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July 5, 2023

The Honorable Michael S. Regan
Administrator
U.S. Environmental Protection Agency
1200 Pennsylvania Ave., N.W.
Washington, DC 20460

Submitted via https://www.regulations.gov

Re: Comments on the proposed rule titled *Multi-Pollutant Emissions Standards for Model Years 2027 and Later Light-Duty and Medium-Duty Vehicles*, 88 Fed. Reg. 29,184 (May 5, 2023) (Docket Nos. EPA-HQ-OAR-2022-0829; FRL 8953-03-OAR)

Dear Administrator Regan:

The undersigned Attorneys General appreciate the opportunity to comment on the Environmental Protection Agency's ("EPA" or "the Agency") proposal, *Multi-Pollutant Emissions Standards for Model Years 2027 and Later Light-Duty and Medium-Duty Vehicles*, 88 Fed. Reg. 29,184 (May 5, 2023) ("Proposed Rule"). Our States and Commonwealths are committed to protecting the country's natural resources and recognize the important role the Clean Air Act ("CAA") has played over the past decades. But the Proposed Rule's too-aggressive shift to electric vehicles ("EVs") is unlawful and misguided. While billed as tightening existing standards for "criteria pollutant and greenhouse gas (GHG) emissions from" certain motor vehicles, *id.* at 29,186, the Proposed Rule is, more accurately, the next phase in a top-to-bottom attempt to restructure the automobile industry. Congress did not give EPA that power. And the Proposed Rule's approach will create more problems than it purports to solve. We urge EPA to adopt instead feasible standards that maintain our nation's air quality without risking consumer safety, economic stability, and national security.

BACKGROUND

EPA first regulated GHG emissions from motor vehicles following the Supreme Court's decision in *Massachusetts v. EPA*, which held that EPA had certain authority under the CAA to regulate greenhouse gas emissions from new motor vehicles. 549 U.S. 497 (2007). Following the *Massachusetts* decision, EPA issued an endangerment finding for "six well-mixed greenhouse gases," including carbon dioxide ("CO_2"). 74 Fed. Reg. 66,496 (Dec. 15, 2009). EPA then promulgated its initial standards for these gases through joint rulemaking with the National Highway Traffic Safety Administration ("NHTSA"). NHTSA is authorized to set corporate average fuel economy standards under the Energy Policy and Conservation Act, Pub. L. No. 94-163, 89 Stat. 871 (1975).

The first of these joint EPA-NHTSA rulemakings occurred in 2010. At that time, EPA and NHTSA set initial CO_2 emissions standards for model years 2012–2016 and later. 75 Fed. Reg. 25,234 (May 7, 2010). In 2012, EPA and NHTSA set new, more stringent CO_2 emissions standards for model years 2017–2025 and later. 77 Fed. Reg. 62,624 (Oct. 15, 2012). In 2020, EPA and NHTSA issued a rule ("the 2020 Rule") that revised the standards for model years 2022–2025, making those standards less stringent and setting a new standard for model years 2026 and later. 85 Fed. Reg. 24,174 (Apr. 30, 2020).

Then President Biden took office and began instituting his climate agenda. By executive order, he required the whole of the federal government to commit the full extent of its authority to reducing GHG emissions. *Executive Order on Tackling the Climate Crisis at Home and Abroad*, Exec. Order No. 14008 of January 27, 2021 ("[W]e must combat the climate crisis with bold, progressive action that combines the full capacity of the Federal Government with efforts from every corner of our Nation, every level of government, and every sector of our economy."). In response, EPA revised the CO_2 emissions standard for model years 2023 and later (the "2021 Rule"). 86 Fed. Reg. 74,434 (Dec. 30, 2021).

The 2021 Rule fundamentally changed EPA's approach to the regulation of motor vehicle emissions. Previously, emissions standards occurred via joint rulemaking with NHTSA and were set in concert with its promulgation of fuel economy standards. This approach made sense because emissions and fuel economy standards are inextricably linked. But the President's climate agenda made joint rulemaking with NHTSA problematic. NHTSA is statutorily prohibited from considering the fuel economy of EVs when setting fuel economy standards. 49 U.S.C. § 32902(h)(1). Consequently, to avoid legal impediments to the President's climate agenda, the 2021 Rule decoupled EPA emissions standards from NHTSA fuel economy standards. The State of Texas, the Commonwealth of Kentucky, and other state and private petitioners challenged the 2021 Rule in the United States Court of Appeals for the D.C Circuit. *Texas, et al. v. EPA, et al.*, Case No. 22-1031. Those challenges remain pending.

In December 2021, President Biden issued yet another executive order, stating that "America must lead the world on clean and efficient cars and trucks" by "bolstering our domestic market by setting a goal that 50 percent of all new passenger cars and light trucks sold in 2030 be zero-emission vehicles, including battery electric, plug-in hybrid electric, or fuel cell electric

vehicles." *Strengthening American Leadership in Clean Cars and Trucks*, Exec. Order 14037 of August 5, 2021. In support of this policy, the President specifically dictated that "[t]he Administrator of the Environmental Protection Agency (EPA) shall, as appropriate and consistent with applicable law, consider beginning work on a rulemaking under the [CAA] to establish new multi-pollutant emissions standards, including for greenhouse gas emissions, for light- and medium-duty vehicles beginning with model year 2027 and extending through and including at least model year 2030." *Id.*

The Proposed Rule is the result of the President's mandate. The Proposed Rule sets "increasingly stringent" standards for CO_2. 88 Fed. Reg. at 29,240. For light-duty passenger cars, the proposal would require a reduction in emissions from 152 grams of CO_2 emitted per mile traveled ("g/mile") for model year 2026 to 73 g/mile for model years 2032 and later—a reduction of 52%. 88 Fed. Reg. at 29,239. For light-duty trucks, the Proposed Rule would require a reduction from 207 g/mile for model year 2026 to 89 g/mile for model years 2032 and later—a reduction of 57%. *Id.* Fleet-wide for all light-duty vehicles, the Proposed Rule would require a reduction in emissions from 186 g/mile for model year 2026 to 82 g/mile for model years 2032 and later—a reduction of 56%. *Id.* at 29,239-29,240. For medium-duty vehicles, the Proposed Rule would require a reduction in CO_2 emissions from 438 g/mile for model year 2027 to 275 g/mile for model years 2032 and later—a reduction of 37%. *Id.* at 29,243. In addition to the revised CO_2 standards, EPA's proposal establishes more stringent emissions standards for non-methane organic gases plus nitrogen oxides, particulate matter, carbon monoxide, and formaldehyde.

DISCUSSION

The Proposed Rule tries to expand EPA's authority under Section 202 of the CAA to force automobile manufacturers to build fewer vehicles with internal combustion engines and make more EVs instead—*many* more, and quickly. The numbers are staggering: EPA expects that the proposal will create enough EVs to penetrate 67% and 46% of overall light- and medium-duty vehicle sales respectively in less than a decade. 88 Fed. Reg. at 29,329, 29,331. Forcing that market transformation goes far beyond the statutory limits Congress set. And it is bad policy.

The Agency points to no textual hook for the Proposed Rule in Section 202—much less a connection clear enough to support the hefty political and economic issues at stake. The Agency's cost-benefit assessment is wrong, too, in large part because it leans so heavily on the shaky "social cost of greenhouse gases" metric. And in EPA's rush to press forward "with haste and ambition" to tackle climate change, Timothy Puko, *Biden to remake U.S. auto industry with toughest emissions limits ever*, Wash. Post (April 12, 2023), https://bit.ly/3qBALKe, EPA blows past red flags about the very possibility of achieving the Proposed Rule's aims—as well as the serious consequences along the way. A more careful look at these issues shows why the Proposed Rule, if left uncorrected, would damage our economy, tax our electrical grids and the families and businesses who depend on them, and threaten our national security. For these and other reasons explained below, the undersigned Attorneys General urge EPA to reconsider the Proposed Rule.

I. The Proposed Rule Exceeds EPA's Statutory Authority.

The Proposed Rule violates EPA's statutory limitations in several ways. EPA may "prescribe . . . standards applicable to the emission of any air pollutant from any class or classes of new motor vehicles or new motor vehicle engines, which in [its] judgment cause, or contribute to, air pollution which may reasonably be anticipated to endanger public health or welfare." 42 U.S.C. § 7521(a)(1). Such standards "shall take effect after such period as the Administrator finds necessary to permit the development and application of the requisite technology, giving appropriate consideration to the cost of compliance within such period." *Id.* § 7521(a)(2).

A vehicle must be tested to determine whether it complies with emissions standards. The administrator "shall test, or require to be tested in such a manner as he deems appropriate, any new motor vehicle or new motor vehicle engine submitted by a manufacturer to determine whether such a vehicle or engine conforms with the regulations prescribed under section 7521 of this title." 42 U.S.C. § 7525(a)(1). If a vehicle or engine complies, each manufacturer must "indicate by means of a label or tag permanently affixed to such a vehicle or engine that such vehicle or engine is covered by a certificate of conformity issued for the purpose of assuring achievement of emissions standards prescribed under section 7521 of this title." *Id.* § 7541(c)(3)(C).

The Proposed Rule exceeds EPA's authority because EPA is permitted to set emissions standards only for classes of new motor vehicles that "cause, or contribute to, air pollution." 42 U.S.C. § 7521(a)(1). But EPA asserts that EVs do not emit CO_2. 88 Fed. Reg. at 29,252 ("Electric vehicle operation would therefore continue to be counted as 0 g/mile."). If EVs are not subject to the Agency's emissions standards, then it follows that EPA cannot include EVs in any calculations that determine those emissions standards. By allowing EVs to help set standards for internal combustion engines, the Proposed Rule puts its thumb on the scale of free markets. This preference for EVs goes well beyond EPA's statutory role, as it contemplates a wholesale substitution of a new vehicle or engine rather than the mere "application" of a "technology" to an existing vehicle or engine type. 42 U.S.C. § 7521(a)(2).

And even if a shift to EVs could be termed the "development and application of [a] requisite technology," EPA has failed to recognize the "period" that will be "necessary" to develop and implement that technology, as required. 42 U.S.C. § 7521(a)(2). As discussed below, the automotive supply chain is nowhere close to ready when it comes to meeting the production demands that the Proposed Rule forces through it. And even if it were, the scope and speed of the Proposed Rule requires automakers to devote every last resource they have to keeping up with that pace—including precious resources they would have spent on the development of more innovative EV technology than we have right now. This sacrifice of innovation at the altar of speed will lead to disastrous consequences down the line as the demand grows for later generations of EVs and their component parts.

But as for EVs, EPA does not adequately explain how it can expand its authority to designate certain batteries and other "associated electric powertrain components" in the same way. *Id.* at 29,286-29,287. It says only that the expansion is an important one, and that these components "were not in general use prior to 1990" and exceed the necessary cost threshold. *Id.* Missing, of

course, is an adequate explanation of how these batteries and other nameless associated electric powertrain components qualify as "pollution control device[s] or component[s]" under the statute. 42 U.S.C. § 7541(i)(2). And given the robust body of state warranty law already in place, a power grab this bold—and in an area (consumer protection) that is typically under the purview of other agencies—needs a much more thorough explanation than the passing one EPA provided.

The Proposed Rule also generates tension with the regulatory efforts of agencies in other areas. As described above, the Department of Transportation, through NHTSA, has the authority to set average fuel economy standards for automobiles. 49 U.S.C. § 32902(a). EPA and NHTSA have previously acted in concert. Now that those efforts have been bifurcated, EPA's proposals could limit dramatically not just the effect of NHTSA's regulatory scheme, but also automakers' ability to comply with the suite of regulations. It seems this may have been the plan all along. *See* Private Pet'r Opening Br., *Texas v. EPA*, No. 22-1031 (D.C. Cir. Apr. 27, 2023), ECF No. 1996915, at 9-10 ("Before joining the administration, the heads of the Council on Environmental Quality and EPA's Office of Air and Radiation (which wrote this rule) advocated this 'decoupling' precisely so that EPA could take 'a bolder approach on light duty vehicle electrification.'" (quoting Climate 21 Proj., *Transition Memo: Environmental Protection Agency* 11 (2021))). But EPA has no authority to wield this kind of power and reduce NHTSA's role in this way, especially considering that Congress has spoken clearly that NHTSA "may not consider" EV fuel economy in setting its own standards. 49 U.S.C. § 32902(h)(1). EPA's apparent attempt to expand its own authority under the CAA ignores the broader statutory context.

The Proposed Rule also runs contrary to Congress's intent by frustrating the purpose of the Renewable Fuel Standards program. *See* Brief of Amici Curiae State of West Virginia and 5 Other States, *Texas v. EPA*, No. 22-1031 (D.C. Cir. Nov. 15, 2022), ECF 1973638, at 24-27 ("WV Amicus Brief"). Through that program, Congress intended the renewable fuel standards program to act as "market forcing policy," increasing utilization of renewable fuels. *Growth Energy v. EPA*, 5 F.4th 1, 33 (D.C. Cir. 2021). The program has led to a reduction in air pollution and oil imports, and the creation of American jobs. *See Renewable Fuel Standard*, Renewable Fuels Ass'n, https://bit.ly/3TWyRxa. But pushing EVs as aggressively as the Proposed Rule does is directly at odds with the promoted utilization of renewable fuels. "It is well established that when two regulatory systems are applicable to a certain subject matter, they are to be reconciled and, to the extent possible, both given effect." *Pennsylvania v. ICC*, 561 F.2d 278, 292 (D.C. Cir. 1977). The Proposed Rule does nothing to "give effect" to the statutory authority Congress provides to the Department of Transportation and for the Renewable Fuel Standards Program. Indeed, the Proposed Rule does not even mention the Program at all.

The Proposed Rule also does not grapple with the fact that EPA needs more than a "plausible textual basis" to issue rules that, as here, implicate significant political and economic issues. *West Virginia v. EPA*, 142 S. Ct. 2587, 2610 (2022). Indeed, the proposal is long on explaining that climate change "threatens human health." 88 Fed. Reg. at 29,207. And it does not hide the ball that the Agency is "forc[ing] the industry to" make EVs that it would not otherwise. *Id.* at 29,233 (quoting *International Harvester Co. v. Ruckelshaus*, 478 F.2d 615, 634-35 (D.C. Cir. 1973)). But the Proposed Rule is short on explaining how Congress made it "clea[r]" that the CAA "authoriz[es] [the] agency to exercise powers of [such] 'vast economic and political significance."

Alabama Ass'n of Realtors v. HHS, 141 S. Ct. 2485, 2489 (2021) (quoting *Utility Air Regul. Grp. v. EPA*, 573 U.S. 302, 324 (2014) ("*UARG*")).

Start with what the Proposed Rule aims to do: restructure the American car industry around EVs in under a decade. Specifically, the Agency is pressing to grow today's 8.4% share of light-duty new EV sales to 67% by 2032. 88 Fed. Reg. at 29,189, 29,329. That allows just eight years from when the proposal will likely be finalized to achieve an *eight-fold* increase. How? By altering emission assessments and imposing the harshest emissions standards the Agency has ever promulgated—on the heels of what are already the "most stringent GHG standards . . . to date" for 2023–2026 model year light-duty vehicles. *Id.* at 29,227 (citing 86 Fed. Reg. at 74,434).

EPA tries to disclaim how extreme this proposal is by saying that the Agency is responding to "[r]ecent trends and developments in emissions control technology, including vehicle electrification and other advanced vehicle technologies," that make the "stringent emissions standards . . . feasible at reasonable cost." 88 Fed. Reg. at 29,186. But it also admits, as it must, that the Proposed Rule will forcibly accelerate market transformations—or in the Agency's more euphemistic terms, require "an increasing pace" across more of manufacturers' "vehicle fleets," *id.* at 29,341. Indeed, far from being "technologically neutral," the proposal's "dramatic reductions in emissions" means that the "only automaker that would meet" them right now is Tesla, which produces *only* EVs. *See* Riley Beggin, *Proposed Emission Rules That Favor EVs Face Political Blowback*, Government Technology (May 23, 2023), https://bit.ly/3qIesCH.

So the reality is that the Proposed Rule is another EPA attempt to "substantially restructure" an important sector of the American economy. *West Virginia*, 142 S. Ct. at 2610. Yet in the 263 Federal Register pages the Proposed Rule spans, the Agency does not reckon with the Supreme Court's recent rebuke of a similarly "transformative expansion" of "regulatory authority," *UARG*, 573 U.S. at 324, nor explain where Congress clearly delegated EPA power to remake the nation's car fleets.

In fact, many of the same indicators that made *West Virginia* "a relatively easy case for the [major questions] doctrine's application," are present here, too. 142 S. Ct. at 2621 (Gorsuch, J., concurring). The "serious[ness] [of] the problem"—in both cases, climate change policy—does not excuse an attempt to exert "authority in a manner that is inconsistent with the administrative structure that Congress enacted into law." *FDA v. Brown & Williamson Tobacco Corp.,* 529 U.S. 120, 125 (2000) (cleaned up). Rather, regulating in an area that remains "the subject of an earnest and profound debate across the country" should counsel more restraint, not less. *West Virginia*, 142 S. Ct at 2614. Yet the Proposed Rule shifts a longstanding scheme to regulate internal combustion engine vehicles into one that erases most of those same cars from the market. Major questions often follow "transformative expansion[s]" of agency power like these. *West Virginia*, 142 S. Ct. at 2614 (cleaned up); *see also id.* at 2612 (describing agency interpretations that "effect a fundamental revision of [a] statute, changing it from [one sort of] scheme of . . . regulation into an entirely different kind").

Furthermore, the Proposed Rule implicates "question[s] of deep economic and political significance," *King v. Burwell*, 576 U.S. 473, 486 (2015), due to the huge "number of people

affected," *United States Telecom Ass'n v. Fed. Commc'ns Comm'n*, 855 F.3d 381, 423 (D.C. Cir. 2017) (Kavanaugh, J., dissenting from the denial of rehearing en banc). Because "Americans place a high value on car ownership," almost 92% of households have at least one vehicle, and over 22% have access to at least three. *Car Ownership Statistics 2023*, Forbes (May 8, 2023), https://bit.ly/3NnPXnn. A regulation affecting so many people is bound to collide with "a significant portion of the American economy," *West Virginia*, 142 S. Ct. at 2608 (cleaned up), and require "billions of dollars in spending by private persons or entities," *id.* at 2621 (Gorsuch, J., concurring) (quoting *King*, 576 U.S. at 485). By EPA's own estimate, technology increases "through 2055 are estimated at $260 billion to $380 billion." 88 Fed. Reg. at 29,344.

Congress has also "conspicuously and repeatedly declined to enact" legislation targeting the precise issues the Proposed Rule presses, *West Virginia*, 142 S. Ct. at 2610, making EPA's "claimed delegation all the more suspect," *Gonzales v. Oregon*, 546 U.S. 243, 267 (2006); *cf.* Private Pet'r Opening Br., *Texas v. EPA*, No. 22-1031 (D.C. Cir. Apr. 27, 2023), ECF No. 1996915, at 28-29, 31-33 (noting that Congress "remains in factfinding mode" on the issue of electrification and has "previously considered and rejected multiple bills with effects similar to EPA's rule"); *see also* Letter to the EPA Administrator of May 25, 2023, https://bit.ly/42EwSBI (letter from 27 U.S. Senators asking EPA to withdraw the Proposed Rule because, among other things, it "violates the separation of powers"); Letter to the EPA Administrator of May 22, 2023, https://bit.ly/43AvMs7 (letter from over 150 members of the U.S. House of Representatives expressing concern about the "unworkable and impractical" standards in the Proposed Rule).

So there is a strong potential that reviewing courts will conclude that whether EPA can force electrification of the vast majority of the nation's automobile industry is a major question that only Congress can answer, or else it must delegate in exceedingly clear terms. And just as in *West Virginia*, the Proposed Rule fails to identify the necessary textual hook. It is not enough to say that the proposal just "prescribe[s] . . . standards" for a "class" of vehicles. 42 U.S.C. § 7521(a)(1). When the rule deliberately forces car dealers to take two-thirds of the most common types of vehicles off showroom floors to meet those "standards," the rule has morphed into something else. Under the Proposed Rule's approach, for instance, EPA could "demand much greater reductions in emissions based on a very different kind of policy judgment" than what technology allows for existing fleets: "that it would be 'best' if" internal combustion engine vehicles "made up a much smaller share of" automobile manufacturing and sales. *West Virginia*, 142 S. Ct. at 2612. What, after all, would stop EPA from "go[ing] further, perhaps forcing" automakers "to cease making [internal combustion engine vehicles] altogether"? *Id.*

And recall that Congress went out of its way to recognize that rules under this portion of the CAA may need waiting periods "to permit the development and application of the requisite technology, giving appropriate consideration to the cost of compliance." 42 U.S.C. § 7521(a)(2). Again, and as detailed below, EPA is ignoring this requirement by putting automakers in the impossible position of trying to satisfy the Proposed Rule's fast-and-furious production demands with a supply chain that is not ready for it, and at the cost of innovation that would have otherwise improved EV efforts in the short and long term. Clearly, Congress was concerned with not outpacing existing technology. In other words, though EPA can put a thumb on the scale to speed

developments along, it cannot use its standard-setting power to will new fleets into existence that the market cannot deliver.

II. The Proposed Rule Is Arbitrary And Capricious.

The Administrative Procedure Act requires EPA "to engage in reasoned decisionmaking, and directs that agency actions be set aside if they are arbitrary or capricious." *Dep't of Homeland Sec. v. Regents of the Univ. of Cal.*, 140 S. Ct. 1891, 1905 (2020) (cleaned up). Courts will evaluate whether the Proposed Rule "was based on a consideration of the relevant factors and whether there has been a clear error of judgment." *Id.* (cleaned up). So among other things, EPA must show that it "examined the relevant data and articulated a satisfactory explanation for [its] decision, including a rational connection between the facts found and the choice made." *Dep't of Com. v. New York*, 139 S. Ct. 2551, 2569 (2019) (cleaned up). "Unsubstantiated or bare assumptions" are not enough. *Nat. Res. Def. Council v. EPA*, 31 F.4th 1203, 1207 (9th Cir. 2022) (cleaned up).

The Proposed Rule would not survive this review for several reasons. EPA built it on faulty premises and inaccurate cost-benefit projections. And EPA ignored critical aspects of the problem that make the Proposed Rule's world unrealistic and dangerous.

A. Treating EVs as zero-emitting vehicles is inaccurate.

EPA's claim that EVs should be counted as emitting zero tailpipe emissions is arbitrary. Electricity fuels battery-powered vehicles, and CO_2-emitting sources create most electricity. *What is U.S. electricity generation by energy source? U.S. Energy Information Administration* (Feb. 2023), https://www.eia.gov/tools/faqs/faq.php?id=427&t=3 (In 2022, "[a]bout 60% of . . . electricity generation was from fossil fuels . . . ."). This is important because "[t]ailpipe emissions from an [internal combustion engine] vehicle can be comparable to . . . upstream electricity generation emissions." *Vehicle criteria pollutant (PM, NOx, CO, HCs) emissions: how low should we go?* NPJ Climate and Atmospheric Science (Nov. 5, 2018), https://www.nature.com/articles/s41612-018-0037-5. Yet EPA ignores these "upstream emissions" when determining compliance with the Proposed Rule. 88 Fed. Reg. at 29,252 ("EPA proposes to include only emissions measured directly from [EVs] . . . consistent with the treatment of all other vehicles.").

EPA argues that refusing to account for upstream emissions furthers its mission to develop EVs. *Id.* ("The program has now been in place for a decade, since MY 2012, with no upstream accounting and has functioned as intended, encouraging the continued development and introduction of electric vehicle technology."). Congress has never authorized such a mission. To the contrary, the CAA states that "A primary goal of this chapter is to encourage or otherwise promote reasonable Federal, State, and local governmental actions, consistent with the provisions of this chapter, for pollution prevention." 42 U.S.C. § 7401(c). Thus, EPA's sanctioned mission here is pollution prevention, not EV development. Because the CAA announces no policy for special treatment of EVs, the Proposed Rule is arbitrary and capricious.

B. The cost-benefit analysis supporting the Proposed Rule is flawed.

The Agency relies on the flawed social cost of carbon metric to measure the alleged benefits of the Proposed Rule. U.S. Environmental Protection Agency, Draft Regulatory Impact Analysis: Multi-Pollutant Emissions Standards for Model Years 2027 and Later Light-Duty and Medium-Duty Vehicles (April, 2022) at 560 ("DRIA") (EPA "estimate[s] the social benefits of GHG reductions expected to occur as a result of the proposed and alternative standards using estimates of the social cost of greenhouse gases (SC-GHG)."). The SC-GHG allegedly represents "the monetary value of the net harm to society associated with a marginal increase in emissions . . . in a given year." *Id.* EPA asserts that "the SC-GHG includes the value of all climate change impacts (both negative and positive), including (but not limited to) changes in net agricultural productivity, human health effects, property damage from increased flood risk and natural disasters, disruption of energy systems, risk of conflict, environmental migration, and the value of ecosystem services." *Id.*

This cost-benefit analysis suffers from serious flaws. And when an agency relies "on a cost benefit analysis as part of its rule-making, a serious flaw undermining that analysis can render the rule unreasonable." *National Ass'n of Home Builders v. EPA*, 682 F.3d 1032, 1040 (D.C. Cir. 2012). Specifically, EPA's SC-GHG analysis dramatically and unjustifiably inflates the alleged benefits of the Proposed Rule in relation to its costs.

For example, the Proposed Rule uses a discount rate much lower than the normal 7%. A lower discount rate ensures that the putative benefits of regulation always outweigh the costs. Longstanding guidance from the Office of Management and Budget's Circular A-4 stipulates a 7% discount rate for rules that primarily affect capital investment. Here, EPA specifically rejects that guidance. "EPA concludes that a 7 percent discount rate is not appropriate to apply to value the social cost of greenhouse gases . . . ." DRIA at 564. Instead, the Proposed Rule utilizes a 3% discount rate—a decrease of 57%. The Proposed Rule settles on the 3% discount rate "for simplicity in presentation" and because 3% "is the rate used in past GHG rules[.]" 88 Fed. Reg. 29,199. But mere convenience has never been recognized as a reason to short-circuit adequate cost-benefit analysis.

The Agency argues that "to discount the future benefits of reducing GHG emissions inappropriately underestimates the impacts of climate change for the purposes of estimating the SC-GHG." DRIA at 563. EPA is wrong, and its conclusory, normative statement appears to misunderstand the basic economic function of a discount rate. Its lower discount rate is simply a ruse to help the Agency arrive at its preferred, but not accurate, cost-benefit analysis. Though the Office of Management and Budget ("OMB") is in the process of amending Circular A-4—a proposal that has its own flaws—OMB specifically indicated that the version requiring utilization of a 7% discount rate "remains in effect." Draft OMB Circular A-4 (April 6, 2023), https://www.whitehouse.gov/wp-content/uploads/2023/04/DraftCircularA-4.pdf.

Additionally, the Proposed Rule considers global climate impacts instead of focusing on domestic impacts. DRIA at 563. According to EPA, "[t]he only way to achieve an efficient allocation of resources for emissions reductions on a global basis … is for all countries to base

their policies on global estimates of damages." *Id.* But Congress did not authorize the Agency to address international pollution through tailpipe emissions regulation. And under the presumption against extra-territoriality, courts generally limit the application of statutes to domestic applications. *RJR Nabisco, Inc. v. Eur. Cmty*, 579 U.S. 325, 335, 136 S. Ct. 2090, 2100 (2016) ("When a statute gives no clear indication of an extraterritorial application, it has none." (citation omitted)).

The effect of these errors is significant. EPA estimates the value of the Proposed Rule's benefit at between "$83 billion and $1.0 trillion across a range of discount rates and values for the social cost of carbon." 88 Fed. Reg. at 29,344. The range of these supposed benefits illustrates their arbitrary and capricious nature. When EPA irrationally and arbitrarily stacks the benefit side of the cost-benefit deck, it negates the usefulness of that analysis.

C. The Proposed Rule ignores significant hurdles to the industry transformation that the rule requires.

EPA is pushing forward with this proposal at a breakneck pace and in circumstances ill-suited to the aggressive industry transformations that the Agency demands. The electrical grids are neither stable nor safe enough to handle EPA's proposal. The country will be more energy dependent and less secure because of it. Automakers will be left without the materials they need to comply. And all the while, consumers—our citizens—will have to deal with empty government promises about vehicle pricing, utilization, and safety. In short, the Proposed Rule ignores too many aspects of this too-important issue.

1. The American power grids are not ready for the Proposed Rule.

As with other areas of concern, the Proposed Rule minimizes the damage it is poised to inflict on the power grids. EPA says utility upgrades to "improve grid reliability and … meet new electric power demands" are "routine[]." 88 Fed. Reg. at 29,311. And the Agency projects that increased demand from a greater number of EVs in the market will be "relatively modest" and have no adverse effect on grid reliability. *Id.* But converting the majority of the automobile market to EVs is not so simple. The Proposed Rule would forcibly phase out an entire fueling and service infrastructure, built over a century, and replace it with one that is still in its infancy. EPA has not accounted for all the problems that will cause.

For starters, the Proposed Rule will send a surge of EV demand to a power grid that is "running on an antiquated delivery system established several decades ago," Gina S. Warren, *Hotboxing the Polar Bear: The Energy and Climate Impacts of Indoor Marijuana Cultivation*, 101 B.U. L. Rev. 979, 982 (2021), and "already strained" by the uptick in renewable energy "share and the challenge of more intermittent energy supply." Luis Avelar, *The Road to an EV Future Still Has a Few Potholes. Here's How To Fix Them*, World Econ. Forum (Jan. 31, 2022), http://bit.ly/3gEVgRj.

One need only look to California—a State the Proposed Rule showcases as an example of a State's "demonstrated . . . ability" to handle the increased charging loads of EVs, 88 Fed. Reg. at

29,312—to see how this plays out in real time. Just days after California officials "voted in favor of banning the sale of new gas-powered vehicles in the state by 2035," Simrin Singh, *California bans the sale of new gas-powered vehicles by 2035*, CBS News (Aug. 25, 2022), https://bit.ly/3P5d1s8, California faced a heat wave that triggered calls for residents to avoid charging their EVs during evening hours to "conserve power" as the "aging electricity grid struggle[d]" to keep up, *Flex Alert extended to Saturday; EV owners asked to not charge vehicles during peak hours*, CBS News (Sept. 2, 2022), https://cbsn.ws/3N4CqQa. As "[a]ll states . . . rethink electricity pricing structures as their EV charging needs increase and their grid changes," California should serve as a warning, not a model. Mark Golden, *Charging cars at home at night is not the way to go, Stanford study finds*, Stanford News Service (Sept. 22, 2022) https://bit.ly/46a3qqm; *see* James Downing, *Federal Funding Will Speed Up Grid Modernization, Utility Officials Say*, CQ Roll Call (Oct. 12, 2022), 2022 WL 6905896 (predicting Texas will add "nearly a quarter of its peak demand" to its overall load in the coming years).

The beginnings of needed grid upgrades will not be easy, fast, or cheap. Some experts estimate that it will cost between $1 and $2.4 trillion by 2050 to make the necessary changes, including replacing countless miles of transmission lines. *See* Tim McLaughlin, *Creaky U.S. power grid threatens progress on renewables, EVs*, Reuters (May 12, 2022), https://bit.ly/43Unta3. Even before the Proposed Rule was announced, experts predicted that a $125 billion share of that price tag would need to be spent just to "allow [the grids] to handle electric vehicles." Will Englund, *Plug-In Cars Are The Future. The Grid Isn't Ready*, Wash. Post (Oct. 13, 2021), http://bit.ly/3SEDPhk.

On top of that, the Proposed Rule is just one part of EPA's full-court press to transform the very energy sector the grids support. The corollary proposal for tailpipe emissions from heavy-duty vehicles, the Coal Combustion Residuals Rule, new methane restrictions, new GHG regulations under Section 111 of the Clean Air Act, the tighter Mercury and Air Toxics Standards, the recent update to the Good Neighbor Plan for ozone—this comprehensive suite of regulations adds even greater strain to existing baseload capacity. The Proposed Rule flouts the reality of existing infrastructure even considered in a vacuum. The Agency has not explained how pursuing all of these measures *together*—that is, how the Proposed Rule would operate in the actual context in which EPA plans to promulgate it—only adds to the impossibility of achieving EPA's vision. In short, these near-simultaneous responses to President Biden's pledge to "end fossil fuel" and "generate all electricity from carbon-free sources in just over a decade"—by, in part, "shut[ting] down" American coal plants—will "have tangible consequences for grid reliability and security" that the Proposed Rule does not address. WV Amicus Brief at 20-24.

Another serious problem is that power grids present "a massive to-do list" that "belongs to no one in particular." McLaughlin, *supra*. Neither of the country's top electricity regulators "has the authority to fix or upgrade the U.S. grid problems to match Washington's green-energy ambitions." *Id.* Similarly, while "[a]ppropriate permits may be required from the local building and permitting authorities" for new "[c]harging equipment installations," the "state and local regulators" "have little independent power" to modernize the grids themselves. *Charging Electric Vehicles at Home*, U.S. Department of Energy Alternative Fuels Data Center, https://bit.ly/42y0f8L. EPA's claim that the Proposed Rule has "no[] . . . federalism implications"

is thus puzzling. 88 Fed. Reg. at 29,405. Basing a massive proposal on anticipated grid *expansions* when "none of the[] players individually [even] have the power or the responsibility to *maintain* the U.S. grid in the national interest," McLaughlin, *supra*, is too speculative for responsible regulation. And trying to move forward without accounting for the role of the States *at all*—who at least are "responsibl[e] for grid maintenance, upgrades and inter-regional connections" in their own spheres—only increases the Proposed Rule's head-in-the-sand approach.

These are just some of the power-grid-related problems the Proposed Rule triggers without a solution. The grids not only lack the capacity to accommodate the Proposed Rule's new demands on them, but are also nowhere near secure enough to take them on. This security piece cannot be overstated; the Agency's failure to sufficiently account for it is another red flag. Within the grids themselves, the EV ecosystem is still "emerging." Mohammad Sayed, Ribal Atallah, Chadi Assi, Mourad Debbabi, *Electric vehicle attack impact on power grid operation*, 137 Int'l J. of Electrical Power & Energy Systems 107,784 (2022), https://bit.ly/3qFk2WI. The "special nature of EV loads" means that "EVs now present a new cyber-physical attack vector . . . against the power grid" that was "previously not possible." *Id.* So every charging station in the country is becoming a potential "entry point[] for cyberattacks directed at the American energy grid." Karoline Gore, *Could electric vehicles present a Cybersecurity risk to the grid?*, AT&T Cybersecurity (Dec. 7, 2020), https://bit.ly/3X1L0DW. The increased number of EVs presents new challenges, too. Because "[a]n electric vehicle has far more hardware chips and software components than an internal combustion engine," manufacturers and consumers alike must "be more careful around security in general." Paul Seredynski, *SAE WCX 2022: EV Cybersecurity threats*, SAE International (Apr. 14, 2022), https://bit.ly/3oYJk1q. More cause for caution and concern that, again, the Proposed Rule does not resolve.

At bottom, the Proposed Rule's high "pressure to achieve rapid expansion" will be "a great hindrance to the secure deployment of the EV infrastructure." Sayed, et al., at 107,784. And because "[o]perators and manufacturers often forgo security measures to achieve faster and cheaper deployment of their equipment," *id.*, the Proposed Rule only promises to increase the risk that grid security will falter in the very years it would be called on to take up massive new loads. The logical result, then, is that these "[p]oorly implemented electric vehicle . . . systems could be a significant risk to EV adoption because the political, social, and financial impact of cyberattacks—or public perception of such—would ripple across the industry and produce lasting effects." Jay Johnson, et al., *Cybersecurity for Electric Vehicle Charging Infrastructure*, Sandia National Laboratories (July 1, 2022), https://www.osti.gov/servlets/purl/1877784. And with "no comprehensive []cybersecurity approach and limited best practices" in the market to date, *id.*, the Proposed Rule must do much better to explain how those risks will not become reality.

2. The automotive supply chain is not ready for the Proposed Rule.

The Proposed Rule's fast-and-furious approach to electrification will also have devastating consequences for the automotive supply chain. EPA admits that "[c]urrently, the U.S. is lagging behind much of the rest of the world in critical mineral production" to so great an extent that "it is more convenient" to import minerals like nickel that are critical to build the necessary components of EVs. 88 Fed. Reg. at 29,315. But talk of convenience masks the reality that "[t]oday's battery

and minerals supply chains revolve around China"—over "half of lithium, cobalt and graphite processing and refining capacity" is located there, and "the majority of the [key mineral] supply chain . . . [is] likely to remain in China through 2030." *Global Supply Chains of EV Batteries*, International Energy Agency, https://bit.ly/3MXdM3Y. At best, finalizing a rule that requires this sort of foreign dependence will deal a significant blow to our energy independence. *See* WV Amicus Br. at 6-17 (explaining how "forcing a quick transition to electric vehicles . . . will make automakers unreasonably dependent on foreign-controlled supply"). At worst, it will raise real threats to our national security. *See* Opening Br. for State Pet'rs., *Texas v. EPA*, No. 22-1031 (D.C. Cir. Apr. 27, 2023), ECF 1996773, at 22-24 (discussing the "well-documented history of China using its rare-earth-minerals dominance as a geopolitical weapon").

What is more, demand for these rare materials will spike outside the automotive context as quickly as the Proposed Rule will spike it within. EPA recognizes this: It acknowledges that critical minerals for EV component production "are also experiencing increasing demand across many other sectors of the global economy . . . as the world seeks to reduce carbon emissions." 88 Fed. Reg. at 29,313. The Proposed Rule also concedes that other "uncertain issues" like "permitting, investor expectations of demand and future prices, and many others" make it "difficult to predict with precision the rate at which new capacity will be brought online in the future." *Id.* Yet the proposed solution is just a short "transition period" so that "a robust supply chain" can develop for these products, including new material mining and expanded processing capacity. *Id.* These obstacles should slow a project with even a conservative timetable; for an overhaul as rushed as the Proposed Rule, they are reason to return to the drawing board. Proceeding without more concrete, realistic projects for expanded supply chains—and more realistic timetables—is another mark of arbitrary and capricious decision-making.

Other concerns about the minerals' supply and their extraction processes raise still more hurdles. The Proposed Rule had to recognize that it would take an estimated "five to ten" or more years "to develop a new [lithium] mine or mineral source"—and that delay is despite "very high" industry motivation from a "very robust" demand outlook. 88 Fed. Reg. at 29,313. Yet even that estimate is likely far too rosy. Last year, one geometallurgy professor looked at what it would take to shift away from fossil fuels entirely and to these and other rare materials for a single generation. Based on 2019 mining production rates, he predicted that the necessary extraction of "battery metals like lithium, cobalt, and graphite" would take over 9,900 years, 1,700 years, and 3,200 years, respectively. Simon P. Michaux, *The quantity of metals required to manufacture just one generation of renewable technology units to phase out fossil fuels*, YouTube (Aug. 18, 2022), https://bit.ly/42w7Fcx; *see also* Simon P. Michaeux, *Assessment of the Extra Capacity Required of Alternative Energy Electrical Power Systems to Completely Replace Fossil Fuels* (Aug. 18, 2022), https://bit.ly/3qCU1qU. Indeed, in 2022, the global reserves of those same three metals amounted to "less than five percent of what we need [for] one generation." *Id.* And among those reserves, not every discovery deposit becomes a mine. Only 1 or 2 for every 1000 does, and it takes between 15 and 20 years for those few mines to become fully functional. *Id.* And of *those*, 20–30% of the mines that get up and running will eventually "go out of business because of market conditions." *Id.*; *see also The Raw-Materials Challenge: How The Metals And Mining Sector Will Be At The Core Of Enabling The Energy Transition*, McKinsey & Co. (Jan. 10, 2022), https://tinyurl.com/2ne5jt37. Throw in the fact that each of these materials has a limited life-cycle

after which they must be "decommissioned and replaced," and it becomes clear that we may well need to "make batteries out of something else." Michaux, *The quantity of metals required to manufacture just one generation of renewable technology units to phase out fossil fuels*, *supra*. That whole endeavor "is not going to be easy." *Id.* Quite right. The Proposed Rule needs to deal with real projections for the real demand it creates.

The view further down the supply chain is no better. The Proposed Rule can say only that supply capacity is "rapidly forming," not that it exists now or in the near-enough future. 88 Fed. Reg. at 29,323. EPA recognizes that it is still only "a *goal* of the U.S. manufacturing industry to create a robust supply chain for these products." *Id.* (emphasis added). EPA also says that, "[i]n general, the structure of the proposed standards allows an incremental phase-in to the MY 2032 level and reflects consideration of the appropriate lead time for manufacturers to take actions necessary to meet the proposed standards." *Id.* at 29,239. But there is nothing "incremental" about an edict for an eight-fold increase in EV sales in eight years. *See id.* at 29,189, 29,329, 29,346. And there is nothing simple about the amount of time and money needed to get the still-illusory supply chain running at massive new scale. According to former auto executive-turned-industry adviser Larry Burns, "[t]he transition automakers are perusing requires building totally new factories, assembly lines and supply chains, a years-long process." Puko, *supra*. Automakers will have to apply "major re-engineering" that "usually takes anywhere from three to five years" per model to *dozens* of vehicle models in under a decade. *Id.*

Battery factories, in particular, take years to build. *See* Eli Leland, *So You Want To Build A Battery Factory*, Medium: Batteries are Complicated (July 16, 2021), https://tinyurl.com/mv4vhh3x. It takes longer still to create and sharpen production processes that yield quality and safe products that can satisfy consumer demand and federal regulators. Mistakes are too costly for it to be any other way. *See* Bradley Berman, *Battery Experts Provide Deeper Explanations for Chevy Bolt Fires*, Autoweek (Nov. 15, 2021), https://tinyurl.com/3r7879u6 (describing recall of 141,000 EVs following 16 reported fires). The Proposed Rule, however, will have "automakers rac[ing] to supplement material shortages," and risking far more than prudence allows, just to "scal[e] these facilities and operations quickly." Paige McKirahan, *United States: EV Supply Chain Disruption To Ignite Disputes Over IP, M&As, And More*, Mondaq (Dec. 9, 2022), https://bit.ly/3p6eXpI. This demand, in turn, "put[s] at risk the stability of mines and refineries with possible unskilled workers," and "[h]uman rights violations . . . run rampant if safe and proper processes are not identified." *Id.* None of this is acceptable. All of it can be avoided.

The Proposed Rule should also account for the reality that too-fast and too-aggressive regulation can stifle the very innovation it relies on. Even with increased governmental subsidies toward rapid EV development, mandates like the Proposed Rule will almost certainly "prompt automakers to make bigger bets on a narrower set of options for complying, which might limit innovation and progress because technology now is changing so rapidly." Puko, *supra*. Programs like the Renewable Fuel Standards are whittled down, contrary to Congress's intent. *See* WV Amicus Br., at 24-27. And changing contexts that should command our attention end up ignored, including that EV "battery technology is still evolving," which means "the U.S. may be at risk of building mines and factories to produce batteries that wind up being obsolete in a decade." Joann

Muller & Jael Holzman, *Why the U.S. Can't build EVs without China*, Axios (Apr. 12, 2023), https://bit.ly/42iaoWS.

The second- and third-order consequences of choosing rushed production based on today's technologies over innovation are weighty, too. Take nickel, for example. It is possible—even likely—that later battery technologies will render it unnecessary. *See* 88 Fed. Reg. at 29,314 (citing battery applications that "an iron phosphate cathode which has lower energy density but does not require . . . nickel"). And that may prove to be a very good thing: "Reaching the nickel means cutting down swaths of rainforest," and "[r]efining it is a carbon-intensive process that . . . produc[es] waste slurry that's hard to dispose of." Jon Emont, *EV Makers Confront the 'Nickel Pickle,'* WSJ (June 4, 2023), https://bit.ly/3PdIoRH. Nickel, then, exposes "a larger contradiction within the EV industry: Though EVs are designed to be less damaging to the environment in the long term than conventional cars, the process of building them carries substantial environmental harm." *Id.* Rather than letting market demand and innovation explore other paths forward, the Proposed Rule locks automakers and the rest of our economy into this impossible option. EPA should slow down this endeavor and allow both safety and innovation to drive decision-making in this critically important area.

3. Consumers are not willing to accept the Proposed Rule's electrification mandate.

All of the above questions whether it is possible to make EVs in the numbers the Proposed Rule dictates. Assuming the Agency could explain away those concerns, another important aspect of the problem would persist: Consumers will not buy that many EVs.

The entire proposal depends on increased—*much* increased—EV demand. And demand undoubtedly is growing. But it is not likely that sales will "rapidly grow" enough that 67% of new passenger cars, trucks, and SUVs will be electric in the next handful of years. 88 Fed. Reg. at 29,189, 29,329. After all, EVs comprised under 6% of the market last year. Sebastian Blanco, *Strict EPA Rules for 2027-2032 Vehicles Announced, Garnering a Range of Reactions*, Car and Driver (updated Apr. 13, 2023), https://www.caranddriver.com/news/a43546970/new-strict-epa-mpg-rules-for-2027-2032-vehicles/. Taking another 60% of the market by model year 2032 is unrealistic. Consumers' "vehicles are near and dear to their hearts," so "[f]or most people," EPA's manipulation of the new-vehicle market "could be really problematic." David Ferris, *Gasoline car bans: EV savior or 'stupid' idea?*, E&E News (Feb. 14, 2020), https://bit.ly/43PIP8I. A March 2023 Gallup survey undercuts EPA's market assumptions, too: Only 12% of U.S. adults are "seriously considering" buying an EV, while 41% "unequivocally" say they would not consider buying one. Megan Brenan, *Most Americans Are Not Completely Sold on Electric Vehicles*, Gallup (Apr. 12, 2023), https://news.gallup.com/poll/474095/americans-not-completely-sold-electric-vehicles.aspx. Add in recent cuts on tax credits for electric-car buyers, and the indications that the Proposed Rule relies on wildly inaccurate demand projections keep growing.

The Proposed Rule somewhat attempts to deal with this concern by predicting that sales will increase as consumers become more familiar with EVs as they see broader "charging infrastructure" and more electric cars "on the road." 88 Fed. Reg. at 29,189. But that raises another buyer-focused concern that makes it even *less* likely consumers will change their

purchasing habits to the extreme degree EPA predicts. For people who "rely on street parking," park in a garage over 25 feet from a power source, or own a condo where the building association is not willing to "pay for upgrading the electrical panel or service," where and how to charge a new electric car is a real concern. Rachel Kurzius, *Considering an electric vehicle? Here's how to prep your home for one*, Wash. Post (Sept. 26, 2022), https://bit.ly/3N4Y3zZ. Even for the slowest and most basic "Level 1" charging option, potential EV customers are out of luck; their "home probably can't accommodate" an EV. *Id.* And those who are able to upgrade their home parking situations may find themselves in a long line as the need for more complex and expensive charging mechanisms grows at a fast clip. *See EV Chargers: How many do we need?*, S&P Global (Jan. 9, 2023), https://bit.ly/3X1xFeM (predicting that the EV population uptick will require "about 700,000 Level 2 and 70,000 Level 3 chargers deployed, including both public and restricted-use facilities," 1.2 million and 109,000 nationally by 2027, and 2.13 million and 172,000 by 2030, "all in addition to the units that consumers put in their own garages").

Even those who already own EVs may be in for some unpleasant surprises. A recent study concluded, for example, that "[t]he vast majority of electric vehicle owners [who] charge their cars at home in the evening or overnight" are "doing it wrong" and should instead "move to daytime charging at work or public charging stations" so as to not overwhelm the grids. Golden, *supra*. But standard electricity pricing "charg[es] commercial and industrial customers big fees based on their peak electricity use." *Id.* "This can disincentivize employers from installing chargers, especially once half or more of their employees have EVs." *Id.* Some of these vehicle owners may thus be left in a vehicle-charging no-man's land.

The Proposed Rule also fails to consider the adverse safety impacts of its mandate. EPA represents that fatality risk will increase "0.2% per distance travelled" under the Proposed Rule, a value it deems is "non-statistically significant." 88 Fed. Reg. at 29,345. EPA also argues that while there will be a projected "increase in accidents, injuries, and fatalities," this increase will stem from "personal decisions[s] by consumers to drive more due to the reduced cost of driving." *Id.*

The National Transportation Safety Board ("NTSB")—one of the federal agencies actually charged with regulating vehicle safety—disagrees with EPA's assertions. The Chair of NTSB recently stated "I'm concerned about the increased risk of severe injury and death for all road users from heavier curb weights and increasing size, power, and performance of vehicles on our roads, including electric vehicles." *NTSB Head Calls Out Heavy EVs As A Safety Risk*, Autoweek (Jan. 13, 2023), https://bit.ly/464YR0j. She noted that a "GMC Hummer EV weighs over 9000 pounds," with a "gross vehicle weight rating [of] a staggering 10,550 pounds" and a battery pack that "weighs over 2900 pounds—about the weight of a Honda Civic." *Id.* Likewise, a Ford F-150 Lightning weighs between 2000 and 3000 pounds more than non-electric versions, while battery-powered SUVs are roughly 33% heavier than non-battery options. *Id.* According to the Chair of NTSB, these factors have "a significant impact on safety for all road users." *Id.* So while EPA may be sanguine about added safety risks, consumers may have good reason not to be. The Proposed Rule does not adequately account for these concerns, either.

Finally, many consumers may not be able to afford electric cars even if they want them. The average new car now costs nearly $50,000. *Average New Car Price Tops $49,500*, Kelly Blue Book (January 11, 2023) https://bit.ly/3PcSkKT. The typical new car payment is now nearly $800 a month. *New Vehicle Affordability Worse Than Ever*, Kelly Blue Book (June 18, 2023) https://bit.ly/3X3F8Kt. EPA admits that the Proposed Rule "will result in a rise in the average purchase price for consumers" from even these rates. 88 Fed. Reg. at 29,364. The Agency estimates increased costs for vehicle manufacturers at $7.5 billion annually by 2027. *Id.* By 2032, the Proposed Rule will cost manufacturers at least $1,200 per vehicle, which they will no doubt pass to consumers. *Id.* at 29,201. Prices for used cars will rise as well. *Id.* at 29,364.

The Agency argues that the benefits of EV ownership will offset these costs. Specifically, EPA insists that "projected vehicle technology costs are offset by the savings in reduced operating costs, including fuel savings and reduced maintenance and repair costs." 88 Fed. Reg. at 29,364. EPA's reasoning is flawed.

The alleged savings for reduced fuel consumption are based on layers of speculation. The shift to EVs is projected to "reduce liquid fuel consumption (gasoline and diesel) while simultaneously increasing electricity consumption." 88 Fed. Reg. at 29,365. EPA is correct to consider the net result of these effects when analyzing the costs and benefits of the Proposed Rule. But a necessary part of that analysis relies on correctly forecasting electricity prices over the coming decades. Simultaneous with the forced electrification of vehicles, EPA is attempting to dramatically restructure America's power-generating portfolio. Whether such a transformation is possible given resource limitations, geopolitical factors, permitting issues, land-use debates, jurisdictional policy differences, and litigation is still to be determined. Even if it is possible, EPA cannot predict with any accuracy the costs to the retail ratepayer for completing such a drastic transition. In short, no one knows with enough certainty to justify massive regulatory shifts whether charging an EV will be more cost-effective than refueling a gasoline engine.

Moreover, low-income consumers will not be able to afford an EV. Despite the Agency's best efforts to present EVs as increasingly affordable, at the end of 2022 the average new EV sold for $61,448. *Average New Car Price Tops $49,500*, *supra*. This is why the Agency acknowledges "low-income households are more likely to buy used vehicles and own older vehicles." 88 Fed. Reg. at 29,344. But used EVs offer little savings if the buyer has to replace the battery. According to the Department of Energy's National Renewable Energy Laboratory, advanced batteries "wear out eventually," and today's batteries last only 8 to 15 years. *Electric Vehicle Benefits and Considerations*, U.S. Department of Energy Alternate Fuels Data Center, https://bit.ly/3PcOn9i. Replacing an EV battery costs anywhere from $5,000 to more than $15,000. *Electric Car Battery Replacement Costs*, Edmunds (May 2, 2023) https://bit.ly/3NutoNS. Such substantial expenses hardly qualify as "reduced repair and maintenance costs." 88 Fed. Reg. at 29,364.

All of this comes at a time of record inflation, historic gasoline prices, and high utility bills. Since President Biden took office, food prices are up over 18%, and energy prices are up over 37%. *Introducing the 'Presidential Inflation Rate': Biden trails only Carter*, Roll Call (March 15, 2023) https://bit.ly/3qH63jd. Home prices have also surged. In the first quarter of 2023, the average home price in the United States was $516,500, *Average Sales Price of Houses Sold for the*

United States, Federal Reserve Economic Data, https://bit.ly/3p4BenX—an increase of 27% in less than three years. Agencies cannot ignore context when weighing the costs and benefits of a proposed rule. Here, the broader economic landscape is another strong mark against the Proposed Rule.

CONCLUSION

The Proposed Rule is unlawful, unwise, and unsustainable. As one auto industry advisor put it, we need more time to develop solutions together: "one more learning cycle, with the consumer, with the infrastructure, with the technology and [with] the supply base." Puko, *supra*. Put differently, encouraging quicker market change within the bounds of an agency's operative statute is one thing. But mandating fast and extreme transformations before supply chains, national security, or consumer confidence have any hope of keeping up is another thing entirely. We respectfully urge EPA to reconsider its Proposed Rule.

Sincerely,

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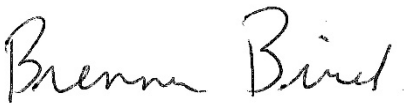

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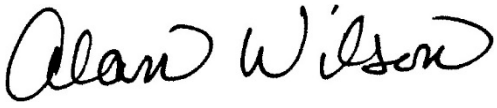

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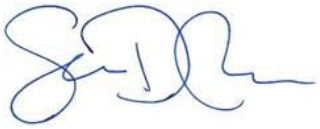

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