United States Court of Appeals
For the Eighth Circuit

No. 24-1721

State of Iowa; State of Arkansas; State of Florida; State of Idaho; State of Kansas; State of Mississippi; State of Missouri; State of Montana; State of Nebraska; State of Ohio; State of Oklahoma; State of Texas; State of Utah; American Free Enterprise Chamber of Commerce

*Petitioner*s

v.

Chris Wright,[1] in his official capacity as Secretary of the United States Department of Energy; Louis Hrkman,[2] in his official capacity as the Principal Deputy Assistant Secretary for Energy Efficiency and Renewable Energy; United States Department of Energy; Lee Zeldin,[3] in his official capacity as the Administrator of United States Environmental Protection Agency; United States Environmental Protection Agency

*Respondent*s

Alliance for Automotive Innovation

Intervenor

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[1]Secretary Chris Wright is automatically substituted as respondent pursuant to Federal Rule of Appellate Procedure 43(c)(2).

[2]Principal Deputy Assistant Secretary Louis Hrkman is automatically substituted as respondent pursuant to Federal Rule of Appellate Procedure 43(c)(2).

[3]Administrator Lee Zeldin is automatically substituted as respondent pursuant to Federal Rule of Appellate Procedure 43(c)(2).

American Fuel & Petrochemical Manufacturers

Amicus on Behalf of Petitioner

Natural Resources Defense Council, Inc.; Sierra Club

Amici on Behalf of Respondent

Petition for Review of an Order of the
Department of Energy

Submitted: January 15, 2025
Filed: September 5, 2025

Before SMITH, BENTON, and ERICKSON, Circuit Judges.

BENTON, Circuit Judge

The Department of Energy promulgated a rule changing its method of calculating the "petroleum equivalency factor," used in determining the equivalent petroleum-based fuel economy values of electric vehicles. Among other changes, DOE had proposed eliminating the 1/0.15 "fuel content factor" that artificially inflates the fuel economy of electric vehicles. But, in the final rule, DOE chose to phase out the fuel content factor, rather than eliminate it. In another part of the final rule, DOE switched to using the "cumulative gasoline-equivalent fuel economy of electricity," calculated over the projected useful life of an electric vehicle fleet—a method DOE had not proposed. Several states and the American Free Enterprise Chamber of Commerce filed a petition for review. Because the fuel content factor exceeds DOE's authority under the substantive statute, and because DOE violated notice-and-comment procedures, this court vacates and remands the final rule.

I.

In 1975, Congress required the Department of Transportation to prescribe "average fuel economy standards for automobiles manufactured by a manufacturer in that model year." **49 U.S.C. § 32902(a)**. Car manufacturers get credits for meeting the corporate average fuel economy (CAFE) standards. **§ 32903(a)**. The statute penalizes a manufacturer that violates a CAFE standard. **§ 32912(b)**. The Environmental Protection Agency determines the average fuel economy of a manufacturer's fleet. **§ 32904(a)**.

Five years later, Congress directed EPA to evaluate whether to include a manufacturer's electric vehicles in determining the average fuel economy of the manufacturer's fleet. Because electric vehicles do not burn fuel internally, Congress directed the Department of Energy to determine "equivalent petroleum based fuel economy values" for various classes of electric vehicles. **§ 32904(a)(2)(b)**. EPA includes these values when calculating the average fuel economies of manufacturers' fleets. ***Id.*** The statute requires the Department of Energy to "review those values each year and determine and propose necessary revisions" based on several factors:

> (i) the approximate electrical energy efficiency of the vehicle, considering the kind of vehicle and the mission and weight of the vehicle.
>
> (ii) the national average electrical generation and transmission efficiencies.
>
> (iii) the need of the United States to conserve all forms of energy and the relative scarcity and value to the United States of all fuel used to generate electricity.
>
> (iv) the specific patterns of use of electric vehicles compared to petroleum-fueled vehicles.

Id.

A.

In 1980, the Department of Energy proposed how to calculate the equivalent petroleum-based fuel economy values of electric vehicles. DOE multiplied the "energy equivalent fuel economy value" by the "petroleum equivalency factor." 45 **Fed. Reg.** 34008, 34011 (May 21, 1980) (proposed rule). The "energy equivalent fuel economy value" addressed subsection (i). ***Id.*** at 34011-12. DOE calculated the "petroleum equivalency factor" using:

- A "driving pattern factor," addressing subsection (iv) by incorporating how DOE expected electric vehicles to be driven compared to petroleum-fueled vehicles;
- An "electrical transmission efficiency factor," addressing subsection (ii) by accounting for energy lost in transmitting electricity;
- An "accessory factor," addressing subsections (iii) and (iv) by including the fuel consumption of petroleum-fueled accessories, like heaters and defrosters, that might be in electric vehicles; and
- An "electricity generation efficiency and relative value factor," addressing subsections (ii) and (iii) by considering the total electricity generated in the United States, the sources of this electricity, and the ratio of the prices of the sources to the price of gasoline.

Id. at 34011–13.

DOE promulgated the rule in 1981. DOE's method for calculating the petroleum-equivalency factor was written as:

$$\mathrm{PEF} = \mathrm{DPF} \times n_{\mathrm{t}} \times \mathrm{AF} \times \frac{\mathrm{E_{total}}}{\sum_{\mathrm{i}} \mathrm{I_i V_i}}$$

"Where: DPF = driving pattern factor;" "n_t = average national electricity transmission efficiency;" "AF = accessory factor;" "E_{total} = total amount of electricity generated from all fuel sources for the model year;" "I_i = input energy of fuel used to generate electricity from fuel source i (quads);" and "V_i = relative value factor of fuel source i." ***Id.*** at 22748.

DOE had proposed setting the driving pattern factor at 0.85. 45 **Fed. Reg.** 73684, 73686 (Nov. 6, 1980). But, in the final rule, DOE set the driving pattern factor at 1.0 because "EVs are expected to be used primarily in urban driving situations" and internal-combustion-engine vehicles "operate inefficiently" in urban settings "due to the effects of stop-and-go driving, prolonged idling, and cold starts." 46 **Fed. Reg.** at 22752.

For the values in the "electricity generation efficiency and relative value factor," DOE used projections about the prices of various fuels, the input energy of various fuels, and the total amount of electricity generation from all fuel sources in each model year over the next seven years. 45 **Fed. Reg.** at 73685–86. Thus, in the final rule, electric vehicles from model years 1981 through 1987 had different petroleum-equivalency factors. 46 **Fed. Reg.** at 22754.

B.

In 1994, DOE proposed to make a permanent method for calculating the petroleum-equivalency factor. 59 **Fed. Reg.** 5336, 5337 (Feb. 4, 1994). The factors in this proposal resembled the factors in the 1981 rule, but with some changes. Relevant here, DOE proposed changing the "electricity generation efficiency and relative value factor" into a "electricity generation efficiency and relative scarcity factor." Instead of comparing the *price* of an individual fuel used to generate electricity to the price of gasoline, the proposed factor focused on the *scarcity* of fuel sources. DOE proposed deriving the "relative scarcity factor" by determining "the U.S. percent and numeric share of the world reserve market . . . , and calculating the rate at which the U.S. is depleting each fuel source's reserves." ***Id.*** at 5338. Like

the 1981 rule, the 1994 proposal asserted that accounting for the "average electricity generation efficiency" was required by subsection 32904(a)(2)(b)(ii) and the "relative scarcity factor" was required by subsection 32904(a)(2)(b)(iii). ***Id.***

However, DOE never promulgated this rule. Instead, in 1999, DOE proposed a new rule, with a new method to calculate the petroleum-equivalency factor. DOE replaced the "relative scarcity factor" with a "'fuel content' factor" of 1/0.15. 64 **Fed. Reg.** 37905, 37907 (July 14, 1999). DOE explained that many comments to the 1994 proposal criticized the "scarcity factor." On reexamination, DOE concluded: "faulty assumptions and calculations were present in some of the steps in the development of the scarcity factor." ***Id.*** at 37906. It then considered alternative methods "for quantifying scarcity and value," including using the market price of the fuels used to generate electricity. ***Id.*** at 37907. However, it determined that these alternative methods rested on assumptions that were "contradictory or highly subjective." ***Id.*** DOE then did "an additional search of the literature regarding reserves of the fuels used to generate electricity." ***Id.*** It determined that although fossil fuel reserves are "obviously finite," fuels used to generate electricity "are quite abundant rather than scarce." ***Id.*** It concluded that "scarcity does not appear to be a concern, and should not be a guiding factor in the rulemaking at this time." ***Id.***

DOE then looked beyond 49 U.S.C. § 32904(a)(2)(B), to section 32905's method of determining the petroleum-equivalent fuel economy of various alternative fuels. Section 32905 provides that the fuel economy measured for models of cars that only use alternative fuel "shall be based on the fuel content of the alternative fuel used to operate the automobile." **49 U.S.C. § 32905(a)**. But it exempted electric vehicles from this provision. ***Id.*** It then set the fuel content for "liquid alternative fuel" at ".15 gallon of fuel" for every "gallon of a liquid alternative fuel used to operate a dedicated automobile." ***Id.*** Because this ratio applies to "liquid" alternative fuels, it does not apply to electricity. At the time, two common liquid alternative fuels for cars were 85% alternative fuel and 15% unleaded gasoline—hence the 1/0.15 ratio. 64 **Fed. Reg.** at 37907. But the statute also provides that a

"gallon equivalent of gaseous fuel is deemed to have a fuel content of .15 gallon of fuel." **49 U.S.C. § 32905(c)**. In its proposed rule, DOE said: "The true energy efficiency of both liquid and gaseous fueled alternative fuel vehicles is intentionally and substantially overstated by the methods specified in 49 U.S.C. 32905, since only 15 percent of their actual energy consumption is accounted for in determining their petroleum-equivalent fuel economy." 64 **Fed. Reg.** at 37907. DOE proposed using a similar approach for electric vehicles.

To calculate the petroleum-equivalency factor, DOE proposed multiplying a "gasoline-equivalent energy content of electricity factor" by a "fuel content factor" of 1/0.15, as well as a driving pattern factor and an accessory factor. ***Id.*** at 37908.

The "gasoline-equivalent energy content of electricity factor" incorporated the "relative energy efficiency of the full energy cycles of gasoline and electricity." ***Id.*** To calculate the gasoline-equivalent energy content of electricity factor, DOE multiplied the "U.S. average fossil-fuel electricity generation efficiency," the "U.S. average electricity transmission efficiency," and a "Watt-hours of energy per gallon of gasoline conversion factor." It then divided this value by the "petroleum refining and distribution efficiency." ***Id.*** DOE stated that it included the U.S. average fossil-fuel electricity generation efficiency and the U.S. average electricity transmission efficiency "to satisfy a requirement from Congress (49 U.S.C. 32904(a)(2)(B))." ***Id.***

DOE justified including a fuel content factor of 1/0.15 based on "(i) Consistency with existing regulatory and statutory procedures, (ii) Provision of similar treatment to manufactures of all types of alternative fuel vehicles, and (iii) simplicity and directness." ***Id.*** DOE believed that the new approach was "simpler, more consistent with the regulatory treatment of other alternative fuel vehicles, and better embodies the Congressional intent." ***Id.*** at 37906.

DOE promulgated the new rule in 2000. 65 **Fed. Reg.** 36986 (June 12, 2000). DOE reiterated that "fuels (raw resources) used to produce electricity are abundant, as are the raw resources used to produce gasoline and diesel fuel." ***Id.*** at 36988.

DOE elaborated that the fuel content factor "is not intended to be a scarcity factor *per se*, but it does result in a very substantial adjustment to the raw calculated energy efficiency of electric vehicles. It is included to reward electric vehicles' benefits to the Nation relative to petroleum-fueled vehicles . . . ." ***Id.*** Under the 2000 rule, the petroleum-equivalency factor for electric vehicles without any petroleum-fueled accessories was 82,049 Watt-hours per gallon. **10 C.F.R. § 474.3(b)(1)**. DOE's method of calculating the petroleum-equivalency factor was written as,

$$PEF = Eg * 1/0.15 * AF * DPF$$

"where: Eg = Gasoline-equivalent energy content of electricity factor," "1/0.15 = 'Fuel content' factor," "AF = Petroleum-fueled accessory factor," and "DPF = Driving pattern factor." 65 **Fed. Reg.** at 36987. DOE retained the driving pattern factor at 1.0 because it believed "that electric vehicles eligible for inclusion in CAFE will offer capabilities (perhaps excepting driving range) similar to those of conventional vehicles. ***Id.***

Finally, to calculate the equivalent petroleum-based fuel economy values of electric vehicles, the petroleum-equivalency factor was divided by the "combined electrical energy consumption" value. ***Id.*** at 36992. EPA calculates the energy consumption value for an electric vehicle by testing the vehicle with two test cycles, one to simulate highway driving and one to simulate urban driving. ***Id.***

C.

In 2023, after a petition for rulemaking under 5 U.S.C. § 553(e), DOE proposed updating its method for calculating the equivalent petroleum-based fuel economy values of electric vehicles. It proposed eliminating the fuel content factor from the petroleum-equivalency factor. 88 **Fed. Reg.** 21525, 21528 (Apr. 11, 2023). It explained that although DOE "did not expressly incorporate scarcity" in the 2000 rule, DOE had added the 1/0.15 fuel content factor "in part, to help address scarcity issues by rewarding electric vehicles' benefits to the Nation relative to petroleum-

fueled vehicles." ***Id.*** However, DOE now believed that the fuel content factor "no longer accurately addresses the need to conserve energy and relative scarcity issues and is no longer appropriate for use in the PEF derivation." ***Id.*** DOE justified eliminating the fuel content factor for three reasons. First, due to advances in electric vehicle technology and growth in electric vehicles' market share, treating electric vehicles like other alternative fuel vehicles "is no longer appropriate." ***Id.*** at 21529. Second, by overvaluing the fuel-efficiency of electric vehicles, the fuel content factor (ironically) allowed manufactures to comply with fuel-economy standards while still manufacturing inefficient internal combustion engine vehicles. "This runs counter to the need of the nation to conserve energy, particularly petroleum." ***Id.*** at 21530. Third, the fuel content factor has "no basis" in either section 32905 or 32904. Although DOE asserted it "could potentially utilize a fuel content factor under the four factors of section 32904," it acknowledged "that is not the basis for the current 1/0.15 fuel content factor." ***Id.***

DOE proposed retaining the driving pattern factor at 1.0 because it "continues to believe that current EVs are equivalently capable vehicles that are likely to be used similarly to gasoline-powered or hybrid-electric vehicles." ***Id.*** at 21530. DOE proposed making the accessory factor for all electric vehicles 1.0 because no electric vehicles currently produced included petroleum-powered accessories, "nor are future EVs likely to include them." ***Id.*** at 21527.

Thus, DOE's proposed value for the petroleum-equivalency factor was "simply the gasoline-equivalent energy content of electricity on a full life-cycle basis." ***Id.*** at 21531. DOE proposed updating the "inputs for generation and transmission efficiencies and relative grid mix projections." ***Id.*** at 21527. DOE took a "forward-looking approach based on projections for the electricity generation grid" during model years 2027 through 2031. ***Id.*** at 21531. In other words, DOE estimated the petroleum-equivalency factor for electric vehicles of a model year using a forecast of the percentages of fuel sources for the electrical grid that year. DOE then made the petroleum-equivalency factor for electric vehicles of model years 2027 through 2031 "the average of the annually calculated value of the PEF,

based on calendar-year projections for the electric grid." ***Id.*** DOE expected the Department of Transportation to promulgate new CAFE standards for model years 2027 through 2031, so DOE applied the same petroleum-equivalency factor for all five model years to "simplify compliance with the CAFE standard." ***Id.*** at 21532. For electric vehicles of model years 2027 to 2031, DOE proposed making the petroleum-equivalency factor 23,160 Watt-hours per gallon. ***Id.***

DOE recognized that using projected generation mixes of the electric grid in future years resulted in a greater petroleum-equivalency factor than using the generation mix in 2020. ***Id.*** at 21536 (23,160 vs. 20,136 Watt-hours per gallon). But DOE noted that "a typical vehicle sold today will be expected to be on the road for well over a decade, at which point the PEF value would not account for improvements in overall grid efficiency as the grid decarbonizes." ***Id.*** DOE concluded that looking to projected future generation mixes, rather than the current generation mix, "would better account for the electricity generation mix of models sold throughout the CAFE compliance period and over the course of the vehicle's useful life." ***Id.***

D.

DOE received several comments on its proposed rule. Some commenters worried that manufacturers could not respond rapidly to an instant elimination of the fuel content factor. In the final rule, DOE decided instead to phase out the fuel content factor during model years 2027 through 2030. DOE reasoned that other incentives and support for electric vehicles would become more fully operative and effective over time, reducing the need for the fuel content factor. But, in the meantime, DOE agreed with commenters that "there is still an opportunity to incentivize additional EV production." 89 **Fed. Reg.** 22041, 22050 (Mar. 29, 2024) (final rule). DOE found that retaining the fuel content factor for a limited time was "likely to incentivize manufactures' production of EVs in the near term." ***Id.*** at 22051. DOE argued that consideration of "the need of the United States to conserve all forms of energy and the relative scarcity and value to the United States of all fuel

used to generate electricity" justified its choice. ***Id.*** at 22052, *quoting* **49 U.S.C. § 32904(a)(2)(B)(iii)**.

DOE also received comments opposing its proposal to base the petroleum-equivalency factor on projections about the electrical grid during model years 2027 through 2031. 89 **Fed. Reg.** at 22047. Commenters noted that "vehicles are driven for many years after their initial sale, not just the five years considered in the NOPR." ***Id.*** at 22047-48. "On further analysis, and in response to these comments," DOE decided to base the petroleum equivalency factor on "the expected survivability-weighted lifetime mileage schedule of the fleet of vehicles sold over the regulatory period." ***Id.*** at 22048. DOE recognized that the average life of a vehicle is 15 years, but "the influence of a fleet of vehicles produced in a given model year lasts much longer." ***Id.*** at 22045. DOE followed the parameters from the Department of Transportation's CAFE model, projecting the annual vehicle miles traveled by a fleet of light duty vehicles each year over 40 years. ***Id.*** at 22046, 22048. DOE calculated the "cumulative gasoline-equivalent fuel economy of electricity" by multiplying "the annual gasoline-equivalent fuel economy of electricity" by the percentage of a fleet's lifetime vehicle miles traveled in the corresponding year, then adding all 40 numbers together. ***Id.*** at 22048. This method "requires calculating electricity generation and transmission efficiency 40 years into the future." 89 **Fed. Reg.** at 22046. DOE claimed that its new method "provides a better representation of how vehicles sold during the regulatory period will be used than did the methodology used in the 2023 NOPR." ***Id.*** DOE emphasized that "the mix of electricity generation sources is a critical variable impacting the value of the PEF" and the "mix of energy sources changes over time and is likely to continue changing in the future." ***Id.*** DOE concluded that looking at the sources of energy for the United States' electrical grid over time was "consistent with Congressional direction at 49 U.S.C. 32904(a)(2)(b)(ii) and (iii) to consider national average electrical generation efficiency and the need to conserve all forms of energy." ***Id.***

DOE published its final rule on March 29, 2024. It continues the petroleum-equivalency factor of 82,049 Watt-hours per gallon for electric vehicles without

petroleum-powered accessories throughout "model year (MY) 2024, MY 2025, and MY 2026." **10 C.F.R. § 474.3(b)**. For model years 2027 to 2030, the petroleum-equivalency factor for all electric vehicles is:

Model Year	**Petroleum-Equivalency Factor** (in Watt-hours per gallon)
2027	79,989
2028	50,427
2029	36,820
2030 (and beyond)	28,996 (fuel content factor fully phased out)

§ 474.3(c), **(d)**, **(e)**, **(f)**.

DOE's new methodology is written as:

$$PEF = CEg \times FCF \times AF \times DPF$$

"Where CEg, or cumulative Eg, is the sum of annual gasoline-equivalent energy content of electricity (Eg) over the 40-year survivability-weighted lifetime mileage schedule (in Wh/gal), FCF is the fuel content factor . . . , AF is the accessory factor (unitless and equal to 1), and DPF is the driving pattern factor (unitless and equal to 1)." 89 **Fed. Reg.** at 22053.

Finally, DOE did not change the method for calculating the "combined electrical energy consumption" value of an electric vehicle. ***Id.*** at 22059. Responding to comments asking DOE to use different tests for electric vehicles, DOE highlighted that EPA used the same method to calculate the fuel economy values of internal combustion engine vehicles for CAFE compliance. "Because the purpose of the [petroleum-equivalency factor] is to provide a fuel economy conversion factor for EVs," DOE concluded that "it is reasonable and appropriate to adopt a consistent methodology that helps ensure a level playing field." ***Id.*** at 22044.

On April 5, 2024, several states and the American Free Enterprise Chamber of Commerce petitioned for review. *See* **49 U.S.C. § 32909(a)(1)** ("A person that may be adversely affected by a regulation prescribed in carrying out any of sections 32901–32904 or 32908 of this title may apply for review of the regulation by filing a petition for review in the United States Court of Appeals for the District of Columbia Circuit or in the court of appeals of the United States for the circuit in which the person resides or has its principal place of business."). Also, the Alliance for Automotive Innovation, a trade association of automobile manufacturers, intervenes by an unopposed motion, which this court granted. **Fed. R. App. P.** 15(d).

II.

This court must first decide whether the petitioners have standing. ***Animal Legal Defense Fund v. Reynolds***, 89 F.4th 1071, 1076 (8th Cir. 2024). The states and the American Free Enterprise Chamber of Commerce have the burden to establish standing. ***Id.*** at 1077. Only one petitioner needs standing. ***Biden v. Nebraska***, 600 U.S. 477, 489 (2023). For standing, a petitioner must show it suffered an injury in fact, fairly traceable to the challenged action, and likely redressable by a favorable decision of the court. ***Spokeo, Inc. v. Robins***, 578 U.S. 330, 338 (2016). An injury in fact is "'an invasion of a legally protected interest' that is 'concrete and particularized' and 'actual or imminent, not conjectural or hypothetical.'" ***Id.*** at 339, *quoting* ***Lujan v. Defenders of Wildlife***, 504 U.S. 555, 560 (1992). Here, the states suffer injuries in fact fairly traceable to DOE's final rule and redressable by a favorable decision of this court.

A.

The states assert multiple ways that at least some of them are injured. According to them, because the inflated equivalent petroleum-based fuel economy values of electric vehicles enable car manufacturers to continue to produce less efficient gasoline vehicles, DOE's final rule results in more energy consumption

than the proposed rule would. Increased energy consumption in turn results in increased greenhouse gas emissions. For those states with coastlines—Florida, Mississippi, and Texas—the increase in greenhouse gas emissions threatens to raise global sea levels and erode their sovereign territory. This, the Supreme Court holds, is an injury in fact. ***Massachusetts v. EPA***, 549 U.S. 497, 521–23 (2007).

Petitioners for appellate review of an agency action "must prove each element of standing as if they were moving for summary judgment in a district court." ***Iowa League of Cities v. EPA***, 711 F.3d 844, 869 (8th Cir. 2013). They must set forth "specific facts supported by affidavit or other evidence." ***Id.*** at 870 (internal quotation marks omitted). DOE points out that the states never actually stated in their opening brief what harm they will suffer from increased greenhouse gas emissions. But the states did cite *Massachusetts v. EPA*, 549 U.S. 497, 522–23 (2007), which explains that rising sea levels erode the territory of a coastal state. The states submitted affidavits explaining how the 2024 final rule would increase carbon-dioxide emissions. One affidavit paraphrased an "endangerment finding" by EPA that "higher greenhouse gas emissions increase the rate of sea-level rise, harming coastal states." The states have proved the existence of an injury in fact with specific facts, supported by affidavits and evidence.

Alternatively, the states assert standing because the rule will increase their costs of maintaining public roads. An affidavit explains that electric vehicles are heavier than gasoline-powered vehicles. Heavier vehicles accelerate road wear, requiring increased expenditures to repair public roads and adapt them to accommodate the heavier vehicles. The affidavit quotes DOE's final rule that phasing out the fuel content factor, rather than eliminating it all at once, "will help manufactures continue to invest in the EV transition and serve as a near-term incentive for vehicle manufactures to invest in and sell EVs, thereby . . . accelerating the widespread adoption of electric vehicles in the United States during this pivotal time." 89 **Fed. Reg.** at 22051. Thus, because the final rule will increase the adoption of electric vehicles, the rule will increase wear to public roads, increasing costs to the states to maintain their roads. "For standing purposes, a loss of even a small

amount of money is ordinarily an 'injury.'" ***Czyzewski v. Jevic Holding Corp.***, 580 U.S. 451, 464 (2017). The states conclude that they suffer injury in fact.

The harm to the states is particularized and concrete. "For an injury to be 'particularized,' it 'must affect the plaintiff in a personal and individual way.'" ***Spokeo***, 578 U.S. at 339, *quoting* ***Lujan***, 504 U.S. at 560 n.1. To be concrete, an injury "must be '*de facto*'; that is, it must actually exist." ***Spokeo***, 578 U.S. at 340. A harm can be widespread and still be particularized and concrete. ***Massachusetts***, 549 U.S. at 517. Here, increased costs to maintain public roads is an injury that actually exists and is particular to the states as states. They do not assert "broad generalities," nor is the possibility of harm "too speculative for Article III purposes." ***McNaught v. Nolen***, 76 F.4th 764, 770 (8th Cir. 2023). Rather, the affidavit is specific in explaining how an increase in electric vehicles harms the states. The states set forth specific facts, supported by affidavit as well as the reasoning of DOE's final rule, that prove a particularized and concrete injury.

The injury to the states is also imminent. Future injuries may satisfy the "actual or imminent" requirement for an injury in fact "if the threatened injury is certainly impending, or there is a substantial risk that the harm will occur." ***Department of Commerce v. New York***, 588 U.S. 752, 767 (2019). The harms to the state will not occur "at an unspecified and indefinite time." ***Id.*** at 771. There is a clear timeline for the harm to the states. The final rule preserves the fuel content factor through model year 2026 and, instead of then eliminating it, gradually phases it out starting in model year 2027. Thus, the harm to the states is imminent.

DOE argues that the states are not truly harmed by increased costs to repair their public roads because those costs are offset by the states charging higher fees for heavier vehicles. But that does not account for the costs from electric vehicles driven in one state but registered in another. "Our standing analysis is not an accounting exercise, so the existence of some purported benefit from an injurious government action does not preclude standing." ***Missouri v. Trump***, 128 F.4th 979, 989 (8th Cir. 2025). DOE also objects that the vehicles affected by its final rule are

small—in contrast to buses or heavy-goods trucks—and thus make a negligible contribution to road wear regardless of fuel type. But negligible is not nothing. "Injury in fact necessary for standing need not be large; an identifiable trifle will suffice." ***Sierra Club v. U.S. Army Corps of Engineers***, 645 F.3d 978, 988 (8th Cir. 2011). The states suffer an injury in fact.

DOE highlights that the states are not directly regulated by the final rule. It argues the harm to the states is not fairly traceable to the final rule. Yes, "where (as here) a plaintiff challenges the government's unlawful regulation . . . of *someone else*, standing is not precluded, but it is ordinary substantially more difficult to establish." ***FDA v. All. for Hippocratic Med.***, 602 U.S. 367, 382 (2024) (internal quotation marks omitted). True, "federal policies frequently generate indirect effects on state revenues or state spending. And when a State asserts, for example, that a federal law has produced only those kinds of indirect effects, the State's claim for standing can become more attenuated." ***United States v. Texas***, 599 U.S. 670, 680 n.3 (2023) (holding that states lack standing to challenge immigration non-enforcement decisions by the Executive Branch). The question here is: "Is it likely that the government's regulation or lack of regulation of someone else will cause a concrete and particularized injury in fact to the unregulated plaintiff"? ***FDA***, 602 U.S. at 385 n.2. The Supreme Court has explained that an indirect harm to states by federal rules is still fairly traceable to the challenged rule if the harm is a "predictable effect" of the rule "on the decisions of third parties." ***New York***, 588 U.S. at 768. Here, it is a predictable effect—DOE's predicted effect—that the final rule will accelerate the manufacture and adoption of electric vehicles. 89 **Fed. Reg.** at 22051. This court can make the "commonsense economic inferences" that incentivizing the production of electric vehicles will result in manufactures making more electric vehicles, and more electric vehicles being produced will result in more electric vehicles being used, harming the states. *Cf.* ***Diamond Alt. Energy, LLC v. EPA***, 145 S. Ct. 2121, 2138 (2025). The harm to the states is fairly traceable to the final rule.

The harm to the states is likely redressable by a decision vacating and remanding the final rule. "After all, the fact that a regulation was designed to produce a particular effect on the market ordinarily means that the likely result of vacating that regulation would be to reduce that effect on the market." ***Id.*** at 2137. Petitioners "adversely affected by a discretionary agency decision generally have standing to complain that the agency based its decision upon an improper legal ground." ***FEC v. Akins***, 524 U.S. 11, 25 (1998) (elaborating that a court can "redress" an injury by setting aside an agency action and remanding it to the agency even if "the agency . . . might later, in the exercise of its lawful discretion, reach the same result for a different reason"). The states also argue that DOE failed to follow notice-and-comment procedures for parts of the rule. Vacating and remanding the rule would also likely remedy the harm to the states by prompting DOE to "reconsider the decision that allegedly harmed the litigant." *See* ***Iowa League of Cities***, 711 F.3d 844, 871 (8th Cir. 2013), *quoting* ***Massachusetts***, 549 U.S. at 518.

However, DOE argues that any harm to the states is not redressable by challenging the final rule. DOE points to new emissions standards from EPA, which impose more stringent fleetwide emissions requirements on car manufacturers than what the Department of Transpiration's fuel-economy standards allow them to emit. DOE (and the Alliance for Automotive Innovation) conclude that, because of the existence of EPA's emissions standards, the final rule will not actually affect greenhouse gas emissions.

DOE also argues that because the final rule will not result in greater carbon-dioxide-emission reductions than under EPA's standards, the final rule will not cause an increase in the production of electric vehicles. DOE concludes that harm to the states from an increase in electric vehicles is not redressable by challenging the final rule. (The Alliance for Automotive Innovation believes that EPA's standards, not DOE's final rule, will exert the controlling regulatory influence on the number of electric vehicles manufactured.).

However, EPA made its new emission standards publicly available on April 17, 2024, publishing them the next day. 89 **Fed. Reg.** 27842 (Apr. 18, 2024). That is, EPA promulgated the standards *after* the states and AmFree filed for review on April 5, 2024. Standing is "determined as of the commencement of the suit." ***Iowa League of Cities***, 711 F.3d at 869. Because the petition for review "marks the commencement of the litigation in federal court," standing here is determined as of April 5. ***McNaught***, 76 F.4th at 769. DOE does not dispute that, measured on April 5, its final rule would cause an increase in emissions and an increase in the manufacture and adoption of electric vehicles.[4] Thus, there was an injury in fact to the states fairly traceable to DOE's final rule, and likely redressable by this court.[5] This court concludes that the states have standing.[6]

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[4]The Department of Justice informs this court that, as of July 4, 2025, the penalties for manufacturers violating CAFE standards are now $0.00. **49 U.S.C. § 32912(b)**. However, this does not change this court's analysis of standing because standing is measured at the commencement of the suit, April 5, 2024.

[5]EPA highlights that petitioners must "demonstrate standing for each claim that they press against each" respondent. ***Murthy v. Missouri***, 603 U.S. 43, 44 (2024). EPA argues that the states do not in their opening brief allege any harm EPA has done to them, nor request any remedy against EPA specifically. EPA asks to be dismissed from this case. True, "a petitioner whose standing is not self-evident should establish its standing at the first appropriate point in the review proceeding." ***Owner-Operator Indep. Drivers Ass'n, Inc. v. U.S. Dep't of Transp.***, 831 F.3d 961, 968 (8th Cir. 2016). But, in their opening brief, the states do explain that the statute requires EPA to "calculate the average fuel economy of a manufacturer" and to "include in the calculation of average fuel economy" the equivalent petroleum-based fuel economy values determined by DOE. **49 U.S.C. § 32904(a)**. Because the states explain how they are harmed by inflated equivalent petroleum-based fuel economy values of electric vehicles, it is self-evident that this harm is also fairly traceable to the agency that applies those values and is redressable by vacating DOE's final rule. This court does not dismiss EPA from this case.

[6]Because only one petitioner needs standing for this case to continue, this court need not decide whether the American Free Enterprise Chamber of Commerce also has standing. This court declines to do so.

B.

DOE invoking EPA's new emissions standards raises a question of "*mootness*, not standing, that addresses whether an intervening circumstance has deprived the plaintiff of a personal stake in the outcome of the lawsuit." ***West Virginia v. EPA***, 597 U.S. 697, 719 (2022). Unlike with standing, DOE, "not the petitioners, bears the burden to establish that a once-live case has become moot." ***Id.*** DOE does not meet its burden of establishing that this case is moot.

"A case becomes moot when it becomes impossible for the court to grant any effectual relief." ***Robinson v. Pfizer, Inc.***, 855 F.3d 893, 897 (8th Cir. 2017). This court "can assume that governments do not usually continue to enforce and defend regulations that have no continuing effect in the relevant market." ***Diamond Alt. Energy, LLC***, 145 S. Ct. at 2139. In a supplemental affidavit,[7] the states explain how, even with EPA's new standards, the final rule still has the effect of increasing emissions and accelerating the manufacture of electric vehicles. Thus, vacating and remanding the rule would grant effectual relief to the states, so this case is not moot.

Regardless, the final rule could harm the states in the future. DOE's final rule "remains on the books." ***National Ass'n of Mfrs. V. Dep't of Def.***, 583 U.S. 109, 120 (2018). EPA's standards are currently being challenged in the D.C. Circuit by several states, including some of the states here. *See* ***Kentucky v. EPA***, No. 24-1087 (D.C. Cir. filed Apr. 18, 2024). If EPA's standards are vacated, then DOE's final rule would once again increase emissions and accelerate the production and adoption of electric vehicles. Thus, DOE's final rule would harm the states. Vacating and remanding it would thus provide effectual relief. "It is not enough that the practical impact of any decision is not assured." ***Gutierrez v. Saenz***, 145 S. Ct. 2258, 2269 (2025). Because it is still possible for this court to grant effectual relief, this case is not moot.

[7]This court grants the petitioners' unopposed motion to file the supplemental affidavit. *Cf.* ***Nat'l Council for Adoption v. Blinken***, 4 F.4th 106, 111–12 (D.C. Cir. 2021).

III.

The task of this court is to "determine whether Congress statutorily authorized" DOE to retain the fuel content factor for a limited time in its calculation of the equivalent petroleum-based fuel economy values of electric vehicles. *See* ***Union Pacific R.R. Co. v. Surface Transp. Board***, 113 F.4th 823, 833 (8th Cir. 2024). "Administrative agencies are creatures of statute. They accordingly possess only the authority that Congress has provided." ***Id.***, *quoting* ***NFIB v. OSHA***, 595 U.S. 109, 117 (2022) (per curiam). Also, under the Administrative Procedure Act, Congress requires this court to "set aside" agency rules promulgated without valid statutory authority. ***United States ex rel. O'Keefe v. McDonnell Douglas Corp.***, 132 F.3d 1252, 1257 (8th Cir. 1998), *citing* **5 U.S.C. § 706(2)(C)**. *Cf.* ***Owner-Operator Independent Drivers Ass'n, Inc. v. Federal Motor Carrier Safety Admin.***, 656 F.3d 580, 587 (7th Cir. 2011) (describing the "well-established rule that when an agency fails to consider a factor mandated by its organic statute, this omission is alone 'sufficient to establish an arbitrary-and-capricious decision requiring vacatur of the rule'"), *quoting* ***Public Citizen v. Federal Motor Carrier Safety Admin.***, 374 F.3d 1209, 1216 (D.C. Cir. 2004).

The parties agree that the APA sets the standard of review. DOE argues that this court applies a "highly deferential standard" when reviewing agency actions under the APA. ***Organization for Competitive Markets v. U.S. Dep't of Agric.***, 912 F.3d 455, 459 (8th Cir. 2018). DOE asserts that if "an agency's determination is supportable on any rational basis," then this court "must uphold it." ***Id.*** However, that language addresses agency actions that might be "arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with law." ***Id.***, *quoting* **5 U.S.C. § 706(2)(A)**. That language does not set the standard of review for agency actions that are "in excess of statutory jurisdiction, authority, or limitations, or short of statutory right." **§ 706(2)(C)**. Instead, the APA provides that, in reviewing agency actions, this court "shall decide all relevant questions of law" and "interpret . . . statutory provisions." **§ 706**. "Courts must exercise their independent judgment in deciding whether an agency has acted within its statutory authority, as the APA

requires." ***Loper Bright Enters. v. Raimondo***, 603 U.S. 369, 412 (2024). Section 706 "makes clear that agency interpretations of statutes . . . are *not* entitled to deference." ***Id.*** at 393. In determining whether the statute authorizes DOE's action, this court begins "with the statute's plain language, giving words the meaning that proper grammar and usage would assign them." ***Union Pacific***, 113 F.4th at 833. Also, this court may "seek aid from the interpretations of those responsible for implementing particular statutes." ***Loper Bright***, 603 U.S. at 394. "In the construction of a doubtful and ambiguous law, the contemporaneous construction of those who were called upon to act under the law, and were appointed to carry its provisions into effect, is entitled to very great respect." ***Id.*** at 385–86.

Agencies "are bound, not only by the ultimate purposes Congress has selected, but by the means it has deemed appropriate, and prescribed, for the pursuit of those purposes." ***MCI Telecomm. Corp. v. AT&T***, 512 U.S. 218, 231 (1994). DOE relies on section 32904, which requires basing electric vehicles' equivalent petroleum-based fuel economy values on, among other factors, "the need of the United States to conserve all forms of energy and the relative scarcity and value to the United States of all fuel used to generate electricity." **49 U.S.C. § 32904(a)(2)(B)(iii)**. DOE explains that gradually phasing out the fuel content factor increases the adoption of electric vehicles. DOE emphasizes that electric vehicles are more energy efficient than gasoline-powered vehicles. It also highlights that greater adoption of electric vehicles helps to conserve scarce fuels. While petroleum used to power gasoline-fueled vehicles is finite, DOE projects that nearly half of electricity will soon be powered by renewable sources of energy, like wind or solar power. Thus, DOE concludes that retaining temporarily the fuel content factor is justified based on the considerations of subsection 32904(a)(2)(B)(iii).

DOE's reading of subsection 32904(a)(2)(B)(iii) is broad, contradicting DOE's decades-long construction of the statute. Unlike its initial method for calculating the petroleum-equivalency factor in 1981, or its 1994 proposed method, DOE no longer tries to quantify the relative value or scarcity of various fuels. 45 **Fed. Reg.** at 34012–13 (proposing to make the "relative value factor" for various

fuels "the ratio of the average price of the individual fuel used to generate electricity to the average price of gasoline"); 59 **Fed. Reg.** at 5338 (proposing to derive the "relative scarcity factor" for various fuels "by determining the U.S. percent and numeric share of the world reserve market . . . , and calculating the rate at which the U.S. is depleting each fuel source's reserves"). Here, DOE does not calculate different values for different fuels. Instead, it applies a flat fuel content factor.

The term "value" includes cost. *Value*, Merriam-Webster, https://www.merriam-webster.com/dictionary/value (defining "value" first as "the monetary worth of something: Market Price" and second as "a fair return or equivalent in goods, services, or money for something exchanged") (last visited Aug. 6, 2025). But unlike in 1981, DOE does not justify having a flat fuel content factor as representing the relative costs of various fuels. Instead, DOE justifies retaining the fuel content factor as serving to "incentive EV production, and hence to conserve energy, specifically petroleum." 89 **Fed. Reg.** at 22052. Under DOE's reading of the statute, the fuel content factor need not be 1/0.15. DOE could choose a different value so long as "applying such a fuel content factor would in fact conserve energy." ***Id.*** This reading of subsection 32904(a)(2)(B)(iii) is not DOE's "contemporaneous construction" of the statute. ***Loper Bright***, 603 U.S. at 385–86. Indeed, this reading is even broader than DOE's justification for the fuel content factor in 2000, which confined the fuel content factor to 1/0.15—the value Congress assigned to liquid alternative fuels and gaseous fuels. The stark difference between DOE's first determination of a "relative value factor" and its current reading of subsection 32904(a)(2)(B)(iii) contradicts DOE's current reading of the statute.

The breadth of DOE's current reading also shows it is not the best reading of the statute. The statute directs DOE to "determine" the "equivalent petroleum based fuel economy values" of electric vehicles "based on" several factors in four subsections. **49 U.S.C. § 32904(a)(2)(B)**. Subsection 32904(a)(2)(B)(iii) is only one of the four. This court presumes that Congress "does not alter the fundamental details of a regulatory scheme in vague terms or ancillary provisions—it does not, one might say, hide elephants in mouseholes." ***Whitman v. American Trucking***

Ass'n, 531 U.S. 457, 468 (2001). If Congress aimed to empower DOE to incentivize the production of electric vehicles so long as the use of electric vehicles conserved energy overall and scarce fuels in particular, "Congress easily could have drafted" the statute "in that broad manner." *See* ***National Ass'n of Mfrs. v. Dep't of Defense***, 583 U.S. 109, 128 (2018).

Other subsections conflict with DOE's reading of subsection (iii). Subsection (i) directs DOE to consider "the approximate electrical energy efficiency of the vehicle." Subsection (ii) directs DOE to consider "the national average electrical generation." DOE argues that subsection (iii) empowers considering both the efficiency of electric vehicles relative to gasoline-powered vehicles, and the percentages of the various fuels generating the electricity used to power electric vehicles. DOE's reading renders subsections (i) and (ii) redundant, violating the canon against surplusage. *See* ***Pulsifer v. United States***, 601 U.S. 124, 143 (2024) ("When a statutory construction thus renders an entire subparagraph meaningless . . . the canon against surplusage applies with special force.") (cleaned up); ***Chicago v. Fulton***, 592 U.S. 154, 159 (2021) ("The canon against surplusage is strongest when an interpretation would render superfluous another part of the same statutory scheme."). It is "more than a little doubtful that Congress would have tucked into the mousehole of" subsection 32904(a)(2)(B)(iii) "an elephant that tramples the work done by" subsections (i) and (ii). *See* ***Epic Sys. Corp. v. Lewis***, 584 U.S. 497, 516 (2018).

Section 32905, an adjacent section, also shows that section 32904 does not empower DOE to include a fuel content factor of 1/0.15. *See* ***Robinson v. Shell Oil Co.***, 519 U.S. 337, 345 (1997) (highlighting that "broader context provided by other sections of the statute provides considerable assistance" in resolving the meaning of an ambiguous statute). In section 32905, Congress explicitly said that the "fuel economy" of alternative liquid fuel vehicles and gaseous fuel vehicles would be "based on" their "fuel content." **49 U.S.C. § 32905(a)**, **(c)**. Congress specifically set the "fuel content" at 1/0.15. ***Id.*** But Congress did not do so for electric vehicles, because section 32905 explicitly exempted electric vehicles. **§ 32905(a)**. Instead,

Congress listed specific factors to calculate the equivalent petroleum-based fuel economy values of electric vehicles. **§ 32904(a)(2)(B)**. The different language in sections 32905 and 32904 shows that they have different meanings. *See, e.g.*, ***Golan-Pertez v. United States***, 498 U.S. 395, 404 (1991); ***Custis v. United States***, 511 U.S. 485, 491-92 (1994); ***Holder v. Humanitarian Law Project***, 561 U.S. 1, 17 (2010); ***University of Texas Sw. Med. Center v. Nassar***, 570 U.S. 338, 357 (2013); ***Southwest Airlines Co. v. Saxon***, 596 U.S. 450, 457–58 (2022) (describing the application of the "meaningful-variation canon" across multiple statutes). Congress's "omission of similar language" in section 32094 "indicates that it did not intend" to include a fuel content factor of 1/0.15 as a factor for the equivalent petroleum-based fuel economy of electric vehicles. *See* ***Custis***, 511 U.S. at 491–92.

DOE has a different view of sections 32094 and 32095. According to it, section 32094 reflects that Congress trusted DOE to decide how best to account for the need of the United States to conserve all forms of energy and the relative scarcity and value of fuels, among other factors. The Alliance for Automotive Innovation adds that because Congress did not specify how to weigh each factor in section 32094, "the agency is authorized to exercise a degree of discretion" in weighing each factor. *See* ***Loper Bright***, 603 U.S. at 394. *Cf.* ***Wilson v. CFTC***, 322 F.3d 555, 559 (8th Cir. 2003) ("Where the issue involves the agency's specialized knowledge and Congress has vested the agency with discretion in a technical area, the courts should recognize the agency's presumed competence and expertise, and uphold the agency's conclusion if it is rationally based.").

"Particularly in cases involving agencies, '[a] statute's meaning may well be that the agency is authorized to exercise a degree of discretion." ***Zimmer Radio of Mid-Missouri, Inc. v. FCC***, 2025 WL 2056854, at *5 (8th Cir. July 23, 2025), *quoting* ***Loper Bright***, 603 U.S. at 395. This court agrees that section 32094(a)(2)(B) does grant DOE some discretion to decide how to operationalize the factors. The plethora of factors listed and the general language used in the section indicate that DOE has some discretion. Also, DOE contemporaneously and consistently interpreted section 32904 to grant it some discretion. Since its first

proposal, DOE has included an "accessory factor," even as it acknowledged that the statute "does not specifically identify petroleum-powered accessories as a parameter in calculating equivalent petroleum-based fuel economy." 45 **Fed. Reg.** at 34012 (interpreting subsections (iii) and (iv) to authorize DOE to include the accessory factor).

But even accepting that section 32904 grants some discretion to DOE, "fixing the boundaries of the delegated authority" is the role of this court. ***Loper Bright***, 603 U.S. at 395 (cleaned up). DOE may have discretion to consider how best to quantify the need to conserve energy overall, as well as the relative value and relative scarcity of various fuels. But here DOE exceeds the boundaries of its statutory authority for the reasons discussed—the dramatic difference between DOE's current view and its previous constructions of section 32904, the broadness of the authority DOE asserts by including the fuel content factor, the risk of making other subsections superfluous, and Congress's choice to exempt electric vehicles from section 32905. DOE cannot "discover in a long-extant statute an unheralded power representing a transformative expansion in its regulatory authority." ***West Virginia v. EPA***, 597 U.S. at 724 (cleaned up). DOE misinterprets subsection 32904(a)(2)(B)(iii).

DOE and the Alliance for Automotive Innovation stress the statutory purpose to incentivize the production of electric vehicles. *See* 45 **Fed. Reg.** at 34009 (describing the purpose of section 32904 as "to provide an incentive for vehicle manufactures to produce electric vehicles"). They also emphasize a purpose to "conserve all forms of energy." **49 U.S.C. § 32904(a)(2)(B)(iii)**. *See also* 45 **Fed. Reg.** at 34008 (describing the purpose of the Energy Policy and Conservation Act of 1975 is to "conserve energy through improvements in the energy efficiency of motor vehicles"). However, the general purposes of the statute do not resolve whether subsection 32904(a)(2)(B)(iii) empowers DOE to incentivize the production of electric vehicles. *See* ***Director, Office of Workers' Comp. Programs v. Newport News Shipbldg. & Dry Dock Co.***, 514 U.S. 122, 136 (1995) ("Every statute proposes, not only to achieve certain ends, but also to achieve them by

particular means—and there is often a considerable legislative battle over what those means ought to be."); ***Luna Perez v. Sturgis Public Schools***, 598 U.S. 142, 150 (2023) (emphasizing that statutes "are the product of compromise, and no law pursues its purposes at all costs") (cleaned up). The incentive to manufacture electric vehicles was created "by including the expected high equivalent fuel economy of these vehicles in the CAFE calculation." ***Id.*** For decades, DOE did not act as if subsection 32904(a)(2)(B)(iii) empowered it to incentivize the production of electric vehicles by artificially inflating their fuel economy. Instead, DOE tried to quantify the relative values of various fuels. 45 **Fed. Reg.** at 34012–13. The "incentive" occurred "by including the expected high equivalent fuel economy of these vehicles in the CAFE calculation." ***Id.*** at 34009. DOE's "contemporaneous construction" indicates that subsection 32904(a)(2)(iii) does not empower DOE to pursue goals by artificially inflating the fuel-economy of electric vehicles. ***Loper Bright***, 603 U.S. at 385-86.

The Alliance for Automotive Innovation argues that the petitioners cannot raise the issue of unlawfulness here because they did not raise it before DOE. *See* ***ExxonMobil Oil Corp. v. FERC***, 487 F.3d 945, 962 (D.C. Cir. 2007) (explaining that requiring petitioners to raise an issue with the agency before seeking judicial review "ensures 'simple fairness' to the agency and other affected litigants" and "provides this Court with a record to evaluate complex regulatory issues"). Here, however, "simple fairness" is not threatened, and there is an ample record to evaluate. Multiple commenters objected to the lawfulness of the fuel content factor, including any attempt to justify it under section 32904. DOE replied to these comments, expressly claiming that section 32904 provides "an adequate statutory basis for retaining the fuel content factor for a limited time period." 89 **Fed. Reg.** at 22049, 22052. Although the states themselves did not raise the issue during notice and comment, the agency and other affected parties were aware of the objection and there is a record to review.

The Alliance for Automotive Innovation also argues that if DOE eliminated the fuel content factor all at once, as in its notice of proposed rulemaking, then it

would have had to consider the reliance interests of car manufacturers. *See* ***Encino Motorcars, LLC v. Navarro***, 579 U.S. 211, 221–22 (2016) (holding that an agency "must at least display awareness that it is changing its position and show that there are good reasons for the new policy. In explaining its changed position, an agency must also be cognizant that longstanding policies may have engendered serious reliance interests that must be taken into account") (cleaned up). But that does not support DOE's final rule. The question before this court is not whether the proposed rule would have been lawful. The question is whether the final rule is lawful. The part of DOE's final rule that preserves and then phases out the fuel content factor is unlawful because the fuel content factor—as currently determined and justified by DOE—lacks statutory authority.[8]

IV.

The states and the American Free Enterprise Chamber of Commerce challenge DOE's calculation of the cumulative equivalent fuel economy of electricity "based on the expected survivability-weighted lifetime mileage schedule of the fleet of vehicles." 89 **Fed. Reg.** at 22048. They argue DOE's calculation violates notice-and-comment procedures, is arbitrary and capricious, and is unlawful. This court concludes that DOE's interpretation of the statute is lawful. But DOE violated notice-and-comment procedures. This court thus need not decide whether DOE acted arbitrarily and capriciously in this part of the rule.

[8]Also, DOE's decision to retain the same two-cycle test procedure for electric vehicles as EPA uses for internal combustion engine vehicles is downstream of DOE's decisions about the petroleum-equivalency factor. 89 **Fed. Reg.** at 22044. Because DOE on remand will reconsider at least some parts of the petroleum-equivalency factor, this court need not rule on whether DOE acted arbitrarily and capriciously in retaining the two-cycle test procedure. ***Public Citizen***, 374 F.3d at 1217 (declining to "render a final decision on petitioners' other objections to the rule" when one objection was dispositive "and especially because the agency's handling of the other factors may be different after reconsideration").

A.

The states and AmFree challenge the "cumulative" aspect of the "cumulative equivalent fuel economy of electricity." They argue that DOE's consideration of the useful life of electric vehicles exceeds its authority under section 32904. They highlight that the lifetime of electric vehicles is not listed in the four subsections of section 32904(a)(2)(B). Instead, subsection (ii) requires DOE to consider "the national average electrical generation and transmission efficiencies." **49 U.S.C. § 32904(a)(2)(B)(ii)**. The states and AmFree emphasize that the statute instructs DOE to review the equivalent petroleum-based fuel economy values "each year" and propose necessary revisions. **§ 32904(a)(2)(B)**. The states and AmFree argue that the ordinary meaning of the word "the" is that DOE must consider only the generation mix of the electrical grid during the model year of the electric vehicle fleet, not the generation mixes of the electrical grid for every year of the electric vehicle fleet's useful lifetime. Finally, they say that DOE's reading of the statute makes its fact-finding "mere speculation" about the United States' electrical grid decades in the future. *See* ***Business Roundtable v. SEC***, 647 F.3d 1144, 1150 (D.C. Cir. 2011).

Again, this court must exercise its "independent judgment" in deciding whether DOE "has acted within its statutory authority." ***Loper Bright***, 603 U.S. at 412. This court is unpersuaded that DOE has exceeded its discretionary authority. Section 32904 tasks DOE with determining the "equivalent petroleum based fuel economy values" of electric vehicles. **49 U.S.C. § 32904**. The statute defines "fuel economy" as "the average number of miles traveled by an automobile for each gallon of gasoline (or equivalent amount of other fuel) used." **§ 32901(11)**. Because the mix of fuels generating electricity in the United States is likely to change over an electric vehicle's lifetime, the amount of electricity equivalent to a gallon of gasoline "used" by electric vehicle's is also likely to change. Although the statute charges DOE with reviewing and revising the equivalent petroleum-based fuel economy values "each year," DOE does not revise these values for past model years. **§ 32904**. Credits are earned at the end of a model year. **§ 32903(b)**. Thus, DOE reasons that

determining the equivalent petroleum-based fuel economy values of electric vehicles required considering the equivalent fuel economy of electricity over the lifetime of an electric vehicle fleet, not just in the year the fleet was produced. The requirement to review the values "each year" does not prohibit DOE from considering the lifetime of electric vehicles and the average miles traveled each year during their lifetime.

Nor does the requirement that DOE base the values on "the national average electrical generation and transmission efficiencies" prohibit DOE from considering these efficiencies over the lifetime of electric vehicles. The states and AmFree argue that the combination of "the" and "each year" in the statute requires DOE to use the generation and transmission efficiencies in the model year that an electrical vehicle fleet is produced. True, "the" can indicate "that a following noun or noun equivalent is definite or has been previously specified by context." ***Nielsen v. Preap***, 586 U.S. 392, 408 (2019). But here, "the" is not followed by a noun. Rather, "the" is followed by an adjective "national average." **49 U.S.C. § 32904(a)(2)(B)(ii)**. In context, the word "the" is "used as a function word . . . to limit the application of the modified noun to that specified by the adjective." *The*, Merriam-Webster, https://www.merriam-webster.com/dictionary/the (last visited July 27, 2025). Thus, the presence of "the" in subsection (ii) does not support the states' reading. This court will not impose "limits on an agency's discretion that are not supported by the text." ***Little Sisters of the Poor v. Penn.***, 591 U.S. 657, 677 (2020). "It is a fundamental principle of statutory interpretation that absent provisions cannot be supplied by the courts." ***Id.*** (cleaned up). The text of Section 32904 does not limit DOE to considering generation and transmission efficiencies only during the model year of a fleet.

Finally, the states point to DOE's original and longstanding practices, arguing that they are entitled to "respect" while DOE's new construction is not. *See* ***Loper Bright***, 603 U.S. at 386. True, DOE has not before now interpreted section 32904 to allow it to consider the vehicle miles traveled over the lifetime of an electric vehicle fleet. In 1981, for electrical vehicles of a model year, DOE based the petroleum-equivalency factor on the projected state of the grid and relative values

of various fuels in that model year, not over the expected lifetime of the vehicles. 45 **Fed. Reg.** at 73686. But DOE still used projections about the future. ***Id.*** DOE's early practice thus contradicts the states' reading of section 32904. Regardless of DOE's prior practices, this court must "independently interpret the statute and effectuate the will of Congress subject to constitutional limits." ***Loper Bright***, 603 U.S. at 395. DOE did not act unlawfully in considering the expected vehicle miles traveled each year over the lifetime of an electric vehicle fleet.

B.

The states and the AmFree argue that DOE promulgated an "entirely new" methodology in its final rule, violating notice-and-comment procedures. ***Owner-Operator Indep. Drivers Ass'n, Inc. v. Federal Motor Carrier Safety Admin.***, 494 F.3d 188, 201 (D.C. Cir. 2007). The APA requires that agencies give notice that includes "either the terms or substance of the proposed rule or a description of the subjects and issues involved." **5 U.S.C. § 553(b)(3)**. And the APA provides that this court "shall hold unlawful and set aside" an agency action found to be "without observance of procedure required by law." **§ 706(2)(D)**. "If a petitioner challenges the agency's compliance with the APA's procedural requirements, then *de novo* review is required because compliance is not a matter that Congress has committed to the agency's discretion." ***Custom Commun'cs, Inc. v. FTC***, 142 F.4th 1060, 1070 (8th Cir. 2025).

Notice "should be sufficiently descriptive of the 'subjects and issues involved' so that interested parties may offer informed criticism and comments." ***Northwest Airlines, Inc. v. Goldschmidt***, 645 F.2d 1309, 1319 (8th Cir. 1981), *quoting* **5 U.S.C. § 553(b)(3)**. DOE emphasizes that notice "need not contain 'every precise proposal which (the agency) may ultimately adopt as a rule.'" ***Northwest Airlines, Inc.***, 645 F.2d at 1319. DOE points out that in its notice of proposed rulemaking it proposed calculating the petroleum-equivalency factor "based on projections for the electricity grid in the future." 88 **Fed. Reg.** at 21531. More, DOE specifically requested comments on its proposal to make the petroleum-equivalency factor for electric

vehicles of model years 2027 through 2031 "the average of the annually calculated value of the PEF, based on calendar-year projections for the electric grid." ***Id.*** This court recognizes a difference between a notice that "expressly asked for comments on a particular issue" and a notice that only "mentioned an issue but 'gave no indication that the agency was considering a different approach.'" ***Citizens Telecommun'cs Co. of Minn., LLC v. FCC***, 901 F.3d 991, 1004 (8th Cir. 2018). Here, DOE did indicate it was considering a different approach.

But DOE still failed to give "notice of the range of alternatives being considered." ***Id.***; *cf.* ***Prometheus Radio Project v. FCC***, 652 F.3d 431, 452 (3d Cir. 2011) (holding that an agency "'must describe the range of alternatives being considered with reasonable specificity. Otherwise interested parties will not know what to comment on, and notice will not lead to better-informed agency decision-making'") (cleaned up), *quoting* ***Horsehead Resource Dev. Co., Inc. v. Browner***, 16 F.3d 1246, 1268 (D.C. Cir. 1994). DOE highlighted multiple alternative approaches it considered for calculating the petroleum-equivalency factor. But none of the alternatives included looking at the expected miles traveled each year during the lifetime of an electric vehicle fleet. 88 **Fed. Reg.** at 21536. DOE gave interested parties almost no idea it was considering the generation mix of the electrical grid each year over a 40-year survivability-weighted lifetime milage schedule. DOE mentioned once that its forward-looking approach "would better account for the electricity generation mix . . . over the course of the vehicle's useful life." ***Id.*** at 21536. But this mention was far away from DOE's request for comment. Rather, before requesting comment on its "proposed approach," DOE explained that it used projections of the grid from 2027 through 2031 because it expected the Department of Transportation's next CAFE standards to be for those years. 88 **Fed. Reg.** at 21531. DOE justified applying the same average petroleum-equivalency factor for all five years because "a fixed value for the CAFE standards period improves the ability of DOT to determine CAFE standards that are 'the maximum feasible average fuel economy level' and provides greater certainty to stakeholders from year to year." ***Id.*** DOE's request for comment "could well have appeared" to be a request for comment about its proposal to average the petroleum-equivalency factors for

model years 2027 through 2031 and apply the same petroleum-equivalency factors for all electric vehicles of those five years. *See* ***Council Tree Commun'cs, Inc. v. FCC***, 619 F.3d 235, 256 (3d Cir. 2010).

Thus, DOE's notice did not allow "interested parties to offer informed criticism and comments." ***Missouri Limestone Producers Ass'n, Inc. v. Browner***, 165 F.3d 619, 622 (8th Cir. 1999). DOE cites three comments pointing out that DOE's proposed method did not consider how the generation mix of the electrical grid will change over the expected lifetime of electric vehicles. One comment, by the American Council for an Energy-Efficient Economy, proposed that DOE "use the projected year-by-year PEF values over the full vehicle life, weighted by expected annual vehicle miles traveled (VMT), which declines with vehicle age." But DOE "cannot bootstrap notice from a comment." ***Citizens Telecommun'cs***, 901 F.3d at 1006. DOE's "cumulative gasoline-equivalent fuel economy of electricity" differs from DOE's proposal in several ways. DOE's proposed method to calculate the petroleum-equivalency factor did not include projecting the useful lifetime of an electric vehicle fleet, the annual vehicle miles traveled each year during that lifetime, nor the generation mix of the electrical grid each year. *See* 89 **Fed. Reg.** at 22045-46, 22047-48. In its final rule, DOE used data from the Department of Transportation about the lifetime vehicle miles traveled by light duty fleets in general, 89 **Fed. Reg.** at 22048, because there is no robust data about the useful lifetime and annual miles traveled by electric vehicle fleets in particular. Before this court, the parties argue whether electric vehicle fleets will have the same lifetimes and the same annual vehicle miles traveled as the average of a manufacture's whole fleet. The lack of engagement with these issues in the comments indicates that DOE's notice was insufficient. The APA's notice-and-comment procedures are "designed to assure due deliberation." ***Smiley v. Citibank (S.D.), N.A.***, 517 U.S. 735, 741 (1996). Because DOE did not propose using a cumulative gasoline-equivalent fuel economy of electricity, "it did not allow for informed participation by interested parties in that portion of the rulemaking, and its notice was insufficient." ***Citizens Telecommun'cs***, 901 F.3d at 1005.

The Alliance for Automotive Innovation argues that a final rule may differ from a proposal if the final rule is a "logical outgrowth" of the proposal. ***American Fed'n of Lab. & Cong. of Indus Orgs. v. Donovan***, 757 F.2d 330, 338 (D.C. Cir. 1985) ("The whole rationale of notice and comment rests on the expectation that the final rules will be somewhat different—and improved—from the rules originally proposed by the agency."); *see also* ***Burlington Northern R.R. Co. v. Minn.***, 882 F.2d 1349, 1355 (8th Cir. 1989) (highlighting that "the final action taken by an agency often differs from the proposed rule, in many cases reflecting the comments of interested parties"). The Alliance argues that the comment by the American Council for an Energy-Efficient Economy reveals that DOE's final rule is a logical outgrowth of DOE's proposal. But the object of the APA's notice-and-comment procedures is "one of fair notice." ***Long Island Care at Home, Ltd. v. Coke***, 551 U.S. 158, 174 (2007); *see also* ***American Fed'n of Lab. & Cong. of Indus Orgs.***, 757 F.2d at 338 ("If the final rule deviates too sharply from the proposal, affected parties will be deprived of notice and an opportunity to respond to the proposal.") (cleaned up). That "some sophisticated observers" thought to mention the changes in the generation mix over the expected lifetime of electric vehicles, does not mean that DOE provided sufficient notice. ***Council Tree Commun'cs, Inc.***, 619 F.3d at 256. This is not a case where "[m]any interested parties understood" what DOE was considering and "they submitted comments opposing or advocating the proposed rules, specifically addressing" looking at the generation mix over the expected vehicle miles traveled each year during the useful lifetime of an electric vehicle fleet. ***Burlington Northern R.R. Co.***, 882 F.2d at 1355. DOE's proposal was not "sufficiently descriptive of the 'subjects and issues involved' so that interested parties may offer informed criticism and comments." ***Citizens Telecommun'cs***, 901 F.3d at 1005. DOE violated notice-and-comment procedures.

The states and AmFree were prejudiced because they "lost the opportunity to dissuade" DOE from adopting the cumulative gasoline-equivalent fuel economy of electricity factor. ***Custom Commun'cs, Inc.***, 142 F.4th at 1073. As demonstrated by the arguments before this court, the states and AmFree would have presented several reasons why DOE should not adopt its cumulative approach. "Petitioners

have raised enough uncertainty whether their comments would have had some effect." ***Id.*** (cleaned up). DOE violated notice-and-comment procedures in this portion of the rulemaking.[9]

V.

The states and AmFree argue that DOE violates subsection 32904(a)(2)(B)(iv) by retaining the driving pattern factor at 1.0. Subsection (iv) provides that DOE shall base the equivalent petroleum-based fuel economy values of electric vehicles on "the specific patterns of use of electric vehicles compared to petroleum-fueled vehicles." **48 U.S.C. § 32904(a)(2)(B)(iv)**. The states and AmFree emphasize that DOE originally recognized that the "petroleum-fueled vehicle has a greater number of vehicle miles travelled annually than the electric vehicle due to the limited range restriction of electric vehicles." 45 **Fed. Reg.** at 34012. They conclude that DOE ignores subsection (iv) by setting a 1.0 driving pattern factor without evidence that electric vehicles have similar performance and are driven the same number of miles as petroleum-fueled vehicles.

Again, this court must exercise its "independent judgment" in deciding whether DOE "has acted within its statutory authority." ***Loper Bright***, 603 U.S. at 412. This court concludes that DOE did not violate subsection (iv) by retaining the driving pattern factor at 1.0. As discussed, the statute delegates some discretion to DOE in how to operationalize that factor. Nothing in the text of subsection (iv) prohibits DOE from setting the driving pattern factor at 1.0 in the proper circumstances. In fact, DOE has maintained the 1.0 driving pattern factor since 1981. 45 **Fed. Reg.** at 73686. Interpretations "issued contemporaneously with the

[9]This court need not decide whether this part of DOE's final rule was arbitrary and capricious. Ruling here on the merits of DOE's calculation of the cumulative gasoline-equivalent fuel economy of electricity would "short-circuit the APA's notice and comment procedures and preclude interested parties from participating in the agency's analytic process." ***Iowa League of Cities***, 711 F.3d at 877. Instead, this court remands this part of the rule to DOE for "further consideration." ***Id.***

statute at issue, and which have remained consistent over time, may be especially useful in determining the statute's meaning." ***Loper Bright***, 603 U.S. at 394. Retaining a driving pattern factor of 1.0 is within the authority that the statute delegates to DOE.

VI.

Having addressed the three substantive challenges to DOE's final rule, this court considers whether the insufficiencies are severable from the final rule. Generally, "the entire rule rises and falls with its challenged provisions." ***Missouri v. Trump***, 128 F.4th at 998. But, in "certain circumstances, portions of a rule can be severed if doing so would 'not impair the function of the statute as a whole, and there is no indication that the regulation would not have passed' had the unlawful provision not been included." ***Id.,*** *quoting* ***K Mart Corp. v. Cartier, Inc.***, 486 U.S. 281, 294 (1988).

DOE believes that Congress intended to "provide an incentive for vehicle manufactures to produce electric vehicles." 45 **Fed. Reg.** at 34009. *See* ***Loper Bright***, 603 U.S. at 394 (reaffirming that "interpretations issued contemporaneously with the statute at issue, and which have remained consistent over time, may be especially useful in determining the statute's meaning"). DOE explains that preserving permanently the fuel content factor would disincentivize increased production of electric vehicles. 89 **Fed. Reg.** at 22050–51. Thus, holding unlawful and vacating only the rule's provision that phases out the fuel content factor would undermine the purpose of the statute.

On this record, DOE would not have promulgated the rule without addressing the fuel content factor. DOE began its rulemaking in response to a petition by National Resources Defense Council and Sierra Club. More than any other issue, they expressed concern about the 1/0.15 fuel content factor. They argued that the multiplier to the fuel economy of electric vehicles enabled manufacturers to comply with CAFE standards without "meaningful improvements in the real-world average

fuel economy of automakers' overall fleets." 86 **Fed. Reg.** 73992, 73995 (Dec. 29, 2021). They also highlighted that the 1/0.15 value neither accounted "for a real-world improvement in fuel conservation" nor "had the effect of causing net improvements in real-word fuel efficiency." ***Id.*** at 73996. They labeled as "questionable" DOE's legal justification for including the 1/0.15 value in the final rule. ***Id.*** The fact that the 1/0.15 value was a primary concern of the petition that prompted DOE's rulemaking indicates that DOE would not have promulgated the final rule without the provision addressing the fuel content factor.

Also, DOE's final rule phasing out of the fuel content factor increases the petroleum-equivalency factor for multiple years relative to DOE's initial proposal eliminating it all at once. Likewise, the final rule's "cumulative gasoline-equivalent fuel economy of electricity" increases the petroleum-equivalency factor relative to DOE's initial proposal to average the "annual gasoline-equivalent fuel economy of electricity" values for 2027 through 2031. *See* 89 **Fed. Reg.** at 22047-48. Because DOE believes that the purpose the statute is to provide an incentive to manufacture electric vehicles, it is reasonable to conclude that DOE would not have promulgated the final rule without including these changes incentivizing the manufacture of electric vehicles.

Finally, the final rule lacks a severability clause. *See* ***Custom Commun'cs, Inc.***, 142 F.4th at 1074–75 (vacating the whole rule despite the rule having a severability clause). Rather, the fuel content factor and the cumulative gasoline-equivalent fuel economy of electricity are two variables in a larger equation for calculating the equivalent petroleum-based fuel economy values of electric vehicles. DOE did not significantly change the other parts of this equation from the 2000 rule. DOE continued the same two-cycle test to determine the combined electrical energy consumption values of electric vehicles. 89 **Fed. Reg.** at 22044. DOE kept the driving pattern factor at 1.0. ***Id.*** at 22052. DOE did change the accessory factor to 1.0 for all electric vehicles. ***Id.*** In the 2000 rule, DOE had the accessory factor at 1.0 for electric vehicles with no petroleum-powered accessories and 0.9 for electric vehicles with those accessories. 65 **Fed. Reg.** at 36987. But this change from DOE's

2000 rule had little practical effect because, as DOE explains: "No EVs currently produced include such accessories and it is unlikely that future EVs will include them." 89 **Fed. Reg.** at 22052. The lack of changes to the other factors used in calculating equivalent petroleum-based fuel economy values of electric vehicles indicates that DOE would not have promulgated a new rule without changing the fuel content factor and the gasoline-equivalent energy content of electricity.

Because the rule is not severable, this court's remedy applies to the whole rule.[10]

VII.

The final question is the proper remedy. Both DOE and the Alliance for Automotive Innovation request that this court not vacate the final rule, even if this court remands the rule to DOE. This court, in determining petitions for review, may "fashion the relief most appropriate to the circumstances of the case before the court." ***U.S. Steel Corp. v. EPA***, 649 F.2d 572, 576 (8th Cir. 1981). This court "must yet determine what relief will best remedy the injury of" the petitioners for review "but minimize any frustration of the purposes" of the statute. ***Id.*** The 2000 rule remains valid and will spring back into effect if this court vacates the 2024 final rule. ***Menorah Med. Ctr. v. Heckler***, 768 F.2d 292, 297 (8th Cir. 1985) ("Unless special circumstances are present . . . prior regulations remain valid until replaced by a valid regulation or invalidated by a court."). The 2000 rule also has a 1/0.15 fuel content factor. Thus, DOE argues, vacating the 2024 final rule would not remedy the states' and AmFree's injuries. DOE adds that vacating the rule would disrupt the statute's energy-conservation goals and disrupt the reliance interests of

[10]This court need not consider whether DOE violated notice-and-comment procedures or acted arbitrarily and capriciously in its decision to retain the driving pattern factor at 1.0. *See* ***Hayes v. Apfel***, 187 F.3d 641, at *2 (8th Cir. 1999) (Table) (finding it "unlikely" that other complained of issues in an agency's decisionmaking "will reoccur on remand").

car manufacturers, who decide about car production years in advance. DOE concludes that this court should not vacate the final rule.

However, in the one binding precedent DOE cites, an agency violated notice-and-comment procedure without good cause. ***U.S. Steel Corp.***, 649 F.2d at 577 (remanding but not vacating the rule). *See also* ***Custom Commun'cs, Inc.***, 142 F.4th at 1074–75 (vacating the rule even though the insufficiencies in the rulemaking were only procedural). Here, DOE exceeds the authority granted by a substantive statute. "Agency action taken without statutory authority must be set aside." ***Union Pacific R.R. Co. v. Surface Transp. Bd.***, 863 F.3d 816, 822 (8th Cir. 2017). *See also* ***O'Keefe***, 132 F.3d at 1257 ("An agency's promulgation of rules without valid statutory authority implicates core notions of the separation of powers, and we are required by Congress to set these regulations aside"), *citing* **5 U.S.C. § 706(2)(C)**. *See generally* ***Sierra Club v. EPA***, 705 F.3d 458, 465 (D.C. Cir. 2013) (distinguishing between a case where the agency action had a "procedural defect" and a case where the agency action had a "substantive defect" and the agency asked the court to vacate its action). Because DOE's rule violates a substantive statute, this court vacates and remands.

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This court grants the petition for review, vacates the 2024 final rule, and remands to DOE.
