is further defined in ESA regulations as “all activities or programs of any kind authorized, funded, or carried out, in whole or in part, by Federal agencies.” 50 C.F.R. § 402.02. These include: “(b) the promulgation of regulations” and “(d) actions directly or indirectly causing modifications to the land, water or air.” *Id.*

<sup>289</sup> See, e.g., *New Mexico v. Bureau of Land Management*, 565 F.3d 683, 689, n.1 (10th Cir. 2009) *Conner v. Burford*, 848 F.2d 1441 (9th Cir. 1988); *Lane County Audubon Society v. Jamison*, 958 F.2d 290 (9th Cir. 1988); *Pacific Rivers Council v. Thomas*, 30 F.3d 1050 (9th Cir. 1994); *Silver v. Babbitt*, 924 F.Supp. 976 (D. Ariz. 1995)

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Comment Number: 0002477\_Saul\_20160728\_CBD\_UPHE-74

Organization I: Center for Biological Diversity

Commenter I: Michael Saul

Other Sections: I 10

Comment Excerpt Text:

The indirect effects of coal leasing and mining include atmospheric emissions of mercury from coal combustion. Mercury is a potent and widely distributed neurotoxin with serious adverse health effects on human health and development as well as the behavior, reproduction, and survival of threatened and endangered species. The United Nations estimates that 26% of global mercury emissions (339-657 metric tons/ year) come from the combustion of coal in power plants.<sup>294</sup> A recent decision held that agencies must consider the indirect effects of even microscopic levels of mercury from coal leasing, mining and combustion decisions:

(294) J. Pacyna, et al., *Study on Mercury Sources and Emissions and Analysis of Cost and Effectiveness of Control Measures: “UNEP Paragraph 29 Study”*, UNEP (Nov. 2010).

“the record reveals that even microscopic changes in the amount of mercury deposition can have significant impacts on threatened and endangered species in the area impacted by the Four Corners Power Plant. See AR 1-2-14-1990 (concluding that a .1% increase in mercury deposition in the basin is likely to jeopardize the continued existence of the Colorado pikeminnow). Given the potentially significant impacts of mercury pollution, OSM’s failure to discuss or analyze the deleterious impacts of combustion-related mercury deposition in the area of the Four Corners Power Plant is troubling.”<sup>295</sup>

(295) *Dine Citizens Against Ruining Our Environment v. U.S. Office of Surface Mining Reclamation and Enforcement*, 82 F.Supp. 3d 1201, 1215 (D. Colo. 2015).

The deposition of mercury and selenium within the Colorado River Basin continues to threaten both human health and endangered species, including the four Colorado River endangered fish. Current scientific information indicates continuing mercury and selenium contamination in the Colorado River Basin, which has the potential to detrimentally affect these species.

Consumption through the food chain is the primary mechanism of bioaccumulation of mercury in the endangered fish, and particularly affects the Colorado pikeminnow's diet as the largest of the endangered Colorado River fish (Herrmann et al. 2016 at 204). Sources of mercury include high levels of atmospheric mercury deposition called "cold condensation" from coal-fired power plant emissions (Id. at 205). This atmospheric deposition and watershed runoff is the most prevalent source of mercury in the Colorado River, but mercury pollution from old gold smelters in the Basin have also infiltrated this river system through decades of runoff from smaller tributaries (Id. At 215). In Grand Canyon, there is a high concentration of mercury in the atmosphere due to emissions from the coal burning Navajo Generating Station in Page, Arizona, resulting in direct negative effects on the endangered fishes' habitat in the lower Colorado River Basin (Walters 2015 at 2385).

Mercury contamination is especially concerning because all four species depend on aquatic invertebrates as a food source. Other piscivorous animals and non-native fish that prey on these juvenile fish, in turn, accumulate mercury, which continues up the food chain, bioaccumulating in adult fish. Concentrations of mercury exceeding 8 micrograms ( $\mu\text{g/g}$ ) in fish organs or eggs may result in reproductive dysfunction and abnormalities (Herrmann et al. 2016 at 204). Walters et al. (2015) found that mean mercury concentrations for three native species and three non-native species from a Colorado River sample site exceeded the risk threshold for piscivorous mammal consumption (Id. at 2390).

Because of the scale of the federal coal leasing program (over 40% of U.S. coal production), BLM must quantify, consider, and consult on, the indirect mercury emissions from combustion of coal, its contribution to global mercury atmospheric concentrations and deposition rates, and its ensuing effects on sensitive, threatened, and endangered species, including the four Colorado River listed fish.

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Comment Number: 0002477\_Saul\_20160728\_CBD\_UPHE-75

Organization I: Center for Biological Diversity

Commenter I: Michael Saul

Other Sections: I

Comment Excerpt Text:

The ESA was enacted, in part, to provide a "means whereby the ecosystems upon which endangered species and threatened species depend may be conserved...[and] a program for the conservation of such endangered species and threatened species."<sup>296</sup> Section 2(c) of the ESA establishes that it is "the policy of Congress that all Federal departments and agencies shall seek to conserve endangered species and threatened species and shall utilize their authorities in furtherance of the purposes of this Act."<sup>297</sup> The ESA defines "conservation" to mean "the use of all methods and procedures which are necessary to bring any endangered species or threatened species to the point at which the measures provided pursuant to this Act are no longer necessary."<sup>298</sup> Similarly, Section 7(a)(1) of the ESA directs that the Bureau and other federal agencies shall use their programs and authorities to conserve endangered and threatened species.<sup>299</sup>

To fulfill the purposes of the ESA, federal agencies are required to "insure that any action authorized, funded, or carried out by such agency...is not likely to jeopardize the continued existence of any endangered species or threatened species or result in the adverse modification of habitat of such species... determined...to be critical."<sup>300</sup> When an agency action "may affect listed species or critical habitat" the agency must consult with expert wildlife agencies, Fish and Wildlife Service and National Marine Fisheries Service, using the "best scientific and commercial data available."<sup>301</sup> ESA consultation serves as an essential function to guide federal actions and identify mitigation to avoid harming listed species. Through consultation, the Services may specify reasonable and



prudent alternatives that will avoid jeopardizing listed species and “suggest modifications” to the action to “avoid the likelihood of adverse effects” to the listed species.<sup>302</sup>

Here, the Bureau must consult on the federal coal leasing program to ensure that coal leasing does not further imperil endangered species. Agencies are required to consult on programs that manage federal lands and leasing, including this coal leasing program.<sup>303</sup> The ESA expressly and broadly requires an agency to comply with Section 7 for “any action” it authorizes or funds.<sup>304</sup> “Action” is broadly defined to include “all activities or programs of any kind authorized, funded, or carried out, in whole or in part” by federal agencies and includes actions that may directly or indirectly cause modifications to the land, water, or air.”<sup>305</sup>

(299) 16 U.S.C. § 1536(a)(1).

(300) 16 U.S.C. § 1536(a)(2) (Section 7 consultation).

(301) 50 C.F.R. § 402.14(a).

(302) 16 U.S.C. § 1536(b); 50 C.F.R. § 402.13.

(303) See e.g., *Cal. ex rel. Lockyer v. United States Dep't of Agric.*, 459 F. Supp. 2d 874, 912 (N.D. Cal. 2006) (finding that the Forest Service violated the ESA by failing to consult on the effects of the State Petitions Rule (which replaced the Roadless Rule) and noting that “[t]he fact that consultation would only address impacts at the programmatic level does not excuse the need to do so); *aff'd sub nom Cal. ex rel. Lockyer v. USDA*, 575 F.3d 999 (9th Cir. 2009); see also *Conner v. Bufford*, 848 F.2d 1441, 1453-54 (9th Cir. 2012).

(304) 16 U.S.C. § 1536(a)(2) (emphasis added); *Pac. Rivers Council v. Thomas*, 30 F.3d 1050, 1054 (9th Cir. 1994) (“there is little doubt that Congress intended to enact a broad definition of agency action in the ESA”).

(305) 50 C.F.R. § 402.02 (emphasis added).

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Comment Number: 0002477\_Saul\_20160728\_CBD\_UPHE-76

Organization I: Center for Biological Diversity

Commenter I: Michael Saul

Other Sections: I

Comment Excerpt Text:

NMFS' 2015 Final Recovery Plan for Elkhorn and Staghorn Coral includes a recovery criterion with specific targets for ocean temperature and ocean acidification conditions that must be achieved for these corals to survive and recover.<sup>306</sup> As noted in the Final Recovery Plan, meeting this criterion is consistent with a return to an atmospheric CO<sub>2</sub> concentration of less than 350 ppm, as concluded by numerous scientific studies that have examined coral species viability in response to ocean warming and ocean acidification.<sup>307</sup> Recognizing the responsibility of all federal agencies to promote listed species' conservation, the Final Recovery Plan further includes a recovery criterion calling for the adoption of “adequate domestic and international regulations and agreements” to abate threats from increasing atmospheric CO<sub>2</sub> concentrations.<sup>308</sup> The plan also includes a recovery action to “develop and implement U.S. and international measures to reduce atmospheric CO<sub>2</sub> concentrations to a level appropriate for coral recovery.”<sup>309</sup>

(306) NMFS. 2015. Recovery Plan for Elkhorn (*Acropora palmata*) and Staghorn (*A. cervicornis*) Corals. Prepared by the Acropora Recovery Team for the National Marine Fisheries Service, Silver Spring, Maryland. See Recovery Criterion 5: “Sea surface temperatures across the geographic range have been reduced to Degree Heating Weeks less than 4; and Mean monthly sea surface temperatures remain below 30°C during spawning periods; and Open ocean

aragonite saturation has been restored to a state of greater than 4.0, a level considered optimal for reef growth.”

(307) These studies include: (1) Veron et al. (2009) which recommends an atmospheric CO<sub>2</sub> concentration of less than 350 ppm to protect coral reef health, and suggests a target of 320 ppm which is the level that pre-dates the onset of mass bleaching events; (2) Donner (2009) which suggests an atmospheric CO<sub>2</sub> concentration target below 370 ppm to avoid degradation of coral reef ecosystems; (3) Simpson et al. (2009) which correlates a Caribbean open-ocean

aragonite saturation state of 4.0, which is recommended by the plan, with an atmospheric CO<sub>2</sub> level at 340 to 360 ppm; and (4) Frieler et al. (2012) which shows that limiting warming to ~1°C above pre-industrial levels is needed to protect Caribbean coral reefs from degradation. A 1°C target is consistent with an emissions trajectory that peaks in the next few years at 400 ppm, declines sharply thereafter (~6% decline per year), and returns atmospheric CO<sub>2</sub> to below 350 ppm in the early 2100s (Hansen et al. 2013).

(308) See Recovery Criterion 8.

(309) See Recovery Action 9.

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Comment Number: 0002477\_Saul\_20160728\_CBD\_UPHE-77

Organization I: Center for Biological Diversity

Commenter I: Michael Saul

Other Sections: I

Comment Excerpt Text:

the 2015 Draft Polar Bear Conservation Plan acknowledges that the polar bear cannot be recovered without decisive action to mitigate the primary threat to the species—greenhouse gas (“GHG”) emissions driving sea-ice loss:

The single most important step for polar bear conservation is decisive action to address global warming (Amstrup et al. 2010, Atwood et al. 2015), which is driven primarily by increasing atmospheric concentrations of greenhouse gases. Short of actions that effectively addresses the primary cause of diminishing sea ice, it is unlikely that polar bears will be recovered.<sup>310</sup>

The best-available science on polar bear viability and sea-ice loss under climate change indicates that returning the atmospheric CO<sub>2</sub> concentration to ~350 ppm is needed for polar bear survival and recovery. Amstrup et al. (2010), published in the journal *Nature*, provides the best available science on the greenhouse gas emissions pathways and atmospheric concentrations needed for polar bear recovery. This study found that polar bear probability of persistence increases when greenhouse gases are reduced significantly in the near future, and that the best possible on-the-ground management to reduce other threats plays an important, although secondary, role in increasing persistence probabilities.<sup>311</sup> Importantly, Amstrup et al. (2010) showed that the commitment scenario—in which CO<sub>2</sub> stays at a constant level of 368 ppm and radiative forcing remains at ~2.2 watts/m<sup>2</sup>—is consistent with polar bear recovery in all ecoregions. These findings are compatible with studies that have found that returning the atmospheric CO<sub>2</sub> concentration to between 350 and 400 ppm by 2100, and subsequently below 350 ppm, is needed to recover Arctic sea ice.<sup>312</sup>

(310) U.S. Fish and Wildlife. 2015. Polar Bear (*Ursus maritimus*) Conservation Management Plan, Draft. U.S. Fish and

Wildlife, Region 7, Anchorage, Alaska. 59 pp, at 6.

(311) Amstrup, S.C. et al. 2010. Greenhouse gas mitigation can reduce sea-ice loss and increase polar bear persistence.

*Nature* 468: 955-960. Because sea-ice habitat decreases relatively linearly with increases in mean global temperature rise in their models, the study concluded that the loss of sea-ice habitat and corresponding “declines in polar bear distribution and numbers are not unavoidable” if immediate and rapid GHG reductions were to be implemented, thus emphasizing the need for rapid, decisive action on emissions reductions.

(312) Hansen, J. et al. 2008. Target atmospheric CO<sub>2</sub>: Where should humanity aim? *Open Atmospheric Science Journal* 2:217-231; Hansen, J. et al. 2013. Assessing “dangerous climate change”: required reduction of carbon emissions to protect young people, future generations and nature. *PLoS ONE* 8: e81648.

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Comment Number: 0002480\_Culver\_20160728\_TWS-15

Organization I: The Wilderness Society

Commenter I: Nada Culver

Comment Excerpt Text:

The BLM through the PEIS, and any needed RMP amendments or revisions, should ensure sage-grouse are sufficiently protected through protections for PHMA and SFA, including making appropriate unsuitability determinations to close areas to leasing.

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Comment Number: 0002485\_Brooke\_20160728-1

Organization I: Black Warrior River

Commenter I: Nelson Brooke

Other Sections: 8.4

Comment Excerpt Text:

A recent lease of 160 acres was awarded to Narley Mine No. 3, operated by Best Coal, Inc. That surface mine has discharges through six sediment basins to an unnamed tributary to Trouble Creek, which flows into Trouble Creek, and then into the Locust Fork of the Black Warrior River in Jefferson County, AL. This stretch of the Locust Fork is federal ESA Critical Habitat for six species of freshwater mussels, and is also home to the Endangered Cahaba Shiner, the Endangered plicate rocksnail, the Threatened flattened musk turtle, and the Candidate Black Warrior Waterdog, among other rare aquatic species. Alabama is number one in the U.S. for aquatic biodiversity, and the Locust Fork is a key priority watershed for rare species habitat, reintroductions, and recovery.

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Comment Number: 0002493\_Mead\_20160728\_GovWY-28

Organization I: Office of Governor Matthew H. Mead

Commenter I: MATTHEW H. MEAD

Comment Excerpt Text:

In addition, energy dense coal power plants provide protection for wildlife by avoiding bird and bat kills attributed to wind turbine blades and increased predatory bird kill rates of ground level wildlife.

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Comment Number: 0002493\_Mead\_20160728\_GovWY-43

Organization I: Office of Governor Matthew H. Mead

Commenter I: MATTHEW H. MEAD

Other Sections: 8.9

Comment Excerpt Text:

Coal mining in Wyoming has a temporary impact on livestock and wildlife grazing and management. Wyoming surface coal operators reclaim lands in a timely manner and in compliance with the permitted mine and reclamation plans. Wyoming has primacy from the OSMRE for regulating compliance of these mining operations. Mine and reclamation acres for coal operations in Wyoming as of January 1, 2016 are: 169,639 disturbed acres, 90,214 acres (53%) in active mining/facilities or partially reclaimed; 79,425 acres (47%) reclaimed through final seeding; and 38,000 acres (22%) in agricultural or hay production. Wyoming operators have received national recognition for their excellence in reclamation in 7 out of the past 10 years and range from shrub establishment to stream channel design and function. Wyoming has been and continues to be a national leader in reclamation of disturbed lands and places high importance on returning reclamation to livestock grazing, agricultural production and wildlife habitat in a timely manner.

Successful reclamation in Wyoming is at least two times more productive than pre-mine native rangeland and provides a valuable mechanism for carbon capture and sequestration which must be evaluated by BLM in the PEIS. See Wick, et al., Aggregate and organic matter dynamics in reclaimed soils as indicated by stable carbon isotopes, *Soil Biology and Chemistry*, pp. 1-9 (2008); (WY0-02814 to 02822); and Stahl, et al., Accumulation of

organic carbon in reclaimed coal mine soils of Wyoming (2003); (WY0-02824 to 02836). Reclamation of surface mines can provide an avenue for atmospheric CO<sub>2</sub> to be captured as organic carbon in the soil and vegetative community. See Ganjgunte, et al., Accumulation and composition of total organic carbon in reclaimed coal mine lands, *Land Degradation and Development*, 20: 156-175 (2008); (WY0-02838 to 02857); and Miyamoto, et al., Long-term effects of mechanical renovation of a mixed-grass prairie: II. Carbon and Nitrogen Balance, *Arid Land Research and Management*. 18:141-151 (2004); (WY0-02869 to 02880). Reclaimed surface mine soils not only capture significant levels of carbon but also provide higher levels of organic nutrient storage, and thus vegetative biomass, allowing for additional carbon capture. These factors show the importance and benefits reclamation, and subsequent management of soil and vegetation has on the carbon cycle. Id.; (WY0-02869 to 02880); McDermott c, Elavarthi S., Rangelands as carbon sinks to mitigate climate change: A review, *Earth science & climate change*, 5:8 1-12 (2014); (WY0-02882 to 02893); and Rhoades et al., Carbon Sequestration of Surface Mine Lands, Department of Forestry, University of Kentucky, Department of Soil Science, North Carolina State University; (WY0-02895 to 02916).

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Comment Number: 0002493\_Mead\_20160728\_GovWY-45

Organization I: Office of Governor Matthew H. Mead

Commenter I: MATTHEW H. MEAD

Comment Excerpt Text:

Although the WGFD would like to see more of a shrub component in the final reclamation standards, coal mine reclamation is seen as extremely successful by the WGFD under the current process.

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Comment Number: 0002493\_Mead\_20160728\_GovWY-46

Organization I: Office of Governor Matthew H. Mead

Commenter I: MATTHEW H. MEAD

Comment Excerpt Text:

In Wyoming, coal operations tend not to interfere with big game species. See Medcraft, J.R. and W. R. Clark, Big Game Habitat Use on Diets on a Surface Mine in Northeastern Wyoming, *Journal of Wildlife Management*, 50:135-142 (1986); (WY0-03052 to 03060); and Garno, R.S. and S. Anderson, Use of Reclaimed Mine Lands by Pronghorn and Mule Deer, *Intermountain Journal of Sciences*, Vol 8 4:213-222 (2002); (WY0-03062 to 03068). Coal operations may temporarily impact small mammals. See Hingten, T.M. and W.R. Clark, Small Mammal Recolonization of Reclaimed Coal Surface-mined Land in Wyoming, *Journal of Wildlife Management*, 48:1255-1261 (1984); (WY0-03070 to 03076). When new or large expansions of coal operations are proposed, the WGFD recommends that an evaluation of delineated big game migration corridors be considered if applicable to the mine area and appropriate considerations taken when leasing or expanding the mine to protect migration corridors.

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Comment Number: 0002493\_Mead\_20160728\_GovWY-47

Organization I: Office of Governor Matthew H. Mead

Commenter I: MATTHEW H. MEAD

Comment Excerpt Text:

The U.S. Fish and Wildlife Service coordinates an extensive and highly successful raptor program for nest removal and nest structure placement in coal country. This program alleviates most concerns with raptor-related impacts. For example, the North Antelope Rochelle Mine's commitment to protect raptors through successful implementation of this program was recognized by OSMRE through a National Award for Excellence in Surface Mining in 2012. "The company surveyed raptor populations, identified potential disturbances for nesting raptors, and developed multiple plans to mitigate those impacts. The company moved several nesting locations, built special nesting towers for raptors, and successfully maintained viable eagle, hawk, owl and kestrel populations."

OSMRE National Award for Excellence in Surface Mining, North Antelope Rochelle Mine (2012); [19] (WY0-03858 to 03861).

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Comment Number: 0002493\_Mead\_20160728\_GovWY-76

Organization I: Office of Governor Matthew H. Mead

Commenter I: MATTHEW H. MEAD

Comment Excerpt Text:

The BLM requires management directions for Greater sage-grouse in Approved RMP amendments and revisions be applied to new permits and leases. The DEQ, LQD also requires that new permits comply with Wyoming Executive Order 2015-4, Greater Sage-Grouse Core Area Protection. (WY0-03078 to 03122). Both of these management directives minimize potential impacts to Greater sage-grouse habitat and breeding cycles and will limit "claims" to areas that cannot be developed without very limited impacts to Greater sage-grouse.

The U.S. Fish and Wildlife Service (FWS) has found "the core area strategy...if implemented by all landowners via regulatory mechanisms, would provide adequate protection for sage-grouse and their habitats in [Wyoming]." 75 Fed. Reg. 13910, 13974 (March 23, 2010). Further, in a November 10, 2010 letter to Ryan Lance, Deputy Chief of Staff, Office of the Governor (WY)- the FWS made the following statement: "The provisions for conservation of Federal trust species, including candidates such as the Greater sage-grouse, under SMCRA and its implementing regulations, are sufficient for conservation of this species." See Hicks, S., U.S. Department of the Interior- Fish and Wildlife Service, Letter to Ryan Lance (Nov. 10, 2010); (WY0-03125). Now that the BLM has revised its RMPs in Wyoming to incorporate Wyoming's core area strategy, the FWS has found that the "adoption of the [core area strategy] into Federal land plans provides additional assurances that protections of Core Areas will be achieved on all lands, regardless of land ownership." Notice of 12-month petition finding, 80 Fed. Reg. 59858, 59883 (Oct. 2, 2015).

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Comment Number: 0002942\_Harbine-I

Organization I: Earthjustice

Commenter I: Jenny Harbine

Comment Excerpt Text:

V. BLM MUST COMPLY WITH ENDANGERED SPECIES ACT CONSULTATION REQUIREMENTS FOR THE FEDERAL COAL PROGRAM The BLM is obligated to conserve species listed under the Endangered Species Act ("ESA"), 16 U.S.C. § 1536. Under section 7 of the ESA, federal agencies must "insure that any action authorized, funded, or carried out by such agency ... is not likely to jeopardize the continued existence of any endangered species or threatened species or result in the destruction or adverse modification of habitat of such species which is determined ... to be critical." 16 U.S.C. § 1536(a)(2). 311 Because alternatives to be considered in the PEIS "may affect" threatened or endangered species and their critical habitat, 50 C.F.R. § 402.14(a), BLM is required to consult with the U.S. Fish and Wildlife Service and the National Marine Fisheries Service (together, "Services") under ESA section 7 to avoid adversely affecting these resources. Under ESA section 7, an agency undertaking an action determines, usually with the assistance of the Services, whether listed species or designated critical habitat exist in the area affected by the action. BLM has recognized the importance of engaging with the Services early in this process. 312 If the agency(s) identify resources protected by the ESA, they proceed to formal consultation over the proposed action unless it is determined that the potential effects of the action are insignificant, discountable or wholly beneficial to listed species and their habitat. Working with the Services, the action agency develops a Biological Assessment that describes how the proposed action may affect threatened and endangered species and critical habitat. The Services (either or both, as appropriate) evaluate the effects of the proposed action on listed species and critical habitat, which is communicated in a Biological Opinion ("BO"). The BO may identify reasonable and prudent alternatives for the proposed action that would avoid jeopardizing species listed under the ESA. 311 See also BLM Manual 6840.IE3 (committed to "ensuring that actions are not likely to jeopardize the continued existence of any endangered species or threatened species or destroy or adversely modify designated critical habitat"). 312 BLM Manual 6840.IF. 81 The threshold for effects that trigger

ESA section 7 consultation is low, and is met when an action “may affect” threatened or endangered species and their critical habitat. 50 C.F.R. § 402.14(a); see also *Western Watershed Project v. Kraayenbrink*, 632 F.3d 472, 498 (9th Cir. 2011) (citation omitted) (describing “may affect” threshold); *Pacific Rivers Council v. Shepard*, No. 03:11-CV-00442-HU, 2011 WL 7562961, at \*9 (D. Or. Sept. 29, 2011), report and recommendation adopted as modified, No. 03:11-CV-442-HU, 2012 WL 950032 (D. Or. Mar. 20, 2012)) (affirming “how low the threshold is for triggering such consultation”). The “may affect” standard is broadly interpreted, and includes proposed actions that may indirectly affect listed species, and regardless of whether a species or habitat occurs on BLM lands. 313 ESA regulations define “effects of the action” as: Effects of the action refers to the direct and indirect effects of an action on the species or critical habitat, together with the effects of other activities that are interrelated or interdependent with that action, that will be added to the environmental baseline. The environmental baseline includes the past and present impacts of all Federal, State, or private actions and other human activities in the action area, the anticipated impacts of all proposed Federal projects in the action area that have already undergone formal or early section 7 consultation, and the impact of State or private actions which are contemporaneous with the consultation in process. Indirect effects are those that are caused by the proposed action and are later in time, but still are reasonably certain to occur. Interrelated actions are those that are part of a larger action and depend on the larger action for their justification. Interdependent actions are those that have no independent utility apart from the action under consideration. 50 C.F.R. § 402.02. The Services have clarified that “[a]ny possible effect, whether beneficial, benign, adverse or of an undetermined character, triggers the formal consultation requirement.” The federal coal program meets these criteria for triggering ESA section 7 consultation.

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Comment Number: 0002942\_Harbine-41

Organization I: Earthjustice

Commenter I: Jenny Harbine

Other Sections: I

Comment Excerpt Text:

Impacts to Wildlife NEPA requires BLM’s PEIS to identify and evaluate all impacts of the federal coal leasing program on wildlife. Specifically, this includes not only the direct impacts of coal 150 See National Climate Assessment and Development Advisory Committee, *CLIMATE CHANGE IMPACTS IN THE UNITED STATES* at 83. 151 U.S. Environmental Protection Agency, *Climate Change Indicators in the United States – Ocean Acidity*, at <https://www3.epa.gov/climatechange/science/indicators/oceans/acidity.html> (last visited July 21, 2016); National Oceanic and Atmospheric Administration, *Sea Surface Temperature (SST) Contour Charts*, at <http://www.ospo.noaa.gov/Products/ocean/sst/contour/> (last visited July 21, 2016); Government Accountability Office, *Climate Change*, at 7. 152 PMEL Carbon Program, *What is Ocean Acidification?*, at <http://www.pmel.noaa.gov/CO2/story/What+is+Ocean+Acidification%3F> (last visited July 21, 2016); National Climate Assessment and Development Advisory Committee, *CLIMATE CHANGE IMPACTS IN THE UNITED STATES* at 583. 153 National Climate Assessment and Development Advisory Committee, *CLIMATE CHANGE IMPACTS IN THE UNITED STATES* at 20 154 *Id.* at 48-49. 155 National Oceanic and Atmospheric Administration, *Sanctuaries and Climate Change*, at <http://sanctuaries.noaa.gov/management/climate/welcome.html> (last visited July 21, 2016). 156 See *id.* 157 National Climate Assessment and Development Advisory Committee, *CLIMATE CHANGE IMPACTS IN THE UNITED STATES*, at 70. 46 leasing and coal mining on public land, but also the indirect and cumulative impacts to wildlife due to transporting and burning the coal. BLM summarized many of the direct impacts of surface coal mining on wildlife in its Final EIS for the Powder River Basin Wright Area lease in 2010: They include road kills by mine-related traffic, direct losses of less mobile wildlife species, restrictions on wildlife movement created by fences, spoil piles and pits, displacement of wildlife from active mining areas (including abandonment of nests or nesting and breeding habitat for birds), increased competition between animals in areas adjacent to mining operations, and increased noise, dust, and human presence. Habitat for aquatic species would also be lost during mining operations. Displaced animals [may] find equally suitable habitat that is not occupied by other animals, or occupy poorer quality habitat than that from which they were displaced. 158 These same direct impacts can be

expected for all surface coal mines on federal land and must be analyzed in the PEIS. BLM has recognized similar impacts post-mining, including an overall “decrease in carrying capacity for some species and a decrease in vegetation diversity.”<sup>159</sup>

However, in the past BLM excluded consideration of a host of indirect impacts that are the reasonably foreseeable consequences of federal coal leasing. These include:

Impacts to wildlife from transportation infrastructure, primarily railroads, used to transport federal coal either to power plants in the U.S. or to export facilities. Impacts to wildlife caused by the ports – existing and proposed – that could receive shipments of federal coal for export.

Increased dust along the entire route of the railroad, as well as the route of connecting railroads that will experience more train traffic made up largely of coal trains.

Increased air and water pollution resulting from increased shipments of and mining of coal resulting from activities from the mine site to the port.

Increased GHG emissions from enabling the extraction and combustion of federal coal. The PEIS must examine these impacts wherever they may occur. <sup>158</sup> Bureau of Land Management, Wright Area FEIS, at ES-52 (July 2010); see also Alton Coal Tract Lease by Application Draft Environmental Impact Statement, at ES-14 (“Direct and indirect impacts from either action alternative would include habitat fragmentation, alteration, loss, and displacement due to surface disturbance, noise, ground vibration, night lighting, and increased risk of vehicle mortality associated with coal-haul trucks.”). <sup>159</sup> Bureau of Land Management, Wright Area FEIS, at ES-52. <sup>47</sup> The PEIS must also examine the impacts the federal coal leasing program has on wildlife in the context of climate change, which exacerbates many of the stressors on wildlife that coal mining directly causes. Climate change poses a direct threat to wildlife and communities. If carbon pollution continues unabated, scientists predict that higher temperatures will lead to the extinction of 50% of species around the globe. <sup>160</sup> With a warming world come habitat shifts, and many wildlife species are finding themselves without suitable habitat to occupy. The latest National Climate Assessment report shows that wildlife and communities are already feeling the impacts of climate with rising seas, heavier precipitation, changes in growing seasons, fewer cold snaps, decreased snow pack, increased incidence of pests, devastating wildfires and droughts, and other significant impacts. <sup>161</sup> Plant and animal species are shifting their entire ranges in search of colder locales, in many cases two-to-three-times faster than scientists anticipated. <sup>162</sup> Due to irreversible changes, cold-water fish such as trout are already disappearing from streams, big game populations such as moose are being pushed out of their historic range, and certain wetland habitats are vanishing. <sup>163</sup> In the Western United States, climate change-related stresses, including severe droughts, have driven mule deer population declines. <sup>164</sup> Vulnerability of these and other large ungulates are expected to increase as “human development causes additional impacts to wildlife habitat” and “these populations are forced to exist on less habitat or lower quality habitat [than] has existed in the past.”<sup>165</sup> Of course, the impacts of climate change are not limited to wildlife in the interior West. Among other problems facing coastal areas, rising sea levels increase salinity intrusion into freshwater ecosystems, such as the Everglades, which provide important habitat for birds, fish, and other wildlife. Freshwater wetlands that offer important foraging habitat for wading birds <sup>160</sup> International Panel on Climate Change, 4th Assessment Report, available at [http://www.ipcc.ch/pdf/assessment-report/ar4/syr/ar4\\_syr.pdf](http://www.ipcc.ch/pdf/assessment-report/ar4/syr/ar4_syr.pdf) (last visited July 28, 2016) <sup>161</sup> See National Climate Assessment and Development Advisory Committee, CLIMATE CHANGE IMPACTS IN THE UNITED STATES at 7. <sup>162</sup> National Wildlife Federation, *Wildlife in a Warming World* (2013), available at [http://www.nwf.org/~media/PDFs/Global-Warming/Reports/NWF\\_Wildlife-Warming-World\\_Report\\_web.aspx](http://www.nwf.org/~media/PDFs/Global-Warming/Reports/NWF_Wildlife-Warming-World_Report_web.aspx) (last visited July 27, 2016). <sup>163</sup> Lisa Eby, et al., Evidence of Climate-Induced Range Contractions in Bull Trout *Salvelinus confluentus* in a Rocky Mountain Watershed U.S.A., *PLOS ONE* (2014), available at <http://www.plosone.org/article/info%3Adoi%2F10.1371%2Fjournal.pone.0098812> (last visited July 28, 2016). <sup>164</sup> Clay Schwartz, Studies, states seek to halt mule deer population decline, *BILLINGS GAZETTE*, October 17, 2013 available at [http://billingsgazette.com/lifestyles/recreation/studies-states-seek-to-halt-mule-deer-population-decline/article\\_e6a17e99-01dd-50ed-9edb-f39c976d9db3.html](http://billingsgazette.com/lifestyles/recreation/studies-states-seek-to-halt-mule-deer-population-decline/article_e6a17e99-01dd-50ed-9edb-f39c976d9db3.html) (last visited July 28, 2016); Ellenberger and Byrne (2015) (Exhibit ) at 3. <sup>165</sup> Ellenberger and Byrne (2015) (Ex. 20) at 3. <sup>48</sup> and other wildlife may decrease. <sup>166</sup> In the Chugach National Forest in Alaska, Forest Service researchers predict that “changes in climate could result in salmon that are smaller and face more to their survival, according to Forest Service researchers. These projected

climate impacts may affect various users, including residents in the region who rely on snow-based tourism and salmon for their livelihoods and Alaska Native residents in the region who rely on forest resources for subsistence hunting, fishing, trapping, and gathering.”<sup>167</sup> Accordingly, all of the direct consequences to wildlife of mining federal coal—including habitat loss, displacement, and restrictions on movement, among others—will be worsened as a result of climate change. In light of the direct devastation coal mining has on lands, water, and wildlife near mined areas, and the indirect but equally destructive impacts to these resources due to greenhouse gas emissions from burning federal coal, the PEIS must examine whether federal coal leasing may be accomplished in a manner consistent with BLM’s mandate to protect these resources for future generations.

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Comment Number: 0002942\_Harbine-53

Organization I: Earthjustice

Commenter I: Jenny Harbine

Comment Excerpt Text:

Impacts to Public Lands and Land Uses The direct and indirect harm to public lands and land uses from the federal coal leasing program are substantial, unavoidable, unnecessary, undue, and unacceptable under FLPMA, which governs the Department’s management of federal coal resources. Between 5 and 8.4 million acres have been disturbed by surface mining in the United States. <sup>115</sup> Coal mining companies currently have control of federal coal underlying nearly half a million acres of public and private lands, <sup>116</sup> approximately 80 percent of which will be strip-mined. <sup>117</sup> These lands are closed to the public—and all non-mining uses—during active mining. Barred public uses include outdoor recreation, hunting, grazing and agriculture. While some mined land may be reclaimed, some of it is permanently altered and rendered unsuitable for pre-mine uses. <sup>118</sup> In addition to these direct impacts to lands from coal mining, greenhouse gas emissions from the burning of coal and consequential climate disruption wreak havoc on ecosystems, not just within the mining area but on all lands. The federal government manages approximately 30 <sup>115</sup> Sourcewatch, The footprint of coal, available at [://www.sourcewatch.org/index.php/The\\_footprint\\_of\\_coal#How\\_much\\_land\\_has\\_been\\_disturbed\\_by\\_all\\_surface\\_mining\\_in\\_the\\_United\\_States](http://www.sourcewatch.org/index.php/The_footprint_of_coal#How_much_land_has_been_disturbed_by_all_surface_mining_in_the_United_States) (last visited July 19, 2016). <sup>116</sup> Bureau of Land Management., Total Federal Coal Leases in Effect, Total Acres Under Lease, and Lease Sales by Fiscal Year Since 1990, available at [http://www.blm.gov/wo/st/en/prog/energy/coal\\_and\\_non-energy/coal\\_lease\\_table.html](http://www.blm.gov/wo/st/en/prog/energy/coal_and_non-energy/coal_lease_table.html) (last visited July 19, 2016) (306 federal coal leases covering 482,691 acres in 2015). <sup>117</sup> White House Fair Return Report, at 22. <sup>118</sup> See *infra* § II.E, detailing unmet reclamation obligations. 41 percent—650 million acres—of our nation’s land along with offshore marine resources. <sup>119</sup> On federal public lands, including lands managed by BLM, the Forest Service, Fish and Wildlife Service, and National Park Service, the effects of climate change are already being felt and will only increase as our climate continues to respond to growing concentrations of greenhouse gases in our atmosphere. <sup>120</sup> Climate change, spurred by fossil fuel combustion including burning of federal coal, catalyzes or exacerbates many harms to lands across the country, including federal public lands. For example, a combination of climate change factors including drought and high temperatures has set off a recent historical trend of more frequent and larger wildfires, a trajectory that is expected to continue as the impacts of climate change become more severe. <sup>121</sup> The impacts of more wildfires are not limited to the physical destruction of the fires themselves. Wildfires may also cause respiratory difficulties and lung disease in humans, and the ash from the fire may adversely affect water supplies. <sup>122</sup> Additionally forest fires can be worsened by the presence of increased insect populations and their adverse effects on timber. These insect populations are expected to grow in the areas most at risk for fire, particularly high-altitude forests. <sup>123</sup> In fact, climate change is expected to cause changes to insect populations in various regions of the country. <sup>124</sup> For example, milder winters will result in higher populations of less frost-resistance <sup>119</sup> U.S. Government Accountability Office, GAO-13-253, Climate Change: Various Adaptation Efforts Are Under Way at Key Natural Resources Management Agencies, at 2 (2013), <http://www.gao.gov/assets/660/654991.pdf>, attached as Ex. 31. <sup>120</sup> The Interior Department’s website acknowledges that “[c]limate change affects every corner of the American continent. It is making droughts drier and longer, floods more dangerous and hurricanes more severe,” and that “[t]he impacts of climate change are forcing [the Interior Department] to change how we manage these resources. Climate change may dramatically affect water supplies in certain watersheds, impact coastal wetlands and barrier islands, cause relocation of and



stress on wildlife, increase wildland fires, further spread invasive species, and more.” See <https://www.doi.gov/climate> (last visited July 27, 2016). 121 The National Science and Technology Council, Committee on Environment, Natural Resources, and Sustainability Subcommittee on Disaster Reduction, Wildland Fire Science and Technology Task Force Final Report, November 2015, 6; U.S. Government Accountability Office, *Climate Change - Agencies Should Develop Guidance for Addressing the Effects on Federal Land and Water Resources*, August 2007, 5-6. As climate change creates longer fire seasons, the damages caused by wildfires also increase. A. L. Westerling, H.G. Hidalgo, D. R. Cayan, & T. W. Swetnam, Warming and Earlier Spring Increase Western U.S. Forest Wildfire Activity, 313-5789 *SCIENCE*, 940-943 (2006). 122 See U.S. Forest Service, *Forests to Faucets*, at [http://www.fs.fed.us/ecosystemservices/FS\\_Efforts/forests2faucets.shtml](http://www.fs.fed.us/ecosystemservices/FS_Efforts/forests2faucets.shtml) (last visited July 21, 2016). 123 J. M. Schmid & D. L. Parker, *Fire and Forest Insect Pests*, at [http://www.fs.fed.us/rm/pubs\\_rm/rm\\_gtr191/rm\\_gtr191\\_232\\_233.pdf](http://www.fs.fed.us/rm/pubs_rm/rm_gtr191/rm_gtr191_232_233.pdf) (last visited July 21, 2016); E. E. Strange & M. P. Ayres, *Climate Change Impacts: Insects*, 11-10 *ELS* (2010). 124 See U.S. Government Accountability Office, *Climate Change*, at 6. 42 species, which in turn can negatively affect local vegetation, agriculture, and even other insect populations that usually might rise during the spring in areas traditionally prone to colder winters. 125 Climate change has also been linked to insect migrations, which can cause issues with invasive populations as they expand beyond their historical ranges due to climatological changes. 126 These migrations can be detrimental to local vegetation, which can in turn affect entire ecological systems. 127 Climate disruption’s effects on vegetation are not limited to the effects of changing insect populations. Changing temperatures are expected to increase the range of many invasive weed species across a variety of landscapes. 128 As one example, invasive weeds from California have been discovered advancing into northern Nevada as temperatures have increased. 129 In the Eastern U.S., some invasive species are projected to migrate all the way from Pennsylvania to Maine to by 2084 under current climatological patterns. 130 As these invasive plant species spread they will cause millions, if not billions, of dollars in damage and may outcompete to destroy local vegetation and crops. 131 As these processes unfold and ecosystems are altered, vulnerable species will face an increased risk of extinction as even minor changes to their habitat might offset population growth. 132 These types of changes can also have adverse effects on shorelines, as critical vegetation is reduced and natural barriers to erosion are weakened, dilemmas that are only further compounded by climate change’s impact on rising sea levels. 133 125 J.S. Bale, G. J. Masters, et al., *Herbivory in Global Climate Change Research: Direct Effects of Rising Temperature on Insect Herbivores*, 8-1 *GLOBAL CHANGE BIOLOGY*, 1-16 (2002). 126 C. Parmesan, *Ecological and Evolutionary Responses to Recent Climate Change*, 37-1 *ANNUAL REVIEW OF ECOLOGY, EVOLUTION, AND SYSTEMATICS* (2006); Logan & Powell, *Ghost Forests, Global Warming, and the Mountain Pine Beetle*, 47 *AM ENTOMOL*, 160-173 (2001). 127 See S. Mainka & G. Howard, *Climate Change and Invasive Species: Double Jeopardy*, 5 *INTEGRATIVE ZOOLOGY*, 102-111 (2010). 128 A. McDonald, S. Riha, et al., *Climate Change and the Geography of Weed Damage: Analysis of U.. Maize Systems Suggests the Potential for Significant Range Transformations*, 130 *AGRICULTURE, ECOSYSTEMS, AND ENVIRONMENT*, 131-140 (2009); Government Accountability Office, *Climate Change*, at 6. 129 . Bradley, M. Oppenheimer, et al., *Climate change and plant invasions: restoration opportunities ahead?*, 15-6 *GLOBAL CHANGE BIOLOGY*, 1511-1521 (2009). 130 See A. McDonald, *Climate Change and the Geography of Weed Damage*. 131 See U.S. Fish and Wildlife Service, *The Cost of Invasive Species*, at <https://www.fws.gov/verobeach/PythonPDF/CostofInvasivesFactSheet.pdf> (last visited July 21, 2016). 132 T. A. Crowl, et al., *The Spread of Invasive Species and Infectious Disease as Drives of Ecosystem Change*, at 6-5 *FRONTIERS IN ECOLOGY AND THE ENVIRONMENT*, 238-246 (2008). 133 Rusty Feagin, Douglas Sherman, & William Grant, *Coastal Erosion, Global Sea-level Rise, and the Loss of Sand Dune Plant Habitats*, at 3-7 *FRONTIERS IN ECOLOGY AND THE ENVIRONMENT* (2005). 43 The true problem with these and other harmful impacts to land from climate change is that they are not finite; as climate change worsens, so too will the adverse impacts to the land and its fauna. As the GAO recognized, climate change “poses significant financial risks to the federal government ... in its role as the manager of large amounts of land and other natural resources.” 134 As such, proactive and imminent actions are required in order to avoid, reduce, and/or mitigate long-term damage to land resources. 135 Already, federal land management agencies have begun developing strategies to identify, monitor, and adapt to resource changes brought about by climate disruption. 136 In

evaluating needed reforms to the federal coal leasing program, the PEIS must examine these impacts from climate change on federal public lands and land management, which continued coal leasing will only worsen.

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Comment Number: 002501\_Ring\_20160728-2

Organization I:Climate911

Commenter I:Wendy Ring

Comment Excerpt Text:

A failure to protect our public lands.

Our public lands are already heavily impacted by drought, wildfire, pine bark beetles, and elevated temperatures resulting from climate change. Increasing emissions from coal would accelerate these adverse impacts. This is incompatible with the BLM's mission "to sustain the health, diversity, and productivity of America's public lands for the use and enjoyment of present and future generations."

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Comment Number: 003057\_Angerhofer\_1072016-1

Commenter I:Cindy Angerhoffer

Comment Excerpt Text:

Mountaintop removal for coal destroys crucial habitat for migratory songbirds and other animals and blights some of the most beautiful areas of the country

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Comment Number: 003070\_Frazier\_1072016-1

Commenter I:Adrian Frazier

Comment Excerpt Text:

Plants take in as much oxygen as they put out through cellular metabolism. Unfortunately because of ocean acidification we have killed off half of the total population of photo-plankton on earth and if we lose the other half due to negligence the human race as well as almost every other animal on earth will suffocate (more like falling asleep and not waking up) due to a lack of oxygen

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Comment Number: Dvorak\_DvorakRaftingFishing\_20160623-4

Organization I:Dvorak Rafting and Fishing Expeditions

Commenter I:Bill Dvorak

Comment Excerpt Text:

Wildlife and fish need it [bonding] to be funded as most coal extraction takes place on prairies, ranchland, and valuable wildlife habitat

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Comment Number: WO\_CoalPEIS\_0003062\_Hoy\_G-1

Commenter I:Judy Hoy

Comment Excerpt Text:

Antelope and mule deer populations are in decline because of the destruction of their habitat. Also, many ordinary citizens depend on the meat of these animals harvested during the season to feed their families. Coal mining and damage that it does to the habitat necessary for these wild ungulates to live is very detrimental to everyone except mining companies.

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Comment Number: 0000725\_Kirchner\_NWF-2

Organization I:National Wildlife Federation

Commenter I:Jane Kirchner

Comment Excerpt Text:

The presence of acid-forming materials exposed as a result of mining can affect aquatic wildlife by eliminating

habitat and by causing direct destruction of some species. Lesser concentrations can suppress productivity, growth rate and reproduction of many aquatic species. Acids, dilute concentrations of heavy metals, and high alkalinity can cause severe damage to wildlife in some areas. The duration of acidic-waste pollution can be long; estimates of the time required to leach exposed acidic materials in the Eastern United States range from 800 to 3,000 years. This is way beyond a business life-cycle calculation.

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Comment Number: 0000725\_Kirchner\_NWF-3

Organization I: National Wildlife Federation

Commenter I: Jane Kirchner

Comment Excerpt Text:

Mule deer, pronghorn antelope, sage grouse, elk and hundreds of bird species including eagles make their home in the Powder River Basin of Wyoming and Montana. The National Wildlife Federation and Natural Resources Defense Council commissioned a study of the health of wildlife in this major coal producing region. This region is also the location of the nation's largest surface coal mine. More than 70% of the mule deer and pronghorn herds evaluated were found to be unhealthy. Notably, of the mule deer herds evaluated, the only one that was found to be healthy was the one living in an area without any energy development within its boundaries

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Comment Number: 0000864\_Szollosi-I

Organization I: National Wildlife Federation

Commenter I: Frank Szollosi

Comment Excerpt Text:

There is increased pressure on wildlife and habitat, especially from fossil fuel extraction. According to your own data, BLM data, in 2010, 2011, the eastern state's office leased 460,000 acres of public land for fossil fuel extraction which was up 71 percent from previous five years.

## Issue 14 - Other Resource Impacts

Total Number of Submissions: 28

Total Number of Comments: 33

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Comment Number: 00000186\_GELLERT\_20160517-4

Commenter I: Paul Gellert

Comment Excerpt Text:

We need to consider the ecosystem risks at local, regional, and broader, even global, scales.

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Comment Number: 00000298\_SHAKESPEAR\_20160519-1

Organization I: Canyon Fuel Company Sufco Mine

Commenter I: Wyatt Shakespear

Comment Excerpt Text:

coal mining provides responsible stewardship of our federal lands, benefiting wildlife grazing as well as other stakeholders

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Comment Number: 00000339\_Newman\_20160519-1

Commenter I: Newman

Comment Excerpt Text:

As federal leases become unaffordable, companies are going to relocate to state and private leases, in which they are mostly eastern, which have a higher sulfur, higher ash, and lower BTU

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Comment Number: 00000343 \_ Salvato \_20160519-1

Commenter I: Bobbie Bryant-Salvato

Comment Excerpt Text:

Bryce Canyon is known for its beautiful night skies and it is a night skies sanctuary. BLM admits there will be a detrimental impact on these skies from increased lighting and air pollution at this 24- hour mine operation, which will be located ten miles from Bryce.

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Comment Number: 00000356 \_ Provost \_20160519-6

Commenter I: Craig Provost

Comment Excerpt Text:

It's also important to note that many of the properties being considered are so close or adjacent to our beautiful national parks, which are the source of millions of dollars to the tourism industry of our state.

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Comment Number: 0000071 \_Quinn\_ 20160517-1

Organization I: Powder River Basin Resource Council

Commenter I: Casey Quinn

Comment Excerpt Text:

An anchor of the regional economy, agricultural operations like L.J. are plagued by uncertainty over the longterm availability of adequate grass and water. Continued mine expansions in the near reclamation of lands in the State of Wyoming magnify this uncertainty. Less than one percent of disturbed acres have achieved final reclamation and bond release. One of the breakdowns in the implementation of our surface mining laws is the failure to force these companies to release mine lands and return them to agriculture production. L.J. hopes the Department of Interior will consider these issues and develop solutions to them during the scope of the programmatic coal review.

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Comment Number: 0000502 \_Rourke\_ 20160517-1

Commenter I: Chuck Rourke

Comment Excerpt Text:

Reclaimed lands are producing more pound of forage per acre than native which translates to less acres per animal units and more pounds of livestock produced

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Comment Number: 0000611 \_Leahy\_ NMWF-1

Organization I: New Mexico Wildlife Federation

Commenter I: Todd Leahy

Comment Excerpt Text:

Coal combustion, without corresponding sequestration technologies, destabilizes and degrades the conditions that make other uses possible. Given the long-term atmospheric impact of carbon dioxide, the effects of mining public coal today will affect public lands for centuries; damaging recreation opportunities, water supplies, wildfire resilience, and even other extractive uses such as timber and grazing. A disparity exists between the high, long-term costs of coal usage and the low, short-term windfalls from sale. The BLM must consider this disparity when making its decisions.

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Comment Number: 0001109\_MADSON\_MtnPact\_20160621-2

Organization I: The Mountain Pact

Commenter I: Diana Madson

Comment Excerpt Text:

Coal production is on the decline in the U.S. and it's time to catalyze the transition toward more sustainable and diverse. Economies. We need to empower our economy to invest in a new path of cleaner, renewable energy. And I thank the Obama Administration for making the \$75 million available in grants for economic and workforce development in communities hit by the coal downturn.

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Comment Number: 0001127-1

Organization I: Association of Northwest Steelheaders

Commenter I: Bob Rees

Comment Excerpt Text:

And when you're taking into account all the different environmental impacts that happen with coal consumption and coal mining, I urge you to better understand and take into account the effects of ocean acidification. I first learned about the effects of ocean acidification from Oregon's cleanest estuary, Netarts Bay, where my neighbors had an oyster hatchery, yet they witnessed an 80 percent mortality for their juvenile oysters because at Oregon's cleanest estuary was receiving the Pacific Ocean water that was highly acidic and detrimental to their product.

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Comment Number: 0002225\_Wheeler\_20160519-4

Commenter I: Ray Wheeler

Comment Excerpt Text:

Direct visual, dust and traffic effects on high value recreational areas such as Bryce Canyon National Park

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Comment Number: 0002225\_Wheeler\_20160519-6

Commenter I: Ray Wheeler

Comment Excerpt Text:

heavy adverse impacts on Highway 89 of 300 trucks a day, or a large coal truck every 7 minutes, on Highway 89, a major arterial access road to our "Golden Circle of national parks

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Comment Number: 0002436-6

Commenter I: Sharon St Joan

Comment Excerpt Text:

The mysterious "hoodoo" rock formations of Bryce Canyon lie just ten miles from the site, near Alton, being proposed for more coal mining. Visitors to Bryce Canyon would no longer be able to look out over a clear vista of hills stretching all the way to the horizon, but instead would see heavy machinery at work destroying the lands below them.

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Comment Number: 0002436-7

Commenter I: Sharon St Joan

Comment Excerpt Text:

In the state of Utah, tourism brings in far more revenue and creates far more jobs than does the coal industry. If we preserve the natural environment, these areas will continue to be places of beauty for tourists and visitors who are drawn here from all over the world, on into the future. If these areas are ruined and destroyed, as is now happening, this will simply lead us to a dead-end, with no future. If we rely on a death-dealing industry, such as coal, instead of a life-sustaining industry such as tourism, then when the coal is gone, and when the coal

companies have all gone bankrupt, as is already beginning to happen, we will be left with nothing. There will then be no jobs, no income, and no wild lands either

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Comment Number: 0002444\_Rait\_20160727-3

Organization I: The Pew Charitable Trusts

Commenter I: Ken Rait

Other Sections: | | |

Comment Excerpt Text:

In conducting the Programmatic Environmental Impact Statement (PEIS) of the federal coal leasing program, the Pew Charitable Trusts recommends that BLM consider the potential impacts new policy direction will have on the agency's mission to manage the lands with wilderness characteristics as part of BLM's multiple use mission. Pristine BLM lands provide a range of uses and benefits in addition to their value as settings for solitude or primitive and unconfined recreation. These lands are some of our nation's most sought after hunting and fishing grounds, most popular mountain biking trails, home to an extensive network of ungulate migration corridors, essential habitat for imperiled species like the greater sage grouse and habitat for 450 listed species. The protection of these values deserves consideration when reforming the federal coal leasing program on BLM lands. Recreation on natural BLM-managed lands has a significant positive impact on rural economies across the West. A study conducted by the independent firm ECONorthwest and commissioned by The Pew Charitable Trusts recently highlighted this value, finding non-motorized recreation on the 246 million acres of our nation's land overseen by the Bureau of Land Management supports 25,000 jobs and generates \$2.8 billion for the U.S. economy. (See: <http://www.pewtrusts.org/en/research-and-analysis/analysis/2016/03/31/the-economic-value-ofquiet-recreation-on-blm-lands>)

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Comment Number: 0002461\_breen\_20160728-4

Organization I: The Wilderness Society

Commenter I: Katie Breen

Comment Excerpt Text:

Coal reform is vital to our land use and stewardship. Americans are increasingly valuing public lands for access to recreation, family time and enjoyment. Studies show time and again the number of visitors to our public lands is steadily increasing. Better managing our coal program ensures protection for the wild places we recreate.

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Comment Number: 0002467\_Fettus\_20160728-20

Organization I: Natural Resources Defense Council

Commenter I: Geoffrey Fettus

Comment Excerpt Text:

While the majority of federal coal is developed from large surface mines, federal coal is also mined underground. Underground mining creates different impacts, including first and foremost subsidence of surface lands after mining occurs. These cracks can pose a safety hazard to surface users, from small cracks that can break the legs of horses, cattle, and wildlife that step into them, to larger cracks that can render surface lands uncrossable for some distance. Some ranchers in Montana have measured subsidence cracks that are up to 15 feet wide. These issues can be compounded when cracking occurs on steep slopes, which increases the risk of slope failure, rockfalls, and landslides. In addition, subsidence cracks can damage springs and streams, draining surface water resources that are beneficial to agriculture and wildlife. The PEIS should analyze subsidence problems on previously leased acreage and disclose impacts.

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Comment Number: 0002467\_Fettus\_20160728-40

Organization I: Natural Resources Defense Council

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Commenter I: Geoffrey Fettus

Comment Excerpt Text:

In addition to climate change impacts, federal coal leasing and subsequent mining creates significant – and in many cases irreversible – impacts to air and water resources, wildlife habitat, and ecosystems in the areas where mining occurs. Federal coal is mined through the large strip mines of the Powder River Basin, as well as underground and longwall mines in other parts of the Western U.S. All coal mines create impacts, which must be addressed in the PEIS.

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Comment Number: 0002467\_Fettus\_20160728-8

Organization I: Natural Resources Defense Council

Commenter I: Geoffrey Fettus

Comment Excerpt Text:

Subsidence: Underground mines that exploit federal coal have caused land subsidence, impacting surface owners and adjacent landowners. For instance, in the Bull Mountains of Montana, Signal Peak Energy's longwall mine, has caused subsidence cracks over a quarter-mile long.

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Comment Number: 0002471\_Reed\_20160728-10

Organization I: High Country Conservation Advocates

Commenter I: Matt Reed

Comment Excerpt Text:

In addition to public lands forests dying from beetle proliferation and other stressors, wildfires are a growing factor on the landscape, affecting ecology, communities and budgets. The U.S. Forest Service is spending more than 50 percent of its budget to suppress the nation's wildfires.<sup>19</sup> Simultaneously, more than 40 percent of our nation's coal is being mined on public lands. The continued leasing of federal lands for coal will only continue to have disastrous impacts in the form of wildfires and budget problems. Over the past 100 years, southwestern Colorado temperatures have increased, and modeled climate projections for the region include warmer and longer frost-free summers, snowline moving up in elevation, earlier snowmelt, and consequently, a longer fire season.<sup>20</sup> Fire has always been a reality on the western landscape, but a changing climate is exacerbating the situation.

(19) See <http://www.fs.fed.us/news/releases/forest-service-report-rising-firefighting-costs-raises-alarms> (last visited July 28, 2016).

(20) Supra note 7, at 2.

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Comment Number: 0002477\_Saul\_20160728\_CBD\_UPHE-6

Organization I: Center for Biological Diversity

Commenter I: Michael Saul

Other Sections: 6

Comment Excerpt Text:

Impacts to energy, infrastructure, and settlements: "Changes in extreme weather events threaten energy, transportation, and water resource infrastructure. Vulnerabilities of industry, infrastructure, and settlements to climate change are generally greater in high-risk locations, particularly coastal and riverine areas, and areas whose economies are closely linked with climate-sensitive resources. Climate change will likely interact with and possibly exacerbate ongoing environmental change and environmental pressures in settlements, particularly in Alaska where indigenous communities are facing major environmental and cultural impacts on their historic lifestyles."<sup>24</sup>

(24) Final Endangerment Finding at 66,498

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Comment Number: 0002480\_Culver\_20160728\_TWS-14

Organization I: The Wilderness Society

Commenter I: Nada Culver

Comment Excerpt Text:

The PEIS should fully consider LWCs and the potential impact of the federal coal program on these lands, including requiring updated inventory and evaluation of opportunities for protection of LWC prior to leasing. The important values of lands with wilderness characteristics s are generally not present on other lands. The BLM should ensure the federal coal mining program seeks to protect these values.

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Comment Number: 0002480\_Culver\_20160728\_TWS-65

Organization I: The Wilderness Society

Commenter I: Nada Culver

Other Sections: 2

Comment Excerpt Text:

Master Leasing Plans are created at a smaller landscape level to manage oil and gas development, focusing on areas where there are likely impacts to and potential conflicts with other resources. See, Handbook H-1624-I (Planning for Fluid Mineral Resources), Chapter V. MLPs incorporate a number of tools to reduce conflicts and guide development to appropriate areas that could be incorporated into the Coal PEIS, including:

- Identifies resource condition objectives to provide standards for subsequent development and reclamation; these may apply to management for air quality, wildlife habitat, riparian areas. H-1624-I.V.C.1. Setting standards prior to approving coal leasing and development will enable BLM to identify and address potential impacts.
- Incorporates resource protection measures to reduce environmental impacts and help achieve resource condition objectives. These measures may include closing areas to leasing, phased leasing, or other lease stipulations or conditions of approval restricting the timing, location, or method of operations; or conditions of approval. H-1624-I.V.C.2. In practice, these measures have included prioritizing mineral leasing in areas with high development potential and minimal resource conflicts, and using phased leasing and development, which can be accomplished through identifying areas to be leased in order and by using limitations on the amount of cumulative surface disturbance that can occur and requiring reclamation prior to additional development. These types of approaches could be used as part of managing both leasing and development in the Coal PEIS.
- Extends to BLM surface and split estate lands. See, Instruction Memorandum 2010-117. The Coal PEIS can and should address leasing and development of federal coal resources including where BLM may not manage the surface.
- Extends to both new and existing leases. H-1624-I.V.C.2. The Coal PEIS can and should incorporate protective measures, including mitigation, which will apply to new leases and approvals of development on existing leases.

Most of these key concepts are embedded in coal regulations and policy already, including the unsuitability criteria, multiple use considerations, special stipulations for leases, and “due regard” language in standard lease terms and the regional leasing framework.

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Comment Number: 0002484\_Ross\_20160728\_PLS-2

Organization I: Public Land Solutions

Commenter I: Katie Ross

Comment Excerpt Text:

The end result of this review should contain a strong standard to ensure that any disturbance to recreation areas is minimized to the greatest extent possible and that operators continuously improve the effectiveness of environmental mitigation standards.



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Comment Number: 0002493\_Mead\_20160728\_GovWY-51

Organization I: Office of Governor Matthew H. Mead

Commenter I: MATTHEW H. MEAD

Comment Excerpt Text:

Agriculture is Wyoming's third largest economic driver and important to our custom and culture. Loss of forage during mining and early stages of reclamation (when grazing is not permitted) can negatively affect livestock operations. Reclamation in accordance with Wyoming standards however generally leaves agricultural landscapes in a more productive state post-mining. The State recommends that livestock grazing be considered, including any effects that may result from mining and associated operations throughout the coal mining lifecycle- mining to post-mine life.

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Comment Number: 0002505\_Brooke\_20160729-4

Organization I: Black Warrior River Keeper

Commenter I: Nelson Brooke

Comment Excerpt Text:

In addition to our reservations about how the BLM Federal Coal Leasing Program handled the recent lease to Best Coal Inc. for Narley Mine No. 3, Black Warrior Riverkeeper has some additional concerns about the program's impact throughout the state of Alabama. While we were unable to obtain any detailed maps of federal coal holdings in Alabama from the regional office, we have serious concerns about the potential for coal being leased in or near our National Forests. We call on the BLM to forbid leases in or near Bankhead National Forest – home of the beloved Sipsey Wilderness, and in or near the Oakmulgee District of the Talladega National Forest. Both of these public lands are loved and used by Alabamians and visitors, and they need to remain wild places, without the scars of a coal mine on the natural environment, Alabama's rich cultural heritage, and local communities.

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Comment Number: 0003087\_Stewart\_H\_06182016-1

Organization I: Friends of the Earth

Commenter I: Mary Stewart

Comment Excerpt Text:

the damage to public lands by destroying the land for future use. In some cases, such as Bryce Canyon, the value for vacationers, the source of income for the community, depends on the view toward the horizon, not just the view a few feet ahead.

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Comment Number: 0020016\_Willims\_20160712-4

Commenter I: Raymond Willims

Comment Excerpt Text:

The BLM should study health impacts, land, air, and water impacts, etc.

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Comment Number: 0020019\_Lane\_20160712-1

Commenter I: Ian Lane

Comment Excerpt Text:

The BLM should look at the associated costs of leasing (mining) coal. They include effects on water, air, health.

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Comment Number: 0020057\_Hepler\_20160830-1

Commenter I: Winifred Hepler

Comment Excerpt Text:

I call attention to the terrific misconception that "clean coal" production (sequestering the carbon air pollution) is at all possible due to the fact that extraction remains a total disaster, considering the loss of trees, the water pollution from overburden filling of headwater streams, the erosion and possible slides from (following) the removal of roots, the leaching of toxins from disturbed land and the disappearance of wildlife habitat and the increase of greenhouse gas from the absence of forest cover.

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Comment Number: 003068\_Good\_1772016-1

Commenter I: Albert Good

Comment Excerpt Text:

Accessing bituminous coal, in particular mountaintop removal, involves severe ecological degradation, not to mention preventing other more sustainable uses of public land such as recreation, wildlife habitat, CO<sub>2</sub> absorption from trees, etc. Accessing anthracite coal is often not much better. Both lead to acid mine drainage, destruction of land for tailings disposal, visual pollution, degradation of infrastructure from heavy equipment and truck traffic, and acid mine drainage causing downgradient damage that may extend off of federally owned land. Not only that, the impact on the U.S. and global environment when the coal is burned is no longer viable on this planet. The CO<sub>2</sub> released clearly contributes to global warming, as well as immediate and long-term health effects on humans and other animals. A side effect of accessing coal is the venting of methane, exacerbating global warming

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Comment Number: 000001239\_RECKLE\_20160623-4

Commenter I: Eric Reckle

Commenter Type: Individual

Classification: Substantive

Comment Category:

Current Task: Analyze Assigned/Due:

Other Sections: 8.12

Comment Excerpt Text:

let's see addressed is the fact that any methane vent -- we have to watch out how we put those in, especially if above-ground area is a wilderness area. I think I'd look at that in terms of how we, how we put that vent in if it's a wilderness area above ground.

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Comment Number: 000001262\_Eaton\_20160623-1

Organization I: The Wilderness Society

Commenter I: Pam Eaton

Comment Excerpt Text:

We need to adjust the way we manage our public lands, not only to adapt to the changing energy landscape -- and it is changing. And it's not going back. But, also to reflect the uses of our land that the American people value. A report released just last week by the Department of Interior found that our parks, wildlife refuges and other public land supported 443 million recreational visits last year and generated \$45 billion dollars in economic output. Our public lands have a very important role to play in the -- in our economy. Our public lands and the resources they provide belong to all of us. And they should be managed for our benefit now and for future generations.

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**Issue 15 - Renewable Energy**

Total Number of Submissions: 121

Total Number of Comments: 128

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Comment Number: 0000739\_Blair\_20160628-1

Commenter I:David Blair

Comment Excerpt Text:

If we quit subsidizing coal which has been subsidized in this country for hundreds of years and subsidize renewables, we can change everything. Net zero houses ARE possible and with them we majorly diminish the need for coal.

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Comment Number: 0000862\_Martin-2

Commenter I:Robin Martin

Comment Excerpt Text:

I implore the BLM to consider utilizing the land for cleaner, more sustainable energy options that provide environmental and economic opportunities for future generations

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Comment Number: 0000010\_Swingle\_20160526\_Oral-3

Commenter I:Rocky Swingle

Comment Excerpt Text:

Examining how BLM's decisions to lease taxpayer-owned coal affect wind and solar generation

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Comment Number: 00000116\_Johnson\_20160517-1

Commenter I:Alan Johnson

Other Sections: 1

Comment Excerpt Text:

In fact, as Robert Bryce senior fellow of the Manhattan Institute for Policy Research stated in his February 2012 paper, "The High Cost of Renewable-Electricity Mandates," he states: "The renewable industry has received over twice in tax credits than other energy producers are paying in taxes. In fact, where the cost for coal averages \$38 per million BTUs, the same million BTUs from onshore wind power could cost between 75 and \$138. And for solar-generated electricity, the cost rises to 242 to \$455 for the same million BTUs. The only way renewable energy appears to be competitive is to receive subsidies and credits." The problem, as my wife and I talked about, is the tax credits do not build an education program for future generations. However, taxes paid by coal companies do. Tax credits for the renewable energy industry do not build infrastructure, provide parks, recreation opportunities, or many of other things that communities enjoy. Coal mining does.

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Comment Number: 00000140\_Puntene\_20160517-1

Commenter I:Shawna Puntene

Comment Excerpt Text:

Fossil fuels compromise 80 percent of the world's energy use. Our industries are the cleanest in the world and have allowed all of us to live better and longer lives. I don't understand why wind energy is not held to the same standard as ours. I recently heard and read that exemptions will be made for the wind industry killing thousands of birds, not 11 as was stated earlier, but 4,200

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Comment Number: 00000164\_ LEVENSHUS\_20160517-5

Organization I:Sierra Club

Commenter I:Jonathan Levenshus

Comment Excerpt Text:

And, finally, please examine how BLM's decision to lease taxpayer-owned coal affects wind and solar generation. The cost of these clean resources are plummeting, and in many parts of the country are now less expensive than fossil fuels.

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Comment Number: 00000169\_ HILL\_20160517-2

Organization I:Kentuckians for the Commonwealth

Commenter I:Joanne Golden Hill

Comment Excerpt Text:

Destroying our land and health for dirty coal plants like this one is slowing the low cost, clean energy resources, like wind and solar. This is worse than climate destruction and polluting our communities' air and waterways. By keeping dirty fuels in the ground and generating electricity with clean energy, we can avoid the pollution costs and the health risks associated with coal.

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Comment Number: 00000190\_ KELLY\_20160517-1

Commenter I:Amy Kelly

Comment Excerpt Text:

currently less than three percent of BLM's solar-eligible land is actually being used for solar. Solar energy zones have been created, and those could power approximately seven million homes. So, I just think that is a great effort that could be expanded with the moratorium of coal leasing on our public lands.

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Comment Number: 00000195\_ SCOTT\_20160517-1

Commenter I:Robert Scott

Comment Excerpt Text:

look at using that -- the land that could be used -- that is for coal mining for solar farms. Instead of -- You know, instead of subsidizing (Inaudible) manufacturing and continuing with the coal mining and fossil fuel, how about subsidizing solar

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Comment Number: 00000303\_ ZUEKERMAN\_20160519-1

Commenter I:Paul Zuekerman

Comment Excerpt Text:

we must make greater strides toward moving solar to its logical place as a prominent form of energy in Utah and relegate coal to the rank of alternative source

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Comment Number: 00000343\_ Salvato\_20160519-3

Commenter I:Bobbie Bryant-Salvato

Other Sections: | |

Comment Excerpt Text:

My hope is that the Federal Government and the State of Utah will look at alternative forms of clean energy that will increase employment in rural Utah as a demand for coal decreases, give these clean industry businesses the same advantages on federal lands that we have given the coal industry for decades

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Comment Number: 00000351 \_ Carson \_20160519-1

Organization I: Skyline Mine

Commenter I: Jared Carson

Comment Excerpt Text:

One of the problems with renewables is they're inconsistent, they're intermittent.

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Comment Number: 00000356 \_ Provost \_20160519-4

Commenter I: Craig Provost

Comment Excerpt Text:

Now, they can shift their skills to many different areas, including the new solar power, whatever, but being more environmentally-friendly and even the tourist industry, as they said. So Utah has plenty of sunshine and has the potential to provide energy without the harmful effects on the environment that coal has been getting the rap for.

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Comment Number: 00000357 \_ Walsh \_20160519-1

Organization I: Sierra Club (National)

Commenter I: Elizabeth Walsh

Comment Excerpt Text:

Our members have worked tirelessly to protect wild places, such as Escalante Grand Staircase National Monument to the proposed Bears Ears Monument in Utah. Our Utah members and those from across the country come to places like these to hike, camp, and to be inspired by nature. To protect these places for future generations, the Sierra Club is committed to slowing climate change and has spent countless volunteering staff hours advocating for a just transition to clean energy resources and a rapid transition away from our dependency on coal. And by "just," I mean providing new opportunities for coal workers and their families in a clean energy future.

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Comment Number: 00000357 \_ Walsh \_20160519-6

Organization I: Sierra Club (National)

Commenter I: Elizabeth Walsh

Comment Excerpt Text:

There are many viable clean energy alternatives to coal, especially in sunny Utah, that have much lower environmental and health impacts on us, wildlife, and future generations of both.

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Comment Number: 00000366 \_ Brady \_20160519-3

Organization I: Emery County

Commenter I: Keith Brady

Comment Excerpt Text:

I am not against alternative forms of electrical generation, but no matter how much we wish for it, America is nowhere near ready to convert strictly to renewables. Renewables are just not as efficient as fossil fuels at generating these base loads and general electricity.

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Comment Number: 0000283 \_ King \_20160519-2

Commenter I: Bill King

Other Sections: I

Comment Excerpt Text:

Researchers at the Massachusetts Institute of Technology, or MIT, have confirmed what many in the energy world already knew: Without government support or high taxes green energy will never be able to compete with

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conventional, more reliable fossil fuel power plants. Their study concluded that the government should make green energy only work when energy prices are extremely high.

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Comment Number: 0000364\_Albury\_20160519-2

Commenter I: Kathryn Albury

Comment Excerpt Text:

It's much more responsible to use our precious energy dollars to invest in sustainable sources of energy that do not emit greenhouse gases. These technologies are already well- developed. We can build sustainable energy as the current coal mines and other fossil fuel mines are being depleted and achieve a smooth transition to sustainable energy.

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Comment Number: 0000505\_Still\_Sierra Club\_20160517-1

Organization I: Sierra Club

Commenter I: Mandy Still

Comment Excerpt Text:

please consider reducing our dependence on the substance by diverting coal funding toward alternative fuel sources, such as Thorium nuclear power and fission.

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Comment Number: 0000530-1

Organization I: Keystone Green Team

Commenter I: Margaret Graham

Comment Excerpt Text:

In addition given the acceleration of global warming and climate changes, it is more environmentally imperative that we switch to alternate sources - e.g., wind farms are replacing coal mining in Wyoming.

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Comment Number: 0000573-1

Commenter I: Keith Ervin

Comment Excerpt Text:

Please study and environmental alternative of rapid transition to a renewable-energy electric grid, including leases of BLM lands for solar, wind, and geothermal power.

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Comment Number: 0000585-1

Commenter I: Maris Abelson

Comment Excerpt Text:

The U.S. currently uses 3,819 terawatts of electricity. Our country's wind energy potential is 89,000 terawatts (NIS 106(27): 10933-10938), and our solar energy potential is 116,146 terawatts (nrel.gov/docs/fy12osti/51946.pdf). We've lost 40% of the ocean-based oxygen since the 1960s. Instead of the 5.3 trillion dollars spent to subsidize fossil fuels each year, we should save our planet by investing in wind and solar, and provide job training in these industries for communities impacted by moving past fossil fuels!

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Comment Number: 0000625-2

Commenter I: Ty Gardiner

Comment Excerpt Text:

Despite \$39 billion dollars in Annual Government subsidies, Solar produced, half percent 0.5% of Electricity in the US in 2015.

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Comment Number: 0000666-2

Commenter I: Tom Peeso

Comment Excerpt Text:

1. Economic impact of electric power cost rising three fold or more if solar or wind replace coal energy. Study & Release Impartially ASAP!

2. Release the true economic and environmental impact of wind energy. The special treatment of industry.

-Highlight cost to wildlife

-Highly subsidizes, no royalties, low rents on land In leasing program BLM must evaluate costs, impacts, returns of alternative energies.

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Comment Number: 0000765\_Jahshan\_NRDC\_20160623-2

Organization I: Natural Resources Defense Council

Commenter I: Amanda Jahshan

Comment Excerpt Text:

The solar industry now employs over 200 thousand people—vastly more than the coal industry. Reforms should also better reflect these kinds of changes that we are seeing our nation make regarding where and how we should get our energy to secure a more sustainable future for generations that follow. To that end, we need to ensure that clean, inexpensive energy sources are able to compete instead of focusing on flooding the market with subsidized coal sold at cut-rate prices.

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Comment Number: 0000773\_Stevens\_20160519-1

Commenter I: Wayne Stevens

Comment Excerpt Text:

Instead of opening public lands to coal extraction, these lands could be opened for commercial renewable energy production sites. This would leave hundreds of thousands acres of vegetation to remove carbon dioxide from the air, limit methane gas from coal mining from getting into the atmosphere, and leave lands for wildlife, recreation, and tourism. More than sixty percent of Scotland's power comes from wind turbines. Most of Morocco's electrical power is produced from solar energy. The United States could do the same, if the government opened lands for renewable energy sites.

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Comment Number: 0000778-3

Organization I: Bowie Resources

Commenter I: Jeff Erickson

Comment Excerpt Text:

Coal mining produces taxes. Solar, wind farms and biomass fuel are subsidized by the government, making an unfair economic decision for the public users.

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Comment Number: 0000788-1

Commenter I: Ben Heaps

Comment Excerpt Text:

If there wasn't coal we would have to use solar pannels which don't provide enough electricity.

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Comment Number: 0000797\_Nehring\_Voices for UT Children\_20160519 -2

Organization I: Voices for Utah Children

Commenter I: Lincoln Nehring

## Comment Excerpt Text:

Acknowledging that a national transition to renewable energy will take time and concerted effort, is nonetheless critical that the shift away from fossil fuels be facilitated as expeditiously as possible—beginning with the most toxic and carbon intensive types.

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Comment Number: 0000815-2

Organization I: Dugout Canyon Mine

Commenter I: William King

Other Sections: I

## Comment Excerpt Text:

Researchers at the Massachusetts Institute of Technology (MIT) have confirmed what many in the energy world already knew: Without government support or high taxes, green energy will never be able to compete with conventional, more reliable fossil fuel power plants. The study concludes that the government could make green energy competitive by offering enormous amounts of taxpayer support. The study confirms that green energy can only work when energy prices are extremely high. The International Energy Agency estimate that developing wind and solar power enough to substantially impact global warming could cost up to \$16.5 trillion. Windmills, solar panels, and ethanol could not compete with coal, natural gas, and oil without mandates and subsidies even when the price of the conventional fuels are relatively high. Now that prices for fossil fuels have plummeted, very little new renewable energy capacity will be installed unless the mandates and the subsidies are raised even higher.

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Comment Number: 0000829-4

Organization I: Utah Citizens Advocating Renewable Energy (UCARE)

Commenter I: Stanley Holmes

## Comment Excerpt Text:

UCARE has seen cost-shifting by the fossil fuels industry in utility rate cases, where coal-driven utilities use antiquated state regulatory systems to overstate the value of their coal assets while undervaluing renewable energy. Federal coal leasing enables this bias toward fossil fuels to the detriment of renewables, such as wind and solar. The BLM should look at how underpriced coal reduces the competitiveness of renewable energy fuels and the appeal of energy efficiency measures.

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Comment Number: 0000831-1

Commenter I: Sharon St. Joan

## Comment Excerpt Text:

How can we afford to invest in clean energy?

By cutting out subsidies to the fossil fuel industry - estimated at \$20 billion a year - we can invest instead in a just transition on two fronts.

First - programs for new, clean, healthy, good-paying jobs, for re-training and assistance for workers and their families. Secondly, we need to invest in clean energy - solar and geo-thermal energy.

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Comment Number: 0000840-1

Commenter I: Craig J. Provost

## Comment Excerpt Text:

The continued use of coal mining only worsens the problems with our environment. Although coal mining has been important for income for some of our hard working population, we should focus on helping them to shift their skills to other important and growing areas of power production, such as wind and solar power, which are



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more environmentally friendly. Utah has plenty of sunshine and has the potential to provide energy without the harmful effects on the environment that coal has.

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Comment Number: 0001144-1

Organization I:Northern Cheyenne Reservation

Commenter I:Cierra Headswift

Comment Excerpt Text:

Eco-Cheyenne installed a solar system on an Northern Cheyenne elder's home. That project was the first of many in the transition to solar sustainability. So there are cleaner and healthier ways to have energy.

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Comment Number: 0001165-2

Commenter I:Pat Freiberg

Comment Excerpt Text:

Ultimately, cheap coal has driven us into this corner and I believe we must find a way to hold the coal industry responsible for the environmental and health destruction that it causes. Once the true cost of coal is reflected in the marketplace, renewable energy will be better able to thrive.

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Comment Number: 0001199\_Stiller\_20160621-1

Organization I:Nature's Stewards

Commenter I:Grace Stiller

Other Sections: 8.1

Comment Excerpt Text:

The federal government should continue investing in clean energy and stop subsidizing private companies to take coal from public lands. Please keep it in the ground.

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Comment Number: 0001199\_Stiller\_20160621-2

Organization I:Nature's Stewards

Commenter I:Grace Stiller

Comment Excerpt Text:

I was raised during the era where the phrase "give peace a chance" was real popular, so I'm asking you to give peace a chance with the environment. Let's stop waging war by strip mining and allowing those leases to continue. And I'd like to change that phrase for the next generation which are the millennials and they are educated, they care about environmental sciences. One of the kids that went through our program got a degree in physics. Solar -- will take solar cells. This phrase should be, give alternative -- give alternative power a chance.

---

Comment Number: 0001200\_Giddings\_20160621-1

Commenter I:Frans Giddings

Comment Excerpt Text:

When I was a kid I was taught that a savings account was for extreme emergencies. Well, I've heard a lot of talk about how we have to continue to use coal and other fossil fuels because we don't have alternatives and what are we gonna do? And I know right now we do have alternatives, and as people have said, there are other coal sources that are still being utilized.

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Comment Number: 0002001\_Stevens\_20160607-5

Commenter I:Wayne Stevens

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## Comment Excerpt Text:

One coal miner stated that renewable energy was more polluting than coal. In reality, over the life span of solar panels and wind driven turbines, renewable is less polluting. The pollution caused by renewable is limited to production, “up front” and then again when the useful life span has ended. During their life span, several decades, solar or wind generators produce little or no pollution nor greenhouse gases.

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Comment Number: 0002031\_Brown\_20160607-3

Organization I: Cloud Peak Energy Resources, LLC

Commenter I: Brad Brown

## Comment Excerpt Text:

There are jobs in alternative energy systems but we have not come up with a strategy, never mind a plan & funding for a new energy transmission system.

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Comment Number: 0002040\_Helming\_20160622-1

Commenter I: Gary Helming

## Comment Excerpt Text:

Alternative energy has its pluses, but it requires heavy subsidies and regulations to make it feasible. Utilities would have pursued it aggressively decades ago, if it were an economical and technically feasible source of large scale energy.

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Comment Number: 0002054\_Petersen\_20160623-1

Commenter I: Robert Petersen

## Comment Excerpt Text:

Montana has enormous wealth in the form of renewable energy and enabling 20th Century technology is stifling the development of 21st Century innovation.

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Comment Number: 0002057\_Rich\_20160619-1

Commenter I: Janis Rich

## Comment Excerpt Text:

Coal is a 19th century product that no longer works in our society. Our funds need to go to R&D of clean energy programs, such as solar and wind, and not to private coal companies that continue destroy the earth.

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Comment Number: 0002065\_Triolo\_20160621-1

Commenter I: Joe Triolo

## Comment Excerpt Text:

We need to move full bore toward a renewable energy infrastructure, and help the formerly extractive communities around the country to become part of the manufacturing and maintenance required to support it.

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Comment Number: 0002085\_Knaphus\_20160626-1

Commenter I: Simon Knaphus

## Comment Excerpt Text:

The BLM leasing program needs to be transformed into a clean energy program. BLM can lease land for wind farms and solar farms. It can use the income from those agreements to upgrade the grid and fast track development of renewable energy technology and programs.

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Comment Number: 0002086\_Knowles\_20160622-1

Commenter I:Randall Knowles

Comment Excerpt Text:

Since solar and wind are heavily subsidized they will NEVER enjoy a LONG TERM success in the United States

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Comment Number: 0002099\_Notkin\_20160611-2

Organization I:KnowWho Services

Commenter I:Debbie Notkin

Comment Excerpt Text:

the right to mine publicly-owned coal how your agency's policies regarding taxpayer-owned coal affect wind and solar generation

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Comment Number: 0002099\_Notkin\_20160611-4

Organization I:KnowWho Services

Commenter I:Debbie Notkin

Comment Excerpt Text:

what your agency could do to promote and support clean energy

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Comment Number: 0002103\_Phillips\_20160623-1

Commenter I:Thomas Phillips

Other Sections: I

Comment Excerpt Text:

The latest Electric Power Monthly report released late last month by the U.S. Energy Information Administration (EIA) reveals that:

\* Wind and solar energy generation increased 32 percent while

\* Coal-fired power generation plunged 24.2 percent

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Comment Number: 0002105\_Raines\_20160622-1

Comment Excerpt Text:

Get coal out of equation Montana needs to switch to renewable energy

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Comment Number: 0002113\_Sauber\_20160622-1

Commenter I:Mike Sauber

Comment Excerpt Text:

Please immediately start the transition to renewable and energy conservation jobs for those in the coal industry and stop coal mining altogether.

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Comment Number: 0002118\_Spiess\_20160623-1

Commenter I:Gretchen Spiess

Other Sections: I

Comment Excerpt Text:

Our business relies on the weather. Temperatures have skyrocketed, winds that were out of the west are now out of the east or the north. Look at [aviationweather.gov/adds/winds/](http://aviationweather.gov/adds/winds/) Aviation Winds/Stream and see for yourself.

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Comment Number: 0002123\_Thweatt\_20160623-1

Commenter I: Dick Thweatt

Comment Excerpt Text:

Our governments should incentivize renewable energy and assist people employed in the coal industry to find new homes and employment.

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Comment Number: 0002125\_Turnquist\_20160623-1

Commenter I: Debra Turnquist

Comment Excerpt Text:

Clean energy such as wind and solar should be used.

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Comment Number: 0002151\_Cinnamon\_20160629-1

Organization I: Unacceptable Risk Film

Commenter I: Sophia Cinnamon

Comment Excerpt Text:

we need to continue to make the transition to clean, renewable energy. We have the power to change the trajectory of climate change by supporting clean and renewable energy. This review process is needed to make smart choices about where we invest in energy for our future and accelerate our transition to clean energy.

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Comment Number: 0002166\_Pasta\_20160629-2

Commenter I: Diane Pasta

Comment Excerpt Text:

The land can be leased for clean energy programs such as for wind farms and solar farms. That would produce income to support renewable energy technology and programs, sustainable jobs, and a more stable climate for our collective future. Public land management programs need to address the current realities involving climate disruption. Eliminating the coal program will greatly benefit the county by helping the US meet its Paris commitments, provide health benefits of not burning coal, and stimulate job growth in the renewable energy sector.

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Comment Number: 0002168\_Kohler\_20160629-3

Commenter I: Bernard Kohler

Comment Excerpt Text:

It is time to adopt policies that move the world toward renewable energy sources.

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Comment Number: 0002172\_Adamek\_20160627-1

Commenter I: Cari Adamek

Other Sections: I

Comment Excerpt Text:

According to the EIA, coal is still responsible for generating 33% of U.S. electricity (<https://www.eia.gov/tools/faqs/faq.cfm?id=427&t=3>). And natural gas is used to generate another 33%. While it would be nice to be getting all our energy from totally renewable and clean sources, they currently only make up 7%. Adding in hydropower only brings us up to 13%.

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Comment Number: 0002172\_Adamek\_20160627-5

Commenter I: Cari Adamek

Comment Excerpt Text:

Use of coal has dropped dramatically while use of natural gas has grown dramatically. So it appears to me that natural gas is making up most of the difference, not renewables. We can't suddenly cut our use of electricity nor can we force renewables to grow fast enough to replace coal in a short time frame — not without some real pain in the economy anyway.

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Comment Number: 0002175\_Woodcock\_20160627-3

Organization I: MSU Department of American Studies

Commenter I: Jennifer Woodcock-Medicine Horse

Comment Excerpt Text:

renewable energy sources are or can be replacing coal, oil, and gas in our economy

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Comment Number: 0002177\_Williams\_20160629-1

Commenter I: Donna Williams

Other Sections: 1

Comment Excerpt Text:

We are rich in wind energy. Other states are flocking here to develop wind energy. Judith Gap, home to the first commercial-scale wind farm in Montana, producing over 50 MW, is owned by Invenegy, an international company headquartered in Chicago.

(<http://meic.org/issues/montana-clean-energy/montana-renewable-energy-projects/>, ) Clearwater Energy's 300-megawatt wind farm near Forsyth is being developed by Orion Renewable Energy Group, of Oakland, CA. WINData's 10-megawatt wind farm outside of Fairfield is supported by Wind Power of San Francisco. The Greycliff wind project, a 20-megawatt farm located in Sweetgrass County, was co-developed by National Renewable Solutions based in Minnesota.

([http://billingsgazette.com/news/wind-farm-developers-face-strong-regulatory-headwinds-press-on/article\\_bedb9482-2d6b-5d0a-af34-dcde17b47b7f.html](http://billingsgazette.com/news/wind-farm-developers-face-strong-regulatory-headwinds-press-on/article_bedb9482-2d6b-5d0a-af34-dcde17b47b7f.html), Billings Gazette, Tom Lutey, Aug 7, 2015) while the New Colony wind project in Wheatland County is 25 megawatts. Both projects are expected to begin delivering power to NorthWestern in 2015 and both will be at least 50 percent owned by Montana interest, keeping even more economic benefits in Montana.

([http://billingsgazette.com/news/opinion/editorial/guest-view-wind-energy-is-driving-economic-development-in-montana/article\\_b1c45a70-60a3-50f2-a551-2c8890fcf886.html](http://billingsgazette.com/news/opinion/editorial/guest-view-wind-energy-is-driving-economic-development-in-montana/article_b1c45a70-60a3-50f2-a551-2c8890fcf886.html), Billings Gazette, Guest View by Jeff L. Fox, Mar 20, 2015)

Spion Kop is a proposed wind generation facility in Cascade County near Raynesford, Montana. NorthWestern Energy recently received pre-approval from the Montana Public Service Commission to purchase Spion Kop from Colorado--based Compass Wind. When it is built, the 40-megawatt facility will be the largest wind generation facility owned directly by a Montana utility

(<http://meic.org/issues/montana-clean-energy/montana-renewable-energy-projects/> ) Spion Kop project, developed by Denver-based Compass Energies, is the first wind farm owned by the regulated utility. (Great Falls Tribune, July 10, 2013)

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Comment Number: 0002179\_Hughey\_20160624-2

Commenter I: Ben Hughey

Other Sections: 2

Comment Excerpt Text:

The BLM leasing program needs to be transformed into a clean energy program. BLM can lease land for wind farms and solar farms. It can use the income from those agreements to upgrade the grid and fast track development of renewable energy technology and programs.

Comment Number: 0002182\_Jenkins\_20160622-2  
Commenter I: Helen Pent Jenkins  
Comment Excerpt Text:  
As a Montanan I know that the future is in renewable energy.

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Comment Number: 0002185\_Leidecker\_20160512-2  
Commenter I: Jodie Leidecker  
Comment Excerpt Text:  
I encourage you to do everything possible to move toward cleaner, renewable energy sources.

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Comment Number: 0002187\_Moore\_20160517-1  
Commenter I: Oliver and Donna Moore  
Comment Excerpt Text:  
As we hear discussion of wind and solar energy taking the place of some of the sources, we realize that neither is dependable enough to provide the heating, cooling, business, home, or agricultural needs of Wyoming, as well as the rest of the country that depends on our production. Being realistic makes us wonder what the country, counties, and states would do without what we have.

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Comment Number: 0002188\_Horwitz\_20160517-1  
Organization I: Electrogrip  
Commenter I: Chris Horwitz  
Comment Excerpt Text:  
While coal is in decline and these corporate profits are falling and the coal companies failing, it's my hope that the BLM will assist the nation in avoiding propping up failing and short-term efforts to keep coal tenuously viable; and instead be moving forward to support wind farm and solar PV installations on its land and phase out coal leasing entirely.

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Comment Number: 0002188\_Horwitz\_20160517-2  
Organization I: Electrogrip  
Commenter I: Chris Horwitz  
Comment Excerpt Text:  
The old coal lands may well provide good bases for PV and wind installations, since their remediation is never as complete as one would like. Jobs for such growing industries and sources of energy are more plentiful than in coal extraction.

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Comment Number: 0002189\_Jozwik\_20160517-12  
Commenter I: Darryl Jozwik  
Comment Excerpt Text:  
**WHAT ARE THE POTENTIAL SUBSTITUTION EFFECTS FROM ANY CHANGES IN FEDERAL COAL PRODUCTION – MINIMAL, NO RENEWABLES CAN PROVIDE AMOUNT OF ENERGY NEEDED.**

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Comment Number: 0002197\_Wise\_20160519-6  
Organization I: Kiewit Mining Group Inc.  
Commenter I: Dirk Wise  
Comment Excerpt Text:  
Evaluate the availability, and pricing of Federal coal impacts electricity generation in the US particularly in light of

regulatory influences, and what other sources of energy supply(including efficiency) are projected to be available.- I pretty much gave my opinion of this in 3a, alternative energy is too expensive at this time and should not be supported by the government when the return is so little. If alternative energy is so viable then take away the subsidies and see if it survives. Coal is reliable and cheap and we have plenty of it in this country...If there is concern for great environmental impact(climate change) then let's provide substantial funding to help improve it.

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Comment Number: 0002207\_Campbell\_20160622-2

Commenter I:Cate Campbell

Comment Excerpt Text:

The energy needs of our country can be met with a sustained focus on renewables and natural gas.

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Comment Number: 0002215\_Pierce\_20160622-2

Commenter I:Jerry Pierce

Comment Excerpt Text:

Filling our countryside up with the so called green energy sites isn't the answer either and they aren't all that efficient as well.

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Comment Number: 0002263\_Davidheiser\_20160710-1

Organization I:German House

Commenter I:James Davidheiser

Comment Excerpt Text:

1) disclose how federal coal leasing affects the amount of solar and wind generated energy that is available

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Comment Number: 0002290\_Schimpff\_20160711-1

Commenter I:Alan Schimpff

Comment Excerpt Text:

We Need Renewable Energy like Wind, Solar Panels, Etc. along with solar incentives.

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Comment Number: 0002300\_Csenge\_20160710-1

Commenter I:Rich Csenge

Comment Excerpt Text:

quickly re-direct BLM policy for developing our nation's energy supplies toward the clean renewable sources of solar and wind.

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Comment Number: 0002305\_Bowers\_20160705-1

Commenter I:Sheila Bowers

Comment Excerpt Text:

We no longer need new leases and old leases should be phased out while the DOE, EPA, FHA and other sister agencies to the DOI work harder on local, democratically owned energy efficiency, rooftop solar and storage, and dynamic, 21st century microgrids and load balancing.

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Comment Number: 0002311\_Costello\_20160721-3

Commenter I:Lauri Costello

Comment Excerpt Text:

coal workers could be transitioned to sustainable fuel industries

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Comment Number: 0002316\_Boeschstein\_CoGovernments\_20160722-1

Organization I: City of Grand Junction

Commenter I: Bennett Boeschstein

Comment Excerpt Text:

Coal mining has played a significant role in our state for decades, and most likely will continue to be a part of our energy landscape for years to come. But how America is getting its energy is changing. Renewable energy now accounts for more than 10% of the nation's energy, and this year natural gas provided more electricity than coal for the first time in history.

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Comment Number: 0002322\_Gordon\_20160722-2

Commenter I: Thomas Gordon

Other Sections: 2

Comment Excerpt Text:

Give the coal companies tax breaks or special incentives to develop other sources of power. I have no objection to them making profits. For instance, geothermal energy extraction could be expanded on lands the coal companies already lease. Make clauses in existing leases to take advantage of this energy source. Once power extraction is established, royalties could be increased in relation to profit margins. The problem of depth to get to geothermal energy is now eliminated to a large degree by advances in drilling technology.

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Comment Number: 0002326\_Moench\_20160724\_UtahPhysicHealthyEnviron-34

Organization I: Utah Physicians for a Healthy Environment

Commenter I: Malin Moench

Other Sections: 16

Comment Excerpt Text:

Continuing such subsidies will also artificially widen the permanent damage that strip mining does to the rangelands and aquifers of the PRB.

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Comment Number: 0002329\_Segger\_20160724\_CambellCntyWY-4

Organization I: County and Prosecuting Attorney's Office, Campbell County, Wyoming

Commenter I: Carol Seeger

Comment Excerpt Text:

In analyzing whether taxpayers are getting a fair return with regard to the production of coal, it cannot be overlooked that other energy sources such as wind and solar are heavily subsidized; almost ten times as much as fossil fuels. These subsidies for other energy sources need to be considered in determining whether a fair return is being received by taxpayers because taxpayers are financing the subsidies

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Comment Number: 0002343\_Camasta\_20160726-1

Commenter I: Cory Camasta

Comment Excerpt Text:

Please halt investments in coal and invest instead in sustainable, clean energy

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Comment Number: 0002347\_Matney\_20160607-1

Commenter I: Barry Matney

Comment Excerpt Text:

-People spoke of the beauty of the mountains being taken away by strip mining – have they given thought to what



would happen to those mountains if wind farms were to be placed in these areas? Come to Buchanan County in SW Virginia and tell me where you would be a wind farm without destroying the very things a majority of the people spoke for.

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Comment Number: 0002376\_Custer\_20160721-1

Organization I: Montana House of Representatives

Commenter I: Geraldine Custer

Comment Excerpt Text:

Recently at an energy conference Karen Herbert, the CEO and president of the US Chamber of Commerce Institute for 21st Century Energy, spoke to us. She said that by 2050 there will be an increase in energy needs of 84% and there will be 2 billion more people on the planet, yet the encouraging thing was that she said that the energy spectrum in 2050 would be similar to what it is now with coal still being the #1 producer of energy. So with that being said, that gives me some encouragement that we just need to get on some of these regulations and do things a little bit better.

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Comment Number: 0002388\_Shaw\_20160721-1

Commenter I: Lori Shaw

Comment Excerpt Text:

People with anti-coal agendas claim to be very concerned about the effect that coal mining has on our earth, but at the same time they don't like to think about the impact that rare earth metal mining has on our planet as well. The list of rare earth metals required to create solar panels and wind turbines is a long one. It includes metals like Lithium, Platinum, and Tellurium (a metal that is more rare than gold.) A tiny amount of neodymium is needed to create the ear-buds of your smartphone, but for a high-performance wind turbine they can need about two tons of it. How are energy sources that require the mining of these substances sustainable or even renewable? The answer is that they are not. (See articles 1 & 2)

By stifling the coal industry and attempting to embrace these so-called "renewable" energy sources, we are essentially trading the mining of one thing for the mining of another. The difference is that wind and solar energy are less reliable and much more expensive. (See article 3)

In the hundreds of years we have before coal reserves are said to run out I am sure that technological advances in wind and solar energy will be made. That is what humans are good at. Nevertheless, the technology for CONSISTENT wind and solar energy currently isn't there yet. Trying to force that unreliable technology on our society before it is ready for it (or even able to afford it for that matter) is as shortsighted as it is unethical.

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Comment Number: 0002436-9

Commenter I: Sharon St Joan

Comment Excerpt Text:

do whatever is in your power to make a just and speedy transition to clean energy. This will be possible by eliminating the hidden subsidies to the fossil fuel energy and by requiring existing coal and other fossil fuel companies to pay their fair share of taxes. With these hidden subsidies, estimated at around 19 billion dollars a year, eliminated, it will be possible to make significant investments in clean energy (also to bring about the technical innovations required for solar power to eliminate toxicity and, in the case of wind, to construct wind mills that do not cause bird deaths).

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Comment Number: 0002441\_Hyche\_20160724-2

Commenter I: Roe Hyche

Comment Excerpt Text:

Why is the USA not protecting the livelihood of our workers? Natural gas is also nonrenewable, but less dirty;

perhaps it could fill in the void during the transition from coal to clean energy; and only temporarily. If the government needs to make money, they should spend the time figuring out how to do it without spoiling the communities and the environment. Even some clean energy sources could be placed on federal lands and while that brings in BLM funds, it will not spoil the land as much as coal mining. Nor will renewable sources run out like coal and natural gas.

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Comment Number: 0002449\_Lyon\_20160727\_NWF-58

Organization I: National Wildlife Federation Action Fund

Commenter I: Jim Lyon

Comment Excerpt Text:

The federal coal program must be reformed to allow from a just transition to cleaner sources of energy. With the future of coal declining and the market for coal drying up, it is important that the federal coal leasing program take into account the concerns of communities that will be most impacted by the shift away from coal. This means, as recommended above, protecting resources these communities must depend on long-term, like water. It means ensuring that the destruction from coal mines is cleaned up and mine sites are reclaimed. BLM should identify regional mitigation strategies to avoid, minimize, and when unavoidable, compensate for resource impacts at regionally selected mitigation sites. The mitigation strategy should include identifying areas that are sources or sinks for carbon. BLM should further direct funding and revenue decisions should be made in a manner that assists these communities in a shift to a healthy, prosperous and just post-coal economy.

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Comment Number: 0002453\_Cook\_20160727-2

Organization I: Rio Blanco County

Commenter I: Katelin Cook

Comment Excerpt Text:

Instead of increasing fees, raising royalty rates and placing counterproductive restrictions on this industry that has been a part of the United States energy portfolio for generations, governmental efforts should be focused on promoting technology to make fossil fuel production and utilization cleaner and more efficient. This is the existing model for renewable energy efforts, and at this point in time the world is decades away from having infrastructure in place for renewable energy that is affordable and reliable.

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Comment Number: 0002464\_Connelly\_20160728\_WyCoaltLocalGov-23

Organization I: Coalition of Local Governments

Commenter I: Kent

Other Sections: I

Comment Excerpt Text:

The Federal government's focus on substantially disrupting coal mining development is contradictory to its public promotion of wind and solar energy development. There is concern about the environmental impacts of coal mining, but the Federal government ignores the loss of habitat that occurs from the development of wind and solar farms, as well as the number of bird mortalities that occur from wind farms. For example, the Blythe Solar Power Project in California requires 4,070 acres of public land for its plant and the Tule Wind Project requires 12,200 acres of public land for the operation of its wind farm. There are also estimates that around 140,000 to 328,000 birds are killed annually by wind turbines. See Scott R. Loss, Tom Will, Peter P. Marra, Estimates of Bird Collision Mortality at Wind Facilities in the Contiguous United States, 168 Biological Conservation 201 (Dec. 2013).

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Comment Number: 0002480\_Culver\_20160728\_TWS-64

Organization I: The Wilderness Society

Commenter I: Nada Culver

Other Sections: 2

Comment Excerpt Text:

The Solar PEIS ultimately made a number of decisions that can and should be considered for updating the agency's approach to leasing in the Coal PEIS, including:

- Identifying Solar Energy Zones (SEZ) that are “relatively large areas that provide highly suitable locations for utility-scale solar development: locations where solar development is economically and technically feasible, where there is good potential for connecting new electricity-generating plants to the transmission distribution system, and where there is generally low resource conflict.” Solar Final PEIS, pp. ES-7 – ES-11. Similarly, the Coal PEIS could identify areas that are “highly suitable” for coal in terms of having high resource potential and low resource conflicts, while also being economically and technically feasible.
- Identifying exclusion areas from solar development, which “allows the BLM to support the highest and best use of public lands by avoiding potential resource conflicts and reserving for other uses public lands that are not well suited for utility-scale solar energy development.” Solar Final PETS, p. ES-7. These areas are significant because of “the size and scale of utility-scale solar energy development (typically involving a single use of public lands).” Id. Instead of leaving the vast majority of lands open to coal leasing, the BLM can and should identify categories of lands that should be excluded, especially since coal mining also limits the use of land to a single use.
- Identifying variance lands that could be made available subject to a stringent process and showing of need in case the SEZs are “insufficient to accommodate demand.” Solar Final PEIS, p. ES-14.
- Incorporating programmatic design features that would be incorporated into all future development in order “to avoid or reduce adverse impacts.” Solar Final PETS, p. ES-6. Similarly, incorporating mandatory best practices for coal development could reduce environmental impacts.
- Setting out a mitigation framework and incorporating the mitigation hierarchy of avoidance, minimization and offset/compensation and preparation of regional mitigation strategies through the following actions:
  - o “Avoidance will be achieved through siting decisions and the identification of priority SEZs.”
  - o “Minimization will be achieved through the application of design features and adherence to applicable federal, state, and local laws and regulations such as the Endangered Species Act (ESA).”
  - o “For those impacts that cannot be avoided or minimized, the BLM will determine, in consultation with affected stakeholders, if measures to offset or mitigate adverse impacts would be appropriate.”
  - o “BLM proposes to establish regional mitigation plans that will facilitate development in SEZs. As envisioned, these regional mitigation plans will simplify and improve the mitigation process for future projects in SEZs.” Solar Final PEIS, p. ES-6. Mitigation should similarly be incorporated into the Coal PEIS, including a regional mitigation strategy to evaluate and design needed mitigation at the programmatic level.

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Comment Number: 0002488\_Sanderson\_20160728-14

Organization I: Colorado Mining Association

Commenter I: Stuart Sanderson

Comment Excerpt Text:

By systematically and incrementally increasing the cost to operate, and reducing lands available for mineral leasing, the Federal government is essentially “closing-the-door” on coal. Coal is a necessary part of our Nation's energy portfolio, maintaining access to affordable energy is of the utmost importance—this necessarily includes the need for coal. This is particularly important due to the recent finalization of the BLM and United States Forest Services' greater sage-grouse land use plan amendments, which closed 24.2 million acres to solar and wind energy development. (4) Much like coal resources, land available for renewable energy resides predominantly in the West. As such, the practical effect of these closures means that there is even more of a need to foster development of coal resources, because the Eastern portion of this nation will not be able to offset these closures to renewable energy in the West.

(4) See Generally, FR Notice of Availability: <https://federalregister.gov/a/2015-24213>; FR Notice of Availability: <https://federalregister.gov/a/2015-24208>.

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Comment Number: 0002493\_Mead\_20160728\_GovWY-17

Organization I: Office of Governor Matthew H. Mead

Commenter I: MATTHEW H. MEAD

Other Sections: 8.5

Comment Excerpt Text:

Order No. 3338 suggests that the BLM's PEIS should examine where to lease federal coal and proposes as an example the BLM's Solar PEIS (Western Solar Plan) which "amended land use plans across six southwestern states and established preferred locations for solar development." Order, p. 7. The BLM must consider its current and adequate regulatory process to examine preferred locations for coal development, including coal planning completed as part of the Resource Management Plan (RMP) process. The BLM's coal planning process includes, but is not limited to, a screen for coal development potential, unsuitability, multiple use and surface ownership consultation. In Wyoming, this was recently completed as part of the revision to the BLM's Buffalo RMP.

The use of twenty unsuitability criteria at 43 C.F.R § 3461.5 represent only one of five screens employed by BLM to determine "where and where not" to lease coal. The other four found at 43 C.F.R. § 3420.1-4(e)(1) through (4) are the principal decisions used to determine which lands are suitable for further consideration. These screening criteria have been and continue to be more than adequate to identify the most appropriate locations for federal coal leasing. If the BLM is intent on considering the Western Solar Plan, the BLM must consider that coal resource development is confined to the location of commercial quantities and qualities of coal. Solar resources are presumably more widespread across the landscape, which allows a greater degree of flexibility in establishing preferred locations for development.

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Comment Number: 0002509\_Iverson\_20160728-3

Commenter I: Kathryn Iverson

Comment Excerpt Text:

Most importantly, this undercuts the cost of renewable and clean energy. We cannot afford to continue such a disastrous policy.

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Comment Number: 0002511\_Krieger\_20160727-4

Organization I: Washington Environmental Council

Commenter I: Emily Krieger

Comment Excerpt Text:

Examine how the leasing of taxpayer owned land effects the production and cost of wind and solar as a viable source of energy.

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Comment Number: 0002513\_Lish\_20160707-5

Commenter I: Christopher Lish

Comment Excerpt Text:

Examining how the Bureau of Land Management's decisions to lease taxpayer-owned coal affect wind and solar generation;

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Comment Number: 0003004\_MasterFormD\_TheSierraClub-4

Organization I: The Sierra Club

Comment Excerpt Text:

Examining how BLM's decisions to lease taxpayer-owned coal affect wind and solar generation

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Comment Number: 0003032\_Bernath\_J\_06112016-1

Organization I:Keep Electricity Affordable

Commenter I:Emery Bernath

Comment Excerpt Text:

Today's technology makes coal a clean and viable fuel. Windmills kill over 30 million birds/bats etc each year - besides they look horrible and if the gov't wouldn't subsidize the industry they would go under - which wouldn't make me shed a single tear - stop wasting our tax money and keep coal as primary fuel.

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Comment Number: 0003033\_Brooks\_J\_06042016-1

Commenter I:Scott Brooks

Comment Excerpt Text:

It's possible to burn coal cleanly and without undesirable environmental effects. It's even cleaner than wind and solar whose infrastructure cost would be very expensive and intrusive. The only viable alternative on the horizon is 4th and 5th gen nuclear.

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Comment Number: 0003038\_Cummins\_J\_06062016-1

Organization I:Keep Electricity Affordable

Commenter I:Tim Cummins

Comment Excerpt Text:

We should continue to strive to research alternative and renewable sources of energy, and to ensure we do the best we can to reclaim the mines to places that are productive to man, wildlife, and the environment.

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Comment Number: 0003041\_Goins\_06052016-1

Organization I:Keep Electricity Affordable

Commenter I:Denise Goins

Comment Excerpt Text:

Before you destroy an industry, make certain alternatives are viable, affordable, & accessible--none of which is currently the case!

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Comment Number: 0003042\_Greene\_J\_06092016-1

Organization I:Keep Electricity Affordable

Commenter I:Eric Greene

Comment Excerpt Text:

Solar and wind power generation is nice but not yet economical and affordable yet.

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Comment Number: 0003045\_Jazwick\_J\_06032016-1

Organization I:Keep Electricity Affordable

Commenter I:Kindra Jazwick

Comment Excerpt Text:

I ask you consider how removing coal from the power supply would possibly permanently disfigure the landscape. If there are no coal mines, the power must come from wind or solar, both of which will add disfiguring eyesores of turbines or panels

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to our public lands. Then those lands will no longer be available for recreation. When coal mines are finished, they leave the land in as good as or better condition than before they mined.

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Comment Number: 0003049\_Bowers\_20160729-1

Commenter I: Sheila Bowers

Comment Excerpt Text:

I am requesting that you immediately stop leasing them to rapacious Big Energy companies of all types - coal, oil, gas, solar, wind, transmission, pipelines, etc. We no longer need new leases and old leases should be phased out while the DOE, EPA, FHA and other sister agencies to the DOI work harder on local, democratically owned energy efficiency, rooftop solar and storage, and dynamic, 21st century microgrids and load balancing. The 19th Century Big Centralized Energy model is an embarrassment to America, not to mention a devastating environmental and economic blight on our once-great nation. We want to save, store, and produce our OWN energy where and when it is needed, and do not want OUR open spaces destroyed for dirty profiteering by energy companies. They are critically needed as carbon sinks, oxygen and clean air generation, not to mention our sanity and the biodiversity that the planet depends upon. To be clear, Big Solar, Big Wind and Big Transmission are as unacceptable as Big Gas, Oil and Coal.

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Comment Number: 0003052\_Lambeth\_20160729-1

Commenter I: Larry Lambeth

Comment Excerpt Text:

Clean energy can improve our health, environment and economy. Clean energy can employ more people than the fossil fuels industry and avoids all the pollution involved in exploration, extraction, transport and combustion.

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Comment Number: 0003053\_Brexel\_20160729-1

Commenter I: Charles Brexel

Comment Excerpt Text:

In 2015, about 90% of all installed, new electrical power in the world was solar and wind power. Electric power companies, in the US and all over the world, are already purchasing or installing only new solar and wind power, rather than natural gas or coal power, mainly because solar and wind power are cheaper to purchase or install. So, we no longer have the demand or the need to burn any more natural gas or coal for power.

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Comment Number: 0003054\_Weir\_20160729-1

Commenter I: Scott Weir

Comment Excerpt Text:

I urge you to do everything in your power to minimize the use of coal starting immediately, by assisting your sister agencies in promoting the rapid development of renewable energy resources. Such development requires strict regulation of the ability of state PUCs to restrict such development compatible with rapid restructuring of the transmission grid (and transmission pricing once again) to accommodate both the rapid variability of renewables and the limitations of existing base load plants to vary output rapidly.

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Comment Number: 0020006\_Cowden\_20160712-4

Commenter I: Rhonda Cowden

Comment Excerpt Text:

We have solar power roof tops capable of producing 23% of all electricity in Tennessee with 16,000 mw of solar panels. There is Shelby Farms Solar Farm. We have 29 power producing dams throughout the Tennessee River System. Recently added Arcadia Wind Power, and nuclear energy available. Clean sources of energy available.

Comment Number: 0020012\_Holmes\_UCARE\_20160712-15

Organization I:Utah Citizens Advocating Renewable Energy

Commenter I:Stanley Holmes

Comment Excerpt Text:

The PEIS should analyze state and regional energy portfolios as well as plans for achieving renewable energy standards. This analysis may reveal the extent to which continued reliance on coal inhibits the development of clean energy sources.

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Comment Number: 0020012\_Holmes\_UCARE\_20160712-6

Organization I:Utah Citizens Advocating Renewable Energy

Commenter I:Stanley Holmes

Comment Excerpt Text:

The PEIS should examine how coal-driven utilities, such as PacifiCorp (d.b.a. Rocky Mountain Power) use antiquated state regulatory systems to overstate the value of their coal interests while, at the same time, undervaluing renewable energy. The BLM should look at how underpriced coal both reduces the competitiveness of renewable energy resources and the appeal of energy efficiency measures.

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Comment Number: 0020023\_Baer\_20160712-1

Commenter I:Carl Baer

Comment Excerpt Text:

It is imperative the America makes the transition to renewable and cleaner energy sources, but coal will continue to be an important domestic energy source in the interim.

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Comment Number: 0020027\_Harris\_20160722-3

Commenter I:Mark Harris

Comment Excerpt Text:

Our public lands should be preserved or used for clean energy production

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Comment Number: 0020058-1

Commenter I:Wayne Stevens

Comment Excerpt Text:

Instead of opening public lands to coal extraction, these lands could be opened for commercial renewable energy production sites.

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Comment Number: 000001205\_Justman\_20160623-2

Organization I:Mesa County

Commenter I:John Justman

Other Sections: I I

Comment Excerpt Text:

We are all short of money on all government levels. It's interesting to me that recently in the paper there was an article how in some part of Canada when they went away from coal, their electric rates went up 300 percent. Germany had a project here a few years ago where they got rid of their nuclear and coal plants and were going to rely on wind and solar. And now they have energy poverty where people pay 10 percent of their household income for their energy bill -- for their household [indiscernible]. And that is not going to work well. Why do

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you think BMW relocated their manufacturing plant to America? Energy cost. The more energy we consume, the higher your standard of living.

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Comment Number: 000001206\_Davis\_20160623-1

Organization I:

Commenter I:Glen Davis

Comment Excerpt Text:

But, let's just suppose that we don't renew that lease up there and they don't have their coal. How many hours a day will it take -- two, three, four -- that you'll be offline? There's nothing to replace that. We cannot store electricity from solar. We can't store it from wind. Now, we can cut back on power production when it's up and spinning and going. And they talk about environment. Have you ever seen one of these solar farms? I mean it's horrible.

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Comment Number: 000001207\_Willett\_20160623-1

Organization I:House District 54

Commenter I:Yeulin Willett

Comment Excerpt Text:

We don't know what the long term affects of huge solar arrays are or wind turbines. We don't know the economic viability.

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Comment Number: 000001215\_BURRITT\_20160623-1

Commenter I:Brad Burritt

Comment Excerpt Text:

While coal will remain an important energy source for Colorado and the country for some time, we have modern technologies, including renewable energies, that need to be included in planning the country's energy future. As you consider what changes to make to the Federal Coal Program, I hope you'll look to places like Delta County and our County Commissioners for ideas on how Interior can be a partner to local communities and who have been reliant on coal for generations.

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Comment Number: 000001230\_NORRIS\_20160623-1

Commenter I:Weston Norris

Comment Excerpt Text:

The time will come when a shift from the current energy sources will happen. This will happen by changing the way we use our current sources and adding resources as they become available. But, that shift should come in a natural progression as it has in the past. Forcing or trying to control this progression can only hinder that process; and I believe will have dire consequences.

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Comment Number: 000001238\_CINNAMON\_20160623-1

Commenter I:Sophia Cinnamon

Comment Excerpt Text:

We know carbon pollution is accelerating climate change, and the burning of coal is the single largest source of carbon emission. As Coloradans, we need to continue to make the transition to clear, renewable energy. This review process is needed to make smart choices about where we invest in energy for our future and accelerate our transition to clean energy.



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Comment Number: 000001250\_SEGO\_20160623-3

Commenter I: Jeff Sego

Other Sections: I

Comment Excerpt Text:

I realize there will be a time for renewable energy. But, currently, it's not reliable or in great abundance. And it's certainly not cheap. For anybody here that doubts that, read up on the Ivan Solar Project south of Las Vegas; and you'll know what I'm saying as far as not reliable and not cheap. Renewables may be the future, but we're not there yet. We need coal to help continue to bridge the energy gap until we get there.

---

Comment Number: 000001258\_Inouye\_20160623-1

Commenter I: David Inouye

Comment Excerpt Text:

Second, the science of energy generation is changing rapidly. I think we've reached a tipping point in terms of the balance between renewable energy and fossil fuels. And that needs to be taken into account in your deliberations.

---

Comment Number: 000001288\_Stein\_20160623-2

Commenter I: Joe Stein

Other Sections: I I

Comment Excerpt Text:

Opponents of the coal moratorium correctly argue that the coal industry provides jobs and economic benefits to working class towns that need it. According to the U.S. Energy Information Administration, about 56,700 Americans are employed in coal mining; down from 80,000 in 2014. These workers are drawn to coal because jobs are a plenty. The U.S. still gets one-third of its energy from coal. Coal companies claim that we cannot replace the jobs that they provide with jobs in the green industry. The data says something different. Worldwide, there are more jobs in renewables than coal mining, oil, and gas combined. As fossil fuels dry up, workers are turning to the solar sector. There are already twice as many solar workers in the U.S. as there are coal miners. 31,000 new solar jobs were created in 2014 alone. With wise policies centered around green energy subsidies, we could create thousands of jobs, effectively nullifying the job loss experienced during the inevitable and necessary divestment from fossil fuel based energy.

---

Comment Number: 00001268\_Ortiz\_20160623-3

Organization I: Western Slope Conservation Center

Commenter I: Karen Ortiz

Comment Excerpt Text:

The North Fork also possesses a wealth of renewable energy sources, like micro-hydro, solar, and biomass. We would welcome an opportunity to pilot some innovative ways to leverage those sources of energy from our -- for our homes, farms, businesses, governments, and community centers. This could similarly diversify our economy, create new jobs, and realize the mass potential for renewable energy

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Comment Number: 00001272\_Armstrong\_20160623-1

Commenter I: Jeremiah Armstrong

Comment Excerpt Text:

One glaring example of this failure of the alternative energy source is the \$2.2 billion Ivanpah solar power project. This was funded by taxpayer money in California's Mojave Desert. And it's supposed to be generating more than a million megawatt hours of electricity each year. But, 15 months after starting, the plant is producing only 40 percent of that. Again, we see the hypocrisy from this, this administration. This doesn't seem to be about revenue. It seems about -- be about destroying and damaging America's energy infrastructure. One big

miscalculation that this particular power plant is -- that it requires far more steam to run smoothly and efficiently than originally thought. According to a document filed with the California Energy Commission, instead of ramping up the plant each day before sunrise by burning about one hour's worth of natural gas to generate the steam, Ivanpah needs more than four times that help from natural -- from fossil fuels to get going. Another unexpected problem is not enough sun. Some of the studies and weather predictions overestimated the amount of sun. It had more cloud cover. It doesn't work when the sun's not shining. Ivanpah isn't the only solar project struggling to energize the grid. According to greentechmedia.com, 64 worldwide solar companies have either gone bankrupt or closed their doors. Even with over \$40 billion subsidized dollars, they can't make it and compete with coal energy.

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Comment Number: 00001282\_Seiter\_20160623-1

Commenter I: Jake Seiter

Comment Excerpt Text:

It has been stated by the United States Fish and Wildlife Service that the Ivanpah Facility kills one bird every two minutes. So, if you do the math and you extrapolate that out to a year, that equals out to 131,400 birds killed by one power -- solar power plant per year.

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Comment Number: 00001282\_Seiter\_20160623-2

Commenter I: Jake Seiter

Comment Excerpt Text:

Now, I also want to include in that the cost of building and operating one of these plants is \$2.2 billion, not including the subsidies that we've already heard about today, that they are given to operate. So, now if you take the 60 [solar] plants required, that accounts to \$132 billion that it costs to run these plants and to build them. Now, that does not include the tax incentives. And I think that's something that needs to be looked at.

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Comment Number: 00001283\_Unknown\_20160623-2:

Comment Excerpt Text:

We can look to several countries around to see how their experiment with green energy has gone. According to the Institute of Energy Research, which stated, in Sweden without government subsidiaries, wind turbine owners have dismantled about 50 turbines and selling them abroad. In Germany, on May 8th, 2016, the power grid was almost fried because the problem with wind and solar is that the intermittent; and, thus, it's uncontrollable by the system operator. The German government has paid wind farms \$548 million last year to cut their power in order to prevent damage to its electric grid because of the damaging effects of renewable energy has on German's grid, according the Daily Collar [phonetic]. Denmark's government abandoned plans to build five offshore wind turbine farms Friday admit fears that its electricity produced, that it would become too expensive for Danish consumers.

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Comment Number: 00001285\_Abshire\_20160623-2

Commenter I: Jim Abshire

Comment Excerpt Text:

The State of California has lost over 700,000 manufacturing jobs in recent years due to the implementation of the renewable portfolio standard. California's industrial electricity rates are 62 percent above the U.S. average. The government has spent billions of dollars, taxpayer dollars, to subsidize renewable energy. Even though their own estimates project that this will only supply 10 percent of the energy demands by the year 2040. That's three percent over today's total. That's a pretty dismal rate of return, considering 65 percent of all Federal subsidies go towards renewables

Comment Number: 00001286\_LeValley\_20160623-3

Organization I:Delta County

Commenter I:Robbie LeValley

Comment Excerpt Text:

Also, in that Programmatic EIS, we specifically ask -- Delta County asks that the interconnectness between what the coal mine produces and what the solar energy and micro-hydro and methane and all of that need for their infrastructure, also be included in that EIS. There are several things that the coal mine produces for the renewable industry

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# Appendix E

## Annotated Bibliography

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# **APPENDIX E**

## **ANNOTATED BIBLIOGRAPHY**

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The BLM received approximately 449 comments, which included data for consideration or citations to references for review. In addition, many commenters attached reference material, white papers, or other data to their submissions for review. To facilitate searching for citations of interest, this annotated bibliography contains a table with the citation and identifies the relevant issue topics from the NOI. This table is followed by full publication information and a brief overview of the content of each document.

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## Appendix E Summary Table

Reference	NOI Topic Areas						
	How, when, and where to lease	Fair Return	Climate impacts	Other impacts	Socioeconomic considerations	Exports	Energy needs
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## Appendix E Summary Table

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## Appendix E Summary Table

Reference	NOI Topic Areas						
	How, when, and where to lease	Fair Return	Climate impacts	Other impacts	Socioeconomic considerations	Exports	Energy needs
<a href="#">Fuchs, B.</a> 2016. Internet website.				X			
<a href="#">Funes, Y.</a> 2016. “What leaving fossil fuels behind can do for inequality.”					X		X
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<a href="#">Gerarden, T., et al.</a> 2016. Federal Coal Program Reform, the Clean Power Plan, and the Interaction of Upstream and Downstream Climate Policies.	X			X			
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<a href="#">Gerking, S., et al.</a> 2008. What explains the increased utilization of Powder River Basin coal in electric power generation?							X
<a href="#">Gilber, R. et al.</a> 1988. “Radionuclide transport from soil to air, native vegetation, kangaroo rats and grazing cattle on the Nevada test site.”				X			
<a href="#">Gillette News Record.</a> 2008. Nitrogen dioxide from mine blast causes orange cloud. Internet website.				X			
<a href="#">Gillingham, K.</a> 2016. Future Direction of Coal Markets: A Focus on Federal Coal Policy.	X	X	X				
<a href="#">Gillis, J.</a> 2013. “Global temperatures highest in 4,000 Years.”			X				
<a href="#">Gillis, J.</a> 2016. “Climate model predicts west Antarctic ice sheet could melt rapidly.”			X				
<a href="#">Gledhill, D. K., et al.</a> 2008. “Ocean Acidification of the Greater Caribbean Region 1996–2006.”			X				
<a href="#">Glick, P.</a> 2006. Fueling the Fire: Global Warming, Fossil Fuels and the Fish and Wildlife of the American West.			X				
<a href="#">Glustrom, L.</a> 2013. Warning: Faulty Reporting of US Coal Reserves.						X	
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<a href="#">Gohlke, J. M., et al.</a> 2011. “Estimating the global public health implications of electricity and coal consumption.”				X			

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Reference	NOI Topic Areas						
	How, when, and where to lease	Fair Return	Climate impacts	Other impacts	Socioeconomic considerations	Exports	Energy needs
<a href="#">Golder Associates</a> . 2012. Environmental Assessment: Bledsoe Coal Lease Kyes-53865.	X			X			
<a href="#">Gomez, J.</a> 2014. United States Government Accountability Office.					X		
<a href="#">Grandjean, et al.</a> 2014. "Neurobehavioural effects of developmental toxicity."				X			
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<a href="#">Gruenspecht, H.</a> 2016. Coal in the United States: Recent Developments and Outlook.				X			
<a href="#">Gutierrez, S.</a> 2011. "Getting there: How long can trains legally block intersections?"					X		
<a href="#">Haggerty, J., et al.</a> 2016. "Does local monitoring empower fracking host communities? A case study from the gas fields of Wyoming."				X	X		
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<a href="#">Hansen, J., et al.</a> 2008. "Target atmospheric CO <sub>2</sub> : Where should humanity aim?"			X				
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<a href="#">Harrigan, R. J., et al.</a> 2014. "A continental risk assessment of West Nile Virus under climate change."			X				
<a href="#">Harvard School of Public Health</a> . 2012. Internet website.				X			X
<a href="#">Headwater Economics</a> . 2015. An Assessment of US Federal Coal Royalties, Current Royalty Structure, Effective Royalty Rates, and Reform Options.		X					

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Reference	NOI Topic Areas						
	How, when, and where to lease	Fair Return	Climate impacts	Other impacts	Socioeconomic considerations	Exports	Energy needs
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<a href="#">Hein, J.</a> 2015. Harmonizing Preservation and Production June 2015. Institute for Policy Integrity. Internet website.	X						
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<a href="#">Hein, J., et al.</a> 2015. Illuminating the Hidden Costs of Coal: How the Interior Department Can Use Economic Tools to Modernize the Federal Coal Program.	X	X					
<a href="#">Hein, J., et al.</a> 2015. Reconsidering Coal's Fair Market Value. The Social Costs of Coal Production and the Need for Fiscal Reform.		X			X		
<a href="#">Heron, E.</a> 2014. Linc Energy charged with causing serious environmental harm, April 12.				X			
<a href="#">Higginbotham, et al.</a> 2013. Coal Train Pollution Signature Study. Briefing paper prepared for the Coal Terminal Action Group Dust and Health Committee.			X				
<a href="#">Hill, J.</a> 2012. Internet website.			X				
<a href="#">Hitt, N. P., et al.</a> "Temporal changes in taxonomic and functional diversity of fish assemblages downstream from mountaintop mining."				X			
<a href="#">Hoegh-Guldberg, O., et al.</a> 2010. "The impact of climate change on the world's marine ecosystems."			X				
<a href="#">Hönisch, B., et al.</a> 2012. "The geological record of ocean acidification."			X				
<a href="#">Hood River News</a> . 2013. "Another voice: Coal transport comments needed now."						X	
<a href="#">Houp, R. E.</a> 1993. "Observations on long-term effects of sedimentation on freshwater mussels (Mollusca: Unionidae) in the north fork of the Red River, Kentucky."				X			
<a href="#">Howard, P.</a> 2016. The Bureau of Land Management's Modeling Choice for the Federal Coal Programmatic Review.	X						
<a href="#">Howarth, et al.</a> 2013. Risk mitigation and the social cost of carbon.					X		
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Reference	NOI Topic Areas						
	How, when, and where to lease	Fair Return	Climate impacts	Other impacts	Socioeconomic considerations	Exports	Energy needs
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<a href="#">Jacobson M., et al.</a> 2011. “Providing all global energy with wind, water, and solar power.”							X

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Reference	NOI Topic Areas						
	How, when, and where to lease	Fair Return	Climate impacts	Other impacts	Socioeconomic considerations	Exports	Energy needs
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<a href="#">Jacquet, J. B.</a> 2014. The Battlement Mesa Health Impact Assessment: A Case Study and Oral History of Process and Lessons Learned.				X			
<a href="#">Jenkinson, J. J.</a> 2005. "Specific gravity and freshwater mussels."				X			
<a href="#">John T. Boyd Company.</a> 2011. Powder River Basin Coal Resource and Cost Study.		X		X			
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<a href="#">Jones &amp; DeMille Engineering.</a> 2016. CIB Funded Projects.					X		
<a href="#">Jones, C., et al.</a> 2009. "Committed terrestrial ecosystem changes due to climate change."			X				
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<a href="#">Joo, N., et al.</a> 2014. 5 Things You Should Know about Powder River Basin Coal Exports. Internet website.			X			X	
<a href="#">Kalderia, K., et al.</a> 2016. Carnegie Institution for Science.	X		X				
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<a href="#">Keith, D.</a> 2013. <i>A Case For Climate Engineering.</i>			X				
<a href="#">Kiesecker, J. M., et al.</a> 2011. "Energy by design: Making mitigation work for conservation and development."				X			
<a href="#">Kitzhaber J. A., et al.</a> 2013. Letter to CEQ re: coal leasing costs.	X		X				
<a href="#">Kreiger, E. et al.</a> 2016. The Clean Power Plan in Pennsylvania: Analyzing Power Generation for Health and Equity.				X	X		
<a href="#">Kroeker, K. J., et al.</a> 2013. "Impacts of ocean acidification on marine organisms: Quantifying sensitivities and interaction with warming."				X			
<a href="#">Krupnick, A., et al.</a> 2015. Putting a Carbon Charge on Federal Coal: Legal and Economic Issues.	X	X					
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<a href="#">Krupnick, A., et al.</a> 2016. Applying EIA's National Energy Modeling System to US Coal Projections: Strengths and Weaknesses for BLM's Programmatic Environmental Impact Statement.	X			X			
<a href="#">Kuykendall, T.</a> 2016. Headwinds Facing US Coal. SNL Energy.					X		
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Reference	NOI Topic Areas						
	How, when, and where to lease	Fair Return	Climate impacts	Other impacts	Socioeconomic considerations	Exports	Energy needs
<a href="#">Kuykendall, T., et al.</a> 2016. Headwind that pushed coal to bankruptcy potentially changing course. SNL Energy		X					X
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<a href="#">Lashof, D. A., et al.</a> 2007. “Coal in a Changing Climate.”			X				
<a href="#">Lattanzio R. K.</a> 2015. Life-Cycle Greenhouse Gas Assessment of Coal and Natural Gas in the Power Sector.			X				
<a href="#">Lazarus, M., et al.</a> 2015. “Supply-side climate policy: The road less taken.”			X				
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<a href="#">Lemly, A. D.</a> 2009. “Aquatic hazard of selenium pollution from coal mining.”				X			
<a href="#">Leong, C.</a> 2001. “Retrograde degeneration of neurite membrane structural integrity of nerve growth cones following in vitro exposure to mercury.”				X			
<a href="#">Leonhardt, D.</a> 2015. “There’s a formula for deciding when to extract fossil fuels.”					X		
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<a href="#">LeResche, B.</a> 2014. Letter to Wyoming DEQ on Linc Aquifer Exemption.				X			
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<a href="#">Lifson, T.</a> 2014. “Debunking the 97% ‘consensus’ on global warming.”			X				
<a href="#">Lin, J., et al.</a> 2014. “China’s international trade and air pollution in the United States.”						X	
<a href="#">Live Science.</a> 2016. Internet website.			X				X

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Reference	NOI Topic Areas						
	How, when, and where to lease	Fair Return	Climate impacts	Other impacts	Socioeconomic considerations	Exports	Energy needs
<a href="#">Loarie, J.</a> 2012. AERMOD Modeling of Air Quality Impacts of the Proposed Morrow Pacific Project.			X				
<a href="#">Lockwood, A. H., et al.</a> 2009. Coal's Assault on Human Health.				X			
<a href="#">Logan, J. A., et al.</a> 2001. "Ghost forests, global warming, and the mountain pine beetle (Coleoptera: Scolytidae)."				X			
<a href="#">Lombardi, K.</a> 2016. Former cleanup workers blame illnesses on toxic coal ash exposures. Internet website.				X			
<a href="#">Loss, S. R., et al.</a> 2013. Estimates of bird collision mortality at wind facilities in the contiguous United States.				X			X
<a href="#">Louie, E. P., et al.</a> 2016. "Retraining investment for US transition from coal to solar photovoltaic employment."					X		
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<a href="#">Lynch, P.</a> 2016. 2016 climate trends continue to break record.			X				
<a href="#">Lyon, A. G., et al.</a> 2003. "Potential gas development impacts on sage grouse nest initiation and movement."				X			
<a href="#">MacDougall, A. H., et al.</a> 2012. "Significant contribution to climate warming from the permafrost carbon feedback."			X				
<a href="#">Machol, B., et al.</a> 2013. "Economic value of US fossil fuel electricity health impacts."			X	X			
<a href="#">Maclean, I. M., et al.</a> 2011. "Recent ecological responses to climate change support predictions of high extinction risk."			X				
<a href="#">Madsen, T., et al.</a> 2016. "We have the power: 100% renewable energy for a clean, thriving America."							X
<a href="#">Mahaffey, K.</a> 2004. "Blood organic mercury and dietary mercury intake: National health and nutrition examination survey, 1999 and 2000."				X			
<a href="#">Mahaffey, K.</a> 2004. Methyl Mercury: Epidemiology Update. EPA. San Diego, California.				X			
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<a href="#">Mapes, L.</a> 2016. Toxic Algae Creating Deep Trouble on West Coast.				X			
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Reference	NOI Topic Areas						
	How, when, and where to lease	Fair Return	Climate impacts	Other impacts	Socioeconomic considerations	Exports	Energy needs
<a href="#">Markandya, A., et al.</a> 2007. "Electricity generation and health."				X			
<a href="#">Markey, E. J., et al.</a> 2014. Summary of GAO Report on Federal Coal Leasing Feb. 4.	X	X					
<a href="#">Marten, A., et al.</a> 2011. Estimating the Social Cost of non-CO <sub>2</sub> GHG Emissions: Methane and Nitrous Oxide.					X		
<a href="#">Marten, A., et al.</a> Incremental CH <sub>4</sub> and N <sub>2</sub> O mitigation benefits consistent with the US Government's SC-CO <sub>2</sub> estimates.			X		X		
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<a href="#">McGlade, C., et al.</a> 2015. "The geographical distribution of fossil fuels unused when limiting global warming to 2 degrees C."			X				
<a href="#">McKenzie, et al.</a> 2004. "Climate change, wildfire, and conservation."			X				
<a href="#">McKibben, B.</a> 2016. "Global warming's terrifying new chemistry."			X				
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<a href="#">Melillo, J. M., et al.</a> 2014. Climate Change Impacts in the United States: The Third National Climate Assessment.			X				
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Reference	NOI Topic Areas						
	How, when, and where to lease	Fair Return	Climate impacts	Other impacts	Socioeconomic considerations	Exports	Energy needs
<a href="#">Moran, C., et al.</a> 2013. Independent scientific panel report on underground coal gasification pilot trials.				X			
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<a href="#">Morton, T.</a> 2016. Update: Peabody, Arch Cut Nearly 480 Jobs At North Antelope, Black Thunder Mines.					X		
<a href="#">Mountain Pact.</a> 2016. How Federal Coal Reform Could Help Mountain Communities Mitigate the Costs of Climate Change.		X	X				
<a href="#">Moy, A. D., et al.</a> 2009. Reduced Calcification in Modern Southern Ocean Planktonic Foraminifera.			X				
<a href="#">Muller, N. Z., et al.</a> 2011. "Environmental accounting for pollution in the United States economy."			X		X		
<a href="#">Mullins, N.</a> 2016. "A coal miner's goodbye."					X		
<a href="#">Multnomah County Health Department.</a> 2013. The Human Health Effects of Rail Transport of Coal Through Multnomah County, Oregon, Mar. 1, 2013.				X	X		
<a href="#">Multnomah County Health Department.</a> 2013. The Human Health Effects of Rail Transport of Coal Through Multnomah County, Oregon: A Health Analysis and Recommendations for Further Action.				X			
<a href="#">Mulvaney, D., et al.</a> 2015. The Potential Greenhouse Gas Emissions from US Federal Fossil Fuels.			X				
<a href="#">Mulvaney, D., et al.</a> 2016. Over-Leased: How Production Horizons of Already Leased Federal Fossil Fuels Outlast Global Carbon Budget.	X		X				
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<a href="#">Munthe, J., et al.</a> 2010. Study on Mercury Sources and Emissions, and Analysis of Cost and Effectiveness of Control Measures: UNEP Paragraph 29 Study.			X				
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Reference	NOI Topic Areas						
	How, when, and where to lease	Fair Return	Climate impacts	Other impacts	Socioeconomic considerations	Exports	Energy needs
<a href="#">NASA</a> . 2016. Internet website.			X				
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<a href="#">National Center for Environmental Health</a> . 2005. “Blood lead levels—United States, 1999-2002.”				X			
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<a href="#">NOAA</a> . 2016. Sea Surface Temperature (SST) Contour Charts.			X				
<a href="#">NOAA</a> . 2016. What Is Ocean Acidification?			X				
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<a href="#">National Research Council</a> . 2010. Hidden Costs of Energy: Unpriced Consequences of Energy Production and Use.					X		X
<a href="#">National Research Council</a> . 2000. Ocean Acidification: A National Strategy to Meet the Challenges of a Changing Ocean.			X				
<a href="#">National Research Council</a> . 2000. Toxicological Effects Of Methyl Mercury.			X				
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<a href="#">NWF</a> . 2014. Issue Brief: Accounting for Carbon Pollution from Coal Mining on Federal Lands.				X			
<a href="#">NWF</a> . 2014. Issue Brief: Accounting for Carbon Pollution from Coal Mining on Federal Lands.	X		X				

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	How, when, and where to lease	Fair Return	Climate impacts	Other impacts	Socioeconomic considerations	Exports	Energy needs
<a href="#">NWF, et al.</a> Losing Ground: Energy Development's Impacts on Wildlife, Landscapes, and Hunting Traditions of the American West.				X			
<a href="#">NWF, et al.</a> 2015. Undermined Promise II	X						
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<a href="#">Newcombe, C. P., et al.</a> 1991. "Effects of suspended sediments on aquatic ecosystems."				X			
<a href="#">Newcombe, C. P., et al.</a> 1996. "Channel suspended sediment and fisheries: A synthesis for quantitative risk and impact."				X			
<a href="#">Newton, T. J., et al.</a> 2007. "Contaminant sensitivity of freshwater mussels: Lethal and sublethal effects of ammonia to juvenile <i>Lampsilis</i> mussels (Unionidae) in sediment and water-only exposures."				X			
<a href="#">NextGen Climate.</a> 2016. Our Air Health and Equity Impacts of Ohio's Power Plants.					X		
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Reference	NOI Topic Areas						
	How, when, and where to lease	Fair Return	Climate impacts	Other impacts	Socioeconomic considerations	Exports	Energy needs
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<a href="#">OIG Report No. CR-EV-BLM-0001-2012</a> . 2013. Coal Management Program, US Department of the Interior.		X					
<a href="#">Onederra, I., et al.</a> 2012. "Understanding main causes of nitrogen oxide fumes in surface blasting."					X		
<a href="#">Orr, J. C., et al.</a> 2005. "Anthropogenic ocean acidification over the twenty-first century and its impact on calcifying organisms."			X				
<a href="#">Painter, T., et al.</a> 2010. "Response of Colorado River runoff to dust radiative forcing in snow."	X			X			
<a href="#">Palmer, M. A., et al.</a> "Restoration as mitigation: Analysis of stream mitigation for coal mining impacts in southern Appalachia."	X			X			
<a href="#">Parmesan, C., et al.</a> 2003. "A globally coherent fingerprint of climate change impacts across natural systems."			X				
<a href="#">Partnership for a Secure America</a> . 2016. Internet website.			X				
<a href="#">Paterson, L.</a> 2016. "More coal layoffs in Wyoming."					X		
<a href="#">Paz, S.</a> 2015. "Climate change impacts on West Nile virus transmission in a global context."			X				
<a href="#">Penfold, M.</a> 2014. Letter to BLM.	X						
<a href="#">Peters, A.</a> 2009. Air Quality and Cardiovascular Health Smoke and Pollution Matter.			X	X			
<a href="#">Peters, K.</a> 1992. "The Clean Air Act and the Amendments of 1990."			X				
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<a href="#">Pfister, T., et al. 2014.</a> "Projections of future summertime ozone over the US."			X				
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Reference	NOI Topic Areas						
	How, when, and where to lease	Fair Return	Climate impacts	Other impacts	Socioeconomic considerations	Exports	Energy needs
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<a href="#">PRBRC and WORC.</a> No date. Abuse of Taxpayer-Owned Powder River Basin Coal.	X	X					
<a href="#">PRBRC, et al. 2015.</a> Letter to Office of Surface Mining Reclamation and Enforcement re: Stream Protection Rule, Washington DC.	X		X	X			
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<a href="#">PRBRC, et al. 2016.</a> Letter to Office of Surface Mining Reclamation and Enforcement re: Proposed Self-Bonding Rule Changes, Washington DC.	X						
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<a href="#">Power, T. M., et al. 2013.</a> The Impact of Powder River Basin Coal Exports on Global Greenhouse Gas Emissions.			X			X	
<a href="#">Power, T., et al. 2010.</a> Comments on the Greenhouse Gas Impacts and the Modeling of Coal Flows in the Millennium Bulk Terminals Longview SEPA Draft Environmental Impact Statement.			X				
<a href="#">Power, T., et al. 2015.</a> Assessing the Ability of Contemporary Models to Calculate the GHG Implications of Federal Coal Leasing Decisions and Other Federal Energy Management Decisions.			X				X
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<a href="#">Rasker, R., et al. 2009.</a> “The economic importance of air travel in high-amenity rural areas.”					X		
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## Appendix E Summary Table

Reference	NOI Topic Areas						
	How, when, and where to lease	Fair Return	Climate impacts	Other impacts	Socioeconomic considerations	Exports	Energy needs
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<a href="#">Rehbach, S., et al.</a> 2015. Downsizing the US coal industry: Can a slow-motion train wreck be avoided?		X			X		
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<a href="#">Rice, D.</a> 2016. "Global temperatures soar for record 12th straight month."			X				
<a href="#">Rich, H.</a> 2013. Internet website.							X
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<a href="#">Riordan, M.</a> 2014. "Don't sell cheap US coal to Asia."						X	
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<a href="#">Roessler.</a> 2006. Las Vegas and the Groundwater Development Project Where does it start? Where will it end?				X			
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<a href="#">Rogelj, J., et al.</a> 2015. "Paris agreement climate proposals need a boost to keep warming well below 2 degrees C."			X				
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## Appendix E Summary Table

Reference	NOI Topic Areas						
	How, when, and where to lease	Fair Return	Climate impacts	Other impacts	Socioeconomic considerations	Exports	Energy needs
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<a href="#">Roth, S.</a> 2016. "Sally Jewell: 'Keep it in the ground' protests 'naïve'."	X						X
<a href="#">Rucker, P.</a> 2012. "Coal export trade raises alarms for western state."		X					
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<a href="#">Schaeffer, M., et al.</a> 2013. Adequacy and Feasibility of the 1.5 Degree C Long-Term Global Limit.			X				
<a href="#">Schleussner, C-F., et al.</a> 2016. "Differential climate impacts for policy-relevant limits to global warming: The case of 1.5 degrees C and 2 degrees C."			X				
<a href="#">Schlissel, D.</a> 2016. "A Sustained Coal Recovery? When You Get There, There's No There There."					X		X
<a href="#">Schmid, M., et al.</a> No date. Fire and Forest Insect Pests.				X			
<a href="#">Schulte Roth &amp; Zabel.</a> 2016. Labor Liabilities in Coal Bankruptcies.					X		
<a href="#">Schuman, G. E., et al.</a> 2000. Sagebrush Establishment on Mined Lands: Ecology and Research.							
<a href="#">Schwartz, C.</a> 2013. "Studies, states seek to halt mule deer population decline."				X			
<a href="#">Sheffield, P. E., et al.</a> 2011. "Global climate change and children's health: Threats and strategies for prevention."			X	X			
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Reference	NOI Topic Areas						
	How, when, and where to lease	Fair Return	Climate impacts	Other impacts	Socioeconomic considerations	Exports	Energy needs
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<a href="#">Shindell, D. T.</a> 2015. “The social cost of atmospheric release.”			X		X		
<a href="#">Shoemaker, J. K., et al.</a> 2013. “What role for short-lived climate pollutants in mitigation policy?”			X				
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<a href="#">Sierra Club, et al.</a> 2015. Comments on Draft Stream Protection Rule.	X						
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<a href="#">Simpson, D. A.</a> 2011. Letter to T. Sturdevant, Washington State Department of Energy.	X						
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<a href="#">Smith, J. B., et al.</a> 2009. “Assessing dangerous climate change through an update of the Intergovernmental Panel On Climate Change (IPCC) “Reasons For Concern.”			X				
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Reference	NOI Topic Areas						
	How, when, and where to lease	Fair Return	Climate impacts	Other impacts	Socioeconomic considerations	Exports	Energy needs
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<a href="#">Spross, J.</a> 2013. Would Limiting Carbon Emissions Destroy The Economy?			X		X		
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<a href="#">Squillace, M.</a> 2013. The Tragic Story of the Federal Coal Leasing Program.	X	X					
<a href="#">Squillace, M.</a> 2016. Testimony of Professor Mark Squillace, University of Colorado Law School before the Subcommittee on Energy and Mineral Resources of the House NRC On HR 5259.	X	X					
<a href="#">Squillace, M.</a> No date. Reclamation Liability under the Surface Mining Control and Reclamation Act (SMCRA).		X		X			
<a href="#">Squillace, M., et al.</a> 2012. NEPA, Climate Change, and Public Lands Decision-Making.			X				
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<a href="#">Stevenson, A.</a> 2016. Taxpayer Exposure to Bankrupt Coal.		X					
<a href="#">Stock J., et al.</a> 2016. Federal Coal Program Reform, the Clean Power Plan, and the Interaction of Upstream and Downstream Climate Policies.			X				
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<a href="#">Storrow, B.</a> 2016. “Wyoming’s two largest coal mines announce layoffs.”					X		
<a href="#">Storrow, B.</a> 2016. “The prospects for coal exports are dimming, but politics have little to do with it.”						X	
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Reference	NOI Topic Areas						
	How, when, and where to lease	Fair Return	Climate impacts	Other impacts	Socioeconomic considerations	Exports	Energy needs
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<a href="#">SFAA</a> . 2016. Comments regarding Surety Bonds.		X					
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<a href="#">Sutherland, A. B., et al.</a> 2007. "Effects of increased suspended sediment on growth rate and gill condition of two southern Appalachian minnows."				X			
<a href="#">Sutherland, A. B., et al.</a> 2008. "Effects of suspended sediment on whole-body cortisol stress response of two southern Appalachian minnows."				X			
<a href="#">Svoboda, L.</a> August 7, 2007.				X			
<a href="#">Svoboda, L.</a> October 27, 2007.				X			
<a href="#">Swain, D., et al.</a> 2013. "The extraordinary California drought of 2013/2014: Character, context, and the role of climate change."			X				
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<a href="#">The Pew Charitable Trusts</a> . 2016. The Economic Value of Quiet Recreation on BLM Lands.					X		
<a href="#">The Wilderness Society</a> . 2014. Greenhouse Gas Emissions from Fossil Fuel Energy Extracted from Federal Lands and Waters: An Update.			X				
<a href="#">Thomas, C. D., et al.</a> 2004. "Extinction risk from climate change."			X	X			

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Reference	NOI Topic Areas						
	How, when, and where to lease	Fair Return	Climate impacts	Other impacts	Socioeconomic considerations	Exports	Energy needs
<a href="#">Tilman, D.</a> 2000. "Causes, consequences and ethics of biodiversity."				X			
<a href="#">Tran, K. T.</a> 2012. AERMOD Modeling of Air Quality Impacts of the Proposed Morrow Pacific Project.				X			
<a href="#">Tsoar, H., et al.</a> 1987. "Dust transport and the question of desert loess formation."				X			
<a href="#">Uinta County.</a> 2011. Uinta County Comprehensive Plan.				X			
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<a href="#">Union of Concerned Scientists.</a> No date. Internet website.			X	X			
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<a href="#">US Bankruptcy Court.</a> 2016. Notice of Filing of Executed Agreements Comprising Resolution of Reclamation Obligations for Alpha Natural Resources, Inc.	X						
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<a href="#">US Climate Change Science Program.</a> 2006. Methane as a Greenhouse Gas.			X				
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Reference	NOI Topic Areas						
	How, when, and where to lease	Fair Return	Climate impacts	Other impacts	Socioeconomic considerations	Exports	Energy needs
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<a href="#">US Court of Appeals of the District of Columbia</a> . Declaration of Christopher B. Field. USCA Case #15-1363 Document #1586661 Filed: December 3, 2015.			X				
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<a href="#">USDA, FS</a> . 2012. Rulemaking for Colorado Roadless Areas Supplemental Final Environmental Impact Statement.				X			
<a href="#">USDA, FS</a> . 2014. Pawnee National Grassland Oil and Gas Leasing Analysis Final Environmental Impact Statement.	X						
<a href="#">USDA, FS</a> . 2015. Rulemaking for Colorado Roadless Areas Supplemental Draft Environmental Impact Statement.	X						
<a href="#">USDA, FS</a> . 2016. Forests to Faucets.				X			
<a href="#">US DOC, BEA</a> . 2016. Regional Economic Accounts.					X		
<a href="#">US DOE</a> . 2014. Addendum to Environmental Review Documents Concerning Exports of Natural Gas.				X			
<a href="#">US DOE</a> . 2014. Life Cycle Greenhouse Gas Perspective on Exporting Liquefied Natural Gas.			X			X	
<a href="#">US DOE, EIA</a> . 2012. Annual Energy Review 2011.							X
<a href="#">US DOE, EIA</a> . 2012. Fuel Competition in Power Generation and Elasticities of Substitution.							X
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<a href="#">US DOE, EIA</a> . 2015. Annual Energy Outlook with Projections to 2040.							x
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<a href="#">US DOE, EIA</a> . 2015. Annual Coal Report 2013.	X	X			X		
<a href="#">US DOE, EIA</a> . 2015. Scheduled 2015 capacity additions mostly wind and natural gas; retirements mostly coal.							x

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Reference	NOI Topic Areas						
	How, when, and where to lease	Fair Return	Climate impacts	Other impacts	Socioeconomic considerations	Exports	Energy needs
<a href="#">US DOE, EIA</a> . 2016. Average utilization for natural gas combined-cycle plants exceeded coal plants in 2015.							x
<a href="#">US DOE, EIA</a> . 2016. Annual Energy Outlook 2016 Early Release: Annotated Summary of Two Cases.							X
<a href="#">US DOE, EIA</a> . 2016. Annual Energy Outlook 2016, Coal Production: Northern Appalachia.							X
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<a href="#">US DOE, EIA</a> . 2016. Internet website.							X
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<a href="#">US DOE, EIA</a> . 2016. Quarterly coal production lowest since the early 1980s.							X
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<a href="#">US DOE, EIA</a> . 2016. Coal made up more than 80% of retired electricity generating capacity in 2015.							x
<a href="#">US DOE, EIA</a> . 2016. Internet website.							X
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<a href="#">US DOE, EIA</a> . 2016. Carbon Dioxide Emissions Coefficients.			X				
<a href="#">US DOE, EIA</a> . 2016. Primary Energy Consumption by Source.							X
<a href="#">US DOE, EIA</a> . 2016. Annual Coal Distribution Report 2014.	X						
<a href="#">US DOE, EIA</a> . 2016. Internet website.							X
<a href="#">US DOE, EIA</a> . 2016. Internet website.							X
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<a href="#">US DOI</a> . 2015. 9 animals that are feeling the impacts of climate change.			X				
<a href="#">US DOI</a> . 2015. Internet website.			X				
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Reference	NOI Topic Areas						
	How, when, and where to lease	Fair Return	Climate impacts	Other impacts	Socioeconomic considerations	Exports	Energy needs
<a href="#">US DOI, BLM</a> . 2008. Manual 6840 – Special Status Species Management.				X			
<a href="#">US DOI, BLM</a> . 2009. West Antelope II Coal Lease Application Final EIS Volume I.	X						
<a href="#">US DOI, BLM</a> . 2010. Record of Decision for the Belle Ayr North Lease by Application.	X						
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Reference	NOI Topic Areas						
	How, when, and where to lease	Fair Return	Climate impacts	Other impacts	Socioeconomic considerations	Exports	Energy needs
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Reference	NOI Topic Areas						
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## Appendix E Summary Table

Reference	NOI Topic Areas						
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## Appendix E Summary Table

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## Appendix E Summary Table

Reference	NOI Topic Areas						
	How, when, and where to lease	Fair Return	Climate impacts	Other impacts	Socioeconomic considerations	Exports	Energy needs
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Reference	NOI Topic Areas						
	How, when, and where to lease	Fair Return	Climate impacts	Other impacts	Socioeconomic considerations	Exports	Energy needs
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<a href="#">Warren, R., et al.</a> 2010. Increasing impacts of climate change upon ecosystems with increasing global mean temperature rise.			X				
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<a href="#">Welch, R.</a> December 4, 2015. Bureau of Land Management, Lakewood, Colorado.		X					
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<a href="#">Whiteside, T., et al.</a> Heavy Traffic Still Ahead.						X	
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## Appendix E Summary Table

Reference	NOI Topic Areas						
	How, when, and where to lease	Fair Return	Climate impacts	Other impacts	Socioeconomic considerations	Exports	Energy needs
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<a href="#">Wilhelm, S.</a> 2014. "Coal trains kill cold trains: Fruit delivery service shuts down as rail congestion heats up."				X			
<a href="#">Williams-Derry, C.</a> 2016. Unfair Market Value II. Coal Exports and the Value of Federal Coal.	X						
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<a href="#">Wilson, R., et al.</a> 2015. Analysis of the Tongue River Railroad Draft Environmental Impact Statement.			X	X			
<a href="#">Wong, L. D., et al.</a> 2016. The incompatibility of high-efficient coal technology with 2 [degrees] C scenarios.			X				
<a href="#">Wood Mackenzie.</a> 2016. Executive Summary: Impact of a Federal Coal Lease Program Reset.	X						
<a href="#">WORC.</a> 2014. Heavy Traffic Ahead, February; Heavy Traffic Still Ahead, July.				X	X		
<a href="#">WORC et al.</a> 2015. Letter to BLM on the Buffalo PRMP/EIS.	X						
<a href="#">WORC, et al.</a> Undermined Promise II, 2015. Internet website.	X			X			
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<a href="#">World Health Organization.</a> 2016. Arsenic.				X			
<a href="#">World Resources Institute.</a> 2003. The Greenhouse Gas Protocol for Project Accounting.			X				
<a href="#">WWC Engineering.</a> 2010. Wright Area Coal Lease Applications Final Environmental Impact Statement.	X			X			
<a href="#">Wyden, R.</a> No date. Fact Sheet: Federal Coal Royalties and Their Impact on Western States.		X					
<a href="#">Wyden, R.</a> Various dates. Wyden correspondence, 2013-2014.				X			

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Reference	NOI Topic Areas						
	How, when, and where to lease	Fair Return	Climate impacts	Other impacts	Socioeconomic considerations	Exports	Energy needs
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<a href="#">Wyoming DEQ.</a> 2016. Permit termination for Medicine Bow Fuel and Power Coal to Liquid Project.	X						
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<a href="#">Wyoming Mining Association.</a> 2016, The 2015-2016 Concise Guide to Wyoming Coal.		X		X			
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<a href="#">Zimmerman, G., et al.</a> 2015. Ensuring Taxpayers Receive a Fair Share for American's Public Resources.		X					
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Unique comments in response to the BLM's notice of proposed amendments to its resource management planning regulations, published in the *Federal Register* on February 25, 2016 (81 FR 9674).

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Research letter contending that greenhouse gas mitigation could lead to retention of more sea ice habitat, meaning that polar bears could persist throughout the century in greater numbers and in more areas.

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**Anderson, S. 2015. Letter to D. Berry, Colorado Office of Surface Mining Reclamation and Enforcement, on Alpha Natural Resources self-bonding. Powder River Basin Resource Council.**

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**Anderson, S. 2010. Sage-grouse RMP Amendments Scoping Comments. Sheridan, Wyoming. August 30, 2010.**

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This report by the Utah governor’s office reviews and analyzes the economic and fiscal impacts sourced to Utah’s energy sector, including mining development. It concludes that the industry provides a significant portion of the state’s jobs, personal income for its residents, economic activity, and public revenues.

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Article from Australian public broadcasting related to Linc Energy executives and contamination charges. Linc executives may be charged for contaminating swaths of prime agricultural land next to its underground coal gasification plant in Queensland.

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Abstract of article from the *International Journal of Cancer* on the epidemiological and environmental evidence of health effects from exposure to erionite fibers. The study took place over the span of four years in the Cappadocian region of turkey. It was done in response to a noticed high incidence of malignant mesotheliomas in areas with exposure to naturally occurring erionite fibers.

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**Barnett, A. G., et al. "Air pollution and child respiratory health: A case-crossover study in Australia and New Zealand." *American Journal of Respiratory and Critical Care Medicine* 171:1272-1278.**

Journal article on a study of the urban centers of Australia and New Zealand showing a strong and consistent association between hospital admissions for asthma in children and outdoor air pollutants, such as nitrogen dioxide and sulfur dioxide.

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**Barraza-Villareal, A., et al. 2008. "Air pollution, airway inflammation, and lung function in a cohort study of Mexico City schoolchildren." *Environmental Health Perspective* 116 (6).**

Journal article on a study of Mexico City schoolchildren showing acute airway inflammation and decrease in lung function when exposed to fine particulates (PM<sub>2.5</sub>) from air pollution.

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Journal article on oysters showing the negative effects of ocean acidification from elevated carbon dioxide levels in the atmosphere.

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**Bates, N. R., et al. 2010. "Feedback and responses of coral calcification on the Bermuda reef system to seasonal changes in biological processes and ocean acidification." *Biogeosciences* 7:2509–2530.**

Journal article on the impacts of ocean acidification on coral, demonstrating that the Bermuda coral reef has had a 50 percent reduction in calcification rates, compared to pre-industrial times.

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**Baughner, M., and De Rocco, T. 1995. BLM press release: Interior Established Royalty Policy Committee, names members and sets first meeting for Denver. For release August 1, 1995.**

News release from the Secretary of the Interior notifying the creation of the Royalty Policy Committee for the Minerals Management Advisory Board and the members being appointed.

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**Becker, D. A., et al. 2015. "Impacts of mountaintop mining on terrestrial ecosystem integrity: Identifying landscape thresholds for avian species in the central Appalachians, United States." *Landscape Ecology* 30:339-356.**

Journal article on how avian species have a range of responses, primarily negative, to reclaimed land resulting from mountaintop removal/valley fill coal mining in central Appalachia.

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**Beehive Collective. 2016. Internet website: [www.beehivecollective.org](http://www.beehivecollective.org).**

Website with studies on global and local issues related to coal.

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**Bernhardt, E. S., and M. A. Palmer. 2011. "The environmental costs of mountaintop mining valley fill operations for aquatic ecosystems of the central Appalachians." *Annals of the New York Academy of Sciences* 1223:39-57.**

Journal article on the impacts of mountaintop mining with valley fill on southern Appalachian forests and their endemic species, such as aquatic salamanders and mussels.

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**Bernhardt, E. S., et al. 2012. "How many mountains can we mine? Assessing the regional degradation of central Appalachian rivers by surface coal mining." *Environmental Science & Technology***

Journal article on the negative impacts of alkali mine drainage from surface coal mines on regional river networks in central Appalachia.

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**Bernstein, A. S. 2011. "Climate change and children's health." *Current Opinion in Pediatrics* 23:221-226.**

Journal article on how climate change could impact children's health.

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**Bernstein, M. A., and J. Griffin. 2005. Regional Differences in the Price-Elasticity of Demand for Energy. RAND Corporation, Santa Monica, California.**

Report on the Department of Energy (DoE) Office of Energy Efficiency and Renewable Energy (EERE), which has a portfolio of energy efficiency research and development programs intended to spur development of energy-efficient technologies. It estimates the benefits of its programs by analyzing their effects, using the DoE's National Energy Modeling System, a complex model of the US energy system.

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Peer-reviewed journal article examines the impact of the coal boom in the 1970s and the subsequent coal bust in the 1980s on local labor markets in Kentucky, Ohio, Pennsylvania, and West Virginia. Addresses two main questions: How were non-mining sectors affected by the shocks to the mining sector, and how did these effects differ between sectors producing local goods and those producing traded goods. Finds evidence of modest employment spillovers into sectors with locally traded goods but not into sectors with nationally traded goods.

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**Black, G. 2011. "Coal on a roll: Plundering America to power the Asian boom." *Onearth Natural Resources Defense Council*. Fall 2011.**

The article describes the practices of extracting coal in the Powder River Basin and other areas at low domestic royalty rates and exporting it to lucrative Asian markets.

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**Bloomberg New Energy Finance. 2016. Sustainable Energy in America Factbook. Bloomberg. Factbook for 2016.**

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The paper discusses recent NEPA case law and explores treatment of range of alternatives, including in the Ninth Circuit's Kootenai Tribe case. It held that "The NEPA alternatives requirement must be interpreted less stringently when the proposed agency action has a primary and central purpose to conserve and protect the natural environment, rather than to harm it . . . [c]ertainly, it was not the original purpose of Congress in NEPA that government agencies in advancing conservation of the environment must consider alternatives less restrictive of developmental interests."

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**BNSF Railway. 2011. Coal Cars. Internet website: [Http://www.Bnsf.Com/Customers/Equipment/Coal-Cars/](http://www.Bnsf.Com/Customers/Equipment/Coal-Cars/).**

BNSF Railway specifications for the coal cars used across its system.

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**Boden, T., and B. Andres. 2015. Ranking of the world's countries by 2013 total CO<sub>2</sub> emissions from fossil-fuel burning, cement production, and gas flaring. Internet website: [Http://Cdiac.Ornl.Gov/Trends/Emis/Top2013.Tot](http://Cdiac.Ornl.Gov/Trends/Emis/Top2013.Tot).**

Ranking of the world's countries by 2013 total CO<sub>2</sub> emissions from fossil fuel burning, cement production, and gas flaring.

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**Bohan, S. 2012. EPA Compliance and Review Program, Denver, Colorado. July 11, 2012.**

Response Letter addressed to Ms. Hazelhurst, the Acting Forest Supervisor Grand Mesa, Umcompahgre and Gunnison National Forest from the EPA Region 8. Contains comments on the Draft Environmental Impact Statement for the Federal Coal Lease Modifications of West Elk Mine. Topic of focus is greenhouse gas mitigation.

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**Bonogofsky, A., A. Jahshan, H. Yu, D. Cohn, and M. MacDonald. 2015. Undermined Promise II. National Wildlife Federation. Denver, Colorado.**

This joint publication by two conservation organizations analyzes the status of coal surface mine reclamation in five western states and updates the 2007 report, Undermined Promise.

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**Boucher, D., and K. Ferretti-Gallon. 2015. "Halfway there? What the land sector can contribute to closing the emissions gap."**

This article discusses agreements on large reductions in global warming emissions to help prevent the world impacts caused from climate change. It also discusses mitigations they plan to achieve in the 2020s.

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**Bounds, W. J., and K. H. Johannesson. 2007. "Arsenic addition to soils from airborne coal dust originating at a major coal shipping terminal." *Water Air Soil Pollution* 185:195-207.**

Journal article on how airborne dust from coal shipping is contributing additional arsenic to local soils in Norfolk, Virginia.

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**BP (British Petroleum). 2016. BP Statistical Review of World Energy June 2016. BP, London, England.**

High-quality objective and globally consistent data on world energy markets. The review is one of the most widely respected and authoritative publications in the field of energy economics, used for reference by the media, academia, world governments, and energy companies. A new edition is published every June.

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Natural gas production in the United States has increased rapidly in recent years, growing by 23 percent from 2007 to 2012. Advances combining horizontal drilling and hydraulic fracturing have enabled producers to access vast supplies of natural gas deposits in shale rock formations. This phenomenon has helped to reduce energy prices. However, fugitive methane emissions from natural gas extraction and processing contribute to global warming. Reducing fugitive methane would make natural gas a cleaner energy source than coal.

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**Brigham, M., et al. 2003. Mercury in Stream Ecosystems—New Studies Initiated by the US Geological Survey. Fact Sheet 016-03, US Department of the Interior and US Geological Survey.**

Fact sheet by the US Geological Survey studying mercury in the environment and how it enters the environment.

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**Bruckner, T., I. A. Bashmakov, and Y. Mulugetta. 2014. Energy Systems. “Climate change 2014: Mitigation of climate change.” Contribution of Working Group III to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change. Cambridge University Press, Cambridge, United Kingdom, and New York, New York, USA.**

This report addresses issues related to the mitigation of greenhouse gas emissions (GHGs) from the energy supply sector.

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**Brunner, D. J., and K. Schultz. 1999. “Effective gob well flaring.” Paper presented at the International Coalbed Methane Symposium.**

Article providing details on a safe and controlled system of gob well flaring, intending to persuade against venting gas from gob wells into the atmosphere. Gob well flaring provides environmental, safety, and financial benefits to mining operations. The article provides a mining operation in Australia as an application of gob well flaring.

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**Bryce, R. 2012. The High Cost of Renewable-Electricity Mandates. Manhattan Institute.**

Report about the unaccounted for costs of renewable electricity mandates that states did not account for when making them.

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**Bucks, D. 2013. “Federal coal: Déjà vu all over again.” November 25, 2013.**

The paper argues that federal coal policy represents broken promises to the public, similar to broken promises to Native Americans in the Powder River Basin area.

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**Bucks, D. R. 2015. Oversight Hearing, Ensuring Certainty for Royalty Payments on Federal Resource Production. Before the Subcommittee on Energy and Mineral Resources Committee on Natural Resources, United States House of Representatives. Washington, DC.**

This is a testimony from Dan R. Bucks, Former Director of the Montana Department of Revenue, urging action to ensure a fair return on natural resources.

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**\_\_\_\_\_ . 2016. Public Management of Federal Coal in the Public Interest.**

This report, by the Former Montana Director of Revenue, is a response to the request for comments by the BLM on the scope and analysis to be undertaken for the federal coal programmatic environmental impact statement (PEIS) established under Secretarial Order 3338. In substantive terms, this report presents a pathway for the PEIS to evaluate and prepare for the successful implementation of new public management systems for the federal coal program

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**Burakowski, E., and M. Magnusson. 2012. Climate Impacts on the Winter Tourism Economy in the United States. National Resource Defense Council, Washington, DC.**

NRDC funded study to help policymakers understand both the ski and snowmobile industries' current economic scale, as well as the potential economic impacts that climate change may cause.

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**Burger, M., and J. Wentz. 2016. Downstream and Upstream Greenhouse Gas Emissions: The Proper Scope of NEPA Review. Columbia Law School .Internet website: <http://blogs.law.columbia.edu/climatechange/2016/04/05/upstream-and-downstream-greenhouse-gas-emissions-from-fossil-fuel-production-and-transportation-new-working-paper-examines-scope-of-federal-analysis-required-under-nepa/>.**

Article from Columbia Law School examining the impacts of greenhouse gas emissions and NEPA review. Examines whether and how agencies should account for emissions from activities that occur “downstream” of the proposed action, such as from the combustion of fossil fuels and emissions from activities that occur “upstream” of the proposed action, such as from the extraction of fossil fuels. This article argues that such emissions do typically fall within the scope of indirect and cumulative impacts that must be evaluated under NEPA. It provides recommendations on how agencies should evaluate such emissions in environmental review documents.

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**Burger, M. 2016. A Mitigation-Based Rationale for Incorporating a Climate Change Impacts Fee into the Federal Coal Leasing Program. Sabin Center for Climate Change Law, New York, New York.**

Paper by the Columbia Law School that develops an argument for using a mitigation-based rationale to deliver a climate change impacts fee on coal extracted from federal lands. It provides suggestions for how the Department of the Interior and the BLM can approach an analysis of the possibility in its programmatic environmental impact statement.

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**Burke, R. A., et al. 2014. “Impacts of mountaintop removal and valley fill coal mining on C and N processing in terrestrial soils and headwater streams.” *Water Air Soil Pollution* 185:195-207.**

Journal article on the significant impacts of mountaintop removal and valley fill in coal mining on the carbon and nitrogen processing in soils, stream sediments, and stream water in Appalachia.

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**Burkhead, N. M., et al. 2001. "Effects of suspended sediment on the reproductive success of the tricolor shiner, a crevice-spawning minnow." *Transaction of the American Fisheries Society* 130(5):959-968.**

Journal article on the impacts of excessive sedimentation in rivers and creeks on the reproductive success of the tricolor shiner and other benthic-spawning fishes in the southeastern United States.

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**Burt, E., et al. 2013. Scientific Evidence of Health Effects from Coal Use in Energy Generation. School of Public Health, University of Illinois at Chicago.**

This document includes scientific evidence of health effects from the use of coal for energy generation. It is a resource for those interested in evidence from the health research literature addressing the health effects of the use of coal, focusing primarily on air emissions from coal combustion.

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**Burtraw, D., et al. 2014. Comments to the US Environmental Protection Agency on Its Proposed Clean Power Plan. Resources for the Future, Washington, DC.**

Comments to the US EPA on its Clean Power Plan proposal.

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**Cal/EPA and The American Lung Association of California. No date. Health Effects of Diesel Exhaust. Cal/EPA's Office Of Environmental Health Hazard Assessment and the American Lung Association of California.**

Factsheet describing the adverse effects of diesel exhaust due to particulates identified as toxic air contaminants by the California Air Resources Board.

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**Caldeira, K., et al. July 27, 2016. Carnegie Institution for Science.**

Comment letter submitted and signed by group of scientists expressing the opinion that there should not be coal leasing on public lands. They write to urge the Department of the Interior to take meaningful action by ending federal coal leasing, extraction, and burning. They cite many sources and offer scientific information supporting limiting coal, which they propose is done by ending federal coal leasing.

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**Caldwell et al. 2009. "Total blood mercury concentrations in the US population: 1999-2006." *Int J Hyg Environ Health* 212:588-598.**

Article describing the distribution and demographic characteristics of total blood mercury levels in the US general population. Article also breaks down age, gender, and racial distribution. They found that mercury levels were highest in women and white children.

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**California, State of. 2007. California, State of. 2007. Settlement Agreement, ConocoPhillips Company and Edmund G. Brown, Jr. Internet website: [http://ag.ca.gov/globalwarming/pdf/ConocoPhillips\\_Agreement.pdf](http://ag.ca.gov/globalwarming/pdf/ConocoPhillips_Agreement.pdf).**

Settlement agreement between ConocoPhillips Company and Edmund G. Brown, Jr., Attorney General of California, on behalf of the People of the State of California, to go forward with the Clean Fuels Expansion Project, designed to use the heavy gas oil that is already produced at the Rodeo Refinery to instead produce cleaner burning gasoline and diesel fuels. Agreement includes ConocoPhillips permanently surrendering its operating permit for plant, conducting a facility-wide energy efficiency audit, and doing a greenhouse gas emission audit.

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**Cantwell, M. 2016. Letter to Sally Jewell, Secretary of the Interior, regarding self-bonding under SMCRA. United States Senate.**

Letter from Senator Cantwell expresses concern over misuse of self-bonding provisions under the Surface Mining Control and Reclamation Act of 1977, which provide a loophole to leave taxpayers responsible for reclamation costs in the event of a coal company bankruptcy and requests investigation and increased enforcement.

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**Cantwell, M. 2016. The Coal Cleanup Taxpayer Protection Act of 2016. US Senate Committee on Energy & Natural Resources, Washington, DC.**

Summary of proposed Coal Cleanup Taxpayer Protection Act of 2016.

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**Cantwell, M., and R. Durbin. 2016. Letter to Comptroller General requesting investigation of self-bonding practices by coal companies. United States Senate.**

The letter from Senators Cantwell and Durbin requests the US Comptroller to initiate an investigation into self-bonding under the Surface Mining Control and Reclamation Act of 1977, in light of the bankruptcies of Arch Coal and Alpha Natural Resources.

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**Carbon Tracker Initiative. 2015. Assessing Thermal Coal Production Subsidies. September 2015. Internet website: <http://www.carbontracker.org/report/coal-subsidies/>.**

Report presents a framework for assessing thermal coal production subsidies in a 2035 framework. It evaluates supply and demand in the Powder River Basin and Australia and finds substantial subsidies in the Powder River Basin.

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**\_\_\_\_\_. 2016. Enough Already: Meeting 2 [degrees] C PRB [Powder River Basin] Coal Demand without Lifting the Federal Moratorium. July 2016. Internet website: <http://www.carbontracker.org/report/enough-already-2c-powder-river-basin-coal-demand-federal-moratorium/>.**

In this paper, potential coal supply from the Powder River Basin is compared with a demand profile restricting global warming to a two degrees Celsius outcome, in line with the upper limit at the recent agreement in Paris. Demand for coal over the period is found to be far outweighed by supply from existing leases alone, meaning that no new federal acreage in the Powder River Basin needs be leased by the federal government through the end of 2040, and the moratorium should be extended.

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**Carbon Tracker Initiative. 2015. The \$2 trillion stranded assets danger zone: How fossil fuel firms risk destroying investor returns. Internet website: <http://www.carbontracker.org/report/stranded-assets-danger-zone/>.**

Website discussing 2 trillion dollars worth of assets/natural resources that need not be used in order to stay under 2 degrees Celsius of global warming.

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**Carnegie Institution. 2008. "Jet streams are shifting and may alter paths of storms and hurricanes." *Science Daily*, April 17, 2008.**

Article with materials provided by the Carnegie Institution. Examines the shift in Earth's jet streams, believing that it may be in response to global warming. The shifting jet streams have implications for the frequency and intensity of future storms, particularly hurricanes.

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**Center for American Progress. Cutting Subsidies and Closing Loopholes in the US Department of the Interior's Coal Program. January 6, 2015. Internet website: <https://www.americanprogress.org/issues/green/report/2015/01/06/103880/cutting-subsidies-andclosing-loopholes-in-the-u-s-department-of-the-interiors-coal-program/>.**

White paper examining how coal companies have learned to maximize subsidies by shielding themselves from royalty payments through increasingly complex financial and legal mechanisms. States that reform is urgently needed to cut these subsidies and to close loopholes that disadvantage other coal producing regions and distort US energy markets.

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**\_\_\_\_\_. 2014. Modernizing the Federal Coal Program. December 2014. Internet website: <https://www.americanprogress.org/issues/green/report/2014/12/09/102699/modernizing-the-federal-coal-program/>.**

Paper finds that the royalty rate significantly undervalues coal and recommends a task force or commission to determine fair market value and assess the social cost of carbon.

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**Center for Biological Diversity. 2015. Grounded: The President's Power to Fight Climate Change, Protect Public Lands by Keeping Publicly Owned Fossil Fuels in the Ground. September 2015. Internet website: [https://www.biologicaldiversity.org/campaigns/keep\\_it\\_in\\_the\\_ground/pdfs/Grounded.pdf](https://www.biologicaldiversity.org/campaigns/keep_it_in_the_ground/pdfs/Grounded.pdf).**

This report details the legal authority by which the president can immediately stop new federal fossil fuel leasing in the United States, thereby keeping up to 450 billion tons from the global pool of potential greenhouse gas pollution. This is equivalent to 13 times the global carbon emissions in 2013 or the annual emissions from 118,000 coal-fired power plants. The president can do this now, without Congress, either independently or in the context of a binding international agreement. This report details the existing executive authority under the three major statutes that govern extraction of federal fossil fuels: the Mineral Leasing Act, the Outer Continental Shelf Lands Act, and the Federal Land Policy and Management Act.

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**Center for Climate and Energy Solutions. 2016. Internet website: <http://www.c2es.org>.**

Coal facts website.

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\_\_\_\_\_. 2016. **US Drought Monitor**. Internet website: <http://www.c2es.org/science-impacts/extreme-weather/drought>.

website showing the extent of drought conditions across the US, including the potential impacts to agriculture, transportation, wildfire, and energy.

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**Center for Health, Environment and Justice. 2015. Health Impacts of Mountaintop Removal Mining**. Internet website: <http://chej.org/2013/04/26/health-impacts-of-mountaintop-removal-mining/>.

This is the introduction page that summarized the health impacts of mountaintop removal mining. It is written by an advocacy organization with a focus on environmental health.

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**Center for Health and the Global Environment. 2011. Mining Coal Mounting Costs: The Life Cycle Consequences of Coal**. Harvard Medical School. Boston, Massachusetts.

Report detailing the cost to the environment and human health of using coal as energy. Provides statistics that expand on the argument. Document also provides visual aids to the coal life cycle.

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**Centers for Disease Control and Prevention. 2016. Coal Dust**. Internet website: <Http://www.Cdc.Gov/Niosh/Npg/Npgd0144.Html>.

Pocket guide to the chemical hazards associated with coal dust.

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**Centre for Research on the Epidemiology of Disasters. 2016**. Internet website: [www.emdat.be](http://www.emdat.be).

Database of information on disasters around the globe.

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**Chen, I., et al. 2011. "Rapid range shifts of species associated with high levels of climate warming." *Science* 333**

Journal article detailing how the distribution of many terrestrial organisms are shifting in latitude or elevation in response to changing climate.

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**Chen, Y., et al. 2004. "Influence of relatively low level of particulate air pollution on hospitalization for COPD in elderly people." *Inhalation Toxicology* 16:21-25.**

Journal article describing the association of low levels of particulate matter air pollution on hospitalization of elderly people with chronic obstructive pulmonary disease.

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**Cheng, M. 2013. "WHO agency: Air pollution causes." *USA Today***. Internet website: <http://usat.ly/1aRY2oY>.

Website article on air pollution in London, in response to International Agency for Research on Cancer's declaration that air pollution is a carcinogen. This was the first time air pollution in its entirety has been classified as cancer causing.

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**Christian, M., and H. Fawad. 2015. Despite Its Cost Edge, PRB Coal Production Fell Almost 10%. SNL Energy.**

Article with details on the state of coal production in the Powder River Basin area. Production is falling, despite coal cost advantage over other US coal areas.

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**Cimons, M. 2016. Keep It in the Ground. Greenpeace International.**

Report examining the coal, oil, and natural gas deposits around the world that pose the greatest risk to the climate if burned for fuel. Includes an overview of efforts by fossil fuel companies and their political allies to develop these resources.

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**Clark, J. 1996. Office of Surface Mining Reclamation and Enforcement.**

Letter with the biological opinion of the US Fish and Wildlife Service in regard to surface mining and Endangered Species Act consultation.

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**Clean Air Task Force. 2001. Cradle to Grave: The Environmental Impacts from Coal. June 2001. Internet website:**

**[http://www.catf.us/resources/publications/files/Cradle\\_to\\_Grave.pdf](http://www.catf.us/resources/publications/files/Cradle_to_Grave.pdf).**

Report discusses pollution from electric power, especially coal. The process of mining and combusting coal releases numerous toxic pollutants into the soil, air, water, and human bodies. The report discusses the toxins found in coal products and the health hazards associated with them and recommends cleaner coal production.

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**\_\_\_\_\_. 2013. Comparison of CO<sub>2</sub> Abatement Costs in the United States for Various Low and No Carbon Resources.**

This is a report that uses levelized costs of electricity to assess the abatement costs of low to no carbon resources.

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**Clean Energy Action. 2009. Coal: Cheap and abundant - or is it? Why Americans should stop assuming that the US has a 200-year supply of coal.**

The report evaluates the practicality of accessing coal reserves that are deeply buried or on federal land. It and concludes that rather than having a 200-year supply of coal, the United States has a much shorter planning horizon for moving beyond coal-fired power plants; the planning horizon could be as short as 20-30 years.

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**\_\_\_\_\_. 2013. Trends in US Delivered Coal Costs, October. Internet website:  
[https://cleanenergyaction.files.wordpress.com/2013/10/us\\_coal\\_costs-2004-2012.pdf](https://cleanenergyaction.files.wordpress.com/2013/10/us_coal_costs-2004-2012.pdf).**

The report tracks coal costs from 2004, when the price decline began to reverse, through 2012, showing upward trends in price in each coal-producing state.

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**Clement, J. P., et al. 2014. A Strategy for Improving the Mitigation Policies and Practices of the Department of the Interior Energy and Climate Change Task Force.**

Report on the challenges and opportunities associated with developing and implementing an effective mitigation policy. It describes key principles and actions necessary to successfully shift from project-by-project management to consistent, landscape-scale, science-based management of the lands and resources for which the Department of the Interior is responsible.

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**Climate Accountability Institute. 2015. Memorandum to the Center for Biological Diversity and Friends of the Earth – USA.**

Monograph presenting the results of an analysis of the oil, natural gas, and coal produced by private companies that have leases on federal lands for fiscal years 2003 through 2014. It estimates the emission of carbon dioxide that results from the marketing and end-use of the carbon fuels made available through federal leases.

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**Climate Accountability Institute. 2016. Scientists Support Ending Coal Leasing on Public Lands to Protect the Climate, Public Health, and Biodiversity. Internet website: [https://www.biologicaldiversity.org/programs/public\\_land/energy/dirty\\_energy\\_development/coal/pdfs/16\\_7\\_26\\_Scientist\\_sign-on\\_letter\\_Coal\\_PEIS.pdf](https://www.biologicaldiversity.org/programs/public_land/energy/dirty_energy_development/coal/pdfs/16_7_26_Scientist_sign-on_letter_Coal_PEIS.pdf).**

This is a letter from a group of scientists to Sally Jewell, Neil Kornze, and Mitchell Leverette stating support for ending the federal coal leasing program on public lands.

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**Climate Action Tracker. 2016. Internet website: [Http://Climateactiontracker.Org/Countries/USA](http://Climateactiontracker.Org/Countries/USA).**

Website tracking the United States intended nationally determined contribution to reduce net greenhouse gas emissions.

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**Climate Advisors. 2016. Finalized Policies Get US Halfway to Meeting Climate Goal. Internet website: [http://www.climateadvisers.com/2025\\_target\\_updated/](http://www.climateadvisers.com/2025_target_updated/).**

Article discussing historic climate agreement, emission regulations, and how that will help the United States reach climate goals.

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**Climate Interactive. No date. Climate Scoreboard UN Climate Pledge Analysis. Internet website: [Https://www.Climateinteractive.Org/Programs/Scoreboard/](https://www.Climateinteractive.Org/Programs/Scoreboard/).**

Website showing the progress that national contributions to the United Nations climate negotiations will make, assuming no further action after the end of the country's pledge period.

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**CO<sub>2</sub> Now. 2016. Annual Global Carbon Emissions. Internet website: [Https://www.Co2.Earth/Global-Co2-Emissions?](https://www.Co2.Earth/Global-Co2-Emissions?).**

Website showing the annual global carbon emissions and their sources.

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**Cohan, D. 2016. “When coal companies go bankrupt, the mining doesn’t always stop.” *The Hill*, Washington, DC.**

News article about the recent bankruptcies in the US coal industry and how coal companies going bankrupt does not mean mining stops and the negative impacts this situation can cause.

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**Colorado Energy Office. 2016. Coal Mine Methane in Colorado Market Research Report. March 2016.**

Market research report by Ruby Canyon Engineering to identify opportunities to use coal mine methane as a fuel source to generate electricity. Coal mine methane is considered to be eligible as a renewable energy source. Three main points are investigated: assessment of current coal mine methane opportunities in Colorado, analysis of potential market size in Colorado, and identification of key barriers. The study concludes that there are 89 megawatts of energy potential from Colorado mines and that there is opportunity in methane-to-energy projects there.

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**Colorado Division of Reclamation, Mining and Safety. 2016. Month Coal Summary Report. Colorado. Internet website: <http://mining.state.co.us/SiteCollectionDocuments/07Summary16.pdf>.**

This is a datasheet of production, workers, and other statistics from each mine in Colorado, as prepared by the state regulatory agency.

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**Colorado Mining Association. 2015. 2015 Colorado Coal Report Production and Employment. Colorado Mining Association Denver, Colorado.**

Coal report with information on production and employment related to coal in Colorado.

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**Commission on Fair Market Value Policy for Federal Coal Leasing. 1984. Fair Market Value Policy for Federal Coal Leasing. Commission on Fair Market Value Policy for Federal Coal Leasing, Washington, DC. February 1984.**

Report on finding fair market value policy recommendations for the federal coal leasing program. The Commission on Fair Market Value Policy for Federal Coal Leasing, an interagency governmental commission, produced a report as mandated by the 1983 Supplemental Appropriations Act (PL 98-63). The report outlines the commission’s recommendations for enhancing management of the federal coal leasing process and improving the prospects for the nation to recover a fair market value for leased coal reserves.

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**Committee Majority Staff. 2016. Hearing entitled “A Review of EPA’s Regulatory Activity During the Obama Administration: Energy and Industrial Sectors.”**

Meeting agenda to the hearing entitled “A Review of EPA’s Regulatory Activity During the Obama Administration: Energy and Industrial Sectors.”

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**Considine, T. J. 2013. "Powder River Basin coal: Powering America." *Natural Resources* 2013(4):514-533.**

Journal article details that the Powder River Basin produces a huge amount of coal that powers the United States and makes the case that the economic nature of the coal reserves is beneficial for the United States.

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**Cooper, T. F., et al. 2008. "Declining coral calcification in massive porites in two nearshore regions of the northern Great Barrier Reef." *Global Change Biology* 14:529-538.**

Journal article describing how recent increases in sea water temperatures have led to unprecedented declines in coral calcification on the northern Great Barrier Reef.

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**Council on Environmental Quality. 2014. Revised Draft Guidance for Federal Departments and Agencies on Consideration of Greenhouse Gas Emissions and the Effects of Climate Change in NEPA Reviews. CEQ, Washington, DC. *Federal Register* 79(247):77802-77831.**

*Federal Register* notice that the Council on Environmental Quality is publishing revised draft guidance on how National Environmental Policy Act analysis and documentation should address greenhouse gas emissions and the impacts of climate change.

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**Crowl, T. A., et al. 2008. "The spread of invasive species and infectious disease as drivers of ecosystem change." *Frontiers in Ecology and the Environment* 6(5):238-246.**

Journal article on how climate change, land use, and transport vectors interact in complex ways to determine the spread of native and nonnative invasive species and pathogens and their effects on ecosystem dynamics. Understanding the interactions of invasive species, disease vectors, and pathogens with other drivers of ecosystem change is critical to human health and economic well-being.

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**Dale Jones, E. B., et al. 1999. "Effects of riparian forest removal on fish assemblages in southern Appalachian Streams." Institute of Ecology and Program in Conservation Ecology and Sustainable Development.**

Paper looking at deforestation of riparian zones and how removing the forest leads to shifts in the structure of stream fish assemblages, due to decreases in fish species that do not guard hidden eggs or that depend on swift, shallow water and increases in fishes that guard their young in pebble or pit nests or that live in slower, deeper water.

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**Davenport, C. 2014. "Climate change deemed growing security threat by military researchers." *The New York Times*. May 13, 2014.**

*The New York Times* investigating the threat climate change poses on national security and global political conflict. Mentions building political support for President Obama's climate change agenda, which includes a regulation to cut pollution from coal-fired power plants. The ways in which climate change is affecting military policy include increasing global instability, opening the Arctic, raising sea level, and increasing extreme storms. The article calls climate change a "threat multiplier" and a "catalyst for conflict."

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**de Hartog, J. J., et al. 2009. "Effects of fine and ultrafine particles on cardiorespiratory symptoms in elderly subjects with coronary heart disease: The ULTRA study." *American Journal of Epidemiology* 157(7).**

Journal article summarizing the results of the ULTRA Study, which looked at the association between fine and ultrafine particulate air pollution and cardiorespiratory health. Researchers concluded some negative effects to the cardiac system do occur, mostly from PM<sub>2.5</sub>.

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**De'ath, G., et al. 2009. "Declining coral calcification on the Great Barrier Reef." *Science* 333:116-119.**

Journal article describing how coral calcification at the Great Barrier Reef has been reduced recently due to declining pH of the upper sea water layers from absorption of increasing atmospheric carbon dioxide.

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**DeForest, C. E. 1999. *Watershed Restoration, Jobs-in-the-Woods, and Community Assistance: Redwood National Park and Northwest Forest Plan.* Spokane, Washington.**

This report distills the legacies of the Redwood National Park expansions legislation and compares them with the Northwest Forest Plan. It also highlights information gaps about the efficacy of watershed restoration, worker retraining, and community redevelopment funding.

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**Dingell, D. 2015. Letter to L. Gohmert, Chair of Subcommittee on Oversight and Investigations for House Committee on Natural Resources.**

The letter urges an investigation into the practice of self-bonding by coal companies, especially the use of subsidiary companies to meet self-bonding requirements, which puts taxpayer dollars at risk when coal companies lack sufficient funds for reclamation.

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**Dingell, D., et al. 2016. Letter to Sally Jewell, Secretary of the Interior, re: Coal Self-bonding. US House of Representatives. June 10, 2016.**

US Representatives express concern over practice of self-bonding among coal companies after Peabody Energy becomes the third major coal producer to file for bankruptcy protection, after Arch Coal and Alpha Natural Resources. Taxpayers are at risk of having to shoulder reclamation costs at these mines as a result of lax enforcement of self-bonding rules. The Department of the Interior is urged to strengthen self-bonding requirements and discourage the practice.

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**Donner, S. D. 2009. "Coping with commitment: Projected thermal stress on coral reefs under different future scenarios." *PLOS ONE* 4(6).**

Journal article about how mass coral bleaching can occur due to periods of anomalously warm ocean temperatures, which can occur from human-caused climate change, and how greenhouse gas mitigation altering the near-term forecast for coral reefs would be limited by time lags in physical climate response.

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**Donoghue, A. M. 2004. "Occupational health hazards in mining: An overview." *Occupational Medicine* 54:283-289.**

Review article outlining the physical, chemical, biological, ergonomic, and psycho-social occupational health hazards of mining and associated metallurgical processes, including exposure to coal dust and crystalline silica.

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**Douberly, E. 2013. "Fire protection guidelines for handling and storing [Powder River Basin] coal." *Power Magazine*.**

The Powder River Basin Coal Users' Group has developed recommended fire-prevention practices/guidelines for plants that burn Powder River Basin coal by itself or in blends. The guidelines are not equipment-specific, because the physical layouts of coal-handling facilities vary significantly and because all fires are unique. The guidelines are not comprehensive; their purpose is to recommend general practices.

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**Doug. 2009. Work safety blog. Internet website: <http://www.blog4safety.com/2009/10/dangerousjobcoalmining/>.**

Blog post informing on coal mining accidents. Describes coal mining as one of America's top ten most dangerous jobs. Discusses precautions that are being taken to improve safety in coal mining and details on what makes the job so dangerous.

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**Doyle Trading Consultants. 2016. Coal Industry Turns the Corner. Doyle Trading Consultants, Grand Junction, Colorado.**

Report with overview of coal industry, capital structures reset, and conclusion.

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**Dubas, G., and D. Mallory. 2010. Assessment of Water Quality Impacts from Coalbed Methane-Produced Water Discharge in the Purgatoire River Watershed. Metro State College of Denver, ENV 4970.**

Metro state study examines extraction of coal bed methane (CBM) and water quality impacts. States that CBM brings large volumes of water, containing solutes or suspended sediments, to the surface. The produced water is usually disposed of by being discharged into surface waters. This study in the Purgatoire River watershed found that CBM water discharge may slightly increase salinity downstream from CBM production sodium concentrations, which may result in ecosystem degradation and water management issues for downstream users.

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**Earthjustice. No date. Coal Mines Clouding America's Air. Internet website: [Earthjustice.org/news/press/2011/coal-mines-clouding-america-s-air](http://Earthjustice.org/news/press/2011/coal-mines-clouding-america-s-air).**

Article states that a group of conservation organizations has sued the US EPA over its failure to protect public health from air pollution from coal mines. The EPA has set clean air standards for coal-fired power plants, coal processing plants, and gravel mines, but not for coal mines. Emissions include methane, nitrogen dioxide, volatile organics, and particulate matter.

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**Eby, L. A., et al. 2014. "Evidence of climate-induced range contractions in bull trout (*Salvelinus confluentus*) in a Rocky Mountain watershed, USA." *PLOS ONE* 9(6).**

Journal article on how bull trout are moving to higher, cooler thermal refuges as water temperatures increase in the Rocky Mountains of the United States, as a result of climate change and global warming.

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**EcoShift Consulting. 2016. Over-leased: How production horizons of already leased federal fossil fuels outlast global carbon budgets. July 2016. Internet website: [www.biologicaldiversity.org/campaigns/keep\\_it\\_in\\_the\\_ground/pdfs/Over-leased-Report-EcoShift.pdf](http://www.biologicaldiversity.org/campaigns/keep_it_in_the_ground/pdfs/Over-leased-Report-EcoShift.pdf).**

Report documents that already leased federal coal will last through 2041, beyond the time frame needed for steep carbon cuts. Argues that no new federal coal should be leased to meet global climate objectives.

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**Ecosystem Marketplace. 2015. Converging at the Crossroads, State of Forest Carbon Finance.**

This paper discusses the convergence of avoided deforestation shifts toward payments for results and the ramp up in payments for emissions reductions.

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**\_\_\_\_\_. 2016. Not so niche: Co-benefits at the Intersection of Forest Carbon and Sustainable Development.**

Report on small developments and projects in the forest marketplace and tracked impacts and co-benefits.

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**Ecotrust. No date. Oregon's Restoration Economy, Investing in natural assets for the benefit of communities and salmon. Internet website: <https://ecotrust.org/media/WWRI-Restoration-Economy-Brochure.pdf>**

This report discusses restoring watersheds as a starting point for a different kind of economic prosperity. It was prepared by Ecotrust, a conservation organization.

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**Ellenberger, J. H., and A. E. Byrne. 2015. Population Status and Trends of Big Game and Greater Sage-Grouse in Southeast Montana and Northeast Wyoming.**

Consultant report analyzing status and trends in populations of big game and greater sage-grouse populations in southeast Montana and northeast Wyoming. Harvest data were used for analysis, from 1980 through 2012. Deer and pronghorn populations appear vulnerable, while elk appear less so. In Montana, greater sage-grouse populations appeared stable, while in Wyoming their numbers had declined significantly.

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**Energy Venture Analysts. 2015. Coal Sales Prices used for Valuation and Payment of Federal Royalties. Energy Ventures Analysis, Inc. Arlington, Virginia.**

Peer review of previous studies by Headwaters Economics. Concludes that Headwaters studies were flawed and of poor quality.

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**Epstein, A. No date. The Moral Case for Fossil Fuels. Internet website: <http://industrialprogress.com/wp-content/uploads/2013/10/The-Moral-Case-for-Fossil-Fuels.pdf>.**

This report discusses the perception of the fossil fuel industry and suggests that we refute the central idea that fossil fuels destroy the planet. It was prepared by Center for Industrial Progress, a for-profit think-tank.

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**Epstein, P. R., et al. 2011. "Full cost accounting for the life cycle of coal." *Annals of the New York Academy of Sciences* 1219:73-98.**

Journal article about the hazards of coal and the resultant waste stream, including estimates of the costs of coal's externalities to the US public, where, if these costs were included, would double to triple the price of coal to make wind, solar, and other forms of nonfossil fuel power generation economically competitive.

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**Erickson, P., and M. Lazarus. 2014. "Impact of the Keystone XL pipeline on global oil markets and greenhouse gas emissions." *Nature Climate Change* DOI: 10.1038.**

Article detailing how energy transportation structures shape energy systems, specifically discussing the Keystone XL pipeline.

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**\_\_\_\_\_. 2016. How would phasing out US federal leases for fossil fuel extraction affect CO<sub>2</sub> emissions and 2 [degree] C goals? Stockholm Environment Institute working paper.**

Working document for the Stockholm Environment Institute that looks into US fossil fuel production, detailing recent trends and outlook, the 2 degree Celsius global warming cap, the effect of federal leasing decisions on fossil fuel production, and reductions in CO<sub>2</sub> emissions from restricted leasing. Paper examines the potential emissions implications of a supply-side measure under consideration in the United States: ceasing to issue new leases for fossil fuel extraction on federal lands and waters, and avoiding renewals of existing leases for resources that are not yet producing. The analysis finds that under such a policy, US coal production would steadily decline, moving closer to a pathway consistent with a global 2 degree Celsius temperature limit.

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**Espey, J. A., and M. Espey. 2004. "Turning on the lights: A meta-analysis of residential electricity demand elasticities." *Journal of Agricultural and Applied Economics*. 36(1):65-81.**

Journal article on how price and income elasticities of residential demand for electricity from previous studies are used as the dependent variables, with data characteristics, model structure, and estimation technique as independent variables. The findings of this research can help better inform public policy makers, regulators, and utilities about the responsiveness of residential electricity consumers to price and income changes.

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**Esposito, V., et al. 2011. "Climate change and ecosystem services: The contribution of and impacts on federal public lands in the United States." USDA Forest Service Proceedings RMRS-P-64.**

Paper completed to contribute to better understanding of how US conservation lands may be affected by climate change. Outlines a method and preliminary estimates of the value of ecosystem services harbored or produced in abundance on those lands, as well as how that value may change under climate change scenarios.

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**Esteves, A. M., D. Franks, and F. Vanclay. 2012. "Social impact assessment: The state of the art." *Impact Assessment and Project Appraisal* 30(1):34-42. DOI:10.1080/14615517.2012.660356**

Peer-reviewed journal article. analyzes the strengths, weaknesses, opportunities, and threats facing Social Impact Assessment (SIA). Article asserts that the SIA community needs to revisit core concepts, such as culture, community, power, human rights, gender, justice, place, resilience, and sustainable livelihoods. It is incumbent on SIA practitioners to educate proponents, regulators, and colleagues about these concepts and to embed them into practice norms. Stronger engagement with the emerging trends of free, prior, and informed consent (FPIC); human rights impact assessment; social performance standards; supply chain management; governance; local content; and economic development will improve the relevance and demonstrable value of SIA to all stakeholders.

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**Ewing, S. A., et al. 2010. "Pb isotopes as an indicator of the Asian contribution to particulate air pollution in urban California." *Environmental Science & Technology* 44(23):8911-8916.**

Journal article testing whether lead isotope ratios in airborne particles can be used to directly evaluate the Asian contribution to airborne particles of human origin in western North America.

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**Executive Office of the President of the United States. 2016. *The Economics of Coal Leasing on Federal Lands: Ensuring a Fair Return to Taxpayers*. White House, Washington, DC.**

This report focuses on the issue of whether the federal coal leasing program provides a fair return to the taxpayer and draws on relevant academic research to provide an economic perspective. A review of the coal leasing program indicates that it has been structured in a way that misaligns incentives going back decades, resulting in a distorted coal market with an artificially low price for most federal coal and unnecessarily low government revenue from the leasing program.

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**\_\_\_\_\_. 2013. *The President's Climate Action Plan*. Internet website: <https://www.whitehouse.gov/sites/default/files/image/president27sclimateactionplan.pdf>.**

President Obama's climate action plan to cut carbon pollution in the United States, to prepare the United States for the impacts of climate change, and to lead international efforts to combat global climate change and prepare for its impacts.

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**Ezzati et al. 2004. Comparative Quantification of Health Risks. Volume I. World Health Organization. Geneva.**

Book produced by the World Health Organization on disease and mortality rates. Includes topics on how to reduce risk and the role and relative magnitude of diseases and injuries. Intended to guide policy and programs.

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**Fabry, V. J., et al. 2008. "Impacts of ocean acidification on marine fauna and ecosystem processes." *ICES Journal Of Marine Science* 65(3):414-432.**

Journal article analyzing the effects of ocean acidification and the synergistic impacts of other anthropogenic stressors, which provide great potential for widespread changes to marine ecosystems.

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**Farrell, C. 2012. "A just transition: Lessons learned from the environmental justice movement." *Duke Forum for Law and Social Change* 4:45 (2012).**

Article examining the role of the Environmental Justice Movement in the fossil fuel economy. It points out how the fossil fuel economy has disproportionately impacted low-income communities and communities of color. The article uses two case studies to explore the role of environmental justice approaches in a just transition to a green economy. Three main points are highlighted: the need for environmental policy transformation, the necessity for communities to be engaged in the change, and the need for a holistic approach in designing the transition.

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**Feely, R. A. 2009. "Ocean acidification: Present conditions and future changes in a high-CO<sub>2</sub> world." *Oceanography* 22(4).**

Journal article about the uptake of anthropogenic CO<sub>2</sub> by the global ocean with resultant fundamental changes in seawater chemistry that could have dramatic impacts on biological ecosystems in the upper ocean.

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**Ferret.com.au. 2014. Article: Addressing a noxious issue—making blasting safer. Internet website: <http://www.ferret.com.au/articles/in-focus/addressing-a-noxious-issue-making-blasting-safer-n2506747>**

The article discusses episodes of nitrogen dioxide exposure from blasting at coal mines. Nitrogen dioxide can form nitric acid in lungs and has required hospitalization of miners. Investigations are underway on how to minimize the formation of the gas in blasting operations.

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**Finkelman, R. B. 2004. "Potential health impacts of burning coal beds and waste banks." *International Journal of Coal Geology* 59:19-24.**

Journal article on the uncontrolled release of pollutants from burning coal beds and waste banks, which present potential environmental and human health hazards. Emissions of large volumes of greenhouse gases from burning coal beds possibly contribute to climate change, which alters ecosystems and patterns of disease occurrence across the globe.

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**Finkelman, R. B., et al. 2002. "Health impacts of coal and coal use: Possible solutions." *International Journal of Coal Geology* 50:425-443.**

Journal article considering several studies on the connection between human health and potential environmental problems—particularly related to coal—by cooperators in the geoscience and medical disciplines.

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**Fisher, J. et al. 2010. "Co-benefits of energy efficiency and renewable energy in Utah." *Synapse*.**

Report discussing current energy generation in Utah and future directions with economic values.

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**Flegal, A., and D. Smith. 1992. "Lead levels in pre-Industrial humans." *New England Journal of Medicine* 326:1293-1294.**

Article detailing the concentration of lead in the blood and bones of humans, comparing pre-Industrial humans to modern humans.

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**\_\_\_\_\_. 1992. "Current needs for increased accuracy and precision in measurements of low levels of lead in blood." *Environmental Research* 50:125-133.**

Abstract from article assessing the need for increased accuracy and precision in measurements of low levels of lead in blood. Provides information on current methods and reasons why they are inadequate. Blames analytical limitations on contamination bias during sample collection. Suggests that trace metal-clean procedures be adopted.

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**Folder. Various dates. Letters from citizen Groups. 2012-2015.**

Folder containing 21 letters from citizen groups.

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**Folder. Various dates. Letters regarding coal leasing delays. April 2015, November 2013, and November 2015.**

Folder containing three subfolders: April 2015 Leasing Delays FOIA response, Nov 2013 Leasing Delays FOIA, Nov 2015 Leasing Delays FOIA response. Seventeen total documents on coal lease delays.

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**Foti, R., et al. 2013. "Signs of critical transition in the Everglades wetlands in response to climate and anthropogenic changes." *Proceedings of the National Academy of Sciences* 110(16):6296-6300.**

Journal article focusing on the Everglades National Park and assessing the impact of changes in the hydrologic regime, as well as habitat loss, on the spatial configuration of vegetation species.

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**Fox, P. 2015. *Environmental, Health and Safety Impacts of the Proposed Oakland Bulk and Oversized Terminal*. Prepared for the Sierra Club. September 21, 2015.**

Report prepared for the Sierra Club by a consulting engineer on the proposed Oakland bulk and oversized terminal. The author concludes that many adverse impacts would result if coal were imported at the proposed terminal and that none of these impacts were anticipated in the CEQA review of this project.

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**Friedmann, J. No date. An open letter to the US coal industry. Lawrence Livermore National Laboratory.**

Open letter to US coal industry from Dr. Julio Friedmann, Senior Advisor for Energy Innovation at the Lawrence Livermore National Laboratory. Letter is an indictment of the path that the US coal industry has taken and suggests that a low-carbon pathway should be pursued.

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**Frieler, K., et al. 2013. "Limiting global warming to 2 degrees C unlikely to save most coral reefs." *Nature Climate Change* (3):165-170. Internet website: <http://www.nature.com/nclimate/journal/v3/n2/pdf/nclimate1674.pdf>.**

This report provides a comprehensive global study of coral bleaching in terms of global mean temperature change, based on an extended set of emissions scenarios and models. It is from a peer-reviewed scientific journal.

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**Fuchs, B. USDA. 2016. Internet website: <http://droughtmonitor.unl.edu/>.**

USDA website with drought monitor map that refreshes daily. Color coded to show areas from abnormally dry through exceptional drought. Shows the most drought in California and in the South.

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**Funes, Y. 2016. "What leaving fossil fuels behind can do for inequality." *Yes! Magazine*, 2016. Bainbridge Island, Washington.**

Essay about the reliance and negative impacts of fossil fuel booms and that the transition to more energy efficient and renewable choices needs to happen to help solve inequality impacts.

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**Funk, J., and S. Saunders. 2014. "Rocky Mountain forests at risk: Confronting climate-driven impacts from insects, wildfires, heat, and drought." *Union of Concerned Scientists and Rocky Mountain Climate Organization*. September 2014.**

The report describes threats to the forests of the Rocky Mountain region from tree-killing insects, wildlife, and heat/drought stress. These stresses are influenced by global warming, which is bringing hotter and drier conditions, thereby amplifying other stresses.

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**Garfin, G., A. Jardine, R. Merideth, M. Black, and S. LeRoy, eds. 2013. *Assessment of Climate Change in the Southwest United States: A Report Prepared for the National Climate Assessment. A report by the Southwest Climate Alliance*. Washington, DC: Island Press. 531 pp.**

Technical report published as one of a series of technical inputs to the National Climate Assessment 2013 report. Report is an assessment of climate change for the Southwest region of the United States.

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**Geiling, N. 2016. *The Plan To Revive Big Coal's Fortunes Isn't Panning Out. Think Progress*.**

New article about the difficulties faced in exporting Powder River Basin coal to foreign markets and the changing conditions that lead to it

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**Geiser, M. et al. 2005. Ultrafine Particles Cross Cellular Membranes by Nonphagocytic Mechanisms in Lungs and in Cultured Cells. *Environmental Health Perspectives*. 113: 1555-1560.**

Journal article investigating ultrafine particles in lungs and their toxic potential. Study was done using rats and aerosol inhalation. The results agreed with human studies that inhalation of ultrafine carbon particles affected pulmonary diffusing capacity.

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**Gerarden, T., W. S. Reeder, and J. H. Stock. 2016. Federal Coal Program Reform, the Clean Power Plan, and the Interaction of Upstream and Downstream Climate Policies. The Harvard Project on Climate Agreements. Discussion Paper 16-82. June 2016.**

Paper studying government coal leasing and the interaction between specific upstream policy, incorporating a carbon adder into federal coal royalties, and downstream emissions. The paper offers statistics and models to provide quantitative results.

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**Gerking, S., et al. Mineral Tax Incentives, Mineral Production And the Wyoming Economy. University of Wyoming.**

Report that presents economic models for analyzing effects of tax incentives and environmental regulations as well as the relationship between mineral production and the Wyoming economy on a larger scale

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**Gerking, S., and S. F. Hamilton. 2008. What explains the increased utilization of Powder River Basin coal in electric power generation? *American Journal of Agricultural Economics* 90(4):933-950.**

This article examines possible explanations for increased utilization of Powder River Basin coal in electric power generation that occurred over the last two decades. Did more stringent environmental policy motivate electric power plants to switch to less polluting fuels? Or, did greater use of Powder River Basin coal occur because relative price changes altered input markets in favor of this fuel. A key finding is that factors other than environmental policy such as the decline in railroad freight rates together with elastic demand by power plants were major contributors to the increased utilization of this fuel. Peer-reviewed journal article.

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**Gilber, R. et al. 1988. "Radionuclide transport from soil to air, native vegetation, kangaroo rats and grazing cattle on the Nevada test site." *Health Phys.* 55: 869-87.**

Abstract from journal article on studies conducted at two nuclear fission sites and two nonnuclear sites. The sites were reviewed on soil particle-size distribution and physical-chemical characteristics of radioactive particles investigating the transfer of transuranic radionuclides.

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**Gillette News Record. 2008. Nitrogen dioxide from mine blast causes orange cloud. Internet website: [http://www.gillette newsrecord.com/news/article\\_6ba2343a-63ff-5dce-a987-2c426e41339c.html?mode=print](http://www.gillette newsrecord.com/news/article_6ba2343a-63ff-5dce-a987-2c426e41339c.html?mode=print).**

News report of a blasting explosion at an Australian mine causing release of nitrogen dioxide and fuel oil, toxic to humans. The company stated it has rules to limit blasts to minimize exposure to local residents.

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**Gillingham, K. 2016. Future Direction of Coal Markets: A Focus on Federal Coal Policy. Yale University.**

Presentation from Yale University with focus on coal in the market system. It gives overview of DOI PEIS Process, Fair Return, and Climate Change

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**Gillis, J. 2013. “Global temperatures highest in 4,000 Years.” *The New York Times*. March 7, 2013.**

Article on global temperatures being higher than any time in the last 4,000 years. The article reports that scientists expect this to get worse, and human activity is to blame. Brings up the point that living things can adapt to change, but the rate of change is what poses a challenge.

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**\_\_\_\_\_. 2016. “Climate model predicts west Antarctic ice sheet could melt rapidly.” *The New York Times*, March 30, 2016.**

News article about a new model suggesting that the West Antarctic ice sheet is vulnerable to global warming and could have catastrophic impacts within the next 100 years on society

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**Gledhill, D. K., et al. 2008. “Ocean Acidification of the Greater Caribbean Region 1996–2006.” *Journal of Geophysical Research* 113.**

Journal article about the uptake of atmospheric carbon dioxide in the ocean and resultant acidification and decrease in carbonate mineral saturation state, which could affect some of the most fundamental biological and geochemical processes of the sea in coming decades.

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**Glick, P. 2006. Fueling the Fire: Global Warming, Fossil Fuels and the Fish and Wildlife of the American West. National Wildlife Federation.**

Document on global warming being driven by burning coal, oil and gas. Includes facts about the effects of climate change, and the expansion of oil and gas development

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**Glustrom, L. 2013. Warning: Faulty Reporting of US Coal Reserves. A Report by Clean Energy Action.**

Article investigating remaining US coal deposits. Using geological and financial data they believe that there is reason to believe that we are reaching the end of US coal deposits. Addresses the public opinion that the United States has a “200 year supply of cheap coal.”

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**Godby, et al. 2015. The Impact of the Coal Economy on Wyoming. Center for Energy Economics and Public Policy. February 2015.**

Paper examining the impacts of coal economy in Wyoming. This study addresses this information gap by describing the importance of the coal sector to Wyoming's economy today. It documents the risks and challenges facing the coal industry in the future due to market conditions and regulatory threats, and using the most recent data available, conducts an impact analysis to determine how these risks could affect the Wyoming economy and state revenues through 2030. The potential impacts of proposed carbon regulations introduced by the Environmental Protection Agency's (EPA) Clean Power Plan are also estimated, as are the potential impacts that large-scale international coal exports could have on Wyoming's economy. This report concludes with analysis of the policy choices Wyoming faces in response to these market challenges.

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**Gohlke, J. M., et al. 2011. "Estimating the global public health implications of electricity and coal consumption." *Environmental Health Perspectives* 119(6):821-826.**

Journal article about how increased electricity consumption in countries with infant mortality of less than 100 in 1,000 live births does not lead to greater health benefits, whereas coal consumption has significant detrimental health impacts.

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**Golder Associates. 2012. Environmental Assessment: Bledsoe Coal Lease KYES-53865. Golder Associates, Inc., Lakewood, Colorado.**

Environmental assessment for the Bledsoe Coal lease in Kentucky, which presents an analysis for offering KYES-53865 for leasing by the BLM with consent by the USFS Daniel Boone National Forest. Includes affected environment and environmental consequences related to this potential lease, and, more generally, the issues around coal leasing and impacts related to coal mining.

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**Gomez, J. 2014. United States Government Accountability Office. Office of Public Affairs, Washington, DC. July 24, 2014.**

GAO report describes the participating entities and processes and methods the Interagency Working Group on Social Cost of Carbon used to develop the 2010 and 2013 estimates. GAO reviewed executive orders, Office of Management and Budget guidance, the Technical Support Document, its 2013 update, and other key documents.

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**Grandjean, and Landrigan, P. 2014. "Neurobehavioural effects of developmental toxicity." *Lancet Neurol.* 13:330-338**

Article from the University of Southern Denmark on neurodevelopmental disabilities and their relation to industrial chemicals. Article proposes a global prevention strategy, where untested chemicals should not be presumed to be safe for brain development, so all chemicals in use and new chemicals must be tested for developmental neurotoxicity.

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**Grantham Research Institute on Climate Change and the Environment. 2014. Closing Coal: Economic and Moral Incentives. May 2014. Internet website: <http://www.lse.ac.uk/GranthamInstitute/wp-content/uploads/2014/05/Closing-Coal-economic-and-moral-incentives.pdf>**

This paper makes the case for implementing climate change policy to close the global coal industry. Coal is singled out because of its high emissions intensity, low rents per unit value, local environmental costs, and sheer scale. Direct supply policy—the sequenced closure of coal mines—may lead to less policy leakage across countries and time than other policies, based on demand or price management.

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**Greenpeace. 2016. Internet website: <http://issuu.com/greenpeaceinternational/docs/energy-revolution-2015-full-hr/?e=2537715/30188730>.**

Greenpeace website on the energy revolution. Contains an interactive 364-page document called Energy [R]evolution: A Sustainable World Energy Outlook 2015. 100% energy for all. Provides a guide to what they believe the future of energy should look like and how to get there.

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**\_\_\_\_\_. No date. Leasing Coal, Fueling Climate Change: How the Federal Coal Leasing Program Undermines President Obama’s Climate Plan.**

Paper analyzing the issue of how a federal program that increases the supply of coal, as with BLM leasing public lands, would be reconciled with President Obama’s Climate Action Plan and what are the potential impacts of carbon pollution from these leases.

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**Greenpeace USA. 2016. Corporate Welfare for Coal: The Biggest Coal Mining Companies Depend on Subsidized Federal Coal, even as They Attack Federal Climate and Clean Air Policies. March 2016. Internet website: <http://www.greenpeace.org/usa/research/corporate-welfare-for-coal/>.**

Greenpeace paper examines federal subsidies for coal.

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**Grijalva, R., et al. 2016. Letter to Secretary Jewell on Coal Reforms. Washington, DC. Internet website: <http://democrats-naturalresources.house.gov/letter-to-secretary-jewell-on-coal-reforms>**

House Natural Resources Committee Ranking Member Raúl M. Grijalva (D-Ariz.) and Energy and Mineral Resources Subcommittee Ranking Member Alan S. Lowenthal (D-Calif.) sent a letter to Interior Secretary Sally Jewell to thank her for reviewing the Interior Department’s broken coal leasing program and to highlight issues that still need to be addressed, including an accurate accounting of the program’s climate and environmental impacts.

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**Gruenspecht, H. 2016. Coal in the United States: Recent Developments and Outlook. US Energy Information Administration, New York, New York.**

Presentation given by the US Energy Information Administration on the current and future outlook of coal in the United States.

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**Gutierrez, S. 2011. "Getting there: How long can trains legally block intersections?" *Seattle Post Intelligencer*. May 31, 2011.**

Newspaper article about the length of time that trains can legally at-grade crossings, which is no more than 10 minutes, per Washington State laws.

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**Haggerty, J., and K. McBride. 2016. "Does local monitoring empower fracking host communities? A case study from the gas fields of Wyoming." *Journal of Rural Studies* 43:235-247.**

Peer-reviewed journal article that evaluates an experimental approach to monitoring and mitigating social and economic impacts of high volume hydraulic fracking (HVHF) development in Wyoming, between 2005 and 2009. Concludes that a community-based approach to planning and impact assessment can be effective as a response to HVHF development, provided there is adequate scaffolding in the form of technical and financial assistance and supporting meta-governance. The intensity of HVHF development creates special problems that can be mitigated by well-supported community-based and participatory processes to social and economic impact assessment.

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**Haggerty, M. 2015. *The Impact of Federal Coal Royalty Reform on Prices, Production, and State Revenue*. Headwaters Economics, Bozeman, Montana.**

This report presents data and analysis that evaluate the revenue, price, and production implications of federal royalty reform on coal deliveries to the domestic power sector. The report models three scenarios for how the final rule could be implemented: 1.) valuing coal based on the first arm's length sale price, 2.) valuing coal based on delivered prices, net of transportation costs, and 3.) valuing coal based on delivered prices, net of transportation costs, which are capped at 50 percent of the value of coal. Report published by Headwaters Economics, an independent nonpartisan research firm.

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**Haggerty, M. N., and J. H. Haggerty. 2015. "Energy development opportunities and challenges in the rural West." In *Bridging the Distance: Common Issues of the Rural West* (D. B. Danbom, editor). University of Utah Press, Salt Lake City.**

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**Hansen, J., et al. 2008. "Target atmospheric CO<sub>2</sub>: Where should humanity aim?" *The Open Atmospheric Science Journal* Vol. 2.**

Journal article arguing if humanity wishes to preserve a planet similar to the one that civilization developed on and that life on Earth is adapted to, then paleoclimate evidence and ongoing climate change suggest that CO<sub>2</sub> will need to be reduced from its current 385 ppm to at most 350 ppm, but likely less than that.

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**Harbine, J., and N. Shoaff. 2015. *Earthjustice and Sierra Club Environmental Law Program*, Bozeman, Montana, and San Francisco, California. May 8, 2015.**

Comments submitted on behalf of Earthjustice, Sierra Club, and 350 Colorado, regarding proposed regulatory changes on the collection of royalties from coal, oil, and gas production on public lands by the Office of Natural Resource Revenue. The organizations express support for ONRR's efforts, urging them to adopt the additional reforms described in this letter for the sake of the taxpayer.

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**Hare, W. L., et al. 2011. "Climate hotspots: Key vulnerable regions, climate change and limits to warming." *Regional Environmental Change* 11(1):1–13.**

Journal article offering an overview of the latest scientific findings in the context of risks and uncertainties and assessing some key vulnerabilities that might lead to dangerous climate change in four areas: adverse declines in regional food and water security, loss of arctic sea ice with projected extinction of species, large-scale sea level rise, and loss of coral reef systems.

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**Harrigan, R. J., et al. 2014. "A continental risk assessment of West Nile Virus under climate change." *Global Change Biology* 20:2417-2425.**

Journal article looking at how global climate change could increase the areas of suitable habitat for the disease and how to tailor mitigation to these new regions.

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**Harvard School of Public Health. 2012. Internet website: <http://www.chgeharvard.org/resource/exploretruecostscoal>.**

Interactive website model produced by the Harvard School of Public Health on the topic of The Measurable, Economic, and Qualitative Cost of Coal. Expands on energy use in the United States. Produced as a supplement to the report Full Cost Accounting for the Life Cycle of Coal. Allows for expansion on topics specific to coal, such as subsidies, climate change, and transport.

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**Headwater Economics. 2015. An Assessment of US Federal Coal Royalties, Current Royalty Structure, Effective Royalty Rates, and Reform Options. January 2015. Internet website: <http://headwaterseconomics.org/energy/coal-royalty-valuation>.**

Paper that provides an overview of government-owned coal reserves by analyzing how revenues from federal coal are obtained, estimating current effective rates, reviewing problems with the current system, and assessing policy reform.

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**\_\_\_\_\_. 2015. The Impact of Federal Coal Royalty Reform on Prices, Production, and State Revenue. May 2015.**

This report presents data and analyses that evaluate the revenue, price, and production implications of federal royalty reform on coal deliveries to the domestic power sector. It models three scenarios for how the final rule could be implemented: 1.) valuing coal based on the first arm's length sale price, 2.) valuing coal based on delivered prices, net of transportation costs, and 3.) valuing coal based on delivered prices, net of transportation costs. The report reviews anticipated changes in revenue, production, and price.

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**Heede, R., and N. Oreskes. 2016. "Potential emissions of CO<sub>2</sub> and methane from proved reserves of fossil fuels: An alternative analysis." *Global Environmental Change*. January 2016: 12-20.**

Journal article analyzing the potential emissions of CO<sub>2</sub> and methane from the proved reserves, as reported by the world's largest producers of oil, natural gas, and coal, with a focus on the 70 companies and eight government-run industries that produced 63 percent of the world's fossil fuels, from 1750 to 2010.

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**Hein, J. 2015. Harmonizing Preservation and Production June 2015. Institute for Policy Integrity. Internet website: [Hein\\_2015\\_DOI\\_LeasingReporthttp://policyintegrity.org/publications/detail/harmonizing-preservation-and-production/](http://policyintegrity.org/publications/detail/harmonizing-preservation-and-production/).**

The report focuses on a deficiency in the federal management of natural resources: The terms of federal leases do not require developers to internalize the environmental and social costs of fossil fuel extraction. In line with their statutory mandates, the BLM and Bureau of Ocean Energy Management must account for these social and environmental costs when leasing and managing federal natural resources to ensure a fair return to taxpayers.

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**\_\_\_\_\_. 2016. Priorities for Federal Coal Reform—Twelve Policy and Procedural Goals for the Programmatic Review. Institute for Policy Integrity. New York University School of Law.**

This report highlights twelve policy and procedural recommendations for the review of the federal coal program. The programmatic EIS, conducted pursuant to the National Environmental Policy Act (NEPA), must be prepared carefully, transparently, and by using the best economic and modeling tools available. The analysis should provide accurate information on how different royalty rates and coal production scenarios would affect greenhouse gas emissions, revenue, jobs, and energy markets—particularly substitution among energy resources. Interior should pay particular attention to policy changes that it can implement now, without the need for new legislation, in order to secure a more fair return and manage federal energy production to meet twenty-first century needs.

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**Hein, J., and P. Howard. 2015. Reconsidering Coal’s Fair Market Value. NYU Institute for Policy Integrity. Oct. 2015. Internet website: [http://policyintegrity.org/files/publications/Coal\\_fair\\_market\\_value.pdf](http://policyintegrity.org/files/publications/Coal_fair_market_value.pdf).**

This report describes how the federal coal leasing program is not structured to ensure that taxpayers receive “fair market value,” as the law requires, for coal extracted from public lands. Recent investigations have shown that coal companies exploit loopholes to avoid paying their fair share of royalties, costing taxpayers up to \$1 billion each year in lost revenue. Outdated fiscal policies fail to remedy uncompetitive bidding practices or properly account for coal’s export value. And the Department of the Interior’s fiscal terms do not account for the prevalent environmental externalities and option values associated with coal production that impose uncompensated costs on the public.

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**\_\_\_\_\_. 2015. Illuminating the Hidden Costs of Coal: How the Interior Department Can Use Economic Tools to Modernize the Federal Coal Program. Institute For Policy Integrity, New York University School of Law.**

Paper analyzing how current regulations about coal leasing and industry interactions have deprived state and federal governments of billions of dollars. It provides common sense, market-based reforms to the federal coal leasing program.

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\_\_\_\_\_. 2015. **Reconsidering Coal's Fair Market Value. The Social Costs of Coal Production and the Need for Fiscal Reform. Institute for Policy Integrity. New York University School of Law.**

This report suggests that a robust definition of “fair market value” should include the market price of the coal resource, the option value of mining that resource, and the social cost of mining—the cost to American taxpayers—of mining on public lands, due to environmental and social externalities. This definition would be consistent with the Department of the Interior’s dual mandate to earn a fair return on development of energy resources and to preserve and protect the environment for future generations.

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**Heron, E. 2014. Linc Energy charged with causing serious environmental harm, April 12.**

Linc Energy charged with causing serious environmental harm at its underground coal gasification plant in Queensland, Australia.

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**Higginbotham, et al. 2013. Coal Train Pollution Signature Study. Briefing paper prepared for the Coal Terminal Action Group Dust and Health Committee. August 2013.**

Paper on monitoring particle pollution levels in residential areas to find the particulate profile of coal trains and the increase in particulate matter with the addition of coal trains. Results of the study were that all coal train signatures were associated with a significant increase in particle pollution levels. The paper calls out these levels as alarming and asks for further studies.

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**Hill, J. 2012. Internet website: <https://youtu.be/Qpup5VTUkr0>**

Video of speech given by Dr. Michelle Hofmann at the Utah Clean Air Conference. Dr. Hofmann is medical director of the Primary Children’s Medical Center at Riverton Hospital, as well as a professor at the University of Utah. She advocates for air quality standards.

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**Hitt, N. P., and D. B. Chambers. “Temporal changes in taxonomic and functional diversity of fish assemblages downstream from mountaintop mining.” *Freshwater Science* 33(3):915-926.**

Journal article on mountaintop coal mining and how it impacts fish assemblages, particularly how effects on water quality can limit the quality and availability of benthic macroinvertebrate prey.

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**Hoegh-Guldberg, O., et al. 2010. “The impact of climate change on the world’s marine ecosystems.” *Science* 328:1523-1528.**

Journal article on how rising greenhouse gas concentrations and anthropogenic climate change are leading to decreased ocean productivity, altered food web dynamics, reduced abundance of habitat-forming species, shifting species distributions, and a greater incidence of disease.

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**Hönisch, B., et al. 2012. “The geological record of ocean acidification.” *Science* 3335:1058-1063.**

Journal article on the geological record and its long-term evidence of a variety of global environmental perturbations, including ocean acidification. Also considers the associated biotic responses, including a review of events exhibiting evidence for elevated atmospheric CO<sub>2</sub>, global warming, and ocean acidification over the past ~300 million years.

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**Hood River News. 2013. “Another voice: Coal transport comments needed now.” January 11, 2013.**

Newspaper article about comments needing to be submitted on the proposed shipping of coal to Asia through the Columbia River Gorge to the Gateway Pacific Terminal in Bellingham, Washington.

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**Houp, R. E. 1993. “Observations on long-term effects of sedimentation on freshwater mussels (*Mollusca: Unionidae*) in the north fork of the Red River, Kentucky.” *Transactions of the Kentucky Academy of Science* 54(3-4):93-97.**

Study comparing historical data for mussels in the Red River. Concludes that many mussel species are intolerant of chronic sedimentation and are being impacted or extirpated.

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**Howard, P. 2016. *The Bureau of Land Management’s Modeling Choice for the Federal Coal Programmatic Review*. NYU Institute for Policy Integrity. June 10, 2016. Internet website: [http://policyintegrity.org/files/publications/BLM\\_Model\\_Choice.pdf](http://policyintegrity.org/files/publications/BLM_Model_Choice.pdf)**

Paper examines modeling choices for coal program reform. There are multiple power sector models available to the BLM for analyzing the effect of current and alternative coal regulations and leasing policies during preparation of its programmatic EIS. This document lays out model selection criteria to assist the BLM in weighing the benefits and costs of these available models. It and offers recommendations for model selection, highlighting the tradeoff between model complexity and transparency.

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**Howarth, R. B., M. D. Gerst, and M. E. Borsuk. 2013. Risk mitigation and the social cost of carbon. *Global Environ. Change* (2013). Internet website: <http://dx.doi.org/10.1016/j.gloenvcha.2013.11.012>**

Article looking into the social cost of carbon, using a stochastic climate-economy model that has been adapted to account for the costs of greenhouse gas emission reductions, the relationship between those emissions and future mean global temperature, and the economic impacts of climate change. This study shows contrast with the findings of previous studies by showing that the social cost of carbon is dependent on the time path for emissions. The study models that the social cost of carbon is \$25,700 per metric ton when emissions are unregulated and \$4 per ton as the stringency of control measures is successively increased. The results suggest even more so that there is no perfectly defined value for carbon emissions.

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**Hulac, B., and D. Brown. 2016. Arch Coal paid execs \$8M in bonuses on eve of bankruptcy. Internet website: <http://www.eenews.net/stories/1060034093>.**

This website article discusses CEOs from Arch Coal getting paid more than \$8 million in bonuses the day before the company filed for bankruptcy.

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**ICF International. 2016. Federal Coal Leasing Reform Options: Effects On CO2 Emissions And Energy Markets--Summary Of Modeling Results Final Report. Vulcan, Inc. Report.**

Report modeling the potential impacts of changes to the federal coal royalty system using a variety of possible scenarios of coal prices and Clean Power Plan implementation.

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**IHS. 2014. IHS Study: Diversity of United States Power Supply Could be Significantly Reduced in Coming Decade. Internet website: <http://press.ihs.com/pressrelease/Energypowermedia/ihsstudydiversityunitedstatespowersupplycouldbesignificant>.**

Article on IHS study of the diversity of US power supply declining in coming decades. Points to the importance of diversity in the power sector and how it is at risk. The research was supported by the Edison Electric Institute, the Nuclear Energy Institute, and the Institute for 21st Century Energy.

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**Institute for Energy Economics and Financial Analysis. 2012. The Great Giveaway: An analysis of the United States' Long-Term Trend of Selling Federally Owned Coal for Less than Fair Market Value.**

Report examining the coal leasing fair market value appraisal program of the BLM.

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\_\_\_\_\_. **2015. Executive summary of testimony by Tom Sanzillo. September 21, 2015.**

Testimony from Finance Director for the Institute for Energy Economics and Financial Analysis. Provides a basic background on the status of US and global coal markets pertaining to potential exports out of the Oakland Army Base Redevelopment Project, as well as comments on the financial risks of the introduction of coal for the Oakland Army Base Redevelopment Project.

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\_\_\_\_\_. **2016. Comments on the Department of the Interior Notice of Intent to Conduct a Programmatic Environmental Impact Sate of Federal Coal Leasing Programs.**

Letter suggesting wholesale alternatives to the federal coal lease program, which include recommending that the Department of the Interior eliminate the current fair market value criteria and replace it with a new partnership model between government agencies and private industry, operating under new rules to protect the interest of US taxpayers.

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\_\_\_\_\_. **2016. Internet website: <http://ieefa.org/category/subject/powder-river-basin-coal/>.**

List of all work related to Powder River Basin done by IEEFA

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**Intended Nationally Determined Contribution. 2015. Internet website: <http://www4.unfccc.int/submissions/indc/Submission%20Pages/submissions.aspx>.**

Website with all nationally determined contributions compiled in one place.

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**Interagency Working Group on Social Cost of Carbon. 2013. Technical Update of the Social Cost of Carbon for Regulatory Impact Analysis - Under Executive Order 12866. US Government, Washington, DC.**

Document provides an update of the SCC estimates, based on new versions of each IAM (DICE, PAGE, and FUND). It does not revisit other interagency modeling decisions, such as those regarding the discount rate reference case socioeconomic and emission scenarios, or equilibrium climate sensitivity. Improvements in the way damages are modeled are confined to those that have been incorporated into the latest versions of the models by the developers themselves in the peer-reviewed literature.

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**Intergovernmental Panel on Climate Change. 2007. Climate Change 2007: Synthesis Report.**

Report providing an integrated view of climate change that summarizes observed changes in climate and their effects on natural and human systems; assesses the causes of the observed change; presents projections of future climate change and related impacts under different scenarios; discusses adaptation and mitigation options over the next few decades; and assesses the relationship between adaptation and mitigation.

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**\_\_\_\_\_. 2014. Climate Change 2014: Impacts, Adaptation, and Vulnerability—Summary for Policymakers.**

Report evaluating how patterns of risks and potential benefits are shifting, due to climate change, and considering how impacts and risks related to climate change can be reduced and managed through adaptation and mitigation.

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**\_\_\_\_\_. 2014. Summary for Policymakers, Contribution to Working Group III to the Fifth Assessment Report of the International Panel on Climate Change. Cambridge University Press, Cambridge, United Kingdom, and New York, New York, USA.**

This report assesses literature on the scientific, technological, environmental, economic, and social aspects of mitigating climate change and builds on previous versions of the report. It was prepared by the Intergovernmental Panel on Climate Change (IPCC), a scientific and intergovernmental body under the auspices of the United Nations

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**\_\_\_\_\_. 2014. Climate Change 2014: Synthesis Report.**

Report that confirms human influence on the climate system is clear and growing, with impacts observed across all continents and oceans. Findings also state that the more human activities disrupt the climate, the greater the risks of severe, pervasive, and irreversible impacts for people and ecosystems and long-lasting changes in all components of the climate system.

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**\_\_\_\_\_ . 2014. "Energy Systems." In: "Climate change 2014: Mitigation of climate change." Contribution of Working Group III to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change.**

Report on energy systems in climate change. Addresses issues related to the mitigation of greenhouse gas emissions from the energy supply sector, which is the largest contributor to greenhouse gas, including renewable energy and decarbonizing of electricity generation to reduce air pollution.

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**International Council on Mining & Metals. 2011. "Fugitive methane emissions in coal mining." Climate Change. London, United Kingdom.**

This report discusses the challenges in estimating and measuring fugitive emissions and placing a carbon price on coal mining.

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**International Energy Agency. 2015. World Energy Outlook 2015. Internet website: <http://www.iea.org/publications/scenariosandprojections/>.**

This website discusses new policy scenario, current policies scenario, 450 scenario, and energy technology perspectives.

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**\_\_\_\_\_ . 2015. World Energy Outlook 2015. Internet website: [http://www.worldenergyoutlook.org/media/weowebiste/2015/WEO2015\\_Chapter01.pdf](http://www.worldenergyoutlook.org/media/weowebiste/2015/WEO2015_Chapter01.pdf).**

This edition of the World Energy Outlook presents an assessment of the prospects for global energy markets to 2040 and draws out implications for energy security. (Only the introduction is available online, and the full report can be ordered here: <http://www.worldenergyoutlook.org/weo2015/>.)

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**Interstate Mining Compact Commission. 2014. Self-Bonding Survey.**

State-by-state review of the extent of self-bonding for reclamation.

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**Ives, M. 2013. Internet website: [http://e360.yale.edu/feature/boom\\_in\\_mining\\_rare\\_earths\\_poses\\_mounting\\_toxic\\_risks/2614/](http://e360.yale.edu/feature/boom_in_mining_rare_earths_poses_mounting_toxic_risks/2614/).**

Paper examines the rare earth metals mining and environmental impacts. The mining of rare earth metals, used in everything from smart phones to wind turbines, has long been dominated by China. But as mining of these key elements spreads to countries like Malaysia and Brazil, scientists warn of the dangers of the toxic and radioactive waste generated by the mines and processing plants.

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**Jacobson M., and M. Delucchi. 2011. "Providing all global energy with wind, water, and solar power. Part I: Technologies, energy resources, quantities and areas of infrastructure, and materials." *Energy Policy* 39(2011):1154–1169.**

Article analyzing the feasibility of providing worldwide energy from wind, water, and sunlight (WWS). The study is done in two parts, first discussing WWS sources, demand, and availability and second addressing variability, economics, and policy of WWS energy. The authors suggest producing all new energy with WWS by 2030 and replacing the existing energy by 2050 discussing political and social barriers to this transformation. The cost of using WWS they state should be similar to current energy sources.

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**Jacquet, J. B. 2014. *A Short History of Social Impact Assessment*. Department of Social and Rural Studies, South Dakota State University, Brookings, South Dakota.**

A white paper from a faculty member at South Dakota State University, Department of Social and Rural Studies. Paper briefly outlines the social impact assessment and provides history of application in NEPA, oil and gas, international contexts, and new applications. Beginning in the early 1970s, a formalized set of practices and procedures called Social Impact Assessment (SIA) emerged to document and predict the socioeconomic impacts from large-scale projects. While originally focused primarily on impacts on such variables as population, employment, and housing, the scope of social and economic variables analyzed through SIA has greatly expanded,

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**\_\_\_\_\_. 2014. *The Battlement Mesa Health Impact Assessment: A Case Study and Oral History of Process and Lessons Learned*. Department of Social and Rural Studies, South Dakota State University, Brookings, South Dakota.**

Paper outlines the Garfield County, Colorado, Health Impact Assessment (HIA) for Battlement Mesa, the first HIA of its kind in the area of oil and natural gas development. This paper offers an in-depth case study of the Battlement Mesa HIA, focusing less on the controversial findings of the report and instead concentrating on the historical context, the regulatory process, and the project design and implementation of the HIA. A white paper from a faculty member at South Dakota State University, Department of Social and Rural Studies.

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**Jenkinson, J. J. 2005. "Specific gravity and freshwater mussels." *Freshwater Mollusk Conservation Society Symposium*.**

Handout about the specific gravity (SG) of native mussels and how their SG allows them to maintain a position in surrounding substrate with similar SG; thus, changes to substrate SG can affect the mollusk distribution.

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**John T. Boyd Company. 2011. Powder River Basin Coal Resource and Cost Study. Denver, Colorado.**

The report addresses the availability of resources and the cost of recovery of those resources and forecasts Free on Board mine prices for coal from 2011 through 2040. The study is based on information available in the public domain, and on Boyd's extensive familiarity and experience with Powder River Basin operations

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**Johnson, L., and C. Hope. "The social cost of carbon in US regulatory impact analyses: An introduction and critique." *Journal of Environmental Studies and Sciences* 2:205-221.**

Abstract on article that estimates the values from the models produced in the US government's published social cost of carbon article. These new values are calculated using a range of discount rates and methods considered more appropriate for the long-term scale of climate change, and a method that assigns "equity weights," based on relative income levels between regions.

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**Jones & DeMille Engineering. 2016. CIB Funded Projects.**

List of Commercial International Bank funded projects.

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**Jones, C., et al. 2009. "Committed terrestrial ecosystem changes due to climate change." *Nature Geoscience* 2:484-487.**

Journal article about how some aspects of the Earth's system, such as global mean temperatures and sea level rise due to thermal expansion or the melting of large ice sheets, continue to respond long after the stabilization of radiative forcing. A climate-vegetation model of the terrestrial biosphere shows significant inertia in its response to climate change and can continue to change for decades after climate stabilization; therefore, subsequent policy development must include this response in order to avoid it.

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**Jones, G. 2011. National IQ and National Productivity: The Hive Mind Across Asia. *Asian Development Review*. George Mason University, Fairfax, Virginia.**

Article arguing that human capital spillover is the cause of cognitive skills having a modest influence on individual wage but strong correlation with national outcomes. Uses arguments for intelligence influence on decision-making.

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**Joo, N., et al. 2014. 5 Things You Should Know about Powder River Basin Coal Exports.**

Internet website:

<https://cdn.americanprogress.org/wpcontent/uploads/2014/08/PowderRiver-factsheet.pdf>.

Fact sheet provided by the Center for American Progress on the massive climate impacts of low-cost coal mined in the Powder River Basin and how, as a result of federal policies, the Powder River Basin coal is selling at below market rates.

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**Kalderia, K., et al. 2016. Carnegie Institution for Science. July 27, 2016.**

Letter from a group of scientists to the Department of the Interior, asking for the ending of coal leasing on public lands to protect the climate, public health, and biodiversity

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**Katestone Environmental. 2011. NSW Coal Mining Benchmarking Study: International Best Practice Measures to Prevent and/or Minimise Emissions of Particulate Matter from Coal Mining. Prepared for Office of Environment and Heritage. Milton, Queensland, Australia.**

This report reviews and compares international best practice measures to prevent and/or minimize particle emissions from all activities associated with New South Wales coal mines. It was prepared by a government organization.

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**Keith, D. 2013. *A Case For Climate Engineering*. MIT Press, Cambridge, Massachusetts.**

This book provides a clear and accessible overview of what the costs and risks might be and how climate engineering might fit into a larger program for managing climate change. Abstract only.

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**Kiesecker, J. M., et al. 2011. "Energy by design: Making mitigation work for conservation and development." Chapter 9 of *Energy Development and Wildlife Conservation in Western North America*.**

Chapter exploring the prospect of a mass extinction event that threatens 10 to 30 percent of all mammal, bird, and amphibian species from anthropogenic stressors, such as invasive species, overexploitation, pollution, and climate change. Habitat destruction is by far the most influential factor in this unprecedented loss of biodiversity. Thus, given the importance of economic development for improving human well-being, it is therefore crucial that we have substantial improvement in our ability to balance development needs with environmental conservation.

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**Kitzhaber J. A., and J. Inslee. 2013. Letter to CEQ re: coal leasing costs.**

Letter requests reevaluation of coal leasing costs to incorporate greenhouse gas and other air quality effects before building proposed terminals in Washington and Oregon for international export of coal.

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**Kreiger, E. et al. 2016. *The Clean Power Plan in Pennsylvania: Analyzing Power Generation for Health and Equity*. PSE Healthy Energy, Oakland, California.**

Report analyzes the health, environmental, and equity dimensions of the Clean Power Plan. Assesses the socioeconomic and environmental health burdens and hazards for populations living near plants regulated under the Clean Power Plan. Models the potential public health impacts of fine particulate matter attributable to combustion at Pennsylvania's power plants. Findings point to where carbon emission reductions may have the greatest public health benefits and help identify where increased or decreased power generation may add to or alleviate burdens on vulnerable communities.

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**Kroeker, K. J., et al. 2013. "Impacts of ocean acidification on marine organisms: Quantifying sensitivities and interaction with warming." *Global Change Biology* 19(6):1884-1896.**

Journal article on how ocean acidification represents a threat to marine species worldwide, and a synthesis of 228 studies shows decreased survival, calcification, growth, development, and abundance in response to acidification, when the broad range of marine organisms is pooled together.

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**Krupnick, A., et al. 2015. Putting a Carbon Charge on Federal Coal: Legal and Economic Issues. Resources For the Future Mar. Internet website: <http://www.rff.org/research/publications/putting-carbon-charge-federal-coal-legal-and-economic-issues>**

The paper considers the legal and economic feasibility of imposing an “upstream” CO<sub>2</sub> charge on coal production at its extraction site. Specifically, it focuses on leased coal from federal lands managed by the BLM. Such a carbon charge is designed to embody the cumulative life cycle externalities from coal mining to combustion (or other “downstream” utilization). Legal analysis concludes that the BLM has the statutory and regulatory authority to impose such a charge and that it would be best to add it to the royalty rate. But a large fee that would dramatically reduce revenues could invite judicial concern. Furthermore, production on state, private, and tribal lands (60 percent of total production) would not be subject to the charge and so could ramp up in response to the economic disadvantage the charge would cause for coal on federal lands.

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**Krupnick, A., N. Richardson, J. Darmstadter, and K. McLaughlin. 2015. Should We Price Carbon from Federal Coal? Resource for the Future. Washington, DC. Internet website: <http://www.rff.org/research/publications/should-we-price-carbon-federal-coal>**

This article discusses whether the BLM should impose an upstream carbon charge on coal production. It was prepared by Resources for the Future, which conducts economic research and objective analysis to help leaders craft smarter policies about natural resources, energy, and the environment.

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**Krupnick, A., et al. 2016. Applying EIA’s National Energy Modeling System to US Coal Projections: Strengths and Weaknesses for BLM’s Programmatic Environmental Impact Statement. Resources for the Future.**

This policy brief explores the strengths and weakness of the Energy Information Administration’s (EIA’s) National Energy Modeling System (NEMS), paying special attention to its application in long-term policymaking. The goal of the paper is to provide insight into how NEMS can contribute to the BLM’s programmatic environmental impact statement for federal coal leasing.

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**Kuykendall, T. 2016. Headwinds Facing US Coal. SNL Energy. March 29, 2016.**

Article forecasting what coal industry may look like in the future. Abstract only.

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**Kuykendall, T., and A. Cotting. 2016. Companies recently filing bankruptcy produce more than 2/3 of PBR coal. April 13, 2016. Internet website: <https://www.snl.com/InteractiveX/Article.aspx?cdid=A-36118340-12086>.**

This article details coal companies that mine the Powder River Basin filing for bankruptcy. It was prepared for S&P global market intelligence, an organization providing market analysis.

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**\_\_\_\_\_ . 2016. Headwind that pushed coal to bankruptcy potentially changing course. SNL Energy. April 29, 2016.**

Article describes recent trends in the metallurgical coal market. Met coal prices have been on a steady decline until the most recent quarter, driven in part by China's reduced demand for steel. Article provides case study for Peabody Coal, which recently entered into Chapter 11 bankruptcy, and is significantly exposed to met and thermal coal. Article published by SNL Energy, a part of S&P Global Market Intelligence, a consulting firm.

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**Labor Network for Sustainability and Strategic Practice. Year unknown. "Just Transition"—Just What Is It? An Analysis of Language, Strategies, and Projects**

Collaborative report defining "just transition," as it relates to the economic transition, including energy, a carbon-neutral economy, communications, manufacturing, transportation, health care, and waste management. The report includes 17 interviews on the "just transition" framework.

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**Laks, D. 2009. "Assessment of chronic mercury exposure within the US population, National Health and Nutrition Examination Survey, 1999–2006." *Biometals* 22:1103-1114.**

Abstract on study that assesses chronic mercury exposure within the US population. Results provide evidence that I-Hg deposition in the human body is a cumulative process and is associated with significant biological markers. There is a time-dependent rise in the populations risk for associated disease.

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**Langham, et al. 2015. National Audubon Society, New York, New York.**

The National Audubon Society has completed a continental analysis of how North America's birds may respond to future climate change. Using extensive citizen science data and detailed climate layers, they developed models that characterize the relationship between the distribution of each species and climate. Then, they used the models to forecast species distributions to future periods, based on climate estimates described by the Intergovernmental Panel on Climate Change (IPCC).

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**Lashof, D. A., et al. 2007. "Coal in a Changing Climate." Natural Resources Defense Council issue paper.**

Paper examining the changing climate for coal production and use in the United States and China, the world's two largest producers and consumers of coal. Emissions from both countries are far higher than from any other country and will together constitute more than 60 percent of global CO<sub>2</sub> emissions from coal. While imperfect and unable to make coal "clean," technologies ready for widespread commercial application can dramatically reduce emissions of carbon dioxide, mercury, sulfur, and nitrogen oxides to reduce the resultant air pollution and global warming effects.

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**Lattanzio R. K. 2015. Life-Cycle Greenhouse Gas Assessment of Coal and Natural Gas in the Power Sector. Congressional Research Service.**

Report compares coal and natural gas environmental and economic impacts, finding that natural gas produces 40 to 60 percent of the CO<sub>2</sub> emissions of coal. However, the fugitive emission of methane greatly increases the greenhouse gas potential of natural gas. The comparative life-cycle emissions of both existing and advanced natural gas technology may be comparable to coal-fired technology.

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**Lazarus, M., et al. 2015. "Supply-side climate policy: The road less taken." Working paper 2015-13. Stockholm Environment Institute, Seattle, Washington.**

Paper explores reasons why supply-side policies have not been pursued and why they deserve more attention. It provides a typology of supply-side policies and frameworks for assessing their effectiveness, efficiency, and feasibility. It finds that supply-side policies, such as removal of producer subsidies, compensation of resource owners for leaving fuels unburned, or outright restrictions on resource development, could bring important benefits.

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**Lee-Ashley, M., and N. Thakar. 2015. Cutting Subsidies and Closing Loopholes in the U.S. Department of the Interior's Coal Program. Center for American Progress. Internet website:  
<https://www.americanprogress.org/issues/green/reports/2015/01/06/103880/cutting-subsidies-and-closing-loopholes-in-the-u-s-department-of-the-interiors-coal-program/>.**

This report investigates coal companies maximizing subsidies on federal lands through increasingly complex financial and legal mechanisms. The report calls for reform to cut subsidies and close loopholes. Center for American progress is a Washington D.C. based think-tank.

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**Lemly, A. D. 2009. "Aquatic hazard of selenium pollution from coal mining." Chapter 6 in Coal Mining: Research, Technology, and Safety. Nova Science Publishers, New York, New York.**

Chapter on how selenium, an element found in coal that can leached out during coal processing, can be mobilized and spread to nearby surface waters, leading to bioaccumulation in food chains, with possibly toxic consequences.

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**Leong, C. 2001. "Retrograde degeneration of neurite membrane structural integrity of nerve growth cones following in vitro exposure to mercury." Neuroreport 12:733-737.**

Abstract of study presenting whether mercury ions could affect membrane dynamics of neurite growth cone morphology and behavior. Results conclude that mercury works as a potential etiological factor in neurodegeneration.

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**Leonhardt, D. 2015. "There's a formula for deciding when to extract fossil fuels." New York Times. New York, New York.**

News article published about using a formula to decide when to extract fossil fuels. Uses the social cost of carbon method.

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**Lepeule, J. 2012. "Chronic exposure to fine particles and mortality: An extended follow-up of the Harvard six cities study from 1974 to 2009." Environmental Health Perspectives 12:965-970.**

Article taking epidemiological studies that have reported associations between fine particles and mortality and adding 11 years of follow-up, incorporating recent lower exposures to fine particles. Article concludes that further public policy efforts that reduce fine particulate matter air pollution are likely to have continued public health benefits.

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**LeResche, B. 2014. Letter to Wyoming DEQ on Linc Aquifer Exemption. Powder River Basin Resource Council, WORC.**

Letter writer argues against allowing an aquifer exemption for Linc Energy's proposed underground coal gasification project in Wyoming. The exemption would contaminate groundwater in the region.

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**Levin and Forbes. 2014. Visualizing the Global Carbon Budget (blog). World Resources Institute. Internet website: <http://www.wri.org/blog/2014/03/visualizing-global-carbon-budget>.**

Online article, evaluating the global carbon budget. Provides a visual aid, describing what the carbon budget is, impacts we are seeing today, what would happen if we do not stick to the budget, and ways that we can meet the budget.

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**Lewtas, J. 2007. "Air pollution combustion emissions: Characterization of causative agents and mechanisms associated with cancer, reproductive, and cardiovascular effects." *Mutation Research* 636:95-133.**

Journal article about combustion emissions that account for over half of the fine particle (PM<sub>2.5</sub>) air pollution and most of the primary particulate organic matter. Studies have shown that short- and long-term exposures to combustion emissions and ambient fine particulate air pollution are associated with measures of genetic damage and increased risks of all causes of mortality, cardiopulmonary mortality, and lung cancer mortality over the long-term.

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**Lifson, T. 2014. "Debunking the 97% 'consensus' on global warming." *American Thinker* 4, February 2014.**

Blog that disputes the consensus in the scientific community about the validity of climate change.

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**Lin, J., et al. 2014. "China's international trade and air pollution in the United States." *Proceedings of the National Academy of Sciences* 111(5):1736-1741.**

Journal article about China, the world's largest emitter of anthropogenic air pollutants, and how Chinese pollutants are transported via the atmosphere to other countries, including the United States. As the United States outsourced manufacturing to China, sulfate pollution in 2006 increased in the western United States but decreased in the eastern United States, reflecting the competing effect between enhanced transport of Chinese pollution and reduced US emissions.

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**Live Science. 2016. Internet website: [www.livescience.com](http://www.livescience.com).**

Article that details the greenhouse gas emissions tied to solar power generation.

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**Loarie, J. 2012. AERMOD Modeling of Air Quality Impacts of the Proposed Marrow Pacific Project. Prepared for the Sierra Club. October 2012.**

Document on the Marrow Pacific Project in Oregon, presenting the methods and results of modeling analysis of air quality impacts. The regulatory dispersion model AERMOD is used to predict project impacts of criteria pollutants. The results state that the proposed Marrow Pacific Project will cause adverse air quality impacts.

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**Lockwood, A. H., et al. 2009. Coal's Assault on Human Health. Physicians for Social Responsibility.**

Report on how coal pollutants affect all major body organ systems and contribute to four of the five leading causes of mortality in the United States (heart disease, cancer, stroke, and chronic lower respiratory diseases). Each step of the coal lifecycle—mining, transportation, washing, combustion, and disposing of post-combustion wastes—impacts human health.

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**Logan, J. A., and J. A. Powell. 2001. "Ghost forests, global warming, and the mountain pine beetle (Coleoptera: Scolytidae)." *American Entomologist* 47(3):160-173.**

Journal article on how outbreaks of the mountain pine beetle are an important part of ecological cycles in western pine forests and have provided researchers with insights into both the beetle's and the forest's evolutionary adaptability.

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**Lombardi, K. 2016. Former cleanup workers blame illnesses on toxic coal ash exposures. Internet website:**

**<https://www.publicintegrity.org/2016/07/20/19962/formercleanupworkersblameillnessestoxiccoalahexposures>.**

Article from Kingston, Tennessee, on toxic exposures to arsenic, lead, and mercury, substances concentrated in coal ash that workers are exposed to in Tennessee Valley Authority power plant. Specifically details the experience of Mr. Wilkinson, who worked to help clean up a massive coal-ash spill, and mentioning thousands of others like him.

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**Loss, S. R., T. Will, and P. Marra. 2013. Estimates of bird collision mortality at wind facilities in the contiguous United States. *Biological Conservation* 168 (2013) 201-209. Internet website: <http://www.sciencedirect.com/science/article/pii/S0006320713003522>.**

This journal article discusses bird fatalities from collisions with US wind turbines annually. It was produced by a peer-reviewed scientific journal.

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**Louie, E. P., and J. M. Pearce. 2016. "Retraining investment for US transition from coal to solar photovoltaic employment." *Energy Economics*. 2016. doi:10.1016/j.eneco.2016.05.016.**

Paper provides an analysis of the cost to retrain current coal workers for solar photovoltaic (PV) industry employment in the United States. The current coal industry positions are determined, the skill set is evaluated, and the salaries are tabulated. For each type of coal position, the closest equivalent PV position is determined and then the retraining time and investment are quantified. These values are applied on a state-by-state basis for coal producing states employing the bulk of coal workers as a function of time, using a reverse seniority retirement program for the current American collection of coal-powered plants. The results show that a relatively minor investment in retraining would allow most coal workers to switch to PV-related positions even in the event of the elimination of the coal industry.

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**Luber, G., et al. 2014. "Human health." Chapter 9 of *Climate Change Impacts in the United States*. National Climate Assessment.**

Chapter noting that climate change threatens human health, including impacts from increased extreme weather, wildfire, decreased air quality, threats to mental health, and illnesses transmitted by food, water, and disease carriers, such as mosquitoes and ticks. Climate change will amplify existing health threats, although public health actions can do much to protect people from some of these impacts, and responding to climate change provides opportunities to improve human health and well-being across many sectors.

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**Lucchini, R., et al. 2012. "Inverse association of intellectual function with very low blood lead but not with manganese exposure in Italian adolescent." *Environmental Res.* 118:65-71.**

Abstract on pediatric lead exposures impact on the cognitive function and behavior and co-exposure to manganese possibly enhancing neurotoxicity. Results find that even low levels of lead exposure have significant negative impacts on cognitive function in adolescents. At low levels manganese did not cause cognitive effects.

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**Luppens, J., and D. Scott. 2015. *Assessment of Coal Geology, Resources, and Reserve Base in the Powder River Basin, Wyoming and Montana*. United States Geological Survey.**

Fact sheet from the USGS about the general state of coal in the Powder River Basin.

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**Lynch, P. 2016. 2016 climate trends continue to break record. NASA. Internet website: <http://www.nasa.gov/feature/goddard/2016/climate-trends-continue-to-break-records/>**

NASA website article using satellite image data to explain that climate change is breaking records in the arctic. It is warmer than ever, with an expectation of more warming to come. This warming is causing ice melt that is noticeable in the images the article provides. Gives indications of the direction of NASA research in the future and on operation Ice Bridge.

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**Lyon, A. G., and S. H. Anderson. 2003. "Potential gas development impacts on sage grouse nest initiation and movement." *Wildlife Society Bulletin* 31(2):486-491. Internet website: [http://www.jstor.org/stable/3784329?seq=1#page\\_scan\\_tab\\_contents](http://www.jstor.org/stable/3784329?seq=1#page_scan_tab_contents).**

This report discusses the decline of the greater sage-grouse and how natural gas development would impact the population. *Wildlife Society Bulletin* a peer-reviewed publication of the wilderness society.

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**MacDougall, A. H., et al. 2012. "Significant contribution to climate warming from the permafrost carbon feedback." *Nature Geoscience* 5:719-721.**

Journal article on how permafrost soils contain almost twice the present atmospheric carbon pool. As these soils thaw owing to climate warming, respiration of organic matter within these soils will transfer carbon to the atmosphere, potentially leading to a positive feedback, leading to significant warming, even under less intensive emissions trajectories.

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**Machol, B., and S. Rizk. 2013. "Economic value of US fossil fuel electricity health impacts." *Environmental International* 52:75-80.**

Journal article about how fossil fuel energy has several externalities not accounted for in the retail price, including associated adverse human health impacts, future costs from climate change, and other environmental damages. Includes quantification of the economic value of health impacts associated with PM<sub>2.5</sub> and PM<sub>2.5</sub> precursors (NO<sub>x</sub> and SO<sub>2</sub>) on a per kilowatt-hour basis.

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**Maclean, I. M., and R. J. Wilson. 2011. "Recent ecological responses to climate change support predictions of high extinction risk." *Proceedings of the National Academy of Sciences Early Edition*. Pp. 1-6.**

Journal article analyzing empirical support for extinction risk for many species as a result of climate change using a global and multitaxon metaanalysis. Mean extinction probability by 2100 across studies making predictions of the future effects of climate change was 10 percent across taxa and regions and empirical evidence gave a mean probability of 14 percent.

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**Madsen, T., et al. 2016. "We have the power: 100% renewable energy for a clean, thriving America." *Environment America Spring 2016*.**

Report on the shift to renewable energy in America. The report details the course for 100 percent renewable energy in order to benefit the climate, environment, health, and economy.

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**Mahaffey, K. 2004. "Blood organic mercury and dietary mercury intake: National health and nutrition examination survey, 1999 and 2000." *Environmental Health Perspectives* 112:562-570.**

Article on blood organic mercury concentrations among women. Compares concentrations in different ethnicities and looks at how a diet containing fish impacts concentrations.

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**Mahaffey, K. 2004. *Methyl Mercury: Epidemiology Update*. EPA. San Diego, California.**

Presentation for the Fish Forum with an epidemiology update on methyl mercury. Slide 9 was cited in the comment.

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**Map of Powder River Basin Overburden Depths. 2006.**

Map showing Powder River Basin overburden.

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**Mapes, L. 2016. *Toxic Algae Creating Deep Trouble on West Coast*. Internet website: <http://www.seattletimes.com/seattle-news/environment/toxic-algae-creating-deep-trouble-on-west-coast/>.**

Newspaper article about a toxic algae bloom off the west coast of the United States in 2015 that shut down certain fisheries seasons for months due to the neurotoxin produced by *Pseudo-nitzschia*.

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**Marcott, S., et al. 2013. “A reconstruction of regional and global temperature for the past 11,300 years.” *Science* 339:1198-1201.**

Abstract from article about regional and global temperatures for the past 11,300 years. This is done so that current trends can be compared to historical trends. The constructed record of global mean surface temperatures provides patterns of warming and cooling. Results find that current global temperatures are higher than those during 90 percent of the entire Holocene.

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**Markandya, A., and P. Wilkinson. 2007. “Electricity generation and health.” *Lancet* 370:979-990.**

Journal article reviewing the current body of knowledge regarding the health effects of different methods of generating electricity.

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**Markey, E. J., and P. DeFazio. 2014. Summary of GAO Report on Federal Coal Leasing Feb. 4. Internet website: <http://www.markey.senate.gov/news/press-releases/markey-report-on-public-coal-leasing-shows-taxpayers-losing-money>.**

A review by Senator Markey’s office found that for every cent per ton that the BLM undervalues federal coal, there is nearly a \$7 million loss to American taxpayers.

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**Marten, A., and S. Newbold. 2011. Estimating the Social Cost of non-CO<sub>2</sub> GHG Emissions: Methane and Nitrous Oxide. US EPA, Washington, DC.**

In this paper a simplified integrated assessment model gets used that combines MAGICC and (elements of) DICE to estimate the social costs of the three most important greenhouse gases—CO<sub>2</sub>, CH<sub>4</sub>, and N<sub>2</sub>O—for 2010 through 2050.

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**Marten, A., E. Kopits, C. Griffiths, S. Newbold, and A. Wolverton. Incremental CH<sub>4</sub> and N<sub>2</sub>O mitigation benefits consistent with the US Government’s SC-CO<sub>2</sub> estimates. *Climate Policy* 15(2):272-298. Internet website: <http://www.tandfonline.com/doi/abs/10.1080/14693062.2014.912981>.**

This article discusses the social costs of non-CO<sub>2</sub> GHGs and develops a set of social cost estimates. *Climate Policy* is an international, peer-reviewed journal on responses to climate change

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**May, H. 2012. Utah asthma action plan: Avoid pollution. Internet website: <http://archive.sltrib.com/story.php?ref=/sltrib/news/54743373-78/asthma-utah-health-quality.html.csp>.**

News article from The Salt Lake Tribune, detailing Utah’s asthma action plan, which emphasizes limiting exposure to pollution.

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**Mccabe, and K. Wolock. “Recent declines in western US snowpack in the context of twentieth-century climate variability.” *EPA. Earth Interactions* 13:1-15.**

Article that looks at monthly snow accumulation and a melt model to determine the impact of changing winter temperatures. Findings include higher temperatures and lower snow water equivalent.

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**McDonald, A., et al. 2009. "Climate change and the geography of weed damage: Analysis of US maize systems suggests the potential for significant range transformations." *Agriculture, Ecosystems and Environment* 130:131-140.**

Journal article about how global warming will impact cropping systems and cause significant geographic range transformations among damaging endemic weeds, thereby resulting in new vulnerabilities to exotic weed invasions. To anticipate these changes and to devise management strategies for proactively addressing them, it is necessary to characterize the environmental conditions that make specific weed species abundant and competitive, and therefore damaging particular crops.

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**McGlade, C., and P. Ekins. 2015. "The geographical distribution of fossil fuels unused when limiting global warming to 2 degrees C." *Nature* 517:187-204. January 2015.**

Research letter informing on the role of fossil fuels in global warming and the suggested limits on reserves, such as coal reserves, to meet the target of a global temperature increase not exceeding 2 degrees C. The letter writer addresses the IPCC's suggested carbon budget and the implications that it would have on future use of fossil fuels. The writer concludes that a transformation in the understanding of fossil fuel is necessary in order to keep temperature rise below 2 degrees Celsius.

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**McKenzie, et al. 2004. "Climate change, wildfire, and conservation." *Conservation Biology* 18:890-902.**

Article on climate change's impact on wildfires. The article determines that climate change will extend fire seasons, as well as increase amplitude and duration of extreme fire weather. These results will depend on management of vegetation structure and fuels.

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**McKibben, B. 2016. "Global warming's terrifying new chemistry." *The Nation*, March 23, 2016.**

Article explaining the rise in natural gas as coal declines, replacing the greenhouse gas CO<sub>2</sub> with the greenhouse gas methane. The article's intent is to bring attention to methane as a harmful gas. The main point of this article is that global warming cannot just be about carbon dioxide any longer, and that natural gas is not a solution for coal.

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**McKinsey & Company. 2013. Pathways to a low-carbon economy: Version 2 of the global greenhouse gas abatement cost curve. Internet website: <http://www.mckinsey.com/business-functions/sustainability-and-resource-productivity/our-insights/pathways-to-a-low-carbon-economy>.**

This report builds on the 2007 report and includes an updated assessment of the development of low-carbon technologies and macro-economic trends and more detailed understanding of abatement potential in different regions and industries.

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**McKittrick, R. 2016. Internet website: <http://business.financialpost.com/fp-comment/junk-science-week-whats-the-right-price-for-carbon-take-a-guess-everyone-else-is>.**

Online article on how the price of carbon is estimated.

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**Mehl, C. 2015. Know Your Economy: Economic Tools Updated for Every County. Headwaters Economics blog. Internet website: <http://headwaterseconomics.org/economic-development/trends-performance/insights-economic-tools-updated/>.**

Internet website providing tools to query economic data and trends for every county in the country. Headwaters Economics is an independent, nonpartisan research firm.

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**Meinshausen, M., et al. 2009. "Greenhouse-gas emission targets for limiting global warming to 2 degrees C." *Nature* 458:1158-1163.**

Journal article providing a comprehensive probabilistic analysis aimed at quantifying greenhouse gas emission budgets for 2000-2050 that would limit warming throughout the twenty-first century to below 2 degrees C, based on a combination of published distributions of climate system properties and observational constraints.

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**Melillo, J. M., et al. 2014. Climate Change Impacts in the United States: The Third National Climate Assessment. US Global Change Research Program.**

Report that assesses the science of climate change and its impacts across the United States, now and throughout this century. It integrates findings of the US Global Change Research Program with the results of research and observations from across the United States and around the world, including reports from the US National Research Council. Documents climate change impacts and responses for various sectors and regions, with the goal of better informing public and private decision-making at all levels.

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**Miller, R., and R. Tausch. 2000 The Role of Fire in Juniper and Pinyon Woodlands: A Descriptive Analysis.**

Article expanding on the increase in both distribution and density of juniper and pinyon across the Intermountain West. Historically, juniper and woodlands have been treated to control expansion, but for wildlife and environmental concerns, this suppression has stopped. This causes risk for large crown fires and tree-dominated woodlands becoming difficult and expensive to fix.

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**Ministry of Municipal Affairs British Columbia. 1999. Public Private Partnership a Guide for Local Government.**

This guidebook is designed to assist local governments considering taking advantage of 1998 amendments to the Municipal Act that expand opportunities for public-private partnerships for the delivery of public facilities and services.

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**Montana Department of Environmental Quality. 2011. A review of the rationale for EC and SAR Standards, Aug. 5, 2011. Internet website: <http://deq.mt.gov/Portals/112/Energy/CoalbedMethane/Documents/FinalRationale.pdf>.**

The report reviews standards for electrical conductivity (EC) and sodium adsorption ratio (SAR) in water in the Tongue and Powder River basins of Montana. The board determined that rules were necessary to ensure that the designated uses of these waters for agricultural purposes would be protected during the development of coal bed methane (CBM). Water produced during CBM development has an average EC value of 2,200 Siemens per centimeter and a SAR value often greater than 40. These values, especially the SAR values, are well above almost all of the ambient water quality values of the rivers and streams in CBM country. In addition, the SAR value of CBM water is well above the value that will adversely impact irrigated agriculture.

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**\_\_\_\_\_. No Date. Rule 17.24.1116: Bonding: Criteria and Schedule for Release of Bond. Internet website: <http://www.mtrules.org/gateway/ruleno.asp?RN=17.24.1116>.**

This rule details the release of bond, including schedule and criteria. It was prepared by a state environmental organization.

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**Moore, F. C., and D. B. Diaz. 2015. Temperature impacts on economic growth warrant stringent mitigation policy. Nature Climate Change, advance online publication.**

Journal article comparing the costs of greenhouse gas mitigation with damages from climate change to evaluate the social welfare implications of climate policy proposals and inform optimal emissions reduction trajectories.

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**Moran, C., et al. 2013. Independent scientific panel report on underground coal gasification pilot trials. Queensland Independent Scientific Panel for Underground Coal Gasification.**

The panel report evaluates the feasibility of commercial scale underground coal gasification technology and concludes that pilot studies should not be allowed to progress to commercial scale until safe decommissioning processes are verified.

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**Morgan, Morgan. 2016. Comments on Petition to Initiate Self-Bonding Rulemaking, Docket ID: OSM-2016-0006. Sierra Club Environmental Law Program.**

Comments submitted by Staff Attorney, Peter Morgan, of the Sierra Club Environmental Law Program on behalf of Sierra Club, Earthjustice, Appalachian Citizens Law Center, Appalachian Voices, Coal River Mountain Watch, Ohio Valley Environmental Coalition, Southern Appalachian Mountain Stewards, Statewide Organizing for Community empowerment, Tennessee Clean Water Network, West Virginia Highlands Conservancy, and West Virginia Rivers Coalition.

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**Morris, A. C. 2016. "Build a better future for coal workers and their communities." Climate and Energy Economics discussion paper. Brookings Institution, Washington, DC.**

This report addresses concerns for coal workers and communities in a changing coal landscape and uncertain future. The Brookings Institution is a nonprofit public policy organization based in Washington, DC.

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**Morton, T. 2016. Update: Peabody, Arch Cut Nearly 480 Jobs At North Antelope, Black Thunder Mines. K2radio, Wyoming.**

Due to several factors. Peabody Energy and Arch Coal had to let go several hundred workers.

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**Mountain Pact. 2016. How Federal Coal Reform Could Help Mountain Communities Mitigate the Costs of Climate Change. July 2016.**

Report produced by the Mountain Pact, a 501c3 nonprofit coalition of mountain communities in the American West, seeking to address the impacts of climate change. Mountain communities are experiencing first hand the costs of climate change. Greenhouse gases from coal are a major contributor to climate change and associated costs. The report recommends that in order to ensure a fair return to taxpayers and improve economic efficiency, the royalty rate on federal coal should incorporate costs related to climate impact mitigation and adaptation.

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**Moy, A. D., et al. 2009. Reduced Calcification in Modern Southern Ocean Planktonic Foraminifera. Nature Geoscience, advance online publication.**

Journal article about how reduced calcification from acidified sea water—a result of anthropogenic carbon dioxide concentrating in the oceans—has decreased the shell weights for planktonic foraminifer. These single-celled calcite-secreting organisms are between 25 and 50 percent of the total open-ocean marine carbonate flux. They influence the transport of organic carbon to the ocean interior; therefore, a possible decline in the abundance of foraminifera caused by acidification could affect both marine ecosystems and the oceanic uptake of atmospheric carbon dioxide.

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**Muller, N. Z., R. Mendelsohn, and W. Nordhaus. 2011. “Environmental accounting for pollution in the United States economy.” *American Economic Review* 101:1649–1675. August 2011.**

Economic review presenting framework to include environmental externalities into a system of national accounts. This study looks at air pollution with an integrated-assessment model to quantify the damages of air pollution for each industry. The results of this study are that many industries have air pollution damages larger than their value added, the greatest loss found in coal-fired electric generation.

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**Mullins, N. 2016. “A coal miner’s goodbye.” *Yes! Magazine*, 2016. Bainbridge Island, Washington.**

Essay of the author’s life of working in a coal mine and then life after leaving the coal mine.

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**Multnomah County Health Department. 2013. The Human Health Effects of Rail Transport of Coal Through Multnomah County, Oregon, Mar. 1, 2013. Internet website: [http://media.oregonlive.com/environment\\_impact/other/Coal%20Report%20.pdf](http://media.oregonlive.com/environment_impact/other/Coal%20Report%20.pdf).**

The Multnomah County (Oregon) Health Department found that “coal dust may travel approximately 500 meters to 2 kilometers (1/3 to 1 1/4 miles or 1,640.42 feet to 6,561.68 feet) from the tracks, depending on weather conditions and train speed.” The study found that coal dust from rail transport has the potential to result in growth and development problems, heart and lung problems, cancers, and safety-related injury and death. It also identified that “coal dust may contain traces of heavy metals, such as lead, mercury, chromium, and uranium that are toxic to the human nervous system. Children are particularly vulnerable to heavy metals . . .” and that the populations living within 500 meters of the rail lines in the county are “communities of color, children, older adults, and people earning low incomes.”

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**\_\_\_\_\_. 2013. The Human Health Effects of Rail Transport of Coal Through Multnomah County, Oregon: A Health Analysis and Recommendations for Further Action. Health Assessment and Evaluation/Office of Policy and Planning Multnomah County Health Department.**

Report evaluating the health risk associated with coal rail transport through Multnomah County, Oregon. Potential environmental effects of concern related to coal transportation included emission of particulate matter in the form of coal dust and diesel locomotive exhaust, along with adverse health effects, such as heart and lung problems, cancers, and growth and development problems.

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**Mulvaney, D., et al. 2015. The Potential Greenhouse Gas Emissions from US Federal Fossil Fuels. EcoShift Consulting. August 2015. Internet website: <http://www.ecoshiftconsulting.com/wp-content/uploads/Potential-Greenhouse-Gas-Emissions-U-S-Federal-Fossil-Fuels.pdf>.**

The report estimates the greenhouse gas emissions from the volume of leased and unleased federal fossil fuels. The estimated volume of these resources is used to compute the life-cycle greenhouse gas emissions associated with developing fossil fuels—including emissions from extraction, processing, transportation, and combustion. Results indicate that a cessation of new federal fossil fuel leasing could keep up to 450 Gt CO<sub>2</sub>e from the global pool of potential future greenhouse gas emissions. This is equivalent to 13 times the global carbon emissions in 2014 or annual emissions from 118,000 coal-fired power plants.

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**Mulvaney, D., et al. 2016. Over-Leased: How Production Horizons of Already Leased Federal Fossil Fuels Outlast Global Carbon Budget. Center for Biological Diversity, Friends of the Earth, and EcoShift Consulting.**

Report concluding that existing federal leases will still be producing fossil fuels long after global carbon budgets have been exhausted. As previous studies suggest, federal fossil fuel leasing policy should be aligned with US climate goals. The analysis strongly suggests that staying within the global carbon budgets will likely require not only ending new federal leases but keeping significant amounts of already leased federal fossil fuels in the ground.

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**Muncy, B. L., et al. 2014. "Mountaintop removal mining reduces stream salamander occupancy and richness in southeastern Kentucky (USA)." *Biological Conservation* 180:115-121.**

Journal article about mountaintop removal coal mining with valley fills (MTR/VF) in central Appalachia, which threatens the integrity of stream ecosystems. Numerous mechanisms may be responsible for decreased occupancy and species richness at MTR/VF streams, although water chemistry may be particularly important. Results indicate that MTR/VF operations lead to significant decreases in salamander occupancy and species richness.

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**Munthe, J., et al. 2010. Study on Mercury Sources and Emissions, and Analysis of Cost and Effectiveness of Control Measures: UNEP Paragraph 29 Study. Division of Technology, Industry and Economics, Chemicals Branch, Geneva, Switzerland.**

Report providing an overview of mercury emissions to air, control options in selected sectors, and their efficiencies and costs. It is prepared with the intention of supporting the ongoing negotiation process to prepare a global legally binding instrument on mercury. Provides an evaluation of global emission trends, including a harmonization of data and improved completeness of previously published inventories from 1990 to 2005.

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**Murdoch, P. S., et al. 2000. "Potential effects of climate change on surface-water quality in North America.: *Journal of the American Water Resources Association* 36(2):347-366.**

Journal article about how changes in climate can have a significant effect on surface water quality and exceed ecosystem thresholds, which leads to chronic water quality changes.

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**Mutter, J. et al. 2010. "Does inorganic mercury play a role in Alzheimer's disease? A systematic review and an integrated molecular mechanism." *J Alzheimer's Dis.* 22:357-374.**

The abstract of article looking at the roll of inorganic mercury in Alzheimer's disease. This article conducts a systematic review using a comprehensive search study, screening other studies by protocol. Article urges industrial and medical usage of mercury to be eliminated as soon as possible.

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**NAACP. Year unknown. Equity in Building Resilience in Adaptation Planning.**

Report by the National Association for the Advancement of Colored People on the equity in climate adaption planning and resilience indicators. Includes list of social, cultural, economic, and political factors that are considered preexisting vulnerabilities or assets to the results of climate change.

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**NASA. 2016. Internet website. <http://climate.nasa.gov/effects/>.**

NASA website on global climate change. Provides facts and details on future effects of climate change. Also provides user with more climate change-related articles. Main focus of the page is on the noticeable effects of global climate change.

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\_\_\_\_\_. 2016. Internet website. <http://www.giss.nasa.gov/staff/gschmidt/>.

Website with biography on Dr. Gavin A. Schmidt. Provides links to his research, articles, and press release. Dr. Schmidt is known for his role in the GISS Model E Earth System Model, investigating past, present, and future climate change.

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**National Center for Environmental Health. 2005. "Blood lead levels—United States, 1999-2002." CDC. MMWR 50:513-516.**

Online article from the CDC on the adverse health effects caused by lead exposure. Examines intellectual and behavioral defects in children and hypertension and kidney disease in adults. Provides specific statistics on percent increases and lead levels.

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\_\_\_\_\_. 2013. "Blood lead levels in children aged 1–5 years — United States, 1999–2010." CDC. MMWR. 62:245-248.

Update on previous statistics detailing the harm lead in the blood can cause. Provides statistics and details on how levels of lead in the blood were monitored. Determines lead to be harmful in the blood, with highest levels found in non-Hispanic black children.

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**National Climate Assessment. 2016. Internet website: <http://nca2014.globalchange.gov/report>.**

Interactive website from the US Global Change Research Program. Breaks down the National Climate Assessment, allowing you to easily move between sections. Subdivided by response strategies, regions, sectors, and climate facts, with full report also available.

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**National Energy Technology Laboratory. 2014. Life Cycle Analysis of Natural Gas Extraction and Power Generation. US Department of Energy.**

Although natural gas has lower greenhouse gas emissions than coal during combustion, life cycle analysis, including fugitive methane emissions, also makes a substantial contribution to global warming. Methane recapture technology can reduce leakage rates. Natural gas is evaluated as an energy source based on environmental, economic, and social considerations.

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**National Marine Fisheries Service and US Fish and Wildlife Service. 2011. Endangered and Threatened Species; Determination of Nine Distinct Population Segments of Loggerhead Sea Turtles as Endangered or Threatened. Department of Commerce, National Marine Fisheries Service, Silver Spring, Maryland. Federal Register 76(184):58868-58952.**

Federal Register notice for the National Marine Fisheries Service and the US Fish and Wildlife Service publishing a determination of threatened or endangered status for nine distinct population segments of loggerhead sea turtles.

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**National Marine Fisheries Service. 2015. Recovery Plan for Elkhorn Coral (*Acropora Palmata*) and Staghorn Coral (*A. Cervicornis*). Southeast Regional Office, Saint Petersburg, Florida.**

Recovery plan for the elkhorn coral (*Acropora palmata*) and the staghorn coral (*A. cervicornis*), which were listed by NMFS as threatened species under the ESA on May 9, 2006. Section 4(f) of the ESA directs NMFS and USFWS to develop and implement recovery plans for species under their jurisdiction, leading to the development of this document by the Acropora Recovery Team, which included coral scientists and management experts from state, territorial, and federal government agencies and the nongovernmental sector.

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**National Mining Association. 2016. Federal Coal Leasing Moratorium: An Examination of the Reasons Driving a Disruptive Policy. Washington, DC.**

The National Mining Association, with the assistance of Norwest, evaluated the claims that the current coal leasing program is not delivering fair value to the taxpayers, as well as the policy suggestions advocated to address the purported shortcomings.

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**National Oceanic and Atmospheric Administration. 2015. Interagency Cooperation—Endangered Species Act of 1973, as Amended; Incidental Take Statements. National Oceanic and Atmospheric Administration, Washington, DC. *Federal Register* 80(90):26832-26845.**

*Federal Register* listing detailing how the US Fish and Wildlife Service and the National Marine Fisheries Service are amending the incidental take statement provisions of Section 7 of the Endangered Species Act of 1973. The two primary purposes of the amendments are to address the use of surrogates to express the amount or extent of anticipated incidental take and to refine the basis for development of incidental take statements for programmatic actions.

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**\_\_\_\_\_. 2016. Sea Level Rise and Coastal Flooding Impacts. Internet website: <https://coast.noaa.gov/slr/>.**

Website with interactive GIS feature, showing the results of coastal flooding impacts from 1 to 6 feet of sea level rise.

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**\_\_\_\_\_. 2016. Sea Surface Temperature (SST) Contour Charts. Internet website: <http://www.ospo.noaa.gov/Products/ocean/sst/contour/>.**

Website showing sea surface temperatures across the globe, with specific details on the coastlines of the United States.

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**\_\_\_\_\_. 2016. What Is Ocean Acidification? Internet website: <http://www.pmel.noaa.gov/co2/story/What+is+Ocean+Acidification%3F>.**

Website explaining ocean acidification, which results when carbon dioxide (CO<sub>2</sub>) is absorbed by seawater and chemical reactions occur that reduce seawater pH, carbonate ion concentration, and saturation states of biologically important calcium carbonate minerals.

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**National Research Council. 1990. Surface Coal Mining Effects on Ground Water Recharge. Committee on Ground Water Recharge in Surface-Mined Areas, Water Science and Technology Board, Commission on Engineering and Technical Systems.**

The report interprets groundwater recharge for the Office of Surface Mining Reclamation and Enforcement. The report concludes that groundwater recharge capacity refers to ability of soils to allow runoff infiltration and that no single technique for assessing recharge can be required in Surface Mining Control and Reclamation Act. Additional research is recommended to improve understanding of recharge pre- and post-mining.

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**\_\_\_\_\_. 2010. Hidden Costs of Energy: Unpriced Consequences of Energy Production and Use. Washington, DC.**

Report on external effects of energy production, both beneficial and negative, in the decision-making process. This is a study requested by Congress in the Energy Policy Act of 2005. The committee was asked to evaluate and define external costs and benefits associated with the production, distribution, and use of energy and not reflected in market prices or policy, related to health, environment, security, and infrastructure.

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**\_\_\_\_\_. 2000. Ocean Acidification: A National Strategy to Meet the Challenges of a Changing Ocean. National Academy Press, Washington, DC.**

Report examining the anticipated consequences of ocean acidification due to rising atmospheric carbon dioxide levels on fisheries, protected species, coral reefs, and other natural resources in the United States and internationally. Recommends priorities for a national research, monitoring, and assessment plan to advance understanding of the biogeochemistry of carbon dioxide uptake in the ocean and the relationship to atmospheric levels of carbon dioxide, and to reduce uncertainties in projections of increasing ocean acidification and the potential effects on living marine resources and ocean ecosystems.

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**\_\_\_\_\_. 2000. Toxicological Effects Of Methyl Mercury. National Academy Press, Washington, DC.**

Report on the impacts of methyl mercury (MeHg), a by-product of emissions from coal-fired power plants as mercury (Hg) breaks down. Methyl Mercury bioaccumulates up the food chain and can lead to high concentrations in predatory fish. Because of these concerns, Congress directed the EPA to contract with the National Research Council to prepare recommendations on the appropriate reference dose for Hg exposure, which this report presents.

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**National Wildlife Federation. 2013. Wildlife in a Warming World: Confronting the Climate Crisis. National Wildlife Federation, Reston, Virginia. 48 pp.**

Report on how plants, fish, and wildlife in the United States are facing a crisis from climate change and how wildlife conservation will require preparing for and manage climate change impacts.

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**National Wildlife Federation. 2014. Issue Brief: Accounting for Carbon Pollution from Coal Mining on Federal Lands. Internet website: [http://www.nwf.org/~media/PDFs/Global-Warming/Policy-Solutions/2014/nwf\\_issue\\_briefs\\_layout\\_web.pdf](http://www.nwf.org/~media/PDFs/Global-Warming/Policy-Solutions/2014/nwf_issue_briefs_layout_web.pdf).**

This report discusses the carbon implications of US coal leasing policies on federal lands and coal exports. The National Wildlife Federation is a conservation organization.

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**National Wildlife Federation and Natural Resources Defense Council. Losing Ground: Energy Development's Impacts on Wildlife, Landscapes, and Hunting Traditions of the American West. Denver, Colorado, and Bozeman, Montana.**

This report details game species in the American West losing ground and habitat to energy development. National Wildlife Federation and Natural Resources Defense Council are conservation organizations.

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**National Wildlife Federation, et al. 2015. Undermined Promise II**

Joint publication of the National Wildlife Federation, the Natural Resources Defense Council, and the Western Organization of Resource Councils. This report is an update of Undermined Promise: Reclamation and Enforcement of the Surface Mining Control and Reclamation Act 1977-2007. Discusses reclamation and bonding, water, wildlife, inspections and enforcement, and recommendations for reform.

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**National Wildlife Federation. Wildlife in Hot Water: America's Waterways and Climate Change. Internet website: [http://www.nwf.org/~media/PDFs/Water/2015/NWF-Report\\_Wildlife-In-Hot-Water.pdf](http://www.nwf.org/~media/PDFs/Water/2015/NWF-Report_Wildlife-In-Hot-Water.pdf).**

This report examines how climate change is affecting and is expected to affect the nation's waterways and wildlife. The National Wildlife Federation is a conservation organization.

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**Nelson, R. 1984. "The Making of federal coal policy." *Busi. Hist. Rev.* 58**

Abstract only. Makes claim that federal coal leasing has failed due to conflicting ideologies.

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**New Mexico Energy, Minerals, and Natural Resources Department. 2016. FAQ - Coal Mine Reclamation Program.**

Online document detailing the coal mine reclamation program and answering commonly asked questions.

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**New Scientist. 2007. Climate Myths Special. May 16, 2007.**

Blog post with information on why climate change is a myth and resources that assert that claim.

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**Newcombe, C. P, and D. D. Macdonald. 1991. "Effects of suspended sediments on aquatic ecosystems." *North American Journal of Fisheries Management* 11(1):72-82.**

Journal article providing managers with a formula to calculate the effects of suspended sediments on fish and aquatic ecosystems by looking at the concentration of sediments and duration of exposure.

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**Newcombe, C. P., and J. O. Jensen. 1996. "Channel suspended sediment and fisheries: A synthesis for quantitative risk and impact." *North American Journal of Fisheries Management* 16:693-727.**

Journal article with a meta-analysis of 80 published and adequately documented reports on fish responses to suspended sediment in streams and estuaries, showing a formula to calculate the range of effects, from no effect to sublethal and lethal.

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**Newton, T. J., and M. R. Bartsch. 2007. "Contaminant sensitivity of freshwater mussels: Lethal and sublethal effects of ammonia to juvenile *Lampsilis* mussels (Unionidae) in sediment and water-only exposures." *Environmental Toxicology and Chemistry* 26(10):2057-2065.**

Journal article on the sensitivity of two juvenile unionid mussels (*Lampsilis cardium* and *L. higginsii*) to ammonia and sediment, demonstrating that juvenile freshwater mussel growth is sensitive to ammonia toxicity and that growth should be measured via sediment tests.

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**NextGen Climate. 2016. Our Air Health and Equity Impacts of Ohio's Power Plants. PSE Healthy Energy.**

This report is based on a comprehensive public health and environmental hazard analysis authored by the energy, science, and policy institute, PSE Healthy Energy. The study examines demographic, social, and economic characteristics of communities located near fossil fuel plants, as well as the environmental health burdens and environmental hazards these neighborhoods face. The study models the national, regional, and local public health impacts of particulate matter associated with combustion at Ohio's power plants in 2015.

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**Nichols, J., and A. Paul. July 28, 2016. WildEarth Guardians, Denver, Colorado.**

Comments in response to the March 30, 2016 notice of intent to prepare a programmatic environmental impact statement to review the federal coal program consistent with Secretarial Order 3338, issued on January 15, 2016. See 81 *Fed. Reg.* 17,720 (March 30, 2016). Expounds on comments made at hearings.

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**Noone, K., et al. 2012. Valuing the Ocean: Draft Executive Summary. Stockholm Environment Institute, Sweden.**

Executive summary identifying the six major threats to the ocean from anthropogenic climate change: ocean acidification, ocean warming, hypoxia, sea level rise, pollution, and overuse of marine resources. Also looks at how these threats can combine to have even more adverse impacts as these threats can combine to be multiple stressors.

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**North American Bird Conservation Initiative. 2016. the State of North America's Birds 2016. Environment and Climate Change Canada: Ottawa**

Infographic on North American birds and their habitats and how climate change will threaten them.

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**Northern Plains Resource Council. 2011. A Hidden Cost of Coal: Exporting Our Coal to Asia. Northern Plains Resource Council, Billings, Montana.**

Paper examining the costs of expanded coal strip mining and exports on the communities of Montana, particularly given the increasing amounts of coal exports to Asia.

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**Office of Inspector General. 2013. Coal Management Program, US Department of the Interior CR-EV-BLM-0001-2012. US Office of the Inspector General, Washington, DC**

Report to determine if the Department of the Interior's coal leasing process obtains a fair return for the public's coal; assesses the effectiveness of the department's coal lease inspection and enforcement program; and assesses whether the department is sufficiently addressing financial concerns about venting methane gas from coal mines.

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**\_\_\_\_\_. 2013. Letter to Senator Wyden regarding coal leasing program.**

The letter addresses Sen. Wyden's questions regarding violations in selling coal below fair market value and safeguards to avoid future violations.

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**Office of Management and Budget. 2014 Technical Support Document: Technical Update of the Social Cost of Carbon for Regulatory Impact Analysis Under Executive Order 12866. Submitted on behalf of Sierra Club. February 26, 2014**

Comments by the Sierra Club on the Interagency Working Group's Technical Support Document on the Social Cost of Carbon.

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**Office of Natural Resources Revenue. 2015. Consolidated Federal Oil & Gas and Federal & Indian Coal Valuation Reform. *Federal Register* 80(3):608-675.**

ONRR proposed to change government regulations governing valuation for royalty purposes of oil and gas produced from federal onshore and offshore leases and coal produce from federal and Indian leases.

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**\_\_\_\_\_. 2016. Statistical Information Site. Internet website: <http://statistics.onrr.gov/Default.aspx>**

Provides the following datasets, which are available for download or query: disbursement data, reported revenue data, and production data.

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**Office of the Press Secretary. 2015. Remarks by the President at the Glacier Conference, Anchorage, Alaska. Internet website: <https://www.whitehouse.gov/the-press-office/2015/09/01/remarks-president-glacier-conference-anchorage-ak>.**

President Obama addresses Alaskan and indigenous communities about climate change and impacts in Arctic regions.

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**Office of the Press Secretary. 2016. North American Climate, Clean Energy, and Environment Partnership Action Plan. Internet website: <https://www.whitehouse.gov/the-press-office/2016/06/29/north-american-climate-clean-energy-and-environment-partnership-action>.**

This website details the partnership of North American leaders to implement a plan to advance clean and secure energy, to drive down short-lived climate pollutants, to promote clean and efficient transportation, to protect nature and advance science, and to show global leadership in addressing climate change.

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**Office of the Secretary of the Interior. 2011. Press release: Interior Releases Report Highlighting Impacts of Climate Change to Western Water Resources. Internet website: <https://www.doi.gov/news/pressreleases/Interior-Releases-Report-Highlighting-Impacts-of-Climate-Change-to-Western-Water-Resources>.**

This press release for the US Department of the Interior announces a report that assesses climate change risks and how these risks could impact water operations, hydropower, flood control, and fish and wildlife in the western United States.

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**Office of the Secretary of the Interior. 2015. Press release: Secretary Jewell Offers Vision for Balanced, Prosperous Energy Future. Internet website: <https://www.doi.gov/news/pressreleases/secretary-jewell-offers-vision-for-balanced-prosperous-energy-future>.**

Press release about the remarks Secretary of the Interior Sally Jewell presented at the Center for Strategic and International Studies on March 17, 2015. She laid out the Department of the Interior's priorities for strengthening the US economy with a balanced, prosperous energy future over the next two years.

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**Ogle, R. S., K. J. Maier, P. Kiffney, M. J. Williams, A. Brasher, L. A. Melton, and A. W. Knight. 1988. "Bioaccumulation of selenium in aquatic ecosystems." *Lake and Reservoir Management* 4(2):165-173. Internet website: <http://www.tandfonline.com/doi/abs/10.1080/07438148809354824>.**

This peer-reviewed journal article investigates how elevated levels of selenium have degraded several ecosystems.

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**OIG Report No. CR-EV-BLM-0001-2012. 2013. Coal Management Program, US Department of the Interior. June 11, 2013. Internet website: <https://www.doioig.gov/reports/coal-management-program-us-department-interior>.**

The federal government and state and local beneficiaries are losing significant revenue due to the undervaluation of taxpayer-owned coal. Based on a small review sample, the report preparers estimated at least \$60 million has been lost.

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**Onederra, I., et al. 2012. “Understanding main causes of nitrogen oxide fumes in surface blasting.” *Mining Technology* September 2012.**

Post-blast fumes are a direct product of the detonation process, which can be easily identified as the resultant yellow to orange post-blast clouds. There is general agreement that the conditions leading to fumes are associated with fuel deficiencies or incomplete detonation of the explosives. From a practical perspective this can be due to one or a combination of factors, such as explosives characteristics, confinement effects, ground conditions, inappropriate blast design parameters, explosives selection, on-bench practices, and potential contamination of explosives in the blast hole.

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**Orr, J. C., et al. 2005. “Anthropogenic ocean acidification over the twenty-first century and its impact on calcifying organisms.” *Nature* 437:681-686.**

Journal article on ocean acidification and how key marine organisms—such as corals and some plankton—will have difficulty maintaining their external calcium carbonate skeletons if this trend continues. Using a variety of models of the ocean-carbon cycle, results seem to indicate that conditions detrimental to high-latitude ecosystems could develop within decades, not centuries, as suggested previously.

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**Painter, T., et al. 2010. “Response of Colorado River runoff to dust radiative forcing in snow.” *PNAS* 107:17125-17130.**

Study that uses the variable infiltration capacity model with post- and pre-disturbance of dust on albedo to estimate the runoff from the Upper Colorado River Basin. The authors find that peak runoff occurs earlier with dust loading. This they suggest could be avoided with mitigation through surface stabilization in the deserts.

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**Palmer, M. A., and K. L. Hondula. “Restoration as mitigation: Analysis of stream mitigation for coal mining impacts in southern Appalachia.” *Environmental Science and Technology* 48:10552-10560.**

Journal article on compensatory mitigation, which is commonly used to replace aquatic natural resources being lost or degraded, and the relative success of stream mitigation. Provides a synthesis of information about 434 stream mitigation projects in Appalachia. Overall, the data show that mitigation being implemented in southern Appalachia for coal mining are not meeting the objectives of the Clean Water Act to replace lost or degraded stream ecosystems and their functions.

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**Parmesan, C., and G. Yohe. 2003. “A globally coherent fingerprint of climate change impacts across natural systems.” *Nature* 421:37-42.**

Journal article exploring systematic trends across diverse species and geographic regions in response to climate change. Shows that recent biological trends match climate change predictions and that climate change is already affecting living systems.

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**Partnership for a Secure America. 2016. Internet website: <http://www.psaonline.org/2015/10/22/republicans-democrats-agree-u-s-security-demands-global-climate-action/>.**

Website with signatories and a statement that US security needs action on climate change.

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**Paterson, L. 2016. "More coal layoffs in Wyoming." Inside Energy News. Internet website: <http://insideenergy.org/2016/04/28/more-coal-layoffs-in-wyoming/>.**

This article discusses more layoffs from Wyoming coal mines, specifically from Alpha Natural Resources. Inside Energy is collaborative journalism initiative among public media, funded by a grant from the Corporation for Public Broadcasting.

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**Paz, S. 2015. "Climate change impacts on West Nile virus transmission in a global context." *Philosophical Transactions of the Royal Society*, Vol. 370.**

Journal article about West Nile virus (WNV) and how weather conditions have direct and indirect influences on WNV vector competence (the ability to acquire, maintain and transmit the virus) on the vector population dynamic and on the virus replication rate in the mosquito, which are mostly weather dependent. The importance of temperature, precipitation, relative humidity, and winds as drivers in WNV epidemiology is increasing under conditions of climate change.

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**Penfold, M. 2014. Letter to BLM. Our Montana, Inc.**

The letter discusses rights of surface owners to consent to coal strip mining on their property and supports extending this right of consent to privately held coal transferred from federal ownership.

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**Peters, A. 2009. Air Quality and Cardiovascular Health Smoke and Pollution Matter. *Circulation*. 120: 924-927.**

Article comparing cigarette smoke and ambient particulate matter. This article estimates the cumulative dose of different degrees of smoking and cardiovascular disease morbidity and mortality, attempting to find a scale to compare.

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**Peters, K. 1992. "The Clean Air Act and the Amendments of 1990." *Santa Clara High Technology Law Journal* 8(1):233-242.**

Law journal note provides brief overview of the provisions of the Clean Air Act.

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**Petty, J. T., et al. 2010. "Landscape indicators and thresholds of stream ecological impairment in an intensively mined Appalachian watershed." *Journal of the North American Benthological Society* 29(4):1292-1309.**

Journal article on the development of an index of mining intensity (MI) that could be used to predict stream water quality and biological conditions; to quantify the extent to which geology and the geographic position of mines modulate the effects of mining on in-stream conditions; and to identify thresholds of MI that produce quantifiable changes to benthic macroinvertebrate communities.

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**Pfister, T., et al. 2014. "Projections of future summertime ozone over the US." *Journal of Geophysical Research: Atmospheres* 119: 5559-5582.**

Study using a regional coupled chemistry-transport model to assess changes in surface ozone over summertime in the United States between the present and 2050.

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**Physicians for Social Responsibility. 2009. Coal's Assault on Human Health, Nov. 18.** Internet website: <http://www.psr.org/news-events/press-releases/coal-pollution-damages-human-health.html>

Policy paper examining the impacts from pollutants emitted during coal combustion; pinpoints negative health consequences at each step of the coal life cycle.

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**Pond, G. J. 2010. "Patterns of Ephemeroptera taxa loss in Appalachian headwater streams (Kentucky, USA)." *Hydrobiologia* 641:185-201.**

Journal article about how expected mayfly communities are disappearing from streams where mining disturbance and residential development has occurred, and that, because of the long-term impacts incurred by both land uses, recovery is uncertain.

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**Pond, G. J., et al. 2008. "Downstream effects of mountaintop coal mining: Comparing biological conditions using family- and genus-level macroinvertebrate bioassessment tools." *Journal of the North American Benthological Society* 27(3):717-737.**

Journal article on how surface coal mining with valley fills has impaired the aquatic life in numerous streams in the central Appalachian Mountains. Four lines of evidence indicate that mining impairs biological condition of streams, a shift in species assemblages, loss of Ephemeroptera taxa, changes in individual metrics and indices, and differences in water chemistry. Results show that mining has had subtle to severe impacts on benthic macroinvertebrate communities.

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**Pope, A., III. 2000. "Epidemiology of fine particulate air pollution and human health: Biologic mechanisms and who's at risk?" *Environmental Health Perspectives* 108:713-723.**

Article that summarizes the epidemiology of the health effects of fine particulate air pollution. Provides opinion that there are adverse health effects of particulates on susceptible populations.

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**Powder River Basin Resource Council and Western Organization of Resource Councils. No date. When Is Federal Coal Leasing Contrary to the Public Interest?**

Final paper discussing coal leasing not being in the public's interest. Points out that the BLM has not defined "public interest" by rule or handbook. Proposes that the lack of guidance and criteria from the BLM on the issue of what coal leases are in the public interest has prevented decision-making. Asks that guidance be developed.

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**\_\_\_\_\_. No date. Abuse of Taxpayer-Owned Powder River Basin Coal.**

This fact sheet describes the export of coal from the Powder River Basin, while royalties to taxpayers are paid based on domestic prices.

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**Powder River Basin Resource Council, et al. 2015. Letter to Office of Surface Mining Reclamation and Enforcement re: Stream Protection Rule, Washington DC.**

Letter from 32 nonprofit groups commenting on the Office of Surface Mining Reclamation and Enforcement proposed Stream Protection Rule (80 FR 44436 [July 27 2015]) and the accompanying DEIS. The rule would increase monitoring and bonding requirements for mountaintop removal mining, but commenters suggest it needs to clarify downstream water quality standards, increase restoration requirements, assess impacts on climate change, and protect watercourses.

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**Powder River Basin Resource Council, et al. 2016. Comments on Proposed Self-Bonding Rule Changes, Docket ID: OSM-2016-0006.**

Comments to the Office of Surface Mining Reclamation and Enforcement submitted by 27 organizations, including the Powder River Basin Resource Council and Sierra Club. Asks Office of Surface Mining Reclamation and Enforcement to use its authority to close the loopholes.

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**Powder River Basin Resource Council, et al. 2016. Letter to Office of Surface Mining Reclamation and Enforcement re: Proposed Self-Bonding Rule Changes, Washington DC.**

Letter from 32 nonprofit environmental and community groups from coal-producing areas, thanking Office of Surface Mining Reclamation and Enforcement for review of self-bonding regulations under SMCRA. The letter requests improved enforcement and closure of the loophole of self-bonding in reclamation liability.

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**Power, T. M. 2011. The Greenhouse Gas Impact of Exporting Coal from the West Coast: An Economic Analysis. Power Consulting, Missoula, Montana.**

Report concluding that the proposed coal export facilities in the Northwest will result in more coal consumption in Asia and will undermine China's progress toward more efficient power generation and usage. Approving proposed coal export facilities would also undermine Washington State's commitment to reducing its own share of greenhouse gas emissions.

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**Power, T. M., and D. S. Power. 2013. The Impact of Powder River Basin Coal Exports on Global Greenhouse Gas Emissions. Power Consulting, Missoula, Montana.**

Report considering the various opinions that increased American coal production and exports will have no net impact on global greenhouse gas emissions, while others have argued that such exports would actually reduce global greenhouse gas emissions. Analyzes and responds to these arguments that there will be no net increase in global greenhouse gas emissions as a result of the expansion of Powder River Basin coal mining and the construction of rail and port infrastructure on the West Coast to support the export of that coal to Asia.

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**Power, T., D. Power, and J. Brown. 2010. Comments on the Greenhouse Gas Impacts and the Modeling of Coal Flows in the Millennium Bulk Terminals Longview SEPA Draft Environmental Impact Statement. A Report Prepared for Earthjustice and Sierra Club. June 10, 2016.**

Comment report on the greenhouse gas impacts and the modeling of coal flows in the Millennium Bulk Terminals Longview SEPA Draft Environmental Impact Statement by Power Consulting, Inc., and Aesir Consulting, LLC. Comments focus on greenhouse gas emissions related to changes in coal and natural gas combustion that would be caused by the project.

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**\_\_\_\_\_. 2015. Assessing the Ability of Contemporary Models to Calculate the GHG Implications of Federal Coal Leasing Decisions and Other Federal Energy Management Decisions. A Report Prepared for Earthjustice and Sierra Club. May 21, 2015.**

A report prepared by consultants familiar with power and modeling by authors familiar with the power industry and modeling. The report details the logistics and economics of coal, the structure of the National Energy Modeling System (NEMS) and its use for the coal market. Concluding that there is the most appropriate model for the Forest Service to use for modeling the greenhouse gas emission impacts of the coal mine road exemption to the Colorado Roadless Rule.

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**\_\_\_\_\_. 2016. Economic Consequences of the Federal Coal Leasing Program: Improving the Quality of the Economic Analysis. A Report Prepared for Earthjustice and Sierra Club. July 27 2016.**

A report prepared by consultants familiar with power and modeling, responding to the Notice of Intent to Prepare a Programmatic Environmental Impact Statement to Review Federal Coal Program. The authors look into the promises and realities of coal mining, the economics of coal mining communities, economic consequences associated with Federal Land Management decisions, and the importance of considering economics in coal leasing policy.

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**Queensland Department of Natural Resources and Mines. 2013. Healthy Headwaters Coal Seam Gas Water Feasibility Study: Assessing the Salinity Impacts of Coal Seam Gas Water on Landscapes and Surface Streams. February 2013.**

Report describes a framework to assess the salinity risk associated with the use of coal seam gas water for irrigation in the Queensland Murray-Darling Basin. The framework has four components—biophysical hazard, salinity stage, current management influence, and post-irrigation land use. Salinity risk must be considered for any irrigation development affected by coal seam gas.

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**Rasker, R., P. H. Gude, J. A. Gude, and J. van den Noort. 2009. "The economic importance of air travel in high-amenity rural areas." *Journal of Rural Studies* 25:343-353.**

Peer-reviewed journal article tests a new county classification system to reflect differing degrees of access to population centers and account for the increasing importance of airports, examines the validity of this new classification, and tests for differences in economic performance among the three county types. Finds that there are three distinct Wests that can be classified using economic performance measures and socioeconomic characteristics: metro, isolated, and connected. The findings illustrate the importance of airports in rural development and the limitations facing those communities that are isolated from markets and population centers.

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**Raupach, M. R., et al. 2014. "Sharing a quota on cumulative carbon emissions." *Nature Climate Change* 4:873-879.**

Journal article on translating global carbon quotas to regional and national scales. For a carbon quota consistent with a 2 degree C warming limit (relative to pre-Industrial levels), the necessary long-term mitigation rates are very challenging, both because of strong limits on future emissions from the global carbon quota and also the likely short-term persistence in emissions growth in many regions.

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**Ray, K. 2016. "Colorado's worst methane polluter is an Arch Coal mine." *Colorado Independent*. May 3, 2016.**

Article on the West Elk Mine's methane production places blame on the lack of both state and federal regulations for the underground coal mines. West Elk Mine was the single largest methane polluter in Colorado, and there are plans to expand it, which the article points out would roll back a large portion of the progress made in tackling methane.

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**Real, E., et al. 2007. "Processes influencing ozone levels in Alaskan forest fire plumes during long-range transport over the North Atlantic." *Journal of Geophysical Research* 112: D10S41.**

Article investigating plumes from Alaskan forest fires to see how they influence ozone levels in the North Atlantic. Results found the ozone impact of Alaskan fires can be potentially significant over Europe.

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**Regan, C. 2016. *US Coal: Pushed to the Margins*. Bloomberg New Energy Finance.**

Coal report with a comprehensive look at coal in the twenty-first century. Main topics are coal retirements overview, wholesale power price suppression, cheap natural gas, plummeting renewables.

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**Rehbach, S., and R. Samek. 2015. *Downsizing the US coal industry: Can a slow-motion train wreck be avoided?* Mining & Minerals Practice. November 2015.**

Report describing the US coal industry's current state of overcapacity, or surplus in the face of falling demand, and long-term outstanding financial liability, including long-term debt, contractual obligations, asset-retirement obligations, and pension funding obligations. Outlines possible strategies for correcting supply-demand imbalance and reducing liability. Report produced by a management consulting firm.

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**REMI and Synapse. 2014. The Economic, Climate, Fiscal, Power, and Demographic Impact of a National Fee-and-Dividend Carbon Tax. Prepared for Citizens' Climate Lobby. Coronado, California.**

Report investigating the impacts of implementing a revenue-neutral carbon tax for nine regions of the United States. Looked at economics, climate, budget, power generation, and demographics. Results determine that there are probable benefits to taxing carbon dioxide emissions.

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**Research Council of Norway. 2010. Persistent organic pollutants in large concentrations in Arctic areas: Fires spread environmental toxins over the Arctic. ScienceDaily. Internet website: <https://www.sciencedaily.com/releases/2010/06/100601072630.htm>**

Online article on organic pollutants in Arctic areas, specifically from forest fires and straw and stubble burning in North America and Eastern Europe. Specifically focuses on the environmental toxin polychlorinated biphenyl, and persistent organic pollutants.

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**Rice, D. 2016. "Global temperatures soar for record 12th straight month." USA Today, May 18, 2016, McLean, Virginia.**

News article with information and resources stating that the average carbon dioxide and temperatures have increased for the last 12 months.

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**Rich, H. 2013. Internet website: <http://www.forbes.com/sites/realspin/2013/03/14/germanys-green-energy-disaster-a-cautionary-tale-for-world-leaders/#3a721c7f14a6>.**

An article on how Chancellor Angela Merkel's energy review and how it has affected the German energy sector.

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**Rieman, B. E., D. Isaak, S. Adams, D. Horan, D. Nagel, C. Luce, and D. Myers. 2007. "Anticipated climate warming effects on bull trout habitats and populations across interior Columbia River Basin." American Fisheries Society 136:1552-1565. Internet website: [http://www.fs.fed.us/rm/boise/publications/fisheries/rmrs\\_2007\\_riemanb001.pdf](http://www.fs.fed.us/rm/boise/publications/fisheries/rmrs_2007_riemanb001.pdf).**

This peer-reviewed scientific journal article investigates how a warming climate will influence regional and local bull trout distributions.

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**Riordan, M. 2014. "Don't sell cheap US coal to Asia." The New York Times. February 13, 2014, New York, New York, p. A27.**

Op-ed article written in opposition of exporting US coal to Asian markets. The author expresses opposition to the proposed Cherry Point shipping terminal north of Seattle, Washington, and describes economic and environmental impacts of coal transportation and exports.

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**Robert Scribbler. 2013. Internet website: <https://robertscribbler.com/2013/07/16/drjenniferfrancistopclimatologistsexplainhowglobalwarmingwreckstheandampsuphydrologicalcycleto causedangerousweather/>.**

Website with information on top Climatologist Dr. Jennifer Francis and her explanation of global warming's impact on the jet stream and extreme weather. Includes video on the topic.

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\_\_\_\_\_. 2014. Internet website: [https://robertscribbler.com/2014/01/23/arcticheatwave\\_torippolarvortexinhalshatteralaskasalltimerecordhighforjanuary/](https://robertscribbler.com/2014/01/23/arcticheatwave_torippolarvortexinhalshatteralaskasalltimerecordhighforjanuary/).

Internet article discussing the record high temperatures in January in Alaska. Author blames the jet stream pattern for higher temperatures, as well as the reduction of land and sea ice. Provides NASA satellite image of heat wave in Alaska.

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\_\_\_\_\_. 2014. Internet website: <https://robertscribbler.com/tag/drjenniferfrancis/>.

Online article linking gravity waves that interfered with atmospheric clock to climate change. Identifies the two climate change effects of Arctic warming—weakened zonal winds and increased wave amplitude—as possible causes. Provides sources and links to other opinions on the topic, as well as maps.

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**Rocky Mountain Climate Organization. 2008. Hotter and Drier: The West's Changed Climate. Internet website: <http://www.rockymountainclimate.org/website%20pictures/Hotter%20and%20Drier.pdf>.**

This report documents that the American West has gotten hotter at a faster rate than the planet as a whole. Across the 11 states, temperatures from 2003 to 2007 were 1.7°F higher than the twentieth century average for the region. By contrast, global temperatures in that five-year period were 1.0°F hotter than the planet's twentieth-century average. The report also presents similar data for each of the 11 states and documents other ways in which the West's climate is already changing and the impacts of those changes.

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**Rocky Mountain Institute. 2010. Internet website: [http://www.rmi.org/RFGGraphhealth\\_effects\\_from\\_US\\_power\\_plant\\_emissions](http://www.rmi.org/RFGGraphhealth_effects_from_US_power_plant_emissions).**

Website with graph of the estimated health effects from US coal-fired power plant emissions. Formatted as a bar graph, with health effects classified into six categories: premature deaths, hospital admissions, heart attacks, chronic bronchitis, asthma attacks, and lost work days, and reported as the estimated number of cases in 2010. The report also claims that the total monetary costs of the health impacts is over \$100 billion annually.

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**Roessler. 2006. Las Vegas and the Groundwater Development Project Where does it start? Where will it end? A Progressive Leadership Alliance of Nevada (PLAN) Report.**

Report discusses pipeline projects in Las Vegas, Tucson, and Albuquerque and the importance of water. Mentions the water crisis.

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**Rogelj, J., et al. 2015. "Energy system transformations for limiting end-of-century warming to below 1.5 degree C." *Nature Climate Change* 5:519-538.**

Journal article on how particularly vulnerable countries may have more impacts projected for a global warming level of 2 degrees C. Therefore, many countries advocate limiting warming to below 1.5 degrees C, which will require a faster scale-up of mitigation action in most sectors and energy efficiency and stringent early reductions.

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**Rogelj, J., et al. 2015. “Paris agreement climate proposals need a boost to keep warming well below 2 degrees C.” *Nature* 534:631-639.**

Journal article on the Paris climate agreement aims to hold global warming to well below 2 degrees Celsius and to “pursue efforts” to limit it to 1.5 degrees Celsius. Argues more can be achieved, because the agreement stipulates that targets for reducing greenhouse gas emissions are strengthened over time, both in ambition and scope, and that additional national, sub-national and non-state actions are required to maintain a reasonable chance of meeting the target.

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**Rogers, A. D., and D. A. Laffoley. 2011. *International Earth System Expert Workshop On Ocean Stresses And Impacts: Summary Report. IPSO Oxford.***

Workshop summary report examining the different effects we are having on the ocean, compromising its ability to support us. Concludes that we have underestimated the overall risks, that the whole of marine degradation is greater than the sum of its parts, and that degradation is now happening at a faster rate than predicted. The scale of the stresses on the ocean means that deferring action will increase costs in the future, leading to even greater losses of benefits.

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**Root, T. L., et al. 2003. “Fingerprints of global warming on wild animals and plants.” *Nature* 421:57-60.**

Journal article about a meta-analysis of how species have responded to climatic changes from global warming. These studies strongly suggest that a significant impact of global warming is already discernible in animal and plant populations. The synergism of rapid temperature rise and other stresses, in particular habitat destruction, could easily disrupt the connectedness among species and lead to a reformulation of species communities, numerous extirpations, and possibly extinctions.

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**Roth, S. 2016. “Sally Jewell: ‘Keep it in the ground’ protests ‘naïve’.” *The Desert Sun*. Internet website: <http://desert.sn/2707PYX>.**

Article on President Obama’s Interior Secretary’s response to the “keep it in the ground” movement. This movement urges the federal government to stop issuing new leases for coal, oil, and gas extraction on public lands. Jewell comments that she agrees that a shift to renewables is needed but states that it will be a slow process and is not reasonable to expect 100% renewables.

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**Rucker, P. 2012. “Coal export trade raises alarms for western state.” *Business and Financial News*.**

Western states that rely on coal revenues are concerned that royalty payments are being undervalued by valuing at domestic prices rather than higher international rates. Coal companies skirt the higher rates by selling to sister companies, which then sell abroad.

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**\_\_\_\_\_. 2016. “Arch Coal asks US bankruptcy court to ease its cleanup.” *Reuters*, January 11, 2016. Internet website: <http://www.reuters.com/article/usa-arch-coal-cleanup-idUSL2N14V11520160111>**

News article related to Arch Coal bankruptcy.

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\_\_\_\_\_. **“US taxpayers due to subsidize Koch-controlled coal mine.” Reuters. January 12, 2016. Internet website: <http://www.reuters.com/article/usa-koch-coal-idUSL2NI4W1JJ20160112>**

Online article on the \$14 million refund from the Obama Administration to a coal company run by William Koch for closing his mine on federal land. Article discusses royalty rates of coal in detail.

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**S&P Global Platts. 2015. “PRB coal producers must cut production to boost prices: Analyst.” *S&P Global Platts*.**

Article stating that, for coal prices to rise, production must be cut sharply in the Powder River Basin.

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\_\_\_\_\_. **2016. “PRB coal stockpiles at roughly 102 days, 35 days above average: UP.” *S&P Global Platts*.**

Article about coal stockpiles being much larger than usual, due to mild weather, market forces, and other reasons.

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**Sanzillo, T. 2012. *The Great Giveaway: An Analysis of the United State’s Long-Term Trend of Selling Federally Owned Coal for Less than Fair Market Value*. Institute for Energy Economics and Financial Analysis. June 2012.**

Report examining the coal-leasing fair market value appraisal program. Uses the limited information that is currently available on the public record. Specifics of this report are from the Powder River Basin. The report concludes that there is no evidence that the BLM receives a market price for coal.

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\_\_\_\_\_. **2016. *Comments on the Department of Interior (DOI) Notice of Intent to Conduct a Programmatic Environmental Impact Statement of Federal Coal Leasing Programs*. Institute for Energy Economics and Financial Analysis, Cleveland, Ohio.**

Proposal commenting on programmatic environmental impact statement of federal coal lease program. Prepared by the Institute for Energy Economics and Financial Analysis.

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**Schaeffer, M., et al. 2013. *Adequacy and Feasibility of the 1.5 Degree C Long-Term Global Limit*. Climate Action Network Europe, Brussels, Belgium.**

Paper examining whether the goal of limiting global warming to 1.5 degrees C is feasible or helps given socioeconomic and technical constraints.

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**Schleussner, C-F., et al. 2016. “Differential climate impacts for policy-relevant limits to global warming: The case of 1.5 degrees C and 2 degrees C.” *Earth System Dynamics* 7:327-351.**

Journal article providing an assessment of key impacts of climate change at warming levels of 1.5 and 2 degrees C, including extreme weather events, water availability, agricultural yields, sea-level rise, and risk of coral reef loss. Results reveal substantial differences in impacts between a 1.5 and 2 degree C warming that are highly relevant for the assessment of dangerous anthropogenic interference with the climate system.

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**Schlissel, D. 2016. “A Sustained Coal Recovery? When You Get There, There’s No There There.” Institute for Energy Economics and Financial Analysis.**

Report published by Institute for Energy Economics and Financial Analysis that contains a comprehensive overview of the coal industry as a whole, from consumption and demand to financial viability.

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**Schmid, M., and D. L. Parker. No date. Fire and Forest Insect Pests. Internet website: [http://www.fs.fed.us/rm/pubs\\_rm/rm\\_gtr191/rm\\_gtr191\\_232\\_233.pdf](http://www.fs.fed.us/rm/pubs_rm/rm_gtr191/rm_gtr191_232_233.pdf).**

Paper on how fire is used to kill bark beetle infestations in logging residual or infested trees but is rarely used to suppress extensive infestations. Forest fires predispose stands to attack by wood boring and bark beetles and create stand conditions conducive to infestations in the future.

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**Schulte Roth & Zabel. 2016. Labor Liabilities in Coal Bankruptcies. Schulte Roth & Zabel Washington, DC.**

Presentation about labor issues in coal bankruptcies. Gives an overview of the industry and what bankruptcy is, then dives into labor issues.

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**Schuman, G. E., et al. 2000. Sagebrush Establishment on Mined Lands: Ecology and Research. Billings Land Reclamation Symposium, Billings, Montana.**

This report discusses how restoring degraded big sagebrush communities and reducing further losses pose major challenges to landowners. It was prepared by The Wyoming Abandoned Coal Mine Land Research Program funded by the Wyoming Department of Environmental Quality, Abandoned Mine Land Division and administered by the Office of Research, University of Wyoming.

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**Schwartz, C. 2013. “Studies, states seek to halt mule deer population decline.” *Billings*, October 17, 2013.**

Newspaper article about the decline in mule deer populations in four western US states and the efforts of those states to halt this decline.

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**Sheffield, P. E., and P. J. Landrigan. 2011. “Global climate change and children’s health: Threats and strategies for prevention.” *Environmental Health Perspectives* 119(3):291-298.**

Journal article on how climate change is increasing the global burden of disease, primarily in children, and that further quantification of the effects of climate change on children’s health is needed globally and also at regional and local levels through enhanced monitoring of children’s environmental health and by tracking selected indicators. Climate change preparedness strategies need to be incorporated into public health programs.

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**Shelanski, H., and M. Obstfeld. 2015. Estimating the Benefits from Carbon Dioxide Emissions reductions. The White House. July 2, 2015.**

Whitehouse summary of social cost of carbon.

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**Shi, G., et al. 2012. “Estimating Elasticity for residential electricity demand in China.” *The Scientific World Journal* 2012.**

Article on how residential demand for electricity responds to its own price in China. Suggests potential to use the price instrument to conserve electricity consumption. The high-income group was found to be more price elastic than the low-income group, implicating a need for policy designed with an increasing block tariff.

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**Shindell, D. T. 2015. “The social cost of atmospheric release.” *Climatic Change* 130:313-326.**

Journal article exploring the economic damages associated with a marginal change in the atmospheric release of individual pollutants owing to their effects on climate and air quality. Prior studies have provided compelling demonstrations of the importance of links between climate change and air quality valuation and of the incorporation of economics into emission metrics, but typically have not fully represented the climate impact of short-lived emissions, especially aerosols and methane.

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**Shoemaker, J. K., D. P. Schrag, M. J. Molina, and V. Ramanathan. 2013. “What role for short-lived climate pollutants in mitigation policy?” *Science* 342, December 13, 2013.**

Article investigating the role of Short-lived climate pollutants, such as methane, in mitigation policy. The article compares and contrasts these climate pollutants to long-lived climate pollutants and incorporates them in the plan to achieve climate goals. This article suggests methane should be discouraged.

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**Shubert, J., et al. 1978. “Combined effects in toxicology: A rapid systematic testing procedure—cadmium, mercury, and lead.” *J. Toxicol Environ Health* 4:763-776.**

Abstract from article on the combined effects of cadmium, mercury, and lead. The article looks at the toxicological response of any combination of the listed toxins. Found that, generally, a combination was synergistic.

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**Sierra Club, Earthjustice, Center for Biological Diversity, Powder River Basin Resource Council, Western Organization. 2014. 1004-AE23 Waste Mine Methane Capture, Use, Sale, or Destruction, Advance Notice of Proposed Rulemaking, 79 Fed. Reg. 23923 (April 29, 2014).**

Comments submitted to the BLM on the Advanced Notice of Proposed Rulemaking concerning Waste Mine Methane Capture, Use, Sale, or Destruction.

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**Sierra Club, et al. 2015. Comments on Draft Stream Protection Rule. OSM–2010–0018. October 26, 2015.**

Letter from the Sierra Club to the BLM, with comments on the Office of Surface Mining Reclamation and Enforcement’s proposed Stream Protection Rule. Urges the agency to move forward with implementation of the Stream Protection Rule.

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**Sierra Club, et al. 2015. Comments on Proposed ONRR Rule: Consolidated Federal Oil and Gas and Federal and Indian Coal Valuation Reform, Docket No. ONRR-2012-0004 Regulation Identifier Number: 1012-AA13. Internet website: [http://www.onrr.gov/Laws\\_R\\_D/PubComm/PDFDocs/AA13/Earthjustice-Sierra%20Club.pdf](http://www.onrr.gov/Laws_R_D/PubComm/PDFDocs/AA13/Earthjustice-Sierra%20Club.pdf).**

Comments submitted on behalf of Earthjustice, Sierra Club, and 350 Colorado, regarding the Office of Natural Resource Revenue's proposed regulatory changes on the collection of royalties from coal, oil, and gas produced on public lands. It addresses the closing of an accounting loophole that in recent years has enabled coal companies to sell federal coal to their own subsidiaries, pay royalties on the initial sale, then reap windfall profits when those subsidiaries sell the same coal at a much higher price without any additional royalty.

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**Sierra Club, et al. 2016. Comments to Office of Surface Mining Reclamation and Enforcement on Petition to Initiate Self-Bonding Rulemaking, Docket ID: OSM-2016-0006. Internet website: [https://www.sierraclub.org/sites/www.sierraclub.org/files/blog/Self-bonding%20comments%20to%20OSMRE\\_7-20-16.pdf](https://www.sierraclub.org/sites/www.sierraclub.org/files/blog/Self-bonding%20comments%20to%20OSMRE_7-20-16.pdf).**

Comments to Office of Surface Mining Reclamation and Enforcement regarding the inappropriateness of coal mines being able to self-bond, due to the high risk of insolvency within the coal mining industry, even when an applicant satisfies the financial criteria in the existing regulations.

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**Sierra Club. 2014. Comments on the Interagency Working Group's Technical Support Document: Social Cost of Carbon for Regulatory Impact Analysis Under Executive Order 12866 (Docket No.OMB-2013-0007-0083). Internet website: <https://fossil.energy.gov/App/DocketIndex/docket/DownloadFile/196>.**

Sierra Club comments on the Interagency Working Group's Technical Support Document: Social Cost of Carbon (SCC) for Regulatory Impact Analysis Under Executive Order 12866. See 78 *Fed. Reg.* 70,586 (November 26, 2013) and 79 *Fed. Reg.* 4359 (January 27, 2014).

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**\_\_\_\_\_. 2016. Keep it in the Ground.**

Report builds on Point of No Return, a groundbreaking 2013 investigation commissioned by Greenpeace International and undertaken by Ecofys. Using a similar approach, this updated report reflects that a number of carbon threats from the 2013 report have abated, and it assesses emerging projects and trends that put the climate and planet at risk.

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**Sightline Institute. 2014. Unfair Market Value. Internet website: [http://www.sightline.org/research\\_item/unfair-market-value/](http://www.sightline.org/research_item/unfair-market-value/).**

The BLM's coal valuation practices ignore added-profit from exports. By ignoring exports, the BLM has been selling many federal coal leases at just a fraction of their true economic value. The report is updated with new information on current, past, and projected coal export forecasts.

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**Simmons, E., et al. 2015. Potential Climate Change Impacts and the BLM Rio Puerco Field Office's Transportation System: A Technical Report. Bureau of Land Management, Rio Puerco Field Office, Albuquerque, New Mexico.**

Report presents climate change projections from 2025 to 2055. This period is centered on 2040, with 15 years of projections on either side, to smooth the data and avoid noise from year-to-year variations. Focusing on the year 2040 allows the analysis to be compatible with the planning time frames for the RPFO TTMP and the central New Mexico region's Metropolitan Transportation Plan time horizons.

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**Simpson, D. A. 2011. Letter to T. Sturdevant, Washington State Department of Energy. Response from BLM regarding South Hilight Coal Lease Application.**

Letter from the BLM responding to Washington State Department of Energy letter stating that preparation of an Supplemental EIS for South Hilight was not warranted, because the connection of port facilities to Wyoming coal leasing was speculative.

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**Simpson Weather Associates. 1993. Norfolk Southern Rail Emission Study. Simpson Weather Associates, Charlottesville, Virginia.**

Report on fugitive coal dust emissions from rail cars during transport and the primary concerns of lost material, thus revenue, and coal dust complaints. Results include that most coal shipments produce no measurable or visible dust and that coal loss from cars can be achieved through slope management of load top profiles and chemical binders.

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**Smh.com.au. 2014. Mine blast gone wrong spews toxic cloud. Internet website: <http://www.smh.com.au/environment/mine-blast-gone-wrong-spews-toxic-cloud-20140221-335rf.html>**

Online article related to mine blast in Australia. The mine emitted toxic fumes of ammonium nitrate and fuel oil after a blast, which left people with sore throats. The blast comes after the company was earlier fined for a similar episode and prompted calls for stricter regulation.

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**Smith, J. B., et al. 2009. "Assessing dangerous climate change through an update of the Intergovernmental Panel On Climate Change (IPCC) "Reasons For Concern." *Proceedings of the National Academy of Sciences* 106(11):4133-4137.**

Journal article describing revisions of the sensitivities of the reasons for concern (RFCs) identified by the IPCC to increases in global mean temperature (GMT) and a more thorough understanding of the concept of vulnerability that has evolved over the past eight years. Compared with results reported in the IPCC Third Assessment Report, smaller increases in GMT are now estimated to lead to significant or substantial consequences in the framework of the five RFCs.

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**SourceWatch. 2016. Internet website: [www.sourcewatch.org](http://www.sourcewatch.org).**

Website with general information on federal coal subsidies.

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\_\_\_\_\_. 2016. **The Footprint Of Coal.** Internet website: [http://www.sourcewatch.org/index.php/The\\_footprint\\_of\\_coal#How\\_much\\_land\\_has\\_been\\_dist](http://www.sourcewatch.org/index.php/The_footprint_of_coal#How_much_land_has_been_dist).

Website estimating nationwide figures for the number of acres disturbed in the process of mining coal. It was completed by adding the now-outdated USGS figures to more current data provided by individual states to the US Office of Surface Mining Reclamation and Enforcement, as part of the annual reporting process required by the Surface Mining Control and Reclamation Act.

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**Spath, P. L., et al. 1999. Life Cycle Assessment of Coal-Fired Power Production (No. NREL/TP-570- 25119). National Renewable Energy Lab., Golden, Colorado. Internet website: <http://www.nrel.gov/docs/fy99osti/25119.pdf>.**

Report provides a life cycle assessment on the production of electricity from coal to examine the environmental aspects of current and future pulverized coal boiler systems. The authors found that CO<sub>2</sub> accounts for 98 to 99 percent by weight of the total air emissions from each system examined. Two other climate change gases, methane and nitrous oxide, are also emitted from the system. Although the global warming potential (GWP) of these gases is much higher than that of CO<sub>2</sub>, they are emitted in much smaller quantities and therefore do not significantly change the GWP of the overall systems.

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**Spracklen, D., et al. 2008. "Impacts of climate change from 2000 to 2050 on wildfire activity and carbonaceous aerosol concentrations in the western United States." *Journal of Geophysical Research* 114:D20301.**

Article investigating the impact of climate change on wildfires and carbonaceous aerosol concentrations in the western United States from 2000 to 2050. The article uses models to determine that climate change will increase summertime organic carbon aerosol concentrations over the western United States and the elemental carbon concentrations. These changes can be traced to an increase in wildfires and changes in meteorology.

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**Spross, J. 2013. Would Limiting Carbon Emissions Destroy The Economy? Think Progress. Web. October 16, 2013. Internet website: <https://thinkprogress.org/would-limiting-carbon-emissions-destroy-the-economy-ac7c36e89872#.v9pxojuxd>**

Article in response to Obama asking the EPA to place limits on carbon pollution emissions from the nation's power plants. This article looks at the economics behind that decision.

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**Squillace, M. 2009. The Strip Mining Handbook. Internet website: <https://sites.google.com/site/stripmininghandbook/chapter-1-introduction>**

This citizen's guide includes seven chapters detailing the impacts of strip mining, The Surface Mining Control and Reclamation Act of 1977, permitting, and monitoring. The intent is to inform citizens about potential impacts of mining near their home or community.

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**Squillace, M. 2013. The Tragic Story of the Federal Coal Leasing Program, American Bar Association Natural Resources & Environment, Winter 2013. Internet website: [http://www.eenews.net/assets/2016/01/21/document\\_gw\\_05.pdf](http://www.eenews.net/assets/2016/01/21/document_gw_05.pdf).**

Report providing a history of federal coal ownership and leasing, reviewing issues related to competition and fair market value and finding significant losses to taxpayers in how coal is currently leased and sold.

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**\_\_\_\_\_. 2016. Testimony of Professor Mark Squillace, University of Colorado Law School before the Subcommittee on Energy and Mineral Resources of the House NRC On HR 5259, 14th Cong., 2nd Sess. 2016.**

Testimony regarding how the federal coal leasing program has never worked as it was designed: as a leasing program that was intended to be managed proactively by the federal government for the vast majority of federal coal. Instead it became a reactive program, with the federal government simply responding to industry applications (many of which have only one bidder and are therefore not market value). Provides a critique of H.R. 5259 as well.

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**\_\_\_\_\_. No date. Reclamation Liability under the Surface Mining Control and Reclamation Act (SMCRA). The Sabin Center for Climate Change Law.**

Report published by The Sabin Center for Climate Change Law and the Center on Global Energy Policy at Columbia University. Discusses many different enforcements, new initiatives, requirements, bonding, and bankruptcy.

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**Squillace, M., and A. Hood. 2012. NEPA, Climate Change, and Public Lands Decision-Making.**

Article offers the guidance that is currently lacking in federal land management agencies and other agencies making decisions impacting natural resource systems. It begins by describing NEPA and focusing especially on those legal requirements most relevant for federal land managers and other agencies making decisions with significant impacts on natural resources. Specifically, Part II discusses the CEQ regulations pertaining to programmatic assessments and tiering, uncertainty, and mitigation; Part III then explains the unique difficulties of applying NEPA to climate change. In particular, this part notes that NEPA's cumulative impacts requirement applied literally to climate change is a seemingly impossible burden for land use decision-makers. Part III also addresses the inherent uncertainty related to climate change, how to understand that uncertainty in the context of predictive climate models, the use of adaptive management to respond to that uncertainty, and the different meanings of the terms adaptation and mitigation in the NEPA and climate change contexts. Part III concludes with the useful insights that land managers might glean from the otherwise inapplicable draft CEQ climate change guidance.

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**Stanford School of Earth, Energy, and Environmental Sciences. No date. OPGEE: The Oil Production Greenhouse Gas Emissions Estimator Internet website: <https://pangea.stanford.edu/researchgroups/eao/research/opgee-oil-production-greenhouse-gas-emissionsestimator>**

Research summary, focusing on building tools to reduce the environmental impacts of energy systems, with an emphasis on greenhouse gas emissions from fossil energy systems. Research methods include engineering based life cycle assessment modeling and computational optimization. Targets include transportation fuels (conventional oil and oil substitutes) and carbon dioxide capture and storage.

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**Stephens, C., and M. Ahern. 2002. Worker and Community Health Impacts Related to Mining Operations Internationally. Mining, Minerals, and Sustainable Development. London School of Hygiene & Tropical Medicine, London, United Kingdom.**

This is a review of literature on mining and health by mineral type, mining process, occupational exposures and impacts, and mining and community health impacts and policy.

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**Stevenson, A. 2016. Taxpayer Exposure to Bankrupt Coal.**

Report examines the taxpayers' exposure to bankrupt coal. Discusses costs in short and long terms and makes suggestions for handling the industry

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**Stock J., et al. 2106. Federal Coal Program Reform, the Clean Power Plan, and the Interaction of Upstream and Downstream Climate Policies. Harvard Kennedy School. Internet website: [http://belfercenter.hks.harvard.edu/publication/26766/federal\\_coal\\_program\\_reform\\_the\\_clean\\_power\\_plan\\_and\\_the\\_interaction\\_of\\_upstream\\_and\\_downstream\\_climate\\_policies.html](http://belfercenter.hks.harvard.edu/publication/26766/federal_coal_program_reform_the_clean_power_plan_and_the_interaction_of_upstream_and_downstream_climate_policies.html).**

US EPA study of the interaction between a specific upstream policy, incorporating a carbon adder into federal coal royalties, and downstream emissions regulation under the Clean Power Plan.

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**Stockholm Environment Institute. 2015. Supply-side climate policy: the road less taken. October 2015. Internet website: <http://www.sei-international.org/publications?pid=2835>.**

Report evaluates supply-side approaches to climate policy and finds that supply-side policies, such as removal of producer subsidies, compensation of resource owners for leaving fuels unburned, and outright restrictions on resource development, could allow for greater emission reductions at the same (or lower) cost than demand-side policies, such as encouraging energy conservation.

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**\_\_\_\_\_. 2016. How would phasing out US federal leases for fossil fuel extraction affect CO<sub>2</sub> emissions and 2 C goals? May 2016. Internet website: [https://www.sei-international.org/publications?pid=2937&utm\\_content=bufferf4b1b&utm\\_medium=social&utm\\_source=twitter.com&utm\\_campaign=buffer](https://www.sei-international.org/publications?pid=2937&utm_content=bufferf4b1b&utm_medium=social&utm_source=twitter.com&utm_campaign=buffer).**

Report examining phasing out of federal coal leases. Concludes that this could reduce global CO<sub>2</sub> emissions by 100 million tonnes per year by 2030 and by greater amounts thereafter. The emissions impact would be comparable to that of other major climate policies under consideration by the Obama administration. These findings suggest that policymakers should give greater attention to measures that slow the expansion of fossil fuel supplies.

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**Storrow, B. 2016. Wyoming's two largest coal mines announce layoffs. Internet website: [http://trib.com/business/energy/wyoming-s-two-largest-coal-mines-announce-layoffs/article\\_0d217a3a-5a9d-5b1d-8d0d-8a5081724bb2.html](http://trib.com/business/energy/wyoming-s-two-largest-coal-mines-announce-layoffs/article_0d217a3a-5a9d-5b1d-8d0d-8a5081724bb2.html).**

This article reports layoffs from the two largest coal mines in America in March 2016: Peabody Energy and Arch Coal.

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\_\_\_\_\_. 2016. "The prospects for coal exports are dimming, but politics have little to do with it." *Casper Star Tribune, Casper, Wyoming.*

Article about the diminishing market for coal affecting the potential for exports.

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**Stratus Consulting. 2010. Potential Environmental Impacts of the Proposed CIRI Underground Coal Gasification Project, Western Cook Inlet, Alaska. January 27, 2010.**

Report retained by the Center for Science in Public Participation to summarize the potential environmental risks associated with Underground Coal Gasification and Carbon Capture and Sequestration in general and the Cook Inlet Region, Inc., proposed project in particular.

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\_\_\_\_\_. 2015. **Greenhouse Gas Emissions from Fossil Energy Extracted from Federal Lands and Waters: An Update Stratus Consulting, Boulder, Colorado.**

Report provides an updated analysis of the magnitude of greenhouse gas emissions currently accounted for from federal lands and waters. Produced by Stratus Consulting for The Wilderness Society.

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\_\_\_\_\_. 2015. **Greenhouse Gas Emissions from Fossil Energy Extracted from Federal Lands and Waters: Final Report. Stratus Consulting, Boulder, Colorado.**

Report designed to develop a preliminary quantitative estimate of the magnitude of ultimate greenhouse gas emissions (including carbon dioxide, methane, and nitrous oxide) associated with these activities (i.e., the quantity of greenhouse gases emitted if, for example, coal mined from federal lands were combusted downstream in various applications, such as in coal-fired power plants). Also involved assembling information on the different types of indirect emissions associated with these activities (e.g., emissions from vehicles used at natural gas production sites).

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**Surety and Fidelity Association of America. 2016. Comments regarding Surety Bonds. July 6, 2016.**

The comments discuss types of reclamation bonds allowed under SMCRA and why companies with a history of insolvency should not be allowed to self-bond.

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**Sustainable Systems Research, LLC. 2015. Technical Memorandum on Air Quality, Climate Change, and Environmental Justice Issues from Oakland Trade and Global Logistics Center. Prepared for Earth Justice. September 18, 2015.**

Reviews potential air quality issues associated with Oakland Bulk and Oversized Terminal handling and exportation of coal. The proposed project would transport 10.5 million tons of coal from Utah to California, impacting Oakland directly. The study suggests that there will be significant health effects from the coal dust, with no found mitigation methods. Also suggested is an increase in warming caused by climate change from transporting the coal overseas.

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**Sutherland, A. B., and J. L. Meyer. 2007. "Effects of increased suspended sediment on growth rate and gill condition of two southern Appalachian minnows." *Environmental Biology of Fishes* 80:389-403.**

Journal article on the effects of increased suspended sediment concentration (SSC) on fish growth and gill condition of two stream-dwelling minnows, which have been less studied than game fish species. Elevated SSC exposure in these minnows significantly decreases growth rates, most likely due to respiratory impairment.

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**Sutherland, A. B., et al. 2008. "Effects of suspended sediment on whole-body cortisol stress response of two southern Appalachian minnows, *Erimonax monachus* and *Cyprinella galactura*." *Copeia* 1:234-244.**

Journal article on the effects of increased suspended sediment concentration (SSC) on whitetail shiners (*Cyprinella galactura*) and spotfin chubs (*Erimonax monachus*) and their total immunoreactive corticosteroid levels. Results demonstrated that exposure to SSCs greater than 100 mg/L can significant stress for young fish.

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**Svoboda, L. August 7, 2007. EPA, Denver, Colorado.**

Response letter addressed to Mr. Richmond, the Forest Supervisor of Grand Mesa, Uncompaghre, and Gunnison National Forests from Larry Svoboda, the Colorado EPA director. Contains detailed comments by the EPA on the Preliminary Final EIS.

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**\_\_\_\_\_. October 27, 2007. EPA, Denver, Colorado.**

Response letter addressed to Mr. Malecek, District Ranger of the Divide Ranger District. Contains EPA Region 8 comments on the Big Moose Vegetation Management Project on air quality, aquatic resources, and threatened and endangered species preliminary to the DEIS.

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**Swain, D., et al. 2013. "The extraordinary California drought of 2013/2014: Character, context, and the role of climate change." S3-S7. American Meteorological Society. Stanford, California.**

Supplement to the Bulletin of the American Meteorological Society. The paper contains the results of 20 research groups that have explored 16 events that occurred in 2013. The cumulative results indicate that human-caused climate change greatly increased the risk for extreme heat waves assessed in the report. Also investigates human influence on droughts, heavy rain, and storms.

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\_\_\_\_\_. 2013. **Federal Coal Leasing: Fair Market Value and a Fair Return for the American Taxpayer.** September 18, 2013. Internet website: <http://www.taxpayer.net/library/article/federal-coal-leasing-fair-market-value-and-a-fair-return-for-the-american-t>.

Report states that the lease-by-application system does not obtain fair market value for federal coal. The report recommends a reevaluation of the lease-by-application system, as well as other reforms, to ensure a fair return for taxpayers.

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**Sweetwater County. 2002. Sweetwater County Comprehensive Plan. Sweetwater County, Wyoming.**

This plan updates and consolidates the 1977 Sweetwater County Land Use Plan, clarifies and reconfirms the county's land use and development objectives, and identifies specific implementation strategies for pursuing county-selected priorities.

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**Synapse Energy Economics. 2012. Comparing the Hidden Costs of Power Generation Fuels. Cambridge, Massachusetts.**

This report discusses indirect and external costs associated with power generation.

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**Terhorst, J., and M. Berkman. 2010. Effect of Coal-Fired Power Generation on Visibility in a Nearby National Park. Berkeley Economic Consulting, Berkeley, California, and Department of Mathematics, San Francisco State University, San Francisco, California.**

Paper examines coal power and air quality. Finding has important implications for the methods generally employed to attribute visibility reductions to air pollution sources.

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**Thakar, N., and M. Madowitz. 2014. Federal Coal Leasing in the Powder River Basin A Bad Deal for Taxpayers. Center for American Progress. June 2014.**

This article states that that Powder River Basin coal is a major contributor to US climate change and carbon pollution and discusses the costs taxpayers pay for burning this coal. This article examines the social costs of burning coal, finding it to exceed the market price of coal, leaving a negative net social benefit. The article concludes that in its current form the federal coal-leasing program in the Powder River Basin is a bad deal for taxpayers, highlighting problems such as subsidizes and a lack of a plan for change.

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**The Global Commission. 2016. Internet website. <http://newclimateeconomy.report/>**

Website offering details on the members of the Global Commission on the Economy and Climate. Provides a quick glance into those that have a hand in the New Climate Economy Project.

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**The Mountain Pact. 2016. How Federal Coal Reform Could Help Mountain Communities Mitigate the Costs of Climate Change. The Mountain Pact.**

Report with data and background on the effects that climate change could have on the world. It uses an economic lense send the effects that coal reform could have on changing climate

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**The New York Times. 2016. "Global Temperatures Are on Course for Another Record This Year" Internet website: [http://www.nytimes.com/2016/07/20/science/nasa-global-temperatures-2016.html?\\_r=1](http://www.nytimes.com/2016/07/20/science/nasa-global-temperatures-2016.html?_r=1).**

Online article on the trends of weather patterns across the United States and a summary of statement from Dr. Gavin A. Schmidt.

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**The Pew Charitable Trusts. 2016. The Economic Value of Quiet Recreation on BLM Lands. Internet website: [http://www.pewtrusts.org/~media/assets/2016/03/wli\\_national\\_quietrec\\_final.pdf?la=en](http://www.pewtrusts.org/~media/assets/2016/03/wli_national_quietrec_final.pdf?la=en).**

This is a factsheet detailing the value of recreation on BLM-administered lands.

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**The Wilderness Society. 2014. Greenhouse Gas Emissions from Fossil Fuel Energy Extracted from Federal Lands and Waters: An Update. Washington, DC.**

This report includes a preliminary estimate of the magnitude of ultimate GHG emissions associated with fossil fuels from 2008 to 2010.

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**Thomas, C. D., et al. 2004. "Extinction risk from climate change." *Nature* 427:145-148.**

Journal article assessing extinction risks for sample regions that cover some 20 percent of the Earth's terrestrial surface. Estimates show the importance of rapid implementation of technologies to decrease greenhouse gas emissions and strategies for carbon sequestration.

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**Tilman, D. 2000. "Causes, consequences and ethics of biodiversity." *Nature* 405:208-211.**

Overview of biodiversity. Focuses on the effects of biodiversity on an ecosystem, effectiveness of strategies to preserve biodiversity, and ethics involved. Concludes that biodiversity should be faced with a more scientific approach.

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**Tran, K. T. 2012. AERMOD Modeling of Air Quality Impacts of the Proposed Morrow Pacific Project. AMI International, Henderson, Nevada.**

Report presenting the results of modeling analysis of air quality impacts of the proposed Morrow Pacific Project in Oregon. The Sierra Club asked AMI Environmental to conduct an air quality modeling analysis, using the regulatory dispersion model AERMOD, to predict project impacts of criteria pollutants, such as nitrogen dioxide (NO<sub>2</sub>), sulfur dioxide (SO<sub>2</sub>), and fine particulates (PM<sub>2.5</sub>).

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**Tsoar, H., and K. Pye. 1987. "Dust transport and the question of desert loess formation." *Sedimentology* 34:139-153.**

Paper details the variables of dust formation and how human activities can influence them.

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**Uinta County. 2011. Uinta County Comprehensive Plan. Uinta County, Wyoming.**

This plan updates and replaces existing Uinta County comprehensive plans and reconfirms the county's land use and development goals and policies.

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**Union of Concerned Scientists. 2011. Climate Change and Your Health—Rising Temperatures, Worsening Ozone Pollution. Union of Concerned Scientists, Cambridge, Massachusetts.**

Report on the adverse effects on ground-level ozone pollution, which can exacerbate lung diseases, such as asthma, and how climate change and higher global temperatures have the potential to increase ozone pollution and increase respiratory symptoms, hospital visits for the young and old, lost school days, and premature mortality for most of those in the continental United States.

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**\_\_\_\_\_. 2012. Climate Change and Your Health—After The Storm: The Hidden Health Risks of Flooding in a Warming World. Union of Concerned Scientists, Cambridge, Massachusetts.**

Report on the deadly and expensive effects of floods, the aftermath of which results in over half of all waterborne disease outbreaks, and how climate change with the potential for extreme rainfall has the potential for significant impacts on human health and property.

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**\_\_\_\_\_. No date. Internet website:**

**[http://www.ucsusa.org/clean\\_energy/coalswind/c01.html#\\_V\\_fWLegrLcs](http://www.ucsusa.org/clean_energy/coalswind/c01.html#_V_fWLegrLcs).**

Website on coal, with links to information on air pollution, waste generated, fuel supply, and water use. Interactive site allows readers to expand on topics.

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**United Nations. 2009. Report of the Conference of the Parties on Its Fifteenth Session, Held in Copenhagen from December 7 to 19, 2009. United Nations Framework Convention on Climate Change, Copenhagen, Denmark.**

Report on the 2009 Copenhagen Accord, which focused on the challenge of climate change and the deep cuts that will be needed in global greenhouse gas emissions so as to hold the increase in global temperature below 2 degrees Celsius and take action to meet this objective consistent with science and equity.

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**United Nations Environment Programme. 2010. Report of the Conference of the Parties on Its Sixteenth Session, Held in Cancun from November 29 to December 10, 2010. United Nations Framework Convention on Climate Change, Cancun, Mexico.**

Report on the 2011 Cancun Agreement, which affirmed that climate change is one of the greatest challenges of our time and reaffirms that deep cuts in global greenhouse gas emissions are required, according to science. Aims to reduce global greenhouse gas emissions to hold the increase in global average temperature below 2 degrees Celsius, above pre-Industrial levels. States that the urgent action to meet this long-term goal should be consistent with science and equity.

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**\_\_\_\_\_. 2010. Environmental Consequences of Ocean Acidification: A Threat to Food Security. United Nations Environment Programme, Nairobi, Kenya.**

Report on how increased carbon dioxide from the burning of fossil fuels and other human activities is altering the chemistry of ocean surfaces and causing them to become more acidic, thereby reducing carbonate ion concentrations. This change makes it difficult for certain organisms to make shells and reef systems that other fish and marine animals depend on, with the likely result that entire marine systems could be significantly impacted, including the humans who depend on them for sustenance.

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**\_\_\_\_\_. 2015. The Emissions Gap Report 2015: A UNEP Synthesis Report. United Nations Environment Programme, Nairobi, Kenya.**

Report providing a scientific assessment of the mitigation contributions from the submitted Intended Nationally Determined Contributions from the Paris Agreement. Report compares the resulting emission levels in 2030 with what science tells us is required to be on track toward the agreed on target of a global average temperature increase, below 2 degrees Celsius by 2100.

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**\_\_\_\_\_. 2015. Conference of the Parties Twenty-First Session, Paris, November 30 to December 11, 2015, Adoption of the Paris Agreement. United Nations Framework Convention on Climate Change, Paris, France.**

Report on the 2015 Paris Agreement that provides a framework for participating parties to deal with climate change. This is an urgent and potentially irreversible threat to human societies and the planet and thus requires the widest possible cooperation by all countries and their participation in an effective and appropriate international response. This agreement is intended to accelerate the reduction of global greenhouse gas emissions, while acknowledging that climate change is a common concern of humankind. Actions to deal with climate change should respect, promote, and consider respective obligations on human rights, the right to health, and the rights of indigenous peoples.

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**\_\_\_\_\_. 2015. Intended Nationally Determined Contributions. Internet website: [http://unfccc.int/focus/indc\\_portal/items/8766.php](http://unfccc.int/focus/indc_portal/items/8766.php).**

This is a database of nationally determined contributions submitted under the Paris Agreement.

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**\_\_\_\_\_. 2015. Subsidiary Body for Scientific and Technological Advice Forty-Second Session, June 1 to 11, 2015. Report on the Structured Expert Dialogue on the 2013–2015 Review. United Nations Framework Convention on Climate Change, Bonn, Switzerland.**

Report summarizing the face-to-face dialogue between over 70 experts and parties on the adequacy of the long-term global goal, in light of the ultimate objective of the convention, and the overall progress made toward achieving the long-term global goal. The goal includes a consideration of the commitments under the convention and a technical summary and compilation of the reports on the four sessions of the structured expert dialogue.

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**US Bankruptcy Court. 2016. Notice of Filing of Executed Agreements Comprising Resolution of Reclamation Obligations for Alpha Natural Resources, Inc.**

Notice from bankruptcy court for Alpha Natural Resources settlement with Office of Surface Mining Reclamation and Enforcement for water treatment and reclamation costs.

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**US Bureau of Labor Statistics. 2016. Quarterly census of employment and wages, private, NAICS 2121 coal mining, all counties in Wyoming. Internet website: [http://data.bls.gov/cew/apps/table\\_maker/v4/table\\_maker.htm#type=2&st=56&year=2013&qtr=A&own=5&ind=2121&supp=0](http://data.bls.gov/cew/apps/table_maker/v4/table_maker.htm#type=2&st=56&year=2013&qtr=A&own=5&ind=2121&supp=0).**

This website is a query of US Bureau of Labor Statistics employment and wage data. Data reflects the 2013 annual average wages of coal mining jobs in Wyoming of \$82,654.

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**US Census Bureau. 2016. Country Business Patterns (CBP). Internet website: <http://www.census.gov/programs-surveys/cbp.html>.**

Website for the US Census Bureau, Country Business Patterns (CBP), an annual series that provides subnational economic data by industry. This series includes the number of establishments, employment during the week of March 12, first quarter payroll, and annual payroll.

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**US Climate Change Science Program. 2006. Methane as a Greenhouse Gas. Climate Change Program Office, Washington DC.**

Report on the role of methane as a greenhouse gas, including a summary of human-influenced sources of methane, such as landfills, natural gas and petroleum production and distribution systems, agricultural activities, coal mining, stationary and mobile combustion, wastewater treatment, and certain industrial processes. About 60 percent of global methane emissions come from these sources, and the rest are from natural sources.

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**US Congress. 1920. Mineral Leasing Act. US Congress, Washington, DC.**

The official Mineral Leasing Act, which pertains to mineral resources owned by the United States.

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**\_\_\_\_\_. 1984. Environmental Protection in the Coal Leasing Program. US Congress, Washington, DC.**

Report responds to a request by the House and Senate Committees on Appropriations, as mandated in the Conference Committee Report on the Department of the Interior and Related Agencies Appropriations Bill for fiscal year 1984. It assesses the ability of the federal coal leasing program to ensure the development of leases in an environmentally compatible manner. This study builds on earlier OTA reports: *An Assessment of the Development and Production Potential of Federal Coal Leases* and *The Direct Use of Coal*. It will contribute to future work on surface mine reclamation.

The assessment addresses the recent controversy surrounding the implementation of the environmental protection aspects of the federal coal leasing program. It discusses the adequacy of the regulatory provisions of the program to ensure the environmental compatibility of federal lease tracts, including the 1982 changes in program policy and regulations. The BLM's implementation of the leasing program legislation and regulations is evaluated, with emphasis on the adequacy of data and analyses to support land use planning and environmental impact assessment. The report assesses the characteristics of tracts proposed for leasing since 1979, to determine whether any of those tracts will be particularly difficult to develop under current environmental laws and regulations. It also assesses the potential for cumulative environmental impacts on the development of several lease tracts in one area. Finally, the report presents policy options that Congress could consider that seek to restore predictability and stability to the leasing program.

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**US Council of Economic Advisors. 2016. The Economics of Coal Leasing on Federal Lands: Ensuring a Fair Return to Taxpayers. US Council of Economic Advisors, Washington, DC.**

This report focuses on whether the federal coal leasing program provides a fair return to the taxpayer and draws on relevant academic research to provide an economic perspective. A review of the coal leasing program indicates that the program has been structured in a way that misaligns incentives, going back decades, resulting in a distorted coal market with an artificially low price for most federal coal and unnecessarily low government revenue from the leasing program. This report examines the market implications of changing royalty rates.

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**US Court of Appeals of the District of Columbia. 1931. *United States ex rel. McLennan v. Wilbur*, 283 US 414. May 1931. Internet website: [https://scholar.google.com/scholar\\_case?case=14937211614653028640&hl=en&as\\_sdt=6&as\\_vis=1&oi=scholar](https://scholar.google.com/scholar_case?case=14937211614653028640&hl=en&as_sdt=6&as_vis=1&oi=scholar).**

Certiorari to the Court of Appeals of the District of Columbia. Court opinion of the Act of Congress approved February 25, 1920, 41 Stat. 437, intended to promote certain mining operations.

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**\_\_\_\_\_. Declaration of Christopher B. Field. USCA Case #15-1363 Document #1586661 Filed: December 3, 2015.**

Declares that, with continuing climate change, the world faces increasing risks of impacts. States that any delay in reducing emissions adds risk of impacts. This declaration summarizes knowledge about three categories of risk.

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**\_\_\_\_\_. Declaration of Thomas Michael Power. USCA Case #1:11-cv-01481-RJL Document #38-7 Filed: December 13, 2012.**

United States Court of Appeals Declaration of Natural Resource Economics specialist Thomas Power declares that decisions with the Powder River Basin will have significant impacts on American coal markets. Discusses prices and the Belle Ayr North and Caballo West coal tracts.

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**US Department of Agriculture, Forest Service. 2012. Rulemaking for Colorado Roadless Areas Supplemental Final Environmental Impact Statement. Internet website: [http://www.fs.usda.gov/Internet/FSE\\_DOCUMENTS/stelprdb5365953.pdf](http://www.fs.usda.gov/Internet/FSE_DOCUMENTS/stelprdb5365953.pdf).**

FEIS prepared by the USFS to promulgate a state-specific rule to manage and conserve roadless area characteristics on approximately 4.2 million acres of National Forest System lands in Colorado. The proposal responds to a recognized need to balance local, state, and national interests in providing management direction for Colorado roadless areas.

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**\_\_\_\_\_. 2014. Pawnee National Grassland Oil and Gas Leasing Analysis Final Environmental Impact Statement. USDA Forest Service, Rocky Mountain Region.**

This final environmental impact statement (FEIS) has been prepared to document and disclose the estimated environmental impacts of a decision to make available and apply lease stipulations to National Forest System lands in the Pawnee National Grassland. The FEIS analyzes the potential impacts of the Forest-wide land availability determination by using a reasonable foreseeable development scenario. The FEIS also proposes lease stipulations and identifies where those stipulations would be applied on future leases when needed on administratively available lands.

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**\_\_\_\_\_. 2015. Rulemaking for Colorado Roadless Areas Supplemental Draft Environmental Impact Statement. US Department of Agriculture, Forest Service, Colorado National Forests, Denver, Colorado.**

Supplemental draft EIS about the proposal to reinstate the North Fork Coal Mining Area (NFCMA) exception of the Colorado Roadless Rule (CRR) on approximately 19,700 acres in the Grand Mesa, Uncompahgre, and Gunnison National Forests. The proposal is a response to deficiencies outlined in a court case. This draft EIS supplements the 2012 final EIS for the CRR with additional analyses. Alternative A is the No Action Alternative; Alternative B is the proposed action and would reinstate the NFCMA exception, allowing temporary road construction for coal mining. Alternative C would establish the NFCMA but would exclude lands identified as “wilderness capable.”

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**\_\_\_\_\_. 2016. Forests to Faucets. Internet website: [http://www.fs.fed.us/ecosystems/services/FS\\_Efforts/forests2faucets.shtml](http://www.fs.fed.us/ecosystems/services/FS_Efforts/forests2faucets.shtml).**

Website from the Forest Service using GIS to model and map the continental United States land areas most important to surface drinking water, the role forests play in protecting these areas, and the extent to which these forests are threatened by development, insects and disease, and wildfire.

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**US Department of Commerce, Bureau of Economic Analysis. 2016. Regional Economic Accounts. Internet website: <http://www.bea.gov/regional/>.**

The regional economic accounts talks about the geographic distribution of US economic activity and growth. The estimates of gross domestic product by state and state and local area personal income, and the accompanying detail, provide a consistent framework for analyzing and comparing individual state and local area economies.

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**US Department of Energy. 2014. Addendum to Environmental Review Documents Concerning Exports of Natural Gas. August 2014. Internet website: <http://energy.gov/fe/addendum-environmental-review-documents-concerning-exports-natural-gas-united-states>.**

Reviews the potential environmental impacts of natural gas production, particularly the hydraulic fracturing of shale formations. Finds that the current rapid development of unconventional natural gas resources will likely continue, with or without the export of natural gas. This is a review of the literature and provides information on the resource areas potentially impacted by unconventional gas production (greenhouse gases).

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\_\_\_\_\_. 2014. **Life Cycle Greenhouse Gas Perspective on Exporting Liquefied Natural Gas.** Internet website: <http://energy.gov/fe/downloads/life-cycle-greenhouse-gas-perspective-exporting-liquefied-natural-gas-united-states>.

This analysis determines that the use of US liquefied natural gas exports for power production in European and Asian markets will not increase greenhouse gas emissions, on a life cycle perspective, when compared to regional coal extraction and consumption for power production. Given the uncertainty in the underlying model data, it is not clear if there are any significant differences between the corresponding European and Asian cases, other than the liquefied natural gas transport distance from the United States and the pipeline distance from Russia. Differences between the US liquefied natural gas, regional liquefied natural gas, and Russian natural gas options are also indeterminate, so no significant change in net climate impact is anticipated from any of these scenarios.

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**US Department of Energy, Energy Information Administration. 2012. Annual Energy Review 2011. US Energy Information Administration, Washington, DC.**

This annual report summarizes statistics on energy production, consumption, trade, stocks, and prices covering all major energy commodities.

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\_\_\_\_\_. 2012. **Fuel Competition in Power Generation and Elasticities of Substitution. US Energy Information Administration, Washington, DC.**

Report analyzing the competition between coal, natural gas, and petroleum used for electricity generation, by estimating what economists refer to as the elasticity of substitution among the fuels. The elasticity of substitution concept measures how the use of these fuels varies, as their relative prices change.

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\_\_\_\_\_. 2013. **Future power market shares of coal, natural gas generators depend on relative fuel prices.** Internet website: <http://www.eia.gov/todayinenergy/detail.php?id=10951>.

Website discusses how natural gas competed more effectively with coal as a fuel for electricity generation, as the cost of operating natural gas-fired generators fell below the cost of operating coal-fired generators in some regions. Includes graphs and diagrams to illustrate the ratio of fuel costs for power generation, including by region, and US electrical generation by fuel, for selected cases.

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\_\_\_\_\_. 2015. **Annual Energy Outlook with Projections to 2040. DOE/EIA-0383(2015). EIA. Washington, DC.**

Document offering energy projections up until 2040. Intended as a starting point for analysis of potential changes in US energy policies, rules, and regulations. Provides conclusions about the direction of US energy.

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\_\_\_\_\_. 2015. **Sales of Fossil Fuels Produced from Federal and Indian Lands, FY 2003 Through FY 2014. US Energy Information Administration, Washington, DC.**

Summary report concludes that fossil fuel production on federal lands decreased by 24 trillion BTUs and increased by 52 trillion BTUs on Indian lands.

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\_\_\_\_\_. **2015. Short-Term Energy Outlook (STEO). US Energy Information Administration, Washington, DC.**

Overview of the short-term energy outlook for the United States, including prices, production, and inventories.

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\_\_\_\_\_. **2015. Annual Coal Report 2013. US Energy Information Administration, Washington, DC.**

The Annual Coal Report provides information about US coal production, number of mines, productive capacity, recoverable reserves, employment, productivity, consumption, stocks, and prices to a wide audience, including Congress, federal and state agencies, the coal industry, and the general public.

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\_\_\_\_\_. **2015. Scheduled 2015 capacity additions mostly wind and natural gas; retirements mostly coal. Internet website: <http://www.eia.gov/todayinenergy/detail.php?id=20292>.**

Website discusses the addition of wind and natural gas and the decline of coal in 2015. Includes graphs and diagrams to demonstrate energy usage and types, as well as a map showing plans for types of energy production in the United States in 2015.

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\_\_\_\_\_. **2016. Average utilization for natural gas combined-cycle plants exceeded coal plants in 2015. Internet website: <http://www.eia.gov/todayinenergy/detail.php?id=25652>.**

Website discusses how 2015 was the first year that average capacity factor for natural gas combined-cycle plants exceeded that of coal stream plants. Includes graphs to illustrate 2005-2015 annual average capacity factor and distribution of annual capacity factor for coal steam and natural gas generators.

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\_\_\_\_\_. **2016. Annual Energy Outlook 2016 Early Release: Annotated Summary of Two Cases. EIA, Washington, DC.**

Annual energy outlook for US energy, with overview of different energy sources and summaries of two cases: electricity and natural gas petroleum.

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\_\_\_\_\_. **2016. Annual Energy Outlook 2016, Coal Production: Northern Appalachia. Internet website: [https://www.eia.gov/forecasts/aeo/data/browser/#/?id=95-AEO2016&cases=ref2016~ref\\_no\\_cpp&sourcekey=0](https://www.eia.gov/forecasts/aeo/data/browser/#/?id=95-AEO2016&cases=ref2016~ref_no_cpp&sourcekey=0).**

Report includes a graph and table of annual coal production projections from northern Appalachia through 2040.

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\_\_\_\_\_. **2016. Annual Energy Outlook 2016, Total Energy Supply, Disposition, and Price Summary. website: Internet website: [https://www.eia.gov/forecasts/aeo/data/browser/#/?id=96-AEO2016@ion=0-0&cases=ref2016~ref\\_ref\\_no\\_cpp-d032316a.16-96-](https://www.eia.gov/forecasts/aeo/data/browser/#/?id=96-AEO2016@ion=0-0&cases=ref2016~ref_ref_no_cpp-d032316a.16-96-)**

This website contains a graph of total energy production of crude oil and lease condensate projects through 2040.

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\_\_\_\_\_. 2016. Internet website: <https://www.eia.gov/tools/faqs/faq.cfm?id=427&t=3>.

Website with information on US energy generation, based on source.

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\_\_\_\_\_. 2016. Internet website: <http://www.eia.gov/electricity/>.

Table of data on electricity usage in the United States.

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\_\_\_\_\_. 2016. **Annual Energy Outlook 2016 with projections to 2040. US EIA, Office of Energy Analysis, Washington, DC.**

This report presents long-term projects of energy supply, demand, and prices through 2040.

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\_\_\_\_\_. 2016. **Quarterly coal production lowest since the early 1980s. Internet website: <http://www.eia.gov/todayinenergy/detail.php?id=26612>.**

Article discussing coal production in recent quarters and showing that the first quarter of 2016 had the lowest coal production since the 1980s.

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\_\_\_\_\_. 2016. **Form EIA-923 detailed data. Internet website: <https://www.eia.gov/electricity/data/eia923/>.**

Survey Form EIA-923 collects detailed electric power data, monthly and annually, on electricity generation, fuel consumption, fossil fuel stocks, and receipts at the power plant and prime mover level. Data available for download.

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\_\_\_\_\_. 2016. **Coal made up more than 80% of retired electricity generating capacity in 2015. Internet website: <http://www.eia.gov/todayinenergy/detail.php?id=25272>.**

Website discusses the electrical generating capacity retired in 2015 by fuel technology. Includes graphs and diagrams to illustrate retired energy generating capacity, existing coal units by operating year and coal unit range and capacity, and coal plant operating status in selected states.

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\_\_\_\_\_. 2016. Internet website: <http://www.eia.gov/coal/markets/>.

Website with information on coal markets in the United States. The Coal Markets Report summarizes average weekly coal commodity spot prices by coal regions in the United States.

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\_\_\_\_\_. 2016. Internet website: <http://www.eia.gov/electricity/monthly/update/archive/may2016/>.

Website with updates on the state of electricity in the United States.

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\_\_\_\_\_. 2016. **Carbon Dioxide Emissions Coefficients. US Energy Information Administration, Washington, DC.**

This is a datasheet of carbon coefficients by volume and mass across different factors.

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\_\_\_\_\_. 2016. **Primary Energy Consumption by Source. Monthly Energy Review. Washington, DC.**

This datasheet shows the consumption of fossil fuels and renewable energy by year.

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\_\_\_\_\_. 2016. **Annual Coal Distribution Report 2014. US Energy Information Administration, Washington, DC.**

The report provides detailed information on domestic coal distribution by origin state, destination state, consumer category, and method of transportation. Also provided is a summary of foreign coal distribution by coal-producing state.

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\_\_\_\_\_. 2016. **Internet website: <http://www.eia.gov/coal/production/quarterly/>.**

Website with a quarterly coal report that contains information and graphs on coal production, importation, exportation, and type of export.

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\_\_\_\_\_. 2016. **Internet website: <http://www.eia.gov/todayinenergy/detail.cfm?id=24472>.**

Website with information on coal production and prices decline in 2015. Contains graphs with additional information on regional production.

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\_\_\_\_\_. 2016. **Internet website: <http://www.eia.gov/todayinenergy/detail.cfm?id=26612>.**

Website with information that quarterly coal production is the lowest since the early 1980s. This is mainly due to challenging market conditions. Contains graphs with information.

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\_\_\_\_\_. 2016. **Internet website: <https://www.eia.gov/forecasts/steo/report/coal.cfm>.**

Short-term energy outlook, with information on coal in the United States.

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\_\_\_\_\_. 2016. **Internet website: <https://www.eia.gov/tools/faqs/faq.cfm?id=427&t=3>.**

FAQ sheet for energy generation by energy source in the United States.

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\_\_\_\_\_. 2016. **Internet website: <http://www.eia.gov/todayinenergy/detail.cfm?id=26012>.**

Information that power sector coal demand has fallen in nearly every state since 2007, with maps and graphs that contain additional information.

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**US Department of Health and Human Services. 2007. Public Health Statement Lead. CAS#: 7439-92-1. ATSDR. Agency for Toxic Substances. Atlanta, Georgia.**

Public health statement with summary chapter from the Toxicological Profile for Lead. Provides information on lead and the effects of exposure to it. Distinguishes between primary and secondary lead and what happens when it enters the environment and the body.

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\_\_\_\_\_. 2010. **Births, Marriages, Divorces, and Deaths: Provisional Data for 2009. NVSS. United States.**

Statistic report on births, marriages, divorces, and deaths for 2009 in the United States in table format.

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**US Department of the Interior. 2015. 9 animals that are feeling the impacts of climate change. Internet website: <https://www.doi.gov/blog/9-animals-are-feeling-impacts-climate-change>.**

**This report details how nine specific species are feeling climate change impacts.**

\_\_\_\_\_. **2015. Internet website: <https://www.doi.gov/pmb/ocean/highlights/sealevelrisecost>.**

US Department of the Interior website from its “Policy Management and Budget, Conservation, External News” section. Includes information on the ocean, Great Lakes, and coastal activities. Website provides a teaser on a \$40 billion of National Parks Service assets at risk from climate change. Also includes image of climate change-caused destruction and an external link for more information.

\_\_\_\_\_. **2016. Secretary Jewell Launches Comprehensive Review of Federal Coal Program. Internet website: <https://www.doi.gov/pressreleases/secretary-jewell-launches-comprehensive-review-federal-coal-program>.**

This press release discusses a pause on new coal leasing while review is underway, additional transparency, and good government initiatives to modernize the program.

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**US Department of the Interior, Bureau of Land Management. 1969. Planning for Fluid Mineral Resources. Bureau of Land management, Washington, DC.**

This handbook provides detailed instructions for complying with the fluid minerals supplemental program guidance for resource management planning, as prescribed in BLM Manual Section 1624.2. It contains, among other things, procedural guidance for analyzing and documenting reasonably foreseeable fluid mineral development and the impacts of such development on the human environment.

\_\_\_\_\_. **2008. Manual 6840 – Special Status Species Management. US Department of the Interior, Bureau of Land Management, Washington, DC.**

BLM manual to provide policy and guidance for the conservation of BLM special status species and the ecosystems BLM-administered lands that they depend on. BLM special status species are those listed or proposed for listing under the Endangered Species Act (ESA) and those requiring special management consideration to promote their conservation and reduce the likelihood and need for future listing under the ESA, which are designated as BLM sensitive by the BLM state directors. All federal candidate species, proposed species, and delisted species in the five years following delisting will be conserved as BLM sensitive species.

\_\_\_\_\_. **2009. West Antelope II Coal Lease Application Final EIS Volume I. Internet website: <http://www.blm.gov/style/medialib/blm/wy/information/NEPA/cfodocs/westantelope/feis.Par.7431.File.dat/vol1.pdf>.**

FEIS prepared by the BLM to document and disclose the results of an environmental analysis for the leasing of a tract of federal coal, the West Antelope II tract, to the Antelope Mine in the Wyoming Powder River Basin.

\_\_\_\_\_. 2010. **Record of Decision for the Belle Ayr North Lease by Application. Department of the Interior, Bureau of Land Management, Washington, DC.**

Record of Decision opens the tract for competitive sale so the coal can be sold on the market.

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\_\_\_\_\_. 2011. **Record of Decision Environmental Impact Statement for the North Porcupine Coal Lease Application. Department of the Interior, Bureau of Land Management, Washington, DC.**

The decision is that it is in the public interest to offer the North Porcupine LBA tract, as described below, for competitive sale. This is so that these reserves will be available for sale in the competitive open coal market, so as to meet the national coal demand that is expected to exist until at least 2035.

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\_\_\_\_\_. 2011. **Record of Decision Environmental Impact Statement for the South Porcupine Coal Lease Application. Department of the Interior, Bureau of Land Management, Washington, DC.**

The decision is that it is in the public interest to offer the South Porcupine LBA tract as described below, for competitive sale. This is so that these reserves will be available for sale in the competitive open coal market, so as to meet the national coal demand that is expected to exist until at least 2035.

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\_\_\_\_\_. 2011. **Record of Decision for the South Hilight Field Coal Lease Application. Department of the Interior, Bureau of Land Management, Washington, DC.**

The decision is to open the tract for competitive sale, so the coal can be sold on the market.

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\_\_\_\_\_. 2011. **Alton Coal Tract Lease by Application Draft Environmental Impact Statement. Internet website: [http://www.blm.gov/style/medialib/blm/ut/lands\\_and\\_minerals/coal/alton\\_coal\\_project.Par.59867.File.dat/Combined%20Alton%20DEIS.pdf](http://www.blm.gov/style/medialib/blm/ut/lands_and_minerals/coal/alton_coal_project.Par.59867.File.dat/Combined%20Alton%20DEIS.pdf).**

DEIS prepared by the BLM to document and disclose the results of an environmental analysis for the leasing of a tract of federal coal, the Alton Coal Tract, in Utah.

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\_\_\_\_\_. 2013. **Bureau of Land Management Socioeconomics Strategic Plan 2012–2022. BLM/WO/GI-13/010+1131. Division of Decision Support, Planning, and NEPA, Washington, DC.**

BLM socioeconomics strategic plan addresses the changing emphasis from natural resources to social and economic focus and provides a roadmap to guide the BLM's socioeconomics program now and for the next 10 years.

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\_\_\_\_\_. 2014. **Waste Mine Methane Capture, Use, Sale, or Destruction; Advanced Notice of Proposed rulemaking. US Department of the Interior, Washington DC. *Federal Register* 79(82):23887-24310.**

Rulemaking notice from the BLM requests comments and suggestions that might assist in the establishment of a program to capture, use, or destroy waste mine methane that is released into the mine environment and the atmosphere as a direct consequence of underground mining on federal leases for coal and other minerals.

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**\_\_\_\_\_. 2014. Climate Change Adaptation Plan. Office of Policy Analysis and Climate Change Working Group. Washington, DC.**

This report details the Department of the Interior's response to climate change and adaptation policy. It is a summary document prepared by the DOI. Highlights the challenges posed by climate change and provides an important update to the Department of the Interior's efforts to identify priorities that are necessary to construct a comprehensive framework that meets this challenge head on.

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**\_\_\_\_\_. 2014. Gunnison Sage-Grouse Habitat Management Policy on Bureau of Land Management-Administered Lands in Colorado and Utah. Department of the Interior, Bureau of Land Management, Washington, DC.**

This memorandum provides interim guidance for protecting important habitat across the range of the Gunnison sage-grouse. The Bureau of Land Management will continue to apply conservation measures to manage and conserve Gunnison sage-grouse and their habitat.

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**\_\_\_\_\_. 2015. Environmental Assessment for the Little Willow Creek Protective Oil and Gas Leasing. Department of the Interior-BLM-ID-B010-2014-0036-EA. February 10, 2015.**

The purpose of this proposal is to protect the federal mineral resource from uncompensated drainage and surface resources from potential damage, in and near Willow Field, Payette County, Idaho.

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**\_\_\_\_\_. 2015. Letter to Governor Hickenlooper re: Royalty Reduction Rate for Oxbow Mine. Elk Mountain Mine. December 4, 2015.**

Letter requesting a royalty rate reduction for the Oxbow Mine.

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**\_\_\_\_\_. 2015. Total Federal Coal Leases in Effect, Total Acres Under Lease, and Lease Sales by Fiscal Year Since 1990. Internet website:  
[http://www.blm.gov/wo/st/en/prog/energy/coal\\_and\\_non-energy/coal\\_lease\\_table.html](http://www.blm.gov/wo/st/en/prog/energy/coal_and_non-energy/coal_lease_table.html).**

Website providing information about the number of total federal coal leases in effect, total acres under lease, and the number of lease sales at the end of each fiscal year since 1990.

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**\_\_\_\_\_. 2015. Authorization to Pay Advance Royalty in Lieu of Continued Operation Granted. April 28, 2015.**

Letter notifying that request to pay advanced royalty in lieu of continued operation is approved.

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**\_\_\_\_\_. 2016. Regulatory Impact Analysis for Revisions to 43 CFR, Part 3100 (Onshore Oil and Gas Leasing) and 43 CFR, Part 3600 (Onshore Oil and Gas Operations), Additions of 43 CFR, Part 3178 (Royalty-Free Use of Lease Production) and 43 CFR, Part 3179 (Waste Prevention and Resource Conservation). January 2016.**

Analysis examining the regulatory impacts of the BLM proposed rulemaking to update 43 CFR, Parts 3100 and 3160 and to propose new regulations at 43 CFR, Chapter II, Parts 3178 and 3179. The 43 CFR, Part 3610, proposed rule would require an application permit to drill for a new oil well, in order to minimize the waste of natural gas from the planned well to the degree reasonably possible. Part 3179 would modify the requirements that limit the venting and flaring of produced natural gas.

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\_\_\_\_\_. 2016. **Waste Prevention, Production Subject to Royalties, and Resource Conservation.** US DOI, Washington, DC. *Federal Register* 81(25):6616-6686.

*Federal Register* notice detailing new BLM proposed regulations to reduce waste of natural gas from venting, flaring, and leaks during oil and natural gas production on onshore federal and Indian leases. The regulations would also clarify when produced gas lost through venting, flaring, or leaks is subject to royalties and when oil and gas production used on site would be royalty free.

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\_\_\_\_\_. 2016. Internet website: [http://www.blm.gov/style/medialib/blm/wo/Communications\\_Directorate/public\\_affairs/news\\_release\\_attachments.Par.98291.File.dat/Questions%20and%20Answers%20Coal.pdf](http://www.blm.gov/style/medialib/blm/wo/Communications_Directorate/public_affairs/news_release_attachments.Par.98291.File.dat/Questions%20and%20Answers%20Coal.pdf).

Website with a question and answer format pertaining to federal coal reforms.

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\_\_\_\_\_. 2016. Internet website: [http://www.blm.gov/style/medialib/blm/wo/Communications\\_Directorate/public\\_affairs/news\\_release\\_attachments.Par.47489.File.dat/Coal%20Reform%20Fact%20Sheet%20Final.pdf](http://www.blm.gov/style/medialib/blm/wo/Communications_Directorate/public_affairs/news_release_attachments.Par.47489.File.dat/Coal%20Reform%20Fact%20Sheet%20Final.pdf).

Fact sheet for coal reform in the United States.

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\_\_\_\_\_. 2016. **Programmatic Environmental Impact Statement on Federal Coal Program.** Internet website: [http://www.blm.gov/wo/st/en/prog/energy/coal\\_and\\_non-energy/details\\_on\\_coal\\_peis.html](http://www.blm.gov/wo/st/en/prog/energy/coal_and_non-energy/details_on_coal_peis.html).

Details some information on the programmatic environmental impact statement review process, including project details and public scoping meeting details.

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\_\_\_\_\_. 2016. Internet website: [http://www.blm.gov/wo/st/en/prog/energy/coal\\_and\\_non-energy.html](http://www.blm.gov/wo/st/en/prog/energy/coal_and_non-energy.html).

Website with overview of the BLM's coal operations.

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\_\_\_\_\_. 2016. **Coal Operations.** Internet website: [http://www.blm.gov/wo/st/en/prog/energy/coal\\_and\\_non-energy.html](http://www.blm.gov/wo/st/en/prog/energy/coal_and_non-energy.html).

Summarizes federal coal operations, including how the government receives a return.

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\_\_\_\_\_. 2016. **Notice of Intent to Prepare a Programmatic Environmental Impact Statement to Review the Federal Coal Program and to Conduct Public Scoping Meetings.** BLM, Washington, DC. *Federal Register* 81(61):17720.

This describes the program and informs the public that the BLM will be conducting public scoping meetings.

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**US Department of the Interior, Bureau of Reclamation. 2016. Reclamation: SECURE Water Act Section 9503(c) - Reclamation Climate Change and Water.**

Report to Congress on anticipated impacts on water resources from climate change and adaptation strategies. It includes a summary of hydrology, climate, impacts on water supply and demand, and climate monitoring for the eight major Reclamation river basins of the west.

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**US Department of Interior, Fish and Wildlife Service. 1987. Endangered and Threatened Wildlife and Plants; Determination of Threatened Species Status for the Blackside Dace. Department of the Interior, US Fish and Wildlife Service, Washington, DC. Federal Register 52(113):22580-22585. Asheville, North Carolina.**

Federal Register notice for the US Fish and Wildlife Service, publishing a determination of threatened status for the blackside dace.

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**\_\_\_\_\_. 1996. Formal Section 7 Biological Opinion and Conference Report on Surface Coal Mining and Reclamation Operations under the Surface Mining Control and Reclamation Act of 1977. US Fish and Wildlife Service, Washington, DC.**

Formal consultation between the Office of Surface Mining and Reclamation and the US Fish and Wildlife Service. ESA Section 7 biological opinion on the proposed action to approve and conduct surface coal mining and reclamation under state and federal regulatory programs adopted pursuant to Surface Mining Control and Reclamation Act of 1977, P.L. 95-87, where such operations may adversely affect threatened or endangered species. As of June 1, 1996, 308 species listed as threatened or endangered occur in states with primacy, and 337 listed species occur in states with federal regulatory programs. Surface coal mining and reclamation could impact only a subset of these species.

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**\_\_\_\_\_. 2011. Endangered Status for Five Southeastern Fish Species. Internet Website: <https://www.fws.gov/southeast/news/2011/11-054.html>.**

This news release announces that the Cumberland darter, rush darter, yellowcheek darter, chucky madtom, and laurel dace are now federally listed as endangered species throughout their respective ranges.

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**\_\_\_\_\_. 2012. Endangered and Threatened Wildlife and Plants; Determination of Endangered Status for the Rayed Bean and Snuffbox Mussels Throughout Their Ranges. Department of the Interior, US Fish and Wildlife Service, Washington DC. Federal Register 77(30):8632-8665.**

Federal Register notice of the US Fish and Wildlife Service publishing a determination of endangered status for rayed bean and snuffbox mussels throughout their ranges.

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**\_\_\_\_\_. 2012. Endangered and Threatened Wildlife and Plants; Determination of Endangered Status for the Sheepnose and Spectaclecase Mussels Throughout Their Range. Department of the Interior, US Fish and Wildlife Service, Washington DC. Federal Register 77(49):14914-14949.**

Federal Register notice of the US Fish and Wildlife Service publishing a determination of endangered status for sheepnose and spectaclecase mussels throughout their range.

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**\_\_\_\_\_. 2012. The Cost of Invasive Species. US Fish and Wildlife, Region 7, Anchorage, Alaska.**

Fact sheet on the negative consequences of invasive species are far-reaching, costing the United States billions of dollars in damages every year. Invasive species are also a leading cause of population decline and extinction in animals.

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\_\_\_\_\_. 2013. **Endangered and Threatened Wildlife and Plants; Endangered Species Status for Diamond Darter.** Department of the Interior, US Fish and Wildlife Service, Washington DC. **Federal Register 78(144):45074-45095.**

Federal Register notice of the US Fish and Wildlife Service publishing a determination of endangered status for the diamond darter.

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\_\_\_\_\_. 2015. **Polar Bear (*Ursus maritimus*) Conservation Management Plan, Draft.** US Fish and Wildlife, Region 7, Anchorage, Alaska.

Management plan developed as a practical guide to implementation of polar bear conservation in the United States. Articulates the conditions whereby polar bears would no longer need the protections of the ESA and to lay out a collective strategy that moves toward achieving those conditions. Also includes how to improve the status of polar bears under the Marine Mammal Protection Act.

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\_\_\_\_\_. 2016. **Endangered and Threatened Wildlife and Plants; Threatened Species Status for the Big Sandy Crayfish and Endangered Species Status for the Guyandotte River Crayfish.** Department of the Interior, US Fish and Wildlife Service, Washington DC. **Federal Register 81(67):20450-20481.**

Federal Register notice of the US Fish and Wildlife Service publishing a determination of threatened species status for the big sandy crayfish and endangered species status for the Guyandotte River crayfish.

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**US Department of the Interior, National Parks Service. 2010. Understanding the Science of Climate Change Talking Points—Impacts to Arid Lands Natural Resource Report NPS/NRPC/NRR—2010/209.** National Parks Service, Missoula, Montana.

Talking points on the impacts of climate change on arid lands from the National Parks Service. The document is part of a series of bioregional summaries that provide scientific findings about climate change. The statements are intended to be used to communicate and answer general questions on climate change.

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\_\_\_\_\_. 2015. **Adapting to Climate Change in Coastal Parks.** Natural Resource Report NPS/NRSS/GRD/NRR—2015/961. National Parks Service. Fort Collins, Colorado.

Report published by the National Parks Service on the challenges posed over the next century from warming global temperatures. The greatest challenge is rising sea level. This report looks at coastal parks, assessing them for exposure to sea level rise.

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**US Department of the Interior, Office of the Secretary. 2016. Press Release: Interior Department Releases Report Underscoring Impacts of Climate Change on Western Water Resources.** Internet website: <https://www.doi.gov/pressreleases/interior-department-releases-report-underscoring-impacts-climate-change-western-water>.

This press release announces a report that identifies climate change as a growing risk to Western water management.

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**US Department of the Interior, Office of Surface Mining Reclamation and Enforcement. 2014. EA For Proposed Revision and Renewal of Permit WA0007D for Resumption of Mining: John Henry No. 1 Coal Mine. Internet website: [http://www.wrcc.osmre.gov/initiatives/johnHenryMine/JHM\\_EA.pdf](http://www.wrcc.osmre.gov/initiatives/johnHenryMine/JHM_EA.pdf).**

EA on the proposed resumption of coal mining at the John Henry No. 1 Coal Mine in King County, Washington, where no coal has been mined 1999. The proposed mining would be conducted over a six-year period, removing 740,000 short tons of minable coal reserves, and would be followed by a year of reclamation.

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**\_\_\_\_\_. 2015. Bull Mountains Mine No. 1: Federal Mining Plan Modification Environmental Assessment. Internet website: <http://www.wrcc.osmre.gov/initiatives/bullMountainsMine/BullMountainsMineEA.pdf>.**

EA on the Bull Mountains Mine No.1 underground coal mine in Montana. Analyzed the potential impacts of leasing five tracts of federal coal on 2,679.76 acres, which would allow the mine to continue producing coal at the current rate, instead of ceasing production as recoverable private coal reserves are exhausted.

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**\_\_\_\_\_. 2015. Bull Mountains Mine No.1 Federal Mining Plan Modification Environmental Assessment. Office of Surface Mining Reclamation and Enforcement, Denver, Colorado.**

Recommends approval, disapproval, or approval with conditions of the proposed mining plan modification to the Assistant secretary of lands and mineral management If approved, the mining plan would allow the proponent to conduct coal mining and reclamation in the coal lease and to economically recover federal, state, and private coal reserves through a logical mining unit.

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**\_\_\_\_\_. 2015. Stream Protection Rule Environmental Impact Statement. Washington, DC.**

DEIS on the proposed revisions to regulations for implementing the Surface Mining Control and Reclamation Act of 1977 (SMCRA). This would better protect streams, fish, wildlife, and related environmental values from the adverse impacts of surface coal mining operations. It would also provide mine operators with a regulatory framework to avoid water pollution and the long-term costs associated with water treatment, would more completely implement the requirements of SMCRA, would remedy deficiencies in existing rules, and would remove obsolete or unneeded provisions from existing rules.

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**\_\_\_\_\_. 2016. Spring Creek Mine Federal Coal Lease MTM 94378 Mining Plan Modification Environmental Assessment. Internet website: <http://www.wrcc.osmre.gov/initiatives/SpringcreekMineLBA1/documents/EA0616.pdf>.**

EA on the Spring Creek surface coal mine in Montana, which rectified the specific procedural deficiencies in the Office of Surface Mining Reclamation and Enforcement's documentation and approval of the NEPA analysis for the 2012 federal mining plan modification. It also analyzed potential changes to the extent or nature of those potential impacts previously evaluated, based on information included in State Mining Permit C1979012 (2014) and new information related to the environmental consequences specific to this action.

**US Departments of Interior, Energy, and Agriculture. 2007. Inventory of Assessed Federal Coal Resources and Restrictions to Their Development. August 2007. Internet website: [http://www.blm.gov/wo/st/en/info/newsroom/2007/september/NR\\_0709\\_03.html](http://www.blm.gov/wo/st/en/info/newsroom/2007/september/NR_0709_03.html).**

Based on recent United States Geological Survey assessments, federal coal resources in the United States total 957,000 million short tons, with the Powder River Basin containing approximately 58 percent of these resources and accounting for approximately 88 percent of recent production.

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**US Department of Interior, Secretary of the Interior. 2016. Order No. 3338: Discretionary Programmatic Environmental Impact Statement to Modernize the Federal Coal Program. US Department of Interior, Washington, DC.**

Secretarial Order directing the BLM to prepare a discretionary programmatic environmental impact statement (PEIS) that analyzes potential leasing and management reforms to the current federal coal program. The PEIS will help the Department of the Interior undertake a comprehensive review of the program and to consider whether and how the program may be improved and modernized. This would be done to foster the orderly development of BLM-administered coal on federal lands in a manner that gives proper consideration to the impact of that development on important stewardship values, while also ensuring a fair return to the American public.

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**US Department of State. 2016. Internet website: <https://keystonepipeline-xl.state.gov/nid/249254.htm#l>.**

Website with the Record of Decision for the Keystone Pipeline, denying the presidential permit application.

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**\_\_\_\_\_. Background Briefing on the Paris Climate Agreement. US Department of State, Washington DC.**

Transcript of conference call with senior Obama administration officials, briefing them just after the signing of the 2015 Paris Climate Agreement. Provides a context for the agreement, a summary of what was achieved, and the mechanisms for achieving the goals set forth in the agreement.

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**US District Court for the District of Columbia. 2015. Civil Action No. 14-1993 (RBW). Western Organization of Resource Council and Friends of the Earth v. Department of the Interior and Bureau of Land Management. August 27, 2015.**

Record from United States District Judge Reggie Walton on the case of Western Organization of Resource Councils and Friends of the Earth v. Department of the Interior and Bureau of Land Management for failure to supplement its environmental impact analysis of federal coal management program. The court granted the defendant's motion to dismiss.

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**US District Court for the District of New Mexico. 2016. Wild Earth Guardians vs. US Office of Surface Mining Reclamation and Enforcement and San Juan Mining. Civ. No. 1:14-cv-00112-RJ-CG. July 18, 2016.**

Court document from the United States District Court for the District of New Mexico outlining a course case between Wild Earth Guardians (Plaintiff) and United States Office of Surface Mining Reclamation and Enforcement et al. and San Juan Coal Company (Defendants) to modify a mining plan and allow a new environmental impact statement.

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**US Environmental Protection Agency. 1998. Study of Hazardous Air Pollutant Emissions from Electric Utility Steam Generating Units—Final Report to Congress. EPA-453/R-98-004a. US EPA, Office of Air Quality, Research Triangle Park, North Carolina.**

Report for Congress in response to legislative mandate from Section 112 of the Clean Air Act. This study investigates the hazards to public health reasonably anticipated to occur from exposure to electric utility steam generated emissions. Provides alternative control strategies for hazardous air pollutants and rulemaking activities to control hazardous air pollutants.

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**\_\_\_\_\_. 1999. Climate Change and Public Lands. US Environmental Protection Agency, Washington, DC.**

Report on how climate change could affect public lands in the United States, such as rising temperatures and changes in precipitation, soil moisture, and sea level.

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**\_\_\_\_\_. 2002. Clinch and Powell Valley Watershed Ecological Risk Assessment. US Environmental Protection Agency, Washington, DC.**

Watershed ecological risk assessment of the unique Clinch and Powell River System in southwestern Virginia. Strongly suggests that (1) coal mining and agricultural practices, past and present, are having adverse impacts on stream habitats, resulting in unacceptable losses of valuable and rare native fish and mussels; and (2) prompt implementation of practical risk lowering actions, such as reclaiming abandoned mines, preventing spills, excluding livestock from streams, and establishing riparian vegetation zones, can mitigate these adverse effects in the future.

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**\_\_\_\_\_. 2008. Integrated Science assessment For Oxides of Nitrogen – Health Criteria. US Environmental Protection Agency, Washington, DC.**

Synthesis of the most policy-relevant science forms the scientific foundation for the review of the primary (health-based) National Ambient Air Quality Standards for nitrous dioxide (NO<sub>2</sub>) currently set at 0.053 parts per million, annual average.

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**\_\_\_\_\_. 2008. Integrated Science assessment For Sulfur Oxides – Health Criteria. US Environmental Protection Agency, Washington, DC.**

Synthesis of the most policy-relevant science to form the scientific foundation for the review of the primary (health-based) National Ambient Air Quality Standards for monomeric sulfur oxides (SO<sub>x</sub>).

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**\_\_\_\_\_. 2009. Integrated Science assessment For Particulate Matter. National Center for Environmental Assessment-RTP Division, Office of Research and Development, US Environmental Protection Agency, Research Triangle Park, North Carolina.**

Integrated science assessment providing a review, synthesis, and evaluation of the most policy-relevant evidence. Communicates critical science judgments relevant to the National Ambient Air Quality Standards review. Forms the scientific foundation for the review of the primary (health-based) and secondary (welfare-based) National Ambient Air Quality Standards for particulate matter.

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**\_\_\_\_\_. 2011. The Benefits and Costs of the Clean Air Act from 1990 to 2020. US Environmental Protection Agency, Washington, DC.**

Report to Congress and the public, with comprehensive, up-to-date, peer-reviewed information on the social benefits and costs of the Clean Air Act and its 1990 amendments (CAA), including improvements in human health, welfare, and ecological resources, as well as the impact of the CAA's provisions on the US economy. Analysis makes it clear that the benefits of the CAA exceed its costs by a wide margin, making it a very good investment for the nation.

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**\_\_\_\_\_. 2011. The Effects of Mountaintop Mines and Valley Fills on Aquatic Ecosystems of the central Appalachian coalfields. US Environmental Protection Agency, Washington, DC.**

Report assessing the environmental impacts of mountaintop mines and valley fills (MTM-VFs) on streams in the central Appalachian coalfields. Conclusions, based on evidence from the peer-reviewed literature, and from the US Environmental Protection Agency's Programmatic Environmental Impact Statement released in 2005, are that MTM-VFs lead directly to five principal alterations of stream ecosystems.

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**\_\_\_\_\_. 2012. National Emission Standards for Hazardous Air Pollutants from Coal- and Oil-Fired Electric Utility Steam Generating Units and Standards of Performance for Fossil Fuel-Fired Electric Utility, Industrial-Commercial-Institutional, and Small Industrial-Commercial-Institutional Steam Generating Units; Final Rule. US EPA, Washington, DC. *Federal Register 77(32)*.**

EPA national emissions standards final rule.

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**\_\_\_\_\_. 2013. Impacts of Climate Change on the Occurrence of Harmful Algal Blooms. US Environmental Protection Agency, Washington, DC.**

Report on how climate change is predicted to change many environmental conditions that could affect the natural properties of freshwater and marine water, favor the growth of harmful algal blooms (HABs), and change habitat, such that marine HABs can invade and occur in freshwater. An increase in the occurrence and intensity of HABs may negatively impact the environment, human health, and the economy for communities across the United States and around the world.

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**\_\_\_\_\_. 2015. Regulatory Impact Analysis For The Clean Power Plan Final Rule. US Environmental Protection Agency, Washington, DC.**

Regulatory Impact Analysis discussing potential benefits, costs, and economic impacts of the Final Carbon Pollution Emission Guidelines for Existing Stationary Sources: Electric Utility Generating Units.

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\_\_\_\_\_. **2015. Inventory of US Greenhouse Gas Emissions and Sinks: 1990-2013. US Environmental Protection Agency, Washington, DC.**

This chapter summarizes the latest information on US anthropogenic greenhouse gas emission trends, from 1990 through 2013. To ensure that the US emissions inventory is comparable to those of other UNFCCC parties, the estimates presented here were calculated using methods consistent with those recommended in the 2006 Intergovernmental Panel on Climate Change Guidelines for National Greenhouse Gas Inventories. The structure of this report is consistent with the UNFCCC guidelines for inventory reporting.

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\_\_\_\_\_. **2015. Regulatory Impact Analysis of the Proposed Emissions Standards for New and Modified Sources in the Oil and Natural Gas Sector. US Environmental Protection Agency, Office of Air Quality Planning and Standards, Research Triangle Park, North Carolina.**

EPA analysis estimates regulatory impacts for 2020 and 2025. The analysis of 2020 is assumed to represent the first year the full suite of proposed standards is in effect and thus represents a single year of potential impacts. Impacts in 2025 are estimated to illustrate how new and modified sources accumulate over time under the proposed New Source Performance Standards. The regulatory impact estimates for 2025 include sources newly affected in 2025, as well as the accumulation of affected sources from 2020 to 2024 that are also assumed to be in continued operation in 2025, thus incurring compliance costs and emissions reductions in 2025.

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\_\_\_\_\_. **2015. Social Cost of Carbon. US Environmental Protection Agency, Washington, DC.**

This report discusses using the social cost of carbon to estimate climate benefits of rulemakings.

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\_\_\_\_\_. **2015. Oil and Natural Gas Sector: Emission Standards for New and Modified Sources. *Federal Register* 80(181), Friday, September 18, 2015/Proposed Rules**

*Federal Register* notice with action that proposes to amend the new source performance standards for the oil and gas natural gas source category by setting standards for both methane and volatile organic compounds. Requirements for methane emissions stems from the realization that methane is a greenhouse gas, and the EPA has linked it to climate change.

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\_\_\_\_\_. **2015. Climate Change in the United States: Benefits of Global Action. United States Environmental Protection Agency, Office of Atmospheric Programs, Washington, DC. EPA 430-R-15-001.**

Report reviews benefits of action on climate change in the United States, including avoiding extreme weather events, costly damages to certain sectors, and mitigation costs.

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\_\_\_\_\_. **2016. Nutrient Pollution: Sources and Solutions. Internet website: <https://www.epa.gov/nutrientpollution/sources-and-solutions>.**

Summary of nutrient pollution, including excessive nitrogen and phosphorus, that washes into water bodies and is released into the air as a result of agriculture, stormwater, wastewater, fossil fuels, and homes. Addresses this pollution at its source.

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\_\_\_\_\_. **2016. Inventory of US Greenhouse Gas Emissions and Sinks: 1990 – 2014. US Environmental Protection Agency, Washington, DC.**

Report summarizing the latest information on US anthropogenic greenhouse gas emission trends from 1990 through 2014. This report identifies and quantifies the country's prime anthropogenic sources and sinks of greenhouse gases to better address climate change.

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\_\_\_\_\_. **2016. Internet website: <https://www.epa.gov/climateindicators/climatechangeindicatorssealevel>.**

Website including climate change indicators, specifically sea level rise in the United States. Contains graph of cumulative sea level change in inches for the years 1880 to 2020. Uses data from Commonwealth Scientific and Industrial Research Organization and National Oceanographic and Atmospheric Administration.

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\_\_\_\_\_. **2016. Internet website: <https://www.epa.gov/coalash/coalashbasics>.**

Informational website on coal ash. Provides the basics on what coal is, the regulations that apply to it, how power plants use it, how much there is, and how the EPA regulates it. Provided in bullet point format for quick assessment.

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\_\_\_\_\_. **July 2016. Internet website: <https://www.epa.gov/mats>.**

Database of Mercury and Air Toxics Standards for the United States.

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\_\_\_\_\_. **September 2016. Internet website: <https://www3.epa.gov/crossstaterule/>**

Database of Cross-State Air Pollution Rates for the United States.

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\_\_\_\_\_. **2016. Climate Change Indicators: Ocean Acidity. Internet website: <https://www.epa.gov/climate-indicators/climate-change-indicators-ocean-acidity>.**

Website that describes changes in the chemistry of the ocean that relate to the amount of carbon dioxide dissolved in the water.

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\_\_\_\_\_. **2016. Coal Mine Methane – What EPA is Doing. June 29, 2016. Internet website: <https://www.epa.gov/epa-coalbed-methane-outreach-program/what-epa-doing>**

Website detailing the EPA's Coal Bed Methane Outreach Program and efforts to reduce coal mine methane emissions.

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\_\_\_\_\_. **2016. Natural Disasters: Flooding. Internet website: <https://www.epa.gov/natural-disasters/flooding>.**

Website that describes what to do in the event of a flooding disaster, as relates to preparedness, during the flood, and during recovery.

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\_\_\_\_\_. 2016. **Water And Climate Change Research. Internet website: <https://www.epa.gov/water-research/water-and-climate-change-research>.**

Website that describes the way the EPA conducts research to better understand the growing impacts of climate change on water quality and availability. This cutting-edge science helps determine and support new strategies for managing watersheds and wastewater, while reducing water-related energy demands.

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**US Geological Survey. 1920. Title 30-Mineral Lands and Mining. US Government, Washington, DC.**

Information on conditions of lease for coal. Contains information on term of lease, annual rentals, royalties, readjustment of conditions, diligent development, suspension, and operation and reclamation plan.

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\_\_\_\_\_. 1998. **A Digital Database of Coal Ownership Status. US Geological Survey.**

This database and its products are designed to help policymakers and land use planners make wise decisions regarding federal land use, while maintaining a healthy domestic energy industry by showing the coal ownership status across the United States.

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\_\_\_\_\_. 2012. **Assessment of Coal Geology, Resources, and Reserves in the Montana Powder River Basin. Open-File Report 2012-1113.**

Summarizes geology, coal resources, and coal reserves in the Powder River Basin assessment area in southeastern Montana.

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\_\_\_\_\_. 2013. **Assessment of Coal Geology, Resources, and Reserve Base in the Powder River Basin, Wyoming and Montana. Fact Sheet 2012-3143.**

Fact sheet from the USGS on the Powder River Basin's coal geology, resources, and reserve base.

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\_\_\_\_\_. 2014. **Modeling Uncertainty in Coal Resource Assessments, with an Application to a Central Area of the Gillette Coal Field, Wyoming. Scientific Investigations Report 2014-5196 US.**

Results of a study that help provide a better assessment of uncertainty than traditional qualitative resource classification.

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\_\_\_\_\_. 2015. **Coal Geology and Assessment of Coal Resources and Reserves in the Powder River Basin, Wyoming and Montana. Professional Paper 1809.**

Report presenting the final results of the first assessment of both coal resources and reserves for all significant coal beds in the entire Powder River Basin, northeastern Wyoming and southeastern Montana. Article estimates 304 billion short tons of underground coal resource in the Powder River Basin.

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\_\_\_\_\_. 2015. **Geospatial Data for Coal Beds in the Powder River Basin, Wyoming and Montana. Data Series 912. Reston, Virginia.**

Report that provides geospatial data for various layers and themes in a geographic information system format for the Powder River Basin, Wyoming and Montana.

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\_\_\_\_\_. **2015. Energy Resources Program - Coal Assessments. Internet website: <http://energy.usgs.gov/Coal/AssessmentsandData/CoalAssessments.aspx>.**

The USGS Energy Resources Program research efforts yield modern, digital assessments of the quantity, quality, location, and accessibility of the nation's coal resources; 37 percent of electricity produced in the United States is generated by coal-fired plants. Understanding the amount of coal reserves that are economically recoverable and of sufficient quality to meet current emission standards is important to ensure adequate future energy supply. Regional coal assessments provide an accurate appraisal of the amount of US coal that is realistically available for production in the near and mid-term future.

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\_\_\_\_\_. **2016. Internet website: <http://energy.usgs.gov/Coal/AssessmentsandData/CoalAssessments.aspx>.**

Website with information on coal assessments carried out by USGS.

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\_\_\_\_\_. **2016. Groundwater And Drought. Internet website: <http://water.usgs.gov/ogw/drought/>.**

Website describing how groundwater, surface water, and the integrated nature of the hydrologic system enable resource managers and policymakers to better prepare for and respond to drought. Provides groundwater data and information that resource managers and policymakers can use to prepare for and respond to drought.

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**US Government Accountability Office. 1979. Issues Facing the Future of Federal Coal Leasing. Report to the Congress of the United States. Publication EMD-79-47. US GAO, Washington, D.C.**

This report identifies and analyzes a broad range of issues affecting the development and implementation of a sound federal coal management program, particularly the use of Western coal in meeting America's energy needs. In 1979, the Secretary of the Interior announced a new federal coal program, calling for resumption of competitive leasing for the first time since a moratorium was imposed in 1971. Leasing was to resume in 1981. However, many questions remained unanswered, some of which GAO believed needed to be resolved before further long-term leasing could resume.

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\_\_\_\_\_. **2012. Coal Leasing: BLM Could Enhance Appraisal Process, More Explicitly Consider Coal Exports, and Provide More Public Information. Report to Congress. December 2012. GAO-14-164SU.**

GAO report examining the coal leasing process. States that, because there is typically little competition for federal leases, the BLM plays a critical role in ensuring that the public receives fair market value for the coal that is leased. However, BLM state offices differ in the approaches they use to estimate fair market value and the rigor of these reports. The BLM should update and ensure consistency of coal appraisal reports and should account for export value of coal.

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**\_\_\_\_\_. 2013. Climate Change. Various Adaptation Efforts Are Under Way at Key Natural Resource Management Agencies. May 2013.**

Study done by GAO with written comments from the Department of Agriculture, stating that the Forest Service agreed with the findings. The report examines steps that key federal natural resource management agencies have taken since 2007 to address adaptation. It also analyzes the agencies' climate change adaptation guidance and planning documents and interviewed agency officials.

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**\_\_\_\_\_. 2013. Coal Leasing: BLM Could Enhance Appraisal Process, More Explicitly Consider Coal Exports, and Provide More Public Information. Report GAO 14-140. US Government Accountability Office, Washington, DC.**

This report examines (1) the number of tracts leased, along with the trends in associated coal production and revenues generated since 1990; (2) the BLM's implementation of the process to estimate fair market value for coal leases; (3) the extent to which the BLM considers coal exports and domestic coal reserves when estimating fair market value; and (4) the extent to which the BLM communicates information on federal coal lease sales to the public. GAO recommends, among other things, that the BLM require state offices to use more than one approach to estimate fair market value, where practicable, to develop a mechanism to ensure that reviews of appraisal reports take place, and to take steps to release additional summary information on its websites, including past lease sales.

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**\_\_\_\_\_. 2014. BLM Could Enhance Appraisal Process, More Explicitly Consider Coal Exports, and Provide More Public Information. Feb. 4, 2014. Internet website: <http://www.gao.gov/products/GAO-14-140>.**

GAO report recommends, among other things, that the BLM require state offices to use more than one approach to estimate fair market value, where practicable, develop a mechanism to ensure that reviews of appraisal reports take place, and takes steps to release additional summary information on its websites, including past lease sales. The Department of the Interior concurred with these recommendations.

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**\_\_\_\_\_. 2014. Regulatory Impact Analysis. Development of the Social Cost of Carbon Estimates. United States GAO, Washington, DC.**

Report from the governmental advisory organization, with data and information compiled on the social cost of carbon. Used interagency and previously published data as a framework.

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**US House of Representatives, Office of the Law Revisions Counsel. 1976. 43 US Code, Section 1701. Congressional declaration of policy. US Congress, Washington, DC.**

Declaration of policy relating to federal lands and the management and use of such lands.

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**\_\_\_\_\_. 1990. Title 42. The Public Health and Welfare. US Government, Washington, DC.**

Instruction for creating reports related to Source reduction and Recycling data collection and EPA reports. Contains information on requirements, items included, provisions, and availability. Also includes information on how often reports need to be submitted

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\_\_\_\_\_. **1996. Title 30. Mineral Lands and Mining. US Government, Washington, DC.**

Information on the national mining and minerals policy, definition of minerals, and execution of policy under other authorized programs.

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\_\_\_\_\_. **2005. Title 30. 30 US Code, Section 20. Leases and Exploration. US Congress, Washington, DC.**

US policy relating to leases and exploration. Contains policy information on leases for coal and exploration licenses.

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**US Office of Federal Register, National Archives and Records Administration, US Government Printing Office. Code of Federal Regulations. 1983. Minerals Management. Title 43, Section 3000.**

Title 43 of the Code of Federal Regulations, Subchapter C, on minerals and management. Contains rules and regulations by the federal agencies regarding public land.

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**US Office of the Inspector General. 2013. Coal Management Program, US Department of the Interior. Report No.: CR-EV-BLM-0001-2012. June 2013.**

Report with 13 recommendations for the BLM to enhance coal sales and inspections after assessing its effectiveness in managing its coal program.

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**US Office of the President. 2013. The President's Climate Action Plan. June 2013.**

President Obama's Climate Action Plan to cut the carbon pollution that causes climate change and affects public health. Three-pillared plan to cut carbon pollution, to prepare the United States for the impacts of climate change, and to lead international efforts to combat global climate change and prepare for its impacts.

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\_\_\_\_\_. **2014. Climate Action Plan Strategy to Reduce Methane Emissions. March 2014.**

Climate action plan detailing strategy to reduce methane emissions. Reducing methane emissions can reduce climate change, and using methane can support economies while providing clean energy. This document details sources of methane and emission trends and lays out the strategy to reduce both domestic and international emissions and highlights examples of technologies and practices that are already helping to cut methane emissions.

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\_\_\_\_\_. **2014. The Cost of Delaying Action to Stem Climate Change. July 2014.**

Report pertaining to the costs associated with climate change. Focusing on the economic costs of climate change, it makes a case that delaying action will result in far greater costs.

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\_\_\_\_\_. **2016. Leaders' Statement on a North American Climate, Clean Energy, and Environment Partnership.** Internet website: <https://www.whitehouse.gov/the-press-office/2016/06/29/leaders-statement-north-america>.

Website detailing the commitment of Prime Minister Justin Trudeau, President Barack Obama, and President Enrique Peña Nieto to a competitive, low carbon, and sustainable North American economy and society. Article announces goals for clean power generation and driving down short-lived climate pollutants.

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\_\_\_\_\_. **2016. The Economics of Coal Leasing. Ensuring Fair Returns to Taxpayers. June 2016.**

This report informs on the coal market in the United States and provides an economic perspective on federal coal leasing and the effects of possible reforms. The report addresses programmatic review of the federal coal leasing program in 30 years, focusing on the taxpayer and concluding that there is an artificially low price for most federal coal. Two possible approaches are suggested to help achieve the ultimate goal of ensuring a fair return to the taxpayer from the federal coal leasing program.

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\_\_\_\_\_. **2016. US-Canada Joint Statement on Climate, Energy, and Arctic Research. March 10, 2016.** Internet website: <https://www.whitehouse.gov/the-press-office/2016/03/10/us-canada-joint-statement-climate-energy-and-arctic-leadership>

Website with article describing President Barack Obama and Prime Minister Justin Trudeau of Canada sharing a common interest in a prosperous and sustainable North American economy by joining together and implementing the Paris Agreement.

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**US Senate. 2016. Concerns about the Economics of Coal Leasing on Federal Lands: Ensuring a Fair Return to Taxpayers. July 14, 2016.**

Letter signed by multiple senators that expresses concern over the report entitled "The Economics of Coal Leasing on Federal Lands: Ensuring a Fair Return to Taxpayers," published by the President's Council on Economic Advisers. Cites conflicts with NEPA as main concern.

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**United States of America. 2015. US Cover Note, INDC and Accompanying Information.** Internet website: <http://www4.unfccc.int/Submissions/INDC/Published%20Documents/United%20States%20of%20America/1/US%20Cover%20Note%20INDC%20and%20Accompanying%20Information.pdf>.

US transmittal to the UN Secretariat of its intended nationally determined contribution to global greenhouse gas emissions, with a target year of 2025.

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**University Cooperation for Atmospheric Research. 2001. Internet website.** Internet website: <https://www.ucar.edu/communications/staffnotes/0107/mercury.html>.

Internet website containing staff notes for July 2001. This note explains research being done by Friedli and Radke on forest fires to determine what they have to do with mercury in fish.

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**University of Oxford. 2016. Internet website: <http://www.smithschool.ox.ac.uk/research-programmes/stranded-assets/background.php>.**

Website with information on stranded assets, including definitions, timelines, and several other factors.

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**Unofficial Networks. 2016. Internet website: <http://unofficialnetworks.com/2016/07/noaa-graphic-shows-record-breaking-heat-dome-affecting-north-america>.**

Brief summary of report released by the National Oceanographic and Atmospheric Administration on the heat dome affecting North America.

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**Utah Department of Health. 2016. Utah Asthma Program. Internet website: <http://www.health.utah.gov/asthma/>.**

This website of the Utah Department of Health includes asthma information and links to asthma resources.

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**van Breevoort, P., et al. 2015. Climate Action Tracker—The Coal Gap: Planned Coal-Fired Power Plants Inconsistent with 2 Degrees C and Threaten Achievement of INDCs. Climate Action Tracker, Berlin, Germany.**

Report on how holding temperature increase below 2 degrees Celsius, or below 1.5 degrees Celsius by 2100 requires a rapid decarbonization of the global power sector. This means phasing out emissions from coal-fired power by 2050. If the planned new coal capacity, estimated by the Global Coal Plant Tracker, were to be built, it would exceed the required levels by 400 percent.

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**Vannote, R. L., and G. W. Minshall. 1982. Fluvial processes and local lithology controlling abundance, structure, and composition of mussel beds. Internet website: <http://www.pnas.org/content/79/13/4103.full.pdf>.**

This report details the study of bivalve molluscan fauna in the upper 40-kilometer canyon reach of the Salmon River.

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**Vano, J., et al. 2014. “Understanding uncertainties in future Colorado River streamflow.” *American Meteorological Society*. January 2014: 59-78.**

This document synthesizes studies on Colorado River streamflow projections. Discusses differences in existing models and the implications of the models for water management. Article concludes with four major reasons for discrepancies in past projections of streamflow.

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**Vaughan, A. 2016. “Abolition of DECC ‘major setback for UK’s climate change efforts.” *The Guardian*. Internet website: <https://www.theguardian.com/environment/2016/jul/15/deccabolitionmajorsetbackforukclimatechangeefforts>.**

Article on British efforts to combat global warming as the Department of Energy and Climate Change is being abolished. The article frames the abolition as a major setback. The reorganizing of departments has put climate change at risk of falling off of the policy agenda.

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**Veron, J. E. N., et al. 2009. The coral reef crisis: The critical importance of <350 ppm CO<sub>2</sub>. Internet website: <http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.434.5355&rep=rep1&type=pdf>.**

This study discusses how the temperature-induced mass coral bleaching is killing coral reefs on a wide geographic scale, due to climate change. The report discusses the importance of not rising above 350 ppm of CO<sub>2</sub> in the atmosphere in order to protect coral reefs.

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**Vine, D. 2016. Achieving the United States' Intended Nationally Determined Contribution. Center for Climate And Energy Solutions. 7 pp.**

Paper looks at the progress that has been achieved since 2005, the effect existing and proposed policies will have by 2025, as well plausible steps to fill the gap and attain the proposed emission cuts for the United States.

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**Vulcan, Inc. 2016. Federal Coal Leasing Reform Options: Effects on CO<sub>2</sub> Emissions and Energy Market. Vulcan, Inc. and ICF International, Fairfax, Virginia.**

This report summarizes the results of multiple base and policy cases. The base case is the reference case against which the policy cases are compared to assess the incremental impact of the policy.

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**\_\_\_\_\_ . 2016. Internet website: <http://www.vulcan.com/News/Articles/2016/Coal-Leasing-Report>.**

Website with news release about potential changes to US Federal Coal Leasing Program. This article announces a new report that analyzes effects on CO<sub>2</sub> emissions and energy markets from coal reform.

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**Wagner, J. C., et al. 1985. "Erionite exposure and mesotheliomas in rats." *Br. J. Cancer* 51:727-730.**

Peer reviewed journal with findings of study investigating epidemiological and environmental surveys in the Cappadocian region of Turkey and the link between high incidence of pleural and peritoneal mesothelioma and villages with the zeolite fibers released from volcanoes.

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**Walker, J., and B. Liebendorfer. 1998. Long-Term Stewardship at the Nevada Test Site. Prepared for the State Tribal Government Working Group.**

Paper discusses the US Department of Energy's long-term stewardship responsibilities at the Nevada Test Site. Concludes that the Department's proposal to acquire, in perpetuity, control of certain selected areas is appropriate. Also determines necessary methods for the future.

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**Walters, D., et al. 2015. Mercury and Selenium Accumulation in the Colorado River Food Web, Grand Canyon, USA. US Geological Survey, Environmental Toxicology and Chemistry.**

USGS report examining mercury and selenium and exposure risks to humans and wildlife in the Colorado River.

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**Warren, M. L., and W. R. Haag. 2004. "Spatio-temporal patterns of the decline of freshwater mussels in the Little South Fork Cumberland River, USA." *Biodiversity and Conservation* 14:1383-1400. Internet website: [http://www.srs.fs.usda.gov/pubs/ja/ja\\_warren003.pdf](http://www.srs.fs.usda.gov/pubs/ja/ja_warren003.pdf)**

This report studies the density and number of species to evaluate the probable sequence and cause of observed mussel declines.

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**Warren, R., J. Price, and A. Fischlin. 2010. Increasing impacts of climate change upon ecosystems with increasing global mean temperature rise. *Climatic Change*. Internet website: [http://www.sysecol.ethz.ch/Articles\\_Reports/Wa152.pdf](http://www.sysecol.ethz.ch/Articles_Reports/Wa152.pdf).**

This report looks at future projected ecosystem changes related to quantified, projected, local and global climate changes.

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**Washington State Department of Ecology. 2009. Health Effects and Economic Impacts of Fine Particle Pollution in Washington. Washington State Department of Ecology, Air Quality Program. Internet website: <https://fortress.wa.gov/ecy/publications/documents/0902021.pdf>.**

This report describes a Department of Ecology analysis to quantify the health and monetary impacts of fine particle pollution in the state. The analysis was done by comparing estimates of the impacts at existing pollution levels to estimates of health effects at a "clean air," or background, level.

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**\_\_\_\_\_. 2011. Letter to Wyoming BLM Director Donald A. Simpson on the South Hilight field coal lease application. May 11, 2011.**

Letter citing Secretary of the Interior Salazar's recent announcement of coal lease sales and pending applications for 3.7 billion tons of Powder River Basin coal. Calls for a supplemental EIS to consider the impacts of exporting coal, due to the likelihood that the new coal is destined for export markets.

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**Washington State Department of Ecology and Oregon Department of Environmental Quality. 2011. Letter to Lands and Minerals Management and the BLM.**

The letter requests a supplemental EIS to evaluate impacts of transporting coal through Oregon and Washington for overseas export for the Wright Area Coal Lease and the South Hilight Field.

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**Weitzman, M. L. 2010. GHG Targets as Insurance against Catastrophic Climate Damages. National Bureau Of Economic Research. Working Paper 16136 Internet website: <http://www.nber.org/papers/w16136>.**

Working paper focused on the "damages function" and keeping greenhouse gas levels down to ensure against climate risks from high temperatures. This paper provides numerical examples of the indirect value of greenhouse gas concentration targets for insight and prevention of climate change temperatures and damages. The results find that the welfare losses from uncertainty from using a quadratic damages function or thin-tailed temperature distribution have been underestimated.

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**Welch, R. December 4, 2015. Bureau of Land Management, Lakewood, Colorado.**

Letter with attachments sent from the BLM to Colorado Governor John Hickenlooper. Letter states the proposed approval of the royalty rate reduction for up to 13.1 million tons for four years. Also contains attached draft decision and Form 1842-1.

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**Westerling, A., et al. 2003. "Climate and wildfire in the western United States." *American Meteorological Society BAMS* 594-604.**

Paper describing wildfires, causes, and trends. Also models wildfires so that several fire seasons can be projected ahead of time. This is the first study to consider the larger picture of wildfire for the entire eastern United States.

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**Westerling, A., et al. 2006. "Warming and earlier spring increase western US forest wildfire activity." *Science* 313:940-943.**

Article investigating the western United States forest wildfire activity's increase in recent decades. The article creates a comprehensive database of large wildfires in the western United States since 1970, comparing it with hydroclimatic and land-surface data. Results provide details on wildfire increases on a timescale, with hydrological information.

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**Whatcom Docs. 2016. Position Statement and Appendices: Coal Train Facts. Internet website: [www.coaltrainfacts.org/whatcom-docs-position-statement-and-appendices](http://www.coaltrainfacts.org/whatcom-docs-position-statement-and-appendices).**

Dozens of Whatcom County, Washington, medical professionals conducted a review of the health impacts of coal train traffic and found significant effects associated with both diesel particulate matter and coal dust, including impaired pulmonary development, increased cardiopulmonary mortality, increased severity and frequency of asthma attacks, increased rates of heart attacks, increased cancer rates, chronic bronchitis, emphysema, pulmonary fibrosis, and more. They include resources from the American Heart Association and American Lung Association.

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**Whitaker, M., G. Heath, P. O'Donoghue, and M. Vorum. 2012. "Life cycle greenhouse gas emissions of coal-fired electricity generation." *Journal of Industrial Ecology* 16:S53-S72. Internet website: <http://onlinelibrary.wiley.com/doi/10.1111/j.1530-9290.2012.00465.x/pdf>.**

This journal article focuses on reducing variability and clarifying central tendencies in estimates of life cycle greenhouse gas emissions.

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**White House. 2013. Executive Order. Preparing the United States for the Impacts of Climate Change. Office of the Press Secretary, Washington, DC.**

Executive Order issued by President Obama to better prepare the United States for the impacts of climate change in the areas of policy, modernization, management, information, planning, among other topics.

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**\_\_\_\_\_. 2013. Internet website: <https://www.whitehouse.gov/the-press-office/2013/06/25/remarks-president-climate-change>.**

Website with complete remarks of President Obama on climate change at Georgetown University.

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\_\_\_\_\_. 2015. **Statement by the President on the Keystone XL Pipeline. Office of the Press Secretary. November 6, 2015.**

Statement declaring the Keystone XL pipeline as not in the nation's best interest, due to lack of economic benefit. It would have no impact on gas prices and would not benefit energy security.

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\_\_\_\_\_. 2015. **Internet website: <https://www.whitehouse.gov/the-press-office/2015/03/31/fact-sheet-us-reports-its-2025-emissions-target-unfccc>.**

Website with an overview of the United States commitment to cut net greenhouse gas emissions and the steps that have been taken to achieve that goal. The target is to cut 26 to 28 percent of emissions by 2025.

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\_\_\_\_\_. 2016. **Internet website: <https://www.whitehouse.gov/the-press-office/2016/06/29/north-american-climate-clean-energy-and-environment-partnership-action>.**

Announcement of a partnership between the United States, Canada, and Mexico to protect and work toward a more environmentally friendly nation.

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**The White House Office of the Press Secretary. 2014. US-China Joint Announcement on Climate Change. Internet website: <https://www.whitehouse.gov/the-press-office/2014/11/11/us-china-joint-announcement-climate-change>.**

Press release about the November 12, 2014, meetings in Beijing, which provides a framework for collaborating to reduce greenhouse gas emissions.

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**Whiteside, T., and G. Fauth. Heavy Traffic Still Ahead. Prepared for Western Organization of Resource Councils. Billings, Montana.**

Report detailing major energy companies and transportation companies proposals in the Powder River Basin. Examines existing Canadian export coal terminals and provides an update to Heavy Traffic Ahead 2012, by describing the current plans for coal production and rail movements from current and proposed Powder River Basin mines to proposed export coal terminals.

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**Whitney, E. 1999. Beware of Orange Clouds. High Country News. Internet website: <http://www.hcn.org/issues/154/4970>.**

Article on blasting in the Powder River Basin in open pit coal mines and the clouds of toxic nitrogen oxide gas created.

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**Wickham, J. D., et al. 2007. "The effect of Appalachian mountaintop mining on interior forest." Landscape Ecology 22:179-187. Internet website: <http://www.srs.fs.usda.gov/pubs/26001>.**

This report uses spatial convolution to identify the effects of mountaintop mining on interior forests.

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**Wiener, J., et al. 1990. "Partitioning and bioavailability of mercury in an experimentally acidified Wisconsin lake." *Environmental Toxicology and Chemistry* 9:909-918.**

Abstract of article that studied the portioning of mercury in a clear water seepage lake in Wisconsin, comparing it to a reference basin. Details the importance of biogeochemical cycling and uptake by fish.

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**WildEarth Guardians, et al. 2010. Petition for Rulemaking Under the Clean Air Act to List Coal Mines as a Source Category and to Regulate Methane and Other Harmful Air Emissions from Coal Mining Facilities Under Section 111. Denver, Colorado.**

This is a petition to the EPA to discharge its duty to confront and control the adverse air quality impacts of coal mines in the United States.

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**Wilhelm, S. 2014. "Coal trains kill cold trains: Fruit delivery service shuts down as rail congestion heats up." *Puget Sound Business Journal*.**

The article discusses congestion on rail lines from coal and oil trains that has forced shutdown of an express rail service transporting fruit in refrigerated cars and is curtailing delivery of produce to the Midwest and East Coast.

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**Williams-Derry, C. 2016. Unfair Market Value II. Coal Exports and the Value of Federal Coal. Sightline Institute. June 2016.**

Report addressing the heavy reliance the coal industry has on federal coal leases that were purchased at low prices and expanding on the opportunity for improvement during the upcoming three-year moratorium on all new federal coal leases. The article concludes that the three-year break in coal leasing will give the government the opportunity to ensure that federal coal leasing policy represents the public interest.

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**\_\_\_\_\_. No date. The Rise and Fall of the Asian Coal Bubble. Sightline Institute.**

Report from the Sightline Institute with information and analysis on a potential market bubble in the Asian coal market.

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**Wilson, R., et al. 2015. Analysis of the Tongue River Railroad Draft Environmental Impact Statement. Prepared for Sierra Club and EarthJustice. September 23, 2015.**

Report from Synapse Energy Economics, Inc., prepared for Sierra Club and EarthJustice analyzing the Tongue River Railroad Draft Environmental Impact Statement. Addresses the proposed 42-mile rail line on the Powder River to transport coal. Analysis found that the DEIS lacked transparency and verifiable data that become problematic in the public decision-making process. The analysis also found issue with the Surface Transportation Board's conclusions on greenhouse gases and climate impacts of the Tongue River Railroad.

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**Wong, L. D., D. de Jager, and P. van Breevoot. 2016. The incompatibility of high-efficient coal technology with 2 [degrees] C scenarios. Ecofys. April 2016.**

Report examining the move toward a low-carbon economy that would be necessary to limit global warming to stay below 2 degrees Celsius. The report shows that high efficiency, low emissions coal-fired electricity generation is incompatible with the 2 degree goal, while detailing the implications of the 2 degree scenario on coal-fired electricity, comparing IEA World Energy Outlook 2015 to IPCC 2 degree scenarios, and looking at planned coal capacity in relation to the those scenarios. The report details how coal is not compatible with the 2 degree goal, but it does not examine alternatives.

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**Wood Mackenzie. 2016. Executive Summary: Impact of a Federal Coal Lease Program Reset.**

Summary only. Highlights key issues surrounding federal coal leases and draws out implications.

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**WORC. 2014. Heavy Traffic Ahead, February; Heavy Traffic Still Ahead, July.**

Heavy Traffic Still Ahead updates WORC's July 2012 report, Heavy Traffic Ahead, and reevaluates the anticipated increase in coal train traffic in light of the current proposals for new or expanded port facilities in the Pacific Northwest. In addition, the update discusses the combined effects of oil trains traveling from North Dakota over the same routes. The report also identifies impacts on communities along the transport route, consequences for existing rail users, including grain shippers and passenger service, and how coal export could affect rail corridors already near capacity. Both reports are available at <http://heavytrafficahead.org/>.

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**WORC and Powder River Basin Resource Council. 2015. Letter to BLM on the Buffalo PRMP/EIS.**

This letter discusses comments on the proposed Buffalo Field Office Resource Management Plan and EIS. The organizations' comments concern lack of an alternative to encourage reclamation and to disclose impacts of coal and oil and gas exploration, drilling, and export.

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**WORC, NWF, and NRDC, Undermined Promise II, 2015. Internet website: [www.underminedpromise.org](http://www.underminedpromise.org).**

The report updates the analysis of the status of coal surface mine reclamation in five western states 30 years after passage of the federal Surface Mining Control and Reclamation Act (SMCRA). It includes an overview of the impacts of coal mining and reclamation practices on wildlife and the plants that they depend on and a case study of issues around sage-grouse habitat restoration on mined lands. Coal mining has trended downward since 2008, and there is a growing push for export. Enforcement of SMCRA is crucial to maintain environmental protections.

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**World Bank Group. No Date. Coal Mining and Production. Internet website: [https://www.ifc.org/wps/wcm/connect/79a98080488552b5ac5cfe6a6515bb18/coal\\_PPAH.pdf?MOD=AJPERES](https://www.ifc.org/wps/wcm/connect/79a98080488552b5ac5cfe6a6515bb18/coal_PPAH.pdf?MOD=AJPERES).**

This is a report on the coal mining industry, including description and practices, waste characteristics, pollution prevention and control, target pollution loads, emission guidelines, and monitoring and reporting.

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**World Health Organization. 2007. Exposure to Mercury: A Major Public Health Concern. World Health Organization, Geneva, Switzerland.**

This report discusses the sources of mercury pollution and associated health impacts.

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**\_\_\_\_\_. 2011. Tackling the Global Clean Air Challenge. World Health Organization, Geneva, Switzerland.**

This report details new findings on the health effects of persistently elevated levels of particle pollution.

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**\_\_\_\_\_. 2016. Arsenic. World Health Organization, Geneva, Switzerland.**

This report discusses the sources of arsenic exposure and associated health effects.

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**World Resources Institute. 2003. The Greenhouse Gas Protocol for Project Accounting. World Business Council for Sustainable Development.**

The protocol provides specific principles and methods for quantifying and reporting greenhouse gas reductions, i.e., the decreases in greenhouse gas emissions, or increases in removals or storage from climate change mitigation projects (greenhouse gas projects).

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**WWC Engineering. 2010. Wright Area Coal Lease Applications Final Environmental Impact Statement. WWC Engineering, Sheridan, Wyoming.**

FEIS assessing the environmental consequences of decisions to hold competitive, sealed-bid sales and issue leases for six federal coal maintenance tracts in Campbell County, Wyoming (the Powder River Basin) as a result of coal lease applications submitted by Ark Land Company, Jacobs Ranch Coal Company, and BTU Western Resources, Inc. As applied for, the Wright area coal lease-by-application tracts include approximately 18,021.73 acres containing approximately 2.570 billion tons of federal coal.

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**Wyden, R. No date. Fact Sheet: Federal Coal Royalties and Their Impact on Western States.**

Fact sheet on royalty revenue collected by the BLM. Contains categories of Wyoming, Montana, Colorado, and Utah, as well as reference tables from Office of Natural Resources Revenue

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**\_\_\_\_\_. Various dates. Wyden correspondence, 2013-2014.**

Folder containing nine documents with correspondence with Natural Resources Committee, incoming Chairman Ron Wyden.

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**Wyden, R., and L. Murkowski. 2013. Letter to Ken Salazar, Department of the Interior regarding coal royalties.**

The letter writer requests Department of the Interior to provide accounting of violations of law related to royalty payments and steps to be taken to ensure a fair return to the public on coal sold internationally.

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**Wyoming Department of Environmental Quality. 2016. Permit termination for Medicine Bow Fuel and Power Coal to Liquid Project. July 1, 2016.**

Letter from Wyoming Department of Environmental Quality terminating a permit after failure to follow and abide by Industrial Sitting Council order.

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**\_\_\_\_\_. 2015. Letter to Alpha Coal West regarding self-bonding.**

The letter states that Alpha Coal West does not qualify for self-bonding and needs to substitute corporate sureties or other credit or securities in order to continue business.

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**Wyoming Mining Association. 2016, The 2015-2016 Concise Guide to Wyoming Coal. 2:4-5**

Informational report from the Wyoming Mining Association on Coal detailing coal production, the technology, revenue, and environmental impacts that coal has on Wyoming.

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**\_\_\_\_\_. 2016. Internet website: <http://www.wyomingmining.org/economics>.**

Website that contains information on the economics of minerals in Wyoming. Main focuses are on severance tax benefits, coals economic impact, and coal mining jobs.

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**Yager, L. 2009. United States Government Accountability Office, Washington, DC. July 8, 2009.**

Letter to the Committee on Finance Chairman Max Baucus regarding how greenhouse gas emissions pricing could affect the international competitiveness of US industries and trade measures being considered as part of proposed US climate change.

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**Yale University. 2016. Internet website: [http://e360.yale.edu/slideshow/loss\\_of\\_arctic\\_sea\\_ice\\_already\\_influencing\\_weather/74/4/](http://e360.yale.edu/slideshow/loss_of_arctic_sea_ice_already_influencing_weather/74/4/).**

Website from Yale reporting on the loss of arctic sea ice and its influence on weather. Provides five weather map diagrams with descriptions of this trend. Fulfills the roll of visual aid for the topic of weather and ice melt from climate change.

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**Young, P., et al. 2012. "Isocyanic acid in a global chemistry transport model: Tropospheric distribution, budget, and identification of regions with potential health impact." *Journal of Geophysical Research: Atmospheres* 117.**

Abstract of article that conducts a study using a global transport model to estimate the distribution of isocyanic acid. This toxic acid can be the result of both anthropogenic and biomass burning sources. With a fixed heterogeneous loss rate the value of tropospheric concentrations were reduced to zero. The article suggests more observational data to evaluate the model.

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**Yuen, A. 2016. Coal: A Duel Between Policy and Markets. Citi Group Global Markets, Inc., Citi Research.**

Report published by Citi Research with a look into the future of the coal industry for investment purposes. Contains data and analysis on future projections for demand on coal.

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**Zamor, R. M., and G. D. Grossman. 2007. "Turbidity affects foraging success of drift-feeding rosyside dace." *American Fisheries Society* 136:167-176. University of Georgia, Athens.**

This article examines the effects of suspended sediment on reactive distance and prey capture success at spring, autumn, and summer temperatures for rosyside dace.

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**Zimmerman, G., C. Moser, J. Goad, M. Lee-Ashley. 2015. *Ensuring Taxpayers Receive a Fair Share for American's Public Resources*. Center for American Progress. Washington, DC.**

This report looks at the return that taxpayers receive from public resources and examines three guiding principles for fair share reforms on public lands.

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**Zubets-Anderson, A. 2016. *Coal in the 21st Century: Bankruptcy and Financing Rating Agency's Perspective*. Moody's Investor Service.**

Ratings report put out by Moody's investor services on the state of coal in the twenty-first century. Headlined by unprecedented market shifts leaving many companies in industry having to declare bankruptcy.

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**Zukoski, E. 2010. *Comments of Colorado Wild et al. on Federal Coal Lease Modifications COC-1362 and COC-67232*. EarthJustice.**

Scoping letter comments submitted to Supervisor Richmond by EarthJustice on behalf of Colorado Wild, Wild Earth Guardians, High Country Citizens' Alliance, Wilderness Workshop, Sierra Club, The Wilderness Society, and Defenders of Wildlife.

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**\_\_\_\_\_. *BLM Must Reject Mountain Coal Company's Sep. 2014 Request for Royalty Relief on Federal Coal Leases C-1362 and COC-67232*. EarthJustice.**

Letter on behalf of High County Conservation Advocates, Sierra Club, and Wild Earth Guardians urging the Bureau of Land Management to reject Mountain Coal Company's request for royalty relief on federal coal Leases. Letter explains reasons why the organizations are against the request.

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**\_\_\_\_\_. *2016. Recent Arch Coal Actions Further Undermine Mountain Coal Company's September 2014 Request for Royalty Relief on Federal Coal Leases C-1362 and COC-67232*. EarthJustice.**

Additional information regarding previous letter, "BLM Must Reject Mountain Coal Company's Sep. 2014 Request for Royalty Relief on Federal Coal Leases C-1362 and COC-67232." This information relates to the \$8 million dollars in bonus that Mountain Coal Company had given.

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