

United States Court of Appeals
FOR THE DISTRICT OF COLUMBIA CIRCUIT

Argued April 10, 2017

Decided July 21, 2017

No. 16-1128

COMPETITIVE ENTERPRISE INSTITUTE, ET AL.,
PETITIONERS

v.

UNITED STATES DEPARTMENT OF TRANSPORTATION AND
ELAINE L. CHAO, IN HER OFFICIAL CAPACITY AS SECRETARY
OF THE U.S. DEPARTMENT OF TRANSPORTATION,
RESPONDENTS

On Petition for Review of a Final Rule of
the United States Department of Transportation

Sam Kazman argued the cause for petitioners. With him on the briefs was *Hans Bader*.

Tara S. Morrissey, Attorney, U.S. Department of Justice, argued the cause for respondents. With her on the brief were *Benjamin C. Mizer*, Principal Deputy Assistant Attorney General at the time the brief was filed, *Matthew M. Collette*, Attorney, *Paul M. Geier*, Assistant General Counsel for Litigation and Enforcement, U.S. Department of Transportation, *Robert M. Gorman*, Trial Attorney, *Paula Lee*, Trial Attorney, and *Blane A. Workie*, Assistant General Counsel for Aviation Enforcement and Proceeding.

Before: KAVANAUGH, *Circuit Judge*, and GINSBURG and RANDOLPH, *Senior Circuit Judges*.

Opinion for the Court filed by *Senior Circuit Judge* RANDOLPH.

Concurring opinion filed by *Circuit Judge* KAVANAUGH.

Dissenting opinion filed by *Senior Circuit Judge* GINSBURG.

RANDOLPH, *Senior Circuit Judge*: The principal question is whether a statutory ban on “smoking” on airplanes may support a Department of Transportation regulation banning the use of electronic cigarettes. Two organizations and an e-cigarette user ask us to set aside the regulation on the ground that it is unlawful.

I.

Since 1973, federal law has regulated smoking on airplanes. Early regulations rested on a statute requiring “safe and adequate” in-flight service. *See* 38 Fed. Reg. 12,207, 12,208 (1973) (relying on Federal Aviation Act, Pub. L. No. 85-726, § 404(a), 72 Stat. 731, 760 (1958), *amended by* Pub. L. No. 92-259 (1972)). *See also Action on Smoking & Health v. C.A.B.*, 699 F.2d 1209, 1211 (D.C. Cir. 1983). In 1987, Congress declared it unlawful “to smoke” on scheduled passenger flights under two hours, and since 2000, the statutory smoking prohibition has extended to all scheduled passenger flights for travel within, to, and from the United States. *See* Pub. L. No. 100-202, § 328, 101 Stat. 1329, 1329-382 (1987); Pub. L. No. 106-181, § 708, 114 Stat. 61, 159 (2000) (codified at 49 U.S.C. § 41706). Department of Transportation regulations prohibit the same. 14 C.F.R. §§ 252.1-252.5.

In 2010, during a Senate committee hearing, the Transportation Department claimed that the statutory smoking prohibition applied to a new device: e-cigarettes. Although analogues to the e-cigarette have existed for decades, most observers date the modern e-cigarette to 2003. The Department stated in the hearing that existing law “already banned” these increasingly popular devices on passenger airlines and that it planned to formalize its interpretation in a rulemaking. *The Financial State of the Airline Industry and the Implications of Consolidation: Hearing Before the S. Comm. on Commerce, Sci., & Transp.*, 111th Cong. 80 (2010).

The Department issued a notice in 2011 proposing a regulation defining “smoking” on airplanes to include e-cigarette use. *See* Smoking of Electronic Cigarettes on Aircraft, 76 Fed. Reg. 57,008, 57,009 (2011). The notice described e-cigarettes as consisting of three parts: “The replaceable cartridge, which most often contains liquid nicotine but may contain other chemicals, the atomizer or heating element, and the battery and electronics.” *Id.* When the user inhales through the mouthpiece, “the electronics detect the air flow and activate the atomizer, the liquid nicotine is vaporized, and the user inhales the vapor.” *Id.* at 57,010 (citation omitted). Although the Department noted that e-cigarettes heat rather than burn the liquid nicotine solution and produce a “vapor, rather than smoke,” it claimed that e-cigarettes involve an “inhalation and exhalation similar to smoking cigarettes.” *Id.* at 57,009-10. The liquid nicotine solution is partly derived from tobacco plants and some evidence suggested that the exhaled nicotine vapor could harm non-users. *Id.* The Department therefore saw “no reason to treat electronic cigarettes any differently than traditional cigarettes.” *Id.* at 57,009.

The Department rested its authority for the regulation on the two sections authorizing past aircraft smoking regulations. *Id.*

The first prohibits “smoking” on scheduled passenger flights within, to, or from the United States. 49 U.S.C. § 41706. The second is the current iteration of the “safe and adequate” statute: it states that an “air carrier shall provide safe and adequate interstate air transportation.” 49 U.S.C. § 41702. The Department invited comments on its statutory authority and the soundness of the rule. 76 Fed. Reg. at 57,009, 57,010.

After receiving more than 1000 comments, the Department issued its final rule defining e-cigarette use as “smoking.”¹ The Department focused on the similarity between conventional cigarettes and e-cigarettes. “Like traditional smoking, e-cigarette use introduces a cloud of chemicals into the air that may be harmful to passengers who are confined in a narrow area within the aircraft cabin without the ability to avoid those chemicals.” Use of Electronic Cigarettes on Aircraft, 81 Fed. Reg. 11,415, 11,420 (2016). Several studies “detected toxic chemicals” from the vapor produced by e-cigarettes. *Id.* The Department acknowledged that the “specific hazards” of e-cigarette vapor have not “yet been fully identified,” but given the unique setting of air travel, it found a “precautionary approach” warranted. *Id.* The Department added that even “if second-hand exposure to e-cigarette” vapor were ever determined safe relative to tobacco smoke, “nearby passengers may still experience discomfort, stress or . . . display aggression or fear because they believe their health is threatened.” *Id.* at 11,424. The Department also noted that airlines on their own already forbid e-cigarette use: “99 percent of passenger enplanements occur on flights that prohibit smoking of any type,

¹ The new rule also applies to charter flights when a flight attendant is required, in accord with a 2012 amendment to § 41706 that prohibits smoking on those flights. *See* 81 Fed. Reg. 11,415, 11,416, 11,425 (2016); FAA Modernization and Reform Act of 2012, Pub. L. No. 112-95, § 401(a), 126 Stat. 11, 83 (2012). Petitioners do not argue against this portion of the rule, so we do not address it.

including both traditional cigarettes and e-cigarettes.” *Id.* Incorporating these and other considerations into a qualitative cost-benefit analysis, the Department found the regulation warranted. *Id.* at 11,422, 11,425-26. It relied on the two statutory sources discussed above.² *Id.* at 11,419.

The final rule defines smoking as the “use of a tobacco product, electronic cigarettes whether or not they are a tobacco product, or similar products that produce a smoke, mist, vapor, or aerosol, with the exception of products (other than electronic cigarettes) which meet the definition of a medical device in section 201(h) of the Federal Food, Drug and Cosmetic Act, such as nebulizers.” *Id.* at 11,427. The rule defines “smoking” for § 41706 as well as for Transportation Department and Federal Aviation Administration regulations. *See* 14 C.F.R. § 252.3; 14 C.F.R. § 121.317.

The Competitive Enterprise Institute, the Consumer Advocates for Smoke-Free Alternatives Association, and Gordon Cummings petitioned for judicial review. *See* 49 U.S.C. § 46110(a). Cummings submitted a declaration stating that he had used e-cigarettes on flights in violation of airline policies, but that he now no longer does so given the penalties for violating the regulation. *See* Decl. of Cummings at 1-2. *See also* 49 U.S.C. § 46301 (civil fine); 49 U.S.C. § 46316 (criminal fine). He has standing to challenge the rule. *See, e.g., Energy Future Coal. v. EPA*, 793 F.3d 141, 144 (D.C. Cir. 2015). *See also Americans for Safe Access v. DEA*, 706 F.3d 438, 443 (D.C. Cir. 2013).

² The Department also relied on a third source in the final rule, 49 U.S.C. § 41712, but it no longer does so on appeal.

II.

Although the Department claimed in the rulemaking (and in its brief) that 49 U.S.C. § 41702 and § 41706 provide alternative authority for the rule, the sections are not co-extensive. The key difference is in their geographic scope. Section 41702 requires that an “air carrier” – defined as a “citizen of the United States undertaking . . . to provide air transportation,” 49 U.S.C. § 40102(a)(2) – “provide safe and adequate interstate air transportation.” The prohibition “against smoking on passenger flights” in § 41706, on the other hand, covers both domestic and foreign air carriers for travel within, to, and from the United States. Because the regulation purports to extend the e-cigarette prohibition to this latter category of flights, *see* 81 Fed. Reg. at 11,419, we must first analyze whether § 41706 provides authority for the rule.

We begin with *Chevron U.S.A. Inc. v. NRDC*, 467 U.S. 837 (1984).³ We first ask whether Congress addressed the question at issue: does “smoking” in § 41706 cover e-cigarette use? *See Nat’l Mining Ass’n v. Kempthorne*, 512 F.3d 702, 708-09 (D.C. Cir. 2008) (citing *Chevron*, 467 U.S. at 842-43). If Congress did

³ *Chevron* arose under the Clean Air Act, but courts – including the Supreme Court and our court – have applied the doctrine when interpreting other statutes. At least as a matter of first principles, this seems problematic. The Clean Air Act provides its own procedures and standards for judicial review that differ from other statutes, such as the Administrative Procedure Act’s instruction to the “reviewing court” to “interpret constitutional and statutory provisions.” *Compare* 42 U.S.C. § 7607(d)(9) & (e), *with* 5 U.S.C. § 706. *See also* Stephen G. Breyer, Richard B. Stewart, Cass R. Sunstein & Adrian Vermeule, *ADMINISTRATIVE LAW AND REGULATORY POLICY* 250 (6th ed. 2006).

not address the question, we next consider whether the Department's interpretation is reasonable. *Id.*⁴

Underlying petitioners' arguments and those of the dissent is the point that e-cigarettes did not exist in 1987 when Congress first made it unlawful "to smoke" on certain flights under two hours, nor did e-cigarettes exist in 2000 when Congress extended the prohibition. Although this means the legislators did not have e-cigarettes in mind when passing those statutes, that does not resolve the interpretive question.⁵ The text itself, rather than the subjective intentions of legislators, governs our review. *See Oncale v. Sundowner Offshore Servs., Inc.*, 523 U.S. 75, 79 (1998). We must ask whether the term "smoking" in a statute enacted before modern e-cigarettes existed covers these devices.

Petitioners maintain that "smoking" in § 41706 requires lighting or burning and does not encompass the heating that occurs with e-cigarettes. The statutory text alone offers no support for that position. Section 41706 employs the verb "smoke" in various formulations. Subsection (a) states that an "individual may not smoke" on certain domestic flights.

⁴ We apply the *Chevron* framework to this facial challenge even though violating § 41706 can bring criminal penalties. *See Babbitt v. Sweet Home Chapter of Communities for a Great Oregon*, 515 U.S. 687, 704 n.18 (1995); *In re Sealed Case*, 223 F.3d 775, 779 (D.C. Cir. 2000).

⁵ *See* Antonin Scalia & Bryan A. Garner, *READING LAW: THE INTERPRETATION OF LEGAL TEXTS* 86 (2012), quoting Lon L. Fuller, *American Legal Realism*, 82 U. PA. L. REV. 429, 445-46 (1934): "Suppose a legislator enacts that it shall be a crime for anyone 'to carry concealed on his person any dangerous weapon.' After the statute is passed someone invents a machine, no larger than a fountain pen, capable of throwing a 'death ray'. Is such a machine included? Obviously, yes."

Subsection (b) states that the “Secretary of Transportation shall require all air carriers and foreign air carriers to prohibit smoking” on certain foreign flights. Nowhere in § 41706 or Title 49 is “smoke” or “smoking” defined. The final subsection of § 41706 states: “The Secretary shall prescribe such regulations as are necessary to carry out this section.” 49 U.S.C. § 41706(d). Whether the regulation before us constitutes a permissible application of the Department’s rulemaking authority is thus unclear from the text alone.

Given the few textual clues in § 41706 itself, both parties turn to external sources. What do the dictionaries say? Petitioners cite definitions of “smoking” that require burning. They invoke Merriam-Webster’s Collegiate Dictionary 1109 (10th ed., 1993 and 1995), for instance, for the proposition that to smoke means “to inhale and exhale the fumes of burning plant material and esp. tobacco.” Other dictionary definitions support the Department. One definition in the Oxford English Dictionary, for example, defines smoking as to “inhale (and expel again) the fumes of tobacco, or other suitable substance, from a pipe, cigar, or cigarette.” 15 OXFORD ENGLISH DICTIONARY 802 (2d ed. 1989). (Definitions of “fume” often refer to vapor and do not require fire. *See, e.g.*, 6 OXFORD ENGLISH DICTIONARY 258-259 (2d ed. 1989).) Webster’s Third New International Dictionary 2152 (1981), similarly defines smoking as to “inhale and exhale the fumes of tobacco or something resembling tobacco from a pipe, cigar, or cigarette.” These definitions are not only contemporaneous with the original 1987 statutory smoking prohibition, but they also describe e-cigarette use: one typically inhales and exhales vaporized nicotine, derived from tobacco plants, from a battery-powered “cigarette.” The rulemaking definition – “the use of . . . electronic cigarettes . . . or similar products that produce a smoke, mist, vapor, or aerosol . . .,” 81 Fed. Reg. at 11,417 – echoes these dictionary definitions.

Petitioners respond that the Department's dictionary definitions are outliers. More dictionary definitions support their position, they argue, and the mere existence of contrary definitions does not render the statute ambiguous. *See* Petitioner Reply Br. 6 (citing *MCI Telecomms. Corp. v. AT&T*, 512 U.S. 218, 225-27 (1994)). That all seems true. Establishing ambiguity is not so simple; but neither is establishing plain meaning. We cannot just tally the dictionary definitions.

Petitioners also argue that the "smoking" prohibition cannot cover e-cigarettes because e-cigarettes do not produce "smoke." In the notice of proposed rulemaking, the Department did state that e-cigarettes produce "a vapor, rather than smoke," but the Department referred to e-cigarette vapor as "second hand smoke." 76 Fed. Reg. at 57,009, 57,010. The title of the notice was also "Smoking of Electronic Cigarettes on Aircraft." Department characterizations aside, whether e-cigarettes produce "smoke" is subject to the same conflicting definitions as the verb form of "smoke" discussed above. *Compare* WEBSTER'S THIRD NEW INTERNATIONAL DICTIONARY 2152 (1981) ("the gaseous products of burning carbonaceous materials made visible by the presence of small particles of carbon"), *with id.* ("a fume or vapor often resulting from the action of heat on moisture"). *See also* *U.S. Fid. & Guar. Co. v. First State Bank & Trust Co.*, 125 F.3d 680, 684 (8th Cir. 1997) (noting conflicting judicial interpretations of noun "smoke"). Even if e-cigarettes do not produce smoke, the verb "smoking" can refer to processes where no smoke is produced. The dictionary definitions of smoking suggest as much, *see supra* 8, as do characterizations by the e-cigarette industry itself. One e-cigarette distributor, for example, has marketed its product for "smoking pleasure." *See Sottera, Inc. v. FDA*, 627 F.3d 891, 893 (D.C. Cir. 2010) (internal quotation marks omitted).

Both the Department and petitioners also cite definitions of smoking from sources in the states. Petitioners refer to an

opinion from the Virginia Attorney General, among other attorneys general, concluding that smoking does not include e-cigarette use. *See* Va. Op. Att’y Gen. No. 10-029 (Apr. 27, 2010). Yet the Department cites many state laws indicating the opposite. *See* CAL. BUS. & PROF. CODE § 22950.5(c); DEL. CODE ANN. tit. 16 § 2902(12); HAW. REV. STAT. § 328J-1; N.J. STAT. ANN. § 26:3D-57. These state laws resulted from amendments including e-cigarettes in their prohibitions against smoking, but that does not mean their definitions without the amendment, as petitioners claim, would have excluded e-cigarettes. The states plausibly did what the Department purported to do: formalize its interpretation that smoking covered e-cigarette use.

In their reply brief, petitioners highlight Congress’s failure to enact proposed bills prohibiting e-cigarette use on airplanes. *See* H.R. 636, 114th Cong. § 5030 (as passed by Senate, Apr. 19, 2016); H.R. 3840, 114th Cong. § 2 (2015). *See also* H.R. 2962, 115th Cong. § 2 (2017). But “Congressional inaction lacks persuasive significance because several equally tenable inferences may be drawn from such inaction, including the inference that the existing legislation already incorporated the offered change.” *Consumer Elecs. Ass’n v. FCC*, 347 F.3d 291, 299 n.4 (D.C. Cir. 2003) (quoting *Pension Benefit Guaranty Corp. v. LTV Corp.*, 496 U.S. 633, 650 (1990)).

So here is where we are. Although the statute does not define “smoke,” some dictionary definitions, some state laws, and some characterizations of smoking by the e-cigarette industry itself support the Department. But other dictionary definitions and other state laws support petitioners. We therefore cannot say that Congress spoke to the precise question at issue.

Petitioners present no arguments under *Chevron*’s second step “beyond those already discussed as part of step one.” *See*

Consumer Elecs. Ass'n, 347 F.3d at 299. The *Chevron*-one analysis supports a reasonableness finding. So does our 2010 decision concluding that the Food and Drug Administration can regulate e-cigarettes as “tobacco products” because the liquid nicotine solution in e-cigarettes is derived from tobacco plants. See *Sottera*, 627 F.3d at 898-99. A “smoking prohibition” reasonably applies to products intended to enable users to inhale and exhale such nicotine.

III.

Petitioners also argue that the regulation is arbitrary.⁶ The thrust of their argument is that e-cigarette use does not harm non-users. They cite studies supposedly demonstrating this and they emphasize that even by the Department’s own characterization, e-cigarettes present only the potential of harm to non-users. The Department cites no instance, petitioners add, of a passenger harmed by in-flight e-cigarette use.

The Department acknowledges the limited evidence on the health effects of e-cigarettes but claims that a “precautionary approach” is warranted. 81 Fed. Reg. at 11,420. At first blush, this approach – based apparently on the “precautionary principle” – may appear convincing. Some studies suggest that e-cigarette vapor may harm non-users. The agency therefore acts sensibly, the thinking goes, when it prevents this possible harm by prohibiting e-cigarette use.

This approach to regulation has been criticized. The precautionary principle “imposes a burden of proof on those who create potential risks, and it requires regulation of activities even if it cannot be shown that those activities are likely to

⁶ Although petitioners formally tie their arbitrariness and procedural arguments to the “safe and adequate” provision, 49 U.S.C. § 41702, we shall address the arguments that apply to § 41706.

produce significant harms. Taken in this strong form, the precautionary principle should be rejected, not because it leads in bad directions, but because it leads in no direction at all. The principle is literally paralyzing – forbidding inaction, stringent regulation, and everything in between. The reason is that in the relevant cases, every step, including inaction, creates a risk to health, the environment, or both.” Cass R. Sunstein, *Beyond the Precautionary Principle*, 151 U. PA. L. REV. 1003, 1003 (2003).

But in this case the Department did more than simply invoke a “precautionary approach.” It determined that the benefits of the regulation justify the costs. One factor reduced both sides of the ledger: airlines already prohibit e-cigarette use on flights. 81 Fed. Reg. at 11,423. Given that backdrop, the costs and benefits primarily flow from those users, like petitioner Cummings, who would otherwise defy the airlines’ prohibitions and take the chance of using e-cigarettes on flights, but will now refrain from doing so given the regulation.

As the Department pointed out, the costs are modest. The small subset of passengers like Cummings is inconvenienced, but those passengers can still use other nicotine products on flights. *Id.* at 11,426. The availability of these “alternative nicotine delivery systems” coupled with the “lack of flight alternatives,” the Department concluded, also means that the regulation will have a minimal effect on the number of passengers flying. *Id.* Any “reduction in demand from smokers” may also “be offset by increased demand from non-smokers.” *Id.* Costs of the regulation would increase if the airlines wanted to allow e-cigarette use on flights, but so would the benefits.

The benefits of the regulation are also modest, but the Department reasonably concluded that they justify the costs. The Department identified three benefits in particular. The first

concerns the health of non-users. The Department found that e-cigarette users would now no longer introduce a “cloud of chemicals into the air that may be harmful to passengers.” *Id.* at 11,420, 11,425. The Department cited seven studies discussing this potential harm. *Id.* at 11,420. Some representative conclusions from the studies:

- “Our data confirm that e-cigarettes are not emission-free and their pollutants could be of health concern for users and secondhand smokers,” Wolfgang Schober et al., *Use of Electronic Cigarettes (E-cigarettes) Impairs Indoor Air Quality and Increases FeNO Levels of E-Cigarette Consumers*, 217 INT’L J. HYGIENE & ENVTL. HEALTH 628, 628 (2014);
- “The vapour generated from e-cigarettes contains potentially toxic compounds,” Maciej Goniewicz et al., *Levels of Selected Carcinogens and Toxicants in Vapour from Electronic Cigarettes*, 23 TOBACCO CONTROL 133, 138 (2014);
- “The study showed that e-cigarettes are a source of secondhand exposure to nicotine but not to combustion toxicants,” Jan Czogala et al., *Secondhand Exposure to Vapors from Electronic Cigarettes*, 16 NICOTINE & TOBACCO RES. 655, 655 (2014);
- “Cartomizer aerosol from a leading manufacturer of [e-cigarettes] contained metals, silicate beads, and nanoparticles,” Monique Williams et al., *Metal and Silicate Particles Including Nanoparticles Are Present in Electronic Cigarette Cartomizer Fluid and Aerosol*, PLoS ONE, Mar. 2013, at 1, 5.

These studies may have flaws, but they tend to show that e-cigarette vapor in confined aircrafts could harm non-users. Especially due to the “involuntary nature” of secondhand exposure on aircrafts, where individuals are often assigned seats, the Department gave particular weight to these health risks. 81 Fed. Reg. at 11,426. “Those seated next to users may not want to expose themselves (or their babies or older children)” to even small risks, the Department concluded. *Id.*

Petitioners criticize these studies, but even a study petitioners rely on cautions that “electronic cigarettes cannot be considered safe.” *See Zachary Cahn & Michael Siegel, Electronic Cigarettes as a Harm Reduction Strategy for Tobacco Control: A Step Forward or a Repeat of Past Mistakes?*, 32 J. PUB. HEALTH POL’Y 16, 26 (2011). Petitioners also acknowledge that “the studies cited by the agency” “show that e-cigarette vapor might introduce into indoor air certain chemicals, some of which, if present in high concentrations, might pose a health risk.” Petitioner Br. 34. The Department sought to reduce this health risk with the regulation.

The regulation’s two other benefits do not depend on the health effects of e-cigarettes. Specifically, the Department noted that prohibiting e-cigarette use would avoid passenger perception of harm – itself a harm. In short, some passengers are not comfortable inhaling the visible mist produced by e-cigarettes. Passengers “may reasonably be concerned,” the Department explained, “that they are inhaling unknown quantities of harmful chemicals.” 81 Fed. Reg. at 11,421. Commenters on the rule expressed these concerns, and this fear alone could cause “discomfort” and “stress” for passengers. *See, e.g.,* Comment of E. Schiller, ID: DOT-OST-2011-0044-0124; 81 Fed. Reg. at 11,424. The Department also concluded that the rule will make it easier for airlines to enforce their own e-cigarette prohibitions. 81 Fed. Reg. at 11,425. Partly for this

reason, associations of flight attendants and pilots supported the rule. *See id.* at 11,417.

Concluding that these benefits justify the costs reflects a “rational connection between the facts found and the choice made.” *Motor Vehicle Mfrs. Ass’n of U.S., Inc. v. State Farm Mut. Auto. Ins. Co.*, 463 U.S. 29, 43 (1983) (internal quotation marks omitted). The regulation is thus not arbitrary.⁷

IV.

Petitioners also raise two procedural objections. They first argue that the Department failed to respond to the contrary studies that they submitted during the comment period. Yet the Department acknowledged the petitioners’ contrary evidence and explained why the regulation was still warranted. *See* 81 Fed. Reg. at 11,418, 11,419-21. The Department noted the other scientific studies and non-scientific justifications for the rule. *Id.*

Petitioners’ second procedural argument concerns the studies cited in the final rule. Specifically, they argue that the Department impermissibly relied on new studies in the final rule without providing the public an opportunity to comment on

⁷ Petitioners also argue that the risks from e-cigarettes do not exceed the risks from other substances and contaminants found on airplanes. But the relevant statute instructs the Department to regulate “smoking,” 49 U.S.C. § 41706, not these other substances. In any case, the “agency enjoys broad discretion in determining how best to handle related, yet discrete, issues in terms of procedures and priorities.” *Mobil Oil Exploration & Producing Se., Inc. v. United Distribution Cos.*, 498 U.S. 211, 230 (1991) (citations omitted). It need not “make progress on every front before it can make progress on any front.” *Pers. Watercraft Indus. Ass’n v. Dep’t of Commerce*, 48 F.3d 540, 544 (D.C. Cir. 1995) (quoting *United States v. Edge Broadcasting Co.*, 509 U.S. 418, 434 (1993)).

them. An agency cannot include material “critical” to its decision for the first time in the final rule, *Pers. Watercraft Indus. Ass’n v. Dep’t of Commerce*, 48 F.3d 540, 544 (D.C. Cir. 1995), but it may include new “supplementary” information that “expands on and confirms” data in the rulemaking record.⁸ *Solite Corp. v. U.S. EPA*, 952 F.2d 473, 484 (D.C. Cir. 1991) (per curiam) (alterations omitted) (quoting *Community Nutrition Institute v. Block*, 749 F.2d 50, 58 (D.C. Cir. 1984)). This case falls in the latter category. In the notice of proposed rulemaking, the Department cited two studies and three articles describing the potential harm from e-cigarettes, and it cited seven different, more recent studies describing the same in the final rule. See 76 Fed. Reg. at 57,010; 81 Fed. Reg. at 11,420. Those new studies did not provide critical new data, but instead “continue[d] to undermine claims that the use of e-cigarettes would have no adverse health implications on users or others who are nearby” and thus further supported the Department’s reasoning in the notice of proposed rulemaking. 81 Fed. Reg. at 11,420.

In their reply brief, petitioners argue that an agency cannot even cite supplementary data in its final rule if the new data prejudices them. That is incorrect. Petitioners support their proposed standard with dicta from past cases blurring the rule itself with the Administrative Procedure Act’s harmless error rule. See generally *Ozark Auto. Distributors, Inc. v. NLRB*, 779 F.3d 576, 582-83 (D.C. Cir. 2015) (discussing harmless error

⁸ This proposition derives from 5 U.S.C. § 553. See *Owner-Operator Indep. Drivers Ass’n, Inc. v. Fed. Motor Carrier Safety Admin.*, 494 F.3d 188, 199 (D.C. Cir. 2007). On the apparent disconnect between the text of § 553 and the requirements concerning “critical” new data, see *Am. Radio Relay League, Inc. v. FCC*, 524 F.3d 227, 246-247 (D.C. Cir. 2008) (Kavanaugh, J., concurring in part and dissenting in part); 1 Richard J. Pierce, ADMINISTRATIVE LAW TREATISE § 7.3, at 583-84, 591 (5th ed. 2010).

rule in 5 U.S.C. § 706). We have written, for instance, that “an agency may use supplementary data . . . *so long as* no prejudice is shown.” *See, e.g., Chamber of Commerce of U.S. v. SEC*, 443 F.3d 890, 900 (D.C. Cir. 2006) (emphasis added) (internal quotation marks omitted). Other statements and our actual rulings, however, treat both a violation of the rule and a showing of prejudice as necessary conditions for vacatur. *See, e.g., id.* at 904; *Am. Radio Relay League, Inc. v. FCC*, 524 F.3d 227, 236-37 (D.C. Cir. 2008); *Owner-Operator Indep. Drivers Ass’n, Inc. v. Fed. Motor Carrier Safety Admin.*, 494 F.3d 188, 202 (D.C. Cir. 2007). Still other cases do not even refer to the prejudice inquiry after finding no violation of the rule. *See Int’l Fabricare Inst. v. U.S. EPA*, 972 F.2d 384, 399-400 (D.C. Cir. 1992) (*per curiam*). No case, to our knowledge, has ever vacated a regulation after finding prejudice but no violation of the notice requirement. That is no surprise: we need not assess whether an error prejudices the petitioner if the agency did not err.

We therefore reject petitioners’ procedural arguments.

V.

For the reasons stated above, we deny the petition for review. Because we uphold the regulation under 49 U.S.C. § 41706, we need not address § 41702.

So ordered.

KAVANAUGH, *Circuit Judge*, concurring: I join the majority opinion and add these brief comments. Even without affording *Chevron* deference to the Department's interpretation of the statute, I would still reach the same result in this case. In my view, although it is a close call, the better interpretation of the term "smoking" in this statute covers e-cigarettes as well as conventional tobacco cigarettes. Judge Ginsburg's fine dissent rests in part on the notion that those who drafted or read the statute in 1987 would not have understood the term "smoking" to encompass e-cigarettes because e-cigarettes did not exist at that time. I am not convinced by that line of analysis, for reasons that the majority opinion persuasively explains. *See* Maj. Op. at 7 & n.5.

GINSBURG, *Senior Circuit Judge*, dissenting: An axiom of statutory interpretation is that “unless otherwise defined, words will be interpreted as taking their ordinary, contemporary, common meaning . . . at the time Congress enacted the statute.” *Perrin v. United States*, 444 U.S. 37, 42 (1979). Today this Court departs from this principle to redefine “smoking” from conventional tobacco consumption, as it was commonly understood in 1987, to prohibit the use of electronic cigarettes, a new technology with a substantially different nicotine delivery process and likely different secondhand effects as well. Just as some people will, no doubt, “find ambiguity even in a ‘No Smoking’ sign,” *Int’l Union v. Gen. Dynamics Land Sys. Div.*, 815 F.2d 1570, 1575 (D.C. Cir. 1987), the Court manufactures ambiguity from the lack of a statutory definition and some abstract dictionary definitions of “smoking” even though the Congress that adopted the statute and the public it represented would have found the term unambiguous when relating to passenger aviation.

Just as historical understandings define the meaning of statutory terms, whether terms are ambiguous is determined as of the time when the Congress passed the law. *See Terrell v. United States*, 564 F.3d 442, 449 (6th Cir. 2009). Subsequent changes in society, technology, or the English language do not alter the meaning of a statute. For example, the Supreme Court held in 2004 that sand and gravel in Nevada were not “valuable” minerals under the Pittman Act of 1919 even though development of the region in the intervening 85 years had made those commodities commercially exploitable. *BedRoc Ltd., LLC v. United States*, 541 U.S. 176, 183-85 (plurality opinion); *id.* at 187-89 (Thomas, J. concurring) (reaching same conclusion as the plurality because sand and gravel in Nevada lacked a “commercial purpose” at the time of enactment). Likewise, the Court has said gaseous methane was not “coal” “reserv[ed] to the United States” in government land grants,

even though advances in scientific knowledge later determined the gas was a commercially valuable part of the coal itself. *Amoco Prod. Co. v. S. Ute Indian Tribe*, 526 U.S. 865, 870, 872-75 (1999). Following the Supreme Court's lead, the courts of appeals have similarly refused to depart from the original meaning of statutory terms notwithstanding subsequent changes in technology and the law. *See Terrell*, 564 F.3d at 451-52 (reading "appear" to require an in-person appearance at a parole hearing because videoconferencing was not technologically feasible at the time of enactment); *Texas v. United States*, 497 F.3d 491, 503-04 (5th Cir. 2007) (rejecting the proposition that "a judicial decision can, ex post facto, create a *Chevron*-type 'gap' that introduces ambiguity into the operation of a statutory scheme"). *United States v. Brune*, 767 F.3d 1009, 1022 (10th Cir. 2014) (holding a statute does not criminalize Internet access because the medium would not have been considered "any other material that contains an image of child pornography" at the time of enactment in 1996); *McDonald v. Sun Oil Co.*, 548 F.3d 774, 779-81 (9th Cir. 2008) (holding the Comprehensive Environmental Response, Compensation, and Liability Act preempts both "statutes of repose" and, as stated in the text, "statutes of limitations" because those terms were used interchangeably when enacted in 1986 even though they are now considered "distinct legal concepts"), *abrogated by CTS Corp. v. Waldburger*, 134 S. Ct. 2175, 2185-87 (2014) (analyzing those terms as they were understood in 1986 but reaching a different conclusion for other reasons).

The Court resists the historical meaning of "smoking" in two ways. First, it holds the term "smoking" was always understood more broadly than conventional tobacco combustion. As evidence, the Court points to dictionary definitions of "smoke" and "smoking" from the 1980s, which it construes to cover e-cigarette usage. True, e-cigarettes

might fit within these definitions if one squints hard enough, but as the Court itself notes “[w]e cannot just tally the dictionary definitions,” Ct. Op. 9, because “[a]mbiguity is a creature not of definitional possibilities but of statutory context,” *Brown v. Gardner*, 513 U.S. 115, 118 (1994). See also *U.S. Fid. & Guar. Co. v. First State Bank & Trust Co.*, 125 F.3d 680, 684 (8th Cir. 1997) (cited by Ct. Op. 9) (disagreeing with “appellants’ definition of the term ‘smoke’ because a term’s ordinary meaning is derived from the interpretation of lay persons rather than the definition provided in a dictionary”). That context – a ban on “smoking” on passenger flights – overwhelmingly confirms the narrow scope of the prohibition in § 41706.

What “smoking” meant in 1987 with respect to passengers on airplanes is beyond doubt, inasmuch as e-cigarettes did not then exist. But like the Court, one could stretch dictionary definitions to apply to a wide range of activities no one would have understood the ban to cover at the time. For example, if one defines “smoke” as “the action of heat on moisture,” Ct. Op. 9 (quoting WEBSTER’S THIRD NEW INTERNATIONAL DICTIONARY 2152 (1981)), and “smoking” as “to emit . . . smoke,” *ENCYCLOPEDIA BRITANNICA* (1988), then the steam (“to emit . . . smoke”) from hot coffee (“the action of heat on moisture”), which was served on airplanes in the 1980s, could also fall within the ban. Likewise a breath-freshening spray (to “inhale (and expel again) the fumes,” Ct. Op. 8 (quoting 15 *OXFORD ENGLISH DICTIONARY* 802 (2d ed. 1989)), of “[a] suspension of solid or liquid particles in a gas,” WEBSTER’S THIRD 2152 (1981) (quoted by the Department)), could be similarly prohibited. Each interpretation would have been just as absurd in the 1980s as it is today, yet each follows from a creative use of dictionary definitions. Although prohibiting a wholly new product, e-cigarettes, may make more sense to modern

passengers, the sentiment of today says nothing about whether the activity was “smoking” in the 1980s, when e-cigarettes did not exist.

The Court’s second theory about the broad meaning of “smoking” suffers from a similarly anachronistic mindset. To wit, the Court cites industry characterizations of e-cigarettes as being for one’s “smoking pleasure.” Ct. Op. 9-10 (quoting *Sottera, Inc. v. FDA*, 627 F.3d 891, 893 (D.C. Cir. 2010) (stating in dicta that e-cigarette liquids are “tobacco products” “derived from tobacco” and regulated under the Tobacco Act but not deciding whether their use is “smoking”)). It also points to several states that have recently extended statutory bans on “smoking” to prohibit e-cigarettes in addition to conventional tobacco. On the first point, contemporary industry marketing efforts alone cannot determine the meaning of a statutory term adopted 30 years ago. Were that the case, an industry could opportunistically characterize its products to fall either inside or outside of a regulatory scheme, undermining the purpose of the statute.

On the second point, the Court is correct that some states have amended their statutory bans to cover e-cigarettes.¹ But in each state cited, the legislature, not an executive agency, amended the statutory prohibition, exercising legislative power it undoubtedly possessed. If the Congress had taken the same action, which it has considered but not done, Ct. Op. 10 (citing H.R. 636, 114th Cong. § 5030 (as passed by the Senate, Apr. 19, 2016); H.R. 3840, 114th Cong. § 2 (2015)), then there would be no serious question of the Department’s

¹ Other states, however, have not. See Va. Op. Att’y Gen. Op. No. 10-029 (Apr. 27, 2010); Ariz. Att’y Gen. Op. No. I14-004 (R14-012), (July 30, 2014); Kan. Att’y Gen. Op. No. 2011-015 (Oct. 31, 2011).

authority, but absent legislative action or an alternative source of regulatory authority,² I cannot accept the Court's ahistorical reinterpretation of a purportedly ambiguous statutory term that was well-understood when enacted in 1987.

I respectfully dissent.

² The Department also argued the Rule can be upheld under its authority to require “safe and adequate” service in passenger aviation. *See* 49 U.S.C. § 41702. As the Court correctly notes, this authority extends only to domestic air carriers, unlike the statutory ban on “smoking,” which also applies to international flights. Because the Court affirmed the ban on the latter, broader ground, I have no cause to address whether it could have been justified on the narrower “safe and adequate” theory. For this reason, I do not address Parts III through V of the Court’s opinion on procedural irregularities in the rulemaking, which are relevant only to the “safe and adequate” rationale.