



CLIMATE WATCH

THE BULLETIN OF THE GLOBAL CLIMATE COALITION

Volume 1 Issue 3

February 1993

U.S. LEADS IN STRATEGY TO REDUCE GREENHOUSE EMISSIONS

At a recent meeting of the National Energy Resource Organization, the majority staff director for the Senate Energy and Natural Resources Committee responded to questions about a climate change strategy under the new administration. He said, "We already have a program to address global climate change—the National Energy Policy Act...."



By John Shlaes

In fact, the United States is one of few countries in the world that can actually point to concrete measures on its books to meet the challenges of reducing carbon dioxide emissions.

Some have attacked the United States for having no "strategy" for dealing with any potential adverse climate change. These criticisms are often coupled with a call for a carbon-based energy tax or rigid targets and timetables for emissions reductions. But a "strategy," by definition, is "a careful plan of action." Jumping headlong into a drastic carbon-based energy tax (whether unilateral or across the OECD) or subscribing to arbitrary targets and timetables is hardly careful, and doesn't provide a platform for America's future.

The National Energy Policy Act (NEPA) can rightly be called a major part of a U.S. "strategy" for tackling climate change. This comprehensive program, which Department of Energy (DOE) Secretary Hazel R. O'Leary calls her department's first priority, paired with U.S. submission to the U.N. of a

"National Action Plan" puts the U.S. far ahead of other countries in both planning and measures aimed at reducing greenhouse gas emissions. The NEPA addresses the issue under Title XVI, "Global Climate Change," establishing a number of mandates (see the table below) for federal action.

The act provides incentives for increased energy efficiency that will result in decreased emissions of greenhouse gases. At the same time, the act is sensitive to our incomplete understanding of climate change issues, and aims to help build a foundation of knowledge on which future policy actions can be based.

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ENERGY POLICY ACT OF 1992 ACTION REQUIREMENTS

TITLE XVI – GLOBAL CLIMATE CHANGE

WHO	WHAT	WHEN
Secretary	Report to Congress on global climate change	October 1994
President & Secretary	Report to Congress on National Energy Policy Plan including a least-cost energy strategy	February 1, 1993
Secretary	Establish a director of climate protection	April 1993
Secretary	Report to Congress on alternative policy mechanisms for reducing greenhouse gas generation	April 1994
Secretary	Inventory aggregate emissions of each greenhouse gas for each year	October 1993
Secretary	Issue guidelines for voluntary information collection and reporting on greenhouse gas sources	April 1994
Secretary	Establish a data base of voluntarily reported information	April 1994
Secretary & AID	Enter into written agreement to carry out innovative environmental technology transfer program	March 23, 1993
President	Decide which plan to use if DOE and AID cannot reach agreement	90 days after memo is received
Secretary	Identify potential energy projects in host countries	June 21, 1993
Secretary	Solicit proposals from U.S. firms	October 1993
Secretary	Prepare a list of eligible technologies under technology transfer program	April 1993
Secretary	Select proposals	February 21, 1993
Secretary & AID	Report to Congress on progress in introducing innovative energy technologies to reduce pollutants	Annually

GLOBAL CHANGE ENCYCLOPEDIA AVAIL- ABLE IN MID-1993

Geoscope, a PC-based global change "encyclopedia" bringing data together from a large number of Earth-monitoring satellites, will be offered to the public in mid-1993, according to its publisher, the Canadian Space Agency.

Geoscope will offer more than 150 computerized data sets, along with satellite images from the last 20 years, which can be used to manipulate and analyze global changes. The package will include software and tools to compare data, superimpose images, create maps and transparencies, and produce scenarios.

Geoscope will be available on diskettes or CD-ROM optical disks for IBM-compatible personal computers. For a brochure, contact the Canadian Space Agency, External Relations, 500 Rene-Levesque Blvd. W., Montreal, Quebec H2Z 1Z7, Canada. ●

SCIENCE WATCH: QUESTIONS ON RECONSTRUCTIONS OF PAST CLIMATES

Recently scientists have tried to unlock clues to the history of the Earth's climate by examining fossils and pollen records. Scientists have taken fossils and pollen samples for plants that still exist today and used that information to get a picture of the climate in a particular area thousands of years ago.

The assumption, of course, is that the climate in which those plants can exist today must have been the climate in which they existed in the past. That is, if a species of plant today lives in a dry area, scientists assume that the area in which pollen samples and fossils are found was dry in the past.

But a recent report in *Nature* magazine suggests that this basic assumption may not be valid. The report found that plants today may use water 100 percent more efficiently as they did in the last ice age. The report found that the improvement in efficiency is a result of higher atmospheric concentrations of

carbon dioxide, which increases water use efficiency in most plant life.

The study says that because of the increased water use efficiency in most plants today, they can grow in areas that were once too dry for them. Thus, it may be inaccurate for scientists to build their pictures of past climates on the basis of the assumptions about the environmental tolerances of plant life. ●

U.S. Leads

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For example, the NEPA calls on the DOE to issue guidelines for voluntary reporting of emissions reductions by industry. As these reductions may make businesses eligible for emissions credits in the future, industry has an incentive to take sensible reduction measures now. The NEPA also provides \$100 million for 1993-1998 for DOE to create a technology transfer program, which will address the challenge of reducing emissions from developing countries, whose emissions will account for 85 percent of future worldwide emissions in the next 30 years as their economies and populations grow.

Under NEPA, these and other actions will take place against the backdrop of a stepped-up effort to assess U.S. options for further climate change measures. The DOE has two years to prepare a report to Congress assessing the value of stabilizing or reducing by 20 percent greenhouse gases by 2005. The report will include evaluations of the socioeconomic, energy and competitive impacts on American taxpayers.

The NEPA reflects a prudent approach to climate change issues. It ensures progress toward our goals for energy efficiency and emissions reductions, while allowing American industry enough flexibility to take the actions that make the most sense for our economy and our future. ●

TEMPERATURE DATA SHOW COOLING IN '92

According to satellite temperature data compiled by NASA's Roy Spencer and John Christy of the University of Alabama, the year 1992 was at least 0.3 degrees Celsius cooler than 1990 or 1991, and 1.84 degrees Celsius cooler than the 1982-1991 average. Christy said that of the 14 years for which satellite data have been available, 1992 was the second coolest, with 1987 and 1988 being the warmest.

Many climate scientists cite the 1991 eruption of Mount Pinatubo in the Philippines as the chief reason for the cooling. But Helene Wilson of the NASA Goddard Institute for Space Studies points out that a similar dip in temperatures occurred from 1980 to 1981, when there was no major volcanic activity.

Satellite information on global temperatures, such as that used by Christy and Spencer, continues to raise questions

about the accuracy of land-based temperature readings, which have indicated a slight warming trend over the last century. While satellite data for the last 14 years do not indicate a warming trend, land-based records for the same period do show a warming.

According to Christy, satellite data reflect the actual trend, as the readings taken from space can cover the entire globe. Land-based readings, many climate scientists believe, are distorted by the distribution and location of the stations used to take the measurements. Many of these readings come from stations located in urban areas, where temperatures are typically higher, or on isolated islands in the oceans, which do not provide readings that accurately reflect the temperatures of large areas of water. ●

Source: *Global Environmental Change Report* (January 15, 1993).

PROFILE OF EPA'S VOLUNTARY "GREEN" PROGRAMS TO REDUCE GREENHOUSE GASES

While some environmentalists and policy makers dispute the idea that economic growth and environmental excellence can walk hand in hand, current EPA voluntary "green" programs are making this partnership a reality. The green programs are based on the belief that the best response to the climate change issue is a flexible one that encourages industry to take measures that make good economic sense and help to reduce greenhouse gas emissions.

EPA's voluntary green programs aim to cut greenhouse gas emissions by improving energy efficiency. Each program targets a single use of energy (such as lighting) and encourages energy consumers to use the most energy-efficient technologies.

Projections of emissions reductions from EPA green programs alone (i.e., not including the benefits from measures such as the Clean Air Act Amendments and the Energy Policy Act) show that by the year 2000 the United States will have made tremendous progress toward stabilizing emissions at 1990 levels.

Following are some key strategies that are making EPA's green programs a success.

- Encourage businesses to take energy efficiency and life-cycle costs into account when making purchasing decisions.
- Identify energy-efficient products to help consumers choose the most cost-effective products.
- Promote mass purchases of energy-efficient technologies, which help make these prod-

ucts more affordable and often cheaper than their less energy-efficient alternatives.

- Encourage industry to commercialize more efficient technologies by demonstrating that these products will sell.
- Promote sensible utility regulation and legal frameworks that encourage cost-effective investments in energy conservation, ensuring that companies and consumers can profit from using resources wisely.
- Create environmental "best practices" agreements to ensure that environmental concerns are taken into account when products and services are designed or planned.

One of EPA's flagship green projects is "Green Lights," a voluntary program that encourages companies to invest in energy-efficient lighting for their offices and factories. Upgrading lighting helps reduce electricity consumption and thereby reduces carbon dioxide emissions.

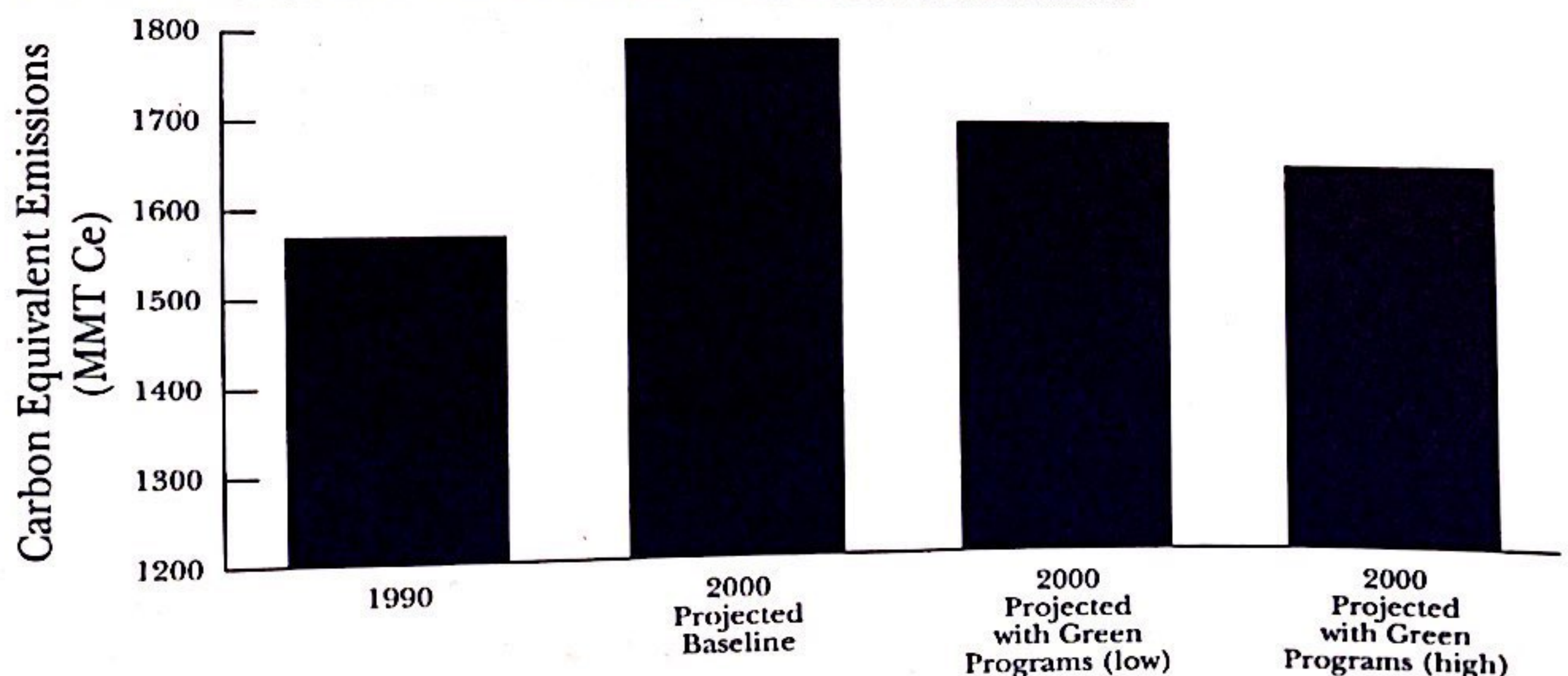
"Green Lights" has recently come

under some fire, however, as a result of reports that its figures on voluntary acceptance of the program are inflated. A consultant hired by EPA said in some cases savings may be overcounted. For example, utilities are included even if they already have fiscal and other incentives in place. EPA has responded saying, "The figures are as accurate as we can make them," and since it "is a brand new program...there are differing opinions...over how to measure and count..."

Other green programs include "Energy Star Computers," which uses an Energy Star logo to help consumers identify energy-efficient desktop computers; "Green Buildings," which encourages the purchase of more efficient heating, ventilation and air conditioning systems for buildings; and the "Golden Carrot," program, through which utilities are offering \$30 million in rebate incentives to the refrigerator manufacturer that can build the largest number of the most efficient, chlorofluorocarbon-free refrigerators at the lowest cost. ●



IMPACT OF EPA GREEN PROGRAMS ON U.S. GREENHOUSE GAS EMISSIONS



Note: Green Programs benefits calculation includes additional complementary demand side management programs. These estimates do not include the other parts of the U.S. Action Plan, e.g., the National Energy Strategy, Clean Air Act, Forests for the Future, and others.

IPCC WORKING GROUP RELEASES GUIDELINES FOR ASSESSING CLIMATE CHANGE IMPACTS

Working Group II of the Intergovernmental Panel on Climate Change (IPCC) has released preliminary guidelines for the assessment of climate change impacts.

The report provides information on approaches and methods of assessment, and presents seven steps for analysis: defining the problem, selecting the method, testing the method, selecting scenarios, assessing biophysical and socioeconomic impacts, evaluating adjustments, and considering policy options.

Also included in the report are discussions of how research should be organized and how research results should be communicated among researchers, with policy makers and with the public. Several case studies show how researchers have assessed climate change impacts in specific areas or sectors.

Copies of the report are available from the Environmental Change Unit, 1a Mansfield Road, Oxford OX1 3TB, United Kingdom. ●

CLIMATE FILE:

Useful Titles on Global Climate Change

1 Manne, Alan S. and Richard G. Richels. *Buying Greenhouse Insurance: The Economic Costs of CO₂ Emission Limits*. Cambridge, Massachusetts: The MIT Press, 1992.

2 Flannery, Brian P. and Robin Clarke, ed. "Global Climate Change: A Petroleum Industry Perspective." London: International Petroleum Industry Environmental Conservation Association, 1991. (Contact IPIECA, London, 071-221-2026.)

3 Larsen, Bjorn and Anwar Shah, "Combatting the 'Greenhouse Effect.'" *Finance and Development*: (December 1992): 20-23. (Contact: The World Bank, public affairs office, 202-477-1234.)

4 *Global Climate Change: What is Known — An Update*. Washington, DC: Washington International Energy Group (WIEG), 1992. (Contact WIEG, 202-331-9820.)

5 Kahl, Jonathan D., et. al. "Absence of Evidence for Greenhouse Warming Over the Arctic Ocean in the Past 40 Years," *Nature*, Volume 361, 28 January 1993, p. 335-337.

Climate Watch is published monthly by Global Climate Coalition, an organization of business trade associations and private companies established to coordinate business participation in the scientific and policy debate on global climate change. Permission is not necessary for reproduction of *Climate Watch* articles.

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