



July 6, 2026

Via Regulations.gov

The Honorable Lee Zeldin
Administrator
U.S. Environmental Protection Agency (EPA)
1200 Pennsylvania Avenue, NW
Washington, DC 20460

Re: EPA's *Revision of Tier 4 Criteria Pollutant Standards, Part 1: Amendments to Phase-In Schedule for Light-Duty and Medium-Duty Vehicles*, 91 Fed. Reg. 28,463 (May 18, 2026), Docket No. EPA-HQ-OAR-2025-3297.

Dear Administrator Zeldin:

The Prime Mover Institute (PMI) submits these comments in support of EPA's Part 1 proposal to delay implementation of the Tier 4 criteria-pollutant standards for light- and medium-duty vehicles.¹

The Prime Mover Institute is a public interest organization dedicated to advancing American energy dominance, protecting mobility, and opposing regulatory mandates that restrict consumer choice, affordability, and the lawful use of conventional vehicles. The Institute participates in agency rulemakings to provide legal arguments and technical information concerning the effects of energy and transportation regulations on consumers, the electric grid, personal transportation, industrial activity, and the rule of law.

The Tier 4 criteria-pollutant standards impose substantial near-term compliance burdens on manufacturers of internal-combustion vehicles. In the 2024 rule, EPA relied heavily on projected battery-electric vehicle sales to reduce fleet-average NMOG + NO_x values and to reduce the need for additional particulate-matter controls across gasoline vehicle fleets. Subsequent changes in law, policy, and market conditions have made those projections unreliable. Without the assumed

¹ See *Revision of Tier 4 Criteria Pollutant Standards, Part 1: Amendments to Phase-In Schedule for Light-Duty and Medium-Duty Vehicles*, 91 Fed. Reg. 28,463 (May 18, 2026).

electric-vehicle volumes, manufacturers face compressed lead time for redesigning, validating, sourcing, and producing compliant vehicles.

EPA now proposes to delay the applicability of those standards for light-duty and medium-duty vehicles through model years 2027 and 2028, reasonably recognizing that the assumptions underlying the Tier 4 phase-in have materially changed, especially the projected battery-electric vehicle market share on which the 2024 rule relied. That Part 1 delay is therefore a necessary first step. But the proposed two-year bridge is not sufficient to provide stable planning time for model year 2029 vehicles. PMI urges EPA to extend the Tier 3 bridge through model year 2029, so that revised requirements begin no earlier than model year 2030.

These comments also address issues EPA should resolve in Part 2. EPA should reconsider and repeal or substantially restructure the Tier 4 criteria-pollutant standards, especially the fleet-average NMOG + NO_x standard, the zero-tailpipe treatment of battery-electric vehicles in averaging, and the particulate-matter standard.

Thank you for the opportunity to comment.

Respectfully submitted,

/Russell Greene/

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INTRODUCTION

Internal-combustion engines are essential to the transportation sector. The spark-ignition car, fueled by gasoline, transformed American life, enabling freedom of mobility like never before. Similarly, compression-ignition trucks powered by energy-dense diesel have “profound socioeconomic consequences.”² They are the “backbone of food deliveries, as well as a key link in the distribution of industrial parts and manufactured goods.”³ Motor vehicles—and the prosperity they unlock—are virtually all powered by internal-combustion engines that rely upon abundant, energy-dense, liquid fuels.

Although these prime movers are essential to modern economic life, they have been threatened by misguided policies. In the United States, these efforts culminated in a “whole-of-government” plan to phase out the internal-combustion engine from the Nation’s roads. That plan had many parts—waivers for California electric vehicle mandates, tax credits for electric vehicles, and illegal multipliers—but the biggest was EPA’s *Multi-Pollutant Emissions Standards for Model Years 2027 and Later Light-Duty and Medium-Duty Vehicles*, promulgated under Section 202(a) of the Clean Air Act.⁴

The largest part of that 2024 rule was its greenhouse gas emissions standards, which new internal-combustion motor vehicles cannot meet. Under those regulations, roughly 70 percent of new passenger cars and light trucks (and nearly half of new heavy-duty trucks under a companion rule) would have been forced to be plug-in electric vehicles by model year 2032. EPA has since rescinded those standards by rescinding the 2009 Endangerment Finding.⁵

The criteria-pollutant standards from the 2024 rule, however, remain in effect. In the Multi-Pollutant Standards, EPA established Tier 4 criteria-pollutant standards for non-methane organic gases and nitrogen oxides (NMOG + NO_x), particulate matter (PM), carbon monoxide (CO), and formaldehyde (HCHO) for light- and medium-duty vehicles.⁶ These stringent standards were

² Vaclav Smil, *Energy and Civilization* 331 (2017).

³ *Id.*

⁴ 89 Fed. Reg. 27,842 (Apr. 18, 2024).

⁵ See *Rescission of the Greenhouse Gas Endangerment Finding and Motor Vehicle Greenhouse Gas Emission Standards Under the Clean Air Act*, 91 Fed. Reg. 7,686 (Feb. 18, 2026).

⁶ See *Revision of Tier 4 Criteria Pollutant Standards, Part 1: Amendments to Phase-In Schedule for Light-Duty and Medium-Duty Vehicles*, 91 Fed. Reg. 28,463, 28,467 (May 18, 2026).

predicated on a projected high market share of battery-electric vehicles.⁷ Because battery-electric vehicles certify at zero grams per mile for tailpipe emissions, manufacturers were expected to rely on high electric vehicle sales to average out their fleet compliance for NMOG + NOx and to bypass the need for additional PM controls on gasoline vehicles.⁸ Rather than representing achievable benchmarks for traditional vehicles, the Tier 4 standards functioned as a *de facto* mandate: without massive electric vehicle sales, manufacturers are forced into unplanned, extensive modifications to internal combustion engines.⁹

Following recent legislative and market shifts—including the voiding of California’s Advanced Clean Cars II preemption waiver and changes to electric vehicle tax incentives—projected electric vehicle market share has plummeted.¹⁰ Acknowledging that the industry lacks the necessary lead time to completely overhaul its internal-combustion product lines with technologies like gasoline particulate filters to meet the model year (MY) 2027 and 2028 standards, EPA has proposed a delay.¹¹ Specifically, this Part 1 rulemaking proposes to extend its prior and far more reasonable Tier 3 standards through model years 2027 and 2028, effectively delaying the phase-in of the Tier 4 standards until model year 2029.¹²

EPA’s Part 1 proposal to delay those standards is an important first step. It recognizes that the Tier 4 standards do not rest on realistic assumptions about technology or consumer demand. Prime Mover Institute supports that delay and urges EPA to extend the Tier 3 bridge through model year 2029.

But that delay is not sufficient. EPA must also, as it says it will, reconsider the Tier 4 standards themselves, addressing the legal and technical problems with those standards, including the illegal fleet-average NMOG + NOx standard and the unreasonable particulate-matter standard.

Accordingly, these comments proceed in five sections and respond principally to EPA’s solicitations C-3, C-4, C-7, C-8, and C-9. Section 1 demonstrates that the proposed Part 1 delay is a lawful and necessary exercise of EPA’s Clean Air Act Section 202(a)(2) authority, compelled by

⁷ *See id.* at 28,466.

⁸ *Id.*

⁹ *See id.* at 28,466, 28,472.

¹⁰ *Id.* at 28,466–67, 28,470.

¹¹ *Id.* at 28,467, 28,472.

¹² *Id.* at 28,465–66.

the collapse of the electrification-based compliance pathway, while urging a further extension through model year 2029. Section 2 explains why EPA correctly declined to monetize the per-ton health costs of the delay. Section 3 requests explicit severability provisions in the final Part 1 rule. Section 4 argues that the Tier 4 standards are unlawful because they function as a *de facto* electric vehicle mandate and rely on unauthorized fleet averaging. In its Part 2 rule, EPA should either eliminate fleet averaging entirely or, at minimum, establish a separate regulatory class for battery-electric vehicles. Section 5 explains that the Tier 4 particulate-matter standard is technologically infeasible, cannot be reliably measured, and addresses emissions that are already *de minimis*. It too should be repealed in the Part 2 rulemaking.

BACKGROUND

Title II of the Clean Air Act establishes a comprehensive federal scheme for regulating motor vehicle emissions. Section 202(a)(1) directs the EPA Administrator to “by regulation prescribe (and from time to time revise) ... 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 his judgment cause, or contribute to, air pollution which may reasonably be anticipated to endanger public health or welfare.”¹³

The Agency’s authority to mandate technological overhauls is strictly bounded by statutory lead-time constraints. Section 202(a)(2) conditions the effective date of any such standard on the Administrator’s finding that sufficient time has been provided “to permit the development and application of the requisite technology, giving appropriate consideration to the cost of compliance within such period.”¹⁴

Congress also established even higher statutory guardrails for heavier vehicles. For vehicles with a gross vehicle weight rating (GVWR) exceeding 6,000 pounds, Section 202(a)(3)(C) dictates that revised criteria-pollutant standards must provide manufacturers with at least four model years of lead time and a minimum of three model years of regulatory stability.¹⁵

EPA has historically used this authority to progressively reduce criteria-pollutant emissions from passenger cars and light-duty trucks. The Tier 3 standards, finalized in 2014 and phased in across MY 2017 through 2025, further tightened emission standards and brought the federal criteria-

¹³ 42 U.S.C. § 7521(a)(1).

¹⁴ 42 U.S.C. § 7521(a)(2).

¹⁵ See 42 U.S.C. § 7521(a)(3)(C).

pollutant program into substantial alignment with California’s Low Emission Vehicle (LEV) III standards.¹⁶ Under the fully phased-in Tier 3 program, manufacturers are bound to a strict fleet-average NMOG + NO_x standard of 30 milligrams per mile (mg/mile) and a per-vehicle PM standard of 3 mg/mile.¹⁷ Following these standards, manufacturers of light-duty vehicles have reduced tailpipe criteria-pollutant emissions by 99 percent relative to uncontrolled 1970 levels.¹⁸

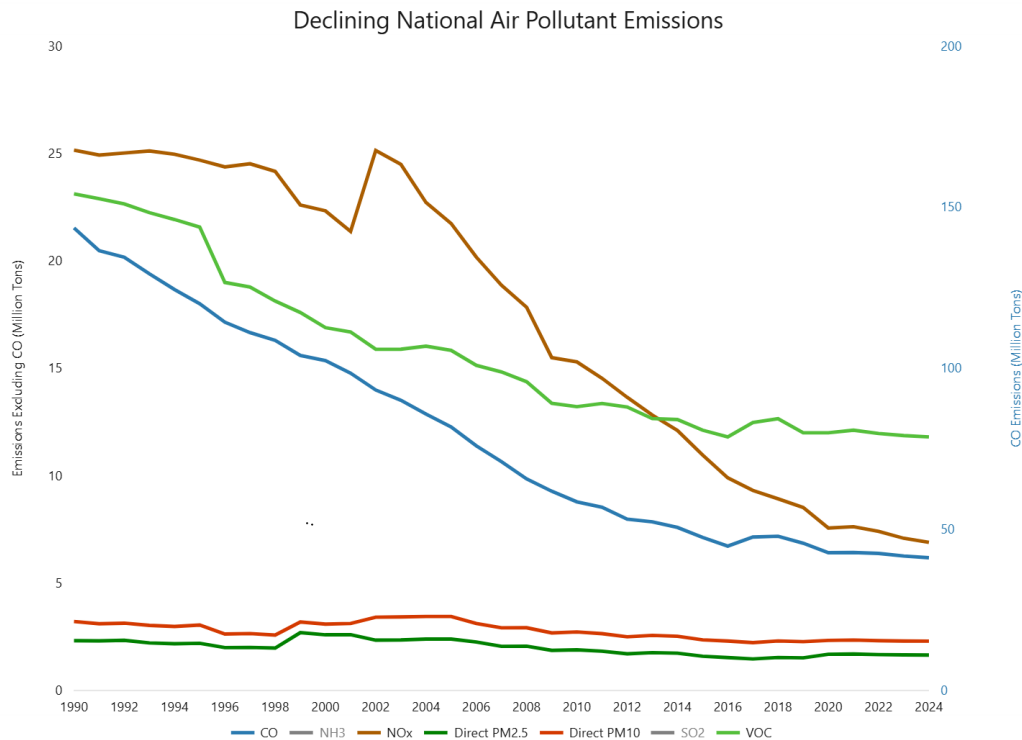


Figure 1: Declining National Air Pollutant Emissions from All Sources 1990–2024.¹⁹

¹⁶ *Control of Air Pollution From Motor Vehicles: Tier 3 Motor Vehicle Emission and Fuel Standards*, 79 Fed. Reg. 23,414 (Apr. 28, 2014).

¹⁷ See 91 Fed. Reg. at 28,466–67.

¹⁸ EPA, *The 2024 EPA Automotive Trends Report: Greenhouse Gas Emissions, Fuel Economy, and Technology since 1975*, EPA-420-R-24-001 (2024) (noting that “EPA’s emissions standards have catalyzed widespread use of new, clean technologies; eliminated lead in gasoline; reduced evaporative emissions from vehicles; and ultimately led to an impressive 99 percent reduction of common vehicle-tailpipe pollutants, such as hydrocarbons, carbon monoxide, nitrogen oxides and particulate matter” since 1970).

¹⁹ EPA, *Our Nation’s Air: Trends Through 2024*, https://gispub.epa.gov/air/trendsreport/2025/#air_trends (last accessed July 1, 2026).

The 2024 Tier 4 Standards and the *De Facto* Electric Vehicle Mandate

The Biden Administration transformed this emission-standard program into yet one more part of its sweeping transformation of the domestic automotive sector. In August 2021, President Biden issued Executive Order 14,037, declaring a national 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.”²⁰

One part of that mandate was EPA’s new Tier 4 criteria-pollutant standards.²¹ The Tier 4 program forces an approximately 50 percent reduction in light-duty criteria-pollutant emissions, stepping the NMOG + NO_x fleet average down from the Tier 3 level of 30 mg/mile in MY 2026 to 15 mg/mile by MY 2032.²² The NMOG + NO_x limit is a sales-weighted fleet average rather than a per-vehicle cap.²³ The program separately establishes an aggressive per-vehicle PM cap of 0.5 mg/mile—down from the Tier 3 level of 3 mg/mile—that must be sustained over three separate test cycles, including a –7 °C cold-temperature FTP-75 test and the high-speed US06 cycle.²⁴

Table 39—LDV, LDT, and MDPV Fleet Average NMOG+NO_x Standards for 25 °C FTP, HFET, US06 and SC03

Model year	LDV, LDT1-2 (GVWR ≤6000 lb) NMOG+NO _x (mg/mi)	LDT3-4 (GVWR 6001-8500 lb) and MDPV NMOG+NO _x (mg/mi)	
		default	early
2026 ^a	^a 30	^a 30	^a 30
2027	25	^a 30	25
2028	23	^a 30	23
2029	21	^a 30	21
2030	19	15	19
2031	17	15	17
2032 and later	15	15	15

^a Tier 3 standards provided for reference.

Figure 2: Changes Required to NMOG + NO_x by Tier 4 Standards.²⁵

²⁰ Exec. Order No. 14,037, 86 Fed. Reg. 43,583 (Aug. 10, 2021).

²¹ See 89 Fed. Reg. at 27,929–42.

²² 91 Fed. Reg. at 28,467; see also *id.* at 28,469 tbl.6.

²³ *Id.* at 28,468.

²⁴ *Id.* at 28,468 tbl.3.

²⁵ 89 Fed. Reg. at 27,935 tbl.39.

Table 43—Light-Duty Vehicle (LDV, LDT, MDPV) PM Standards

Test cycle	Tier 3 standards (mg/mi)	Final PM standard (mg/mi)
25 °C FTP	3	0.5
US06	6	0.5
–7 °C FTP	Not applicable	0.5

Figure 3: Changes Required to PM by Tier 4 Standards.²⁶

EPA predicated the feasibility of the Tier 4 program on massive projected growth in the nationwide market share of battery-electric vehicles. The Agency expressly established the NMOG + NO_x standards “based on a projected high market share of battery electric vehicles (BEVs), as the expected high BEV volumes would participate in the emissions averaging for NMOG + NO_x,” enabling a manufacturer to meet the declining fleet average as it stepped down to its final value in MY 2032 or 2033.²⁷

In that fleet-averaging calculation, each electric vehicle is “averaged into the fleet at zero grams per mile,” so the higher a manufacturer’s electric vehicle sales, the lower its fleet-average NMOG + NO_x result, allowing high-volume electric vehicle sales to average down the fleet profile and neutralize the need to engineer costly, extensive emission reductions on conventional internal-combustion vehicles.²⁸

The same dynamic governs particulates: because electric vehicles emit zero tailpipe PM, every electric vehicle sold counts toward the per-vehicle PM phase-in (20 percent of the fleet in MY 2027, rising to 40 percent in MY 2028), so that high electric vehicle sales would require “fewer, and potentially no, additional PM controls”—i.e., gasoline particulate filters—across a manufacturer’s gasoline fleet.²⁹

²⁶ *Id.* at 27,939 tbl.43.

²⁷ *Id.* at 28,466.

²⁸ *Id.*

²⁹ *Id.*; *see id.* at 28,471.

Indeed, the Agency's own Regulatory Impact Analysis (RIA) confirms that virtually no conventional internal-combustion vehicles can comply with the fully phased-in Tier 4 parameters.³⁰ Specifically, for the model year 2032 fleet-average NMOG + NOx standard of 15 mg/mile, a mere 39 internal-combustion models complied, and practically all of those are strong hybrids, mild hybrids, or plug-in hybrid electric vehicles (PHEVs). Even then, most of these vehicles barely meet the new standard and fail to provide the 30 to 40 percent compliance headroom that manufacturers require to avoid severe compliance risks.³¹

The Collapsed Compliance Baseline and the Proposed Part 1 Delay

The fiscal and regulatory environment that EPA relied upon to justify the 2024 Tier 4 rule has completely dissolved. In its original compliance modeling, the Agency assumed that battery-electric vehicles would command a market share of 26 percent in MY 2027 and 31 percent in MY 2028 across the light-duty program fleet.³² EPA assumed that this consumer demand would be permanently driven by federal financial subsidies under the Inflation Reduction Act and compulsory state-level electric vehicle sales quotas, most notably California's Advanced Clean Cars II regulations.³³

That foundational baseline was never realistic. A fundamental and persistent lack of consumer demand has dogged electric vehicle mandates from the beginning. EPA itself now acknowledges that factors such as a slower projected expansion of charging infrastructure and lower overall consumer perception of BEVs have significantly curtailed consumer acceptance. Intervening federal actions simply delivered the final blow to these initial assumptions. In June 2025, Congress passed and President Trump signed a Congressional Review Act resolution voiding EPA's preemption waiver for California's Advanced Clean Cars II program, stripping California and twelve other Section 177 states of their enforcement power.³⁴ Shortly thereafter, on July 4, 2025, the One Big Beautiful Bill Act was enacted, which completely terminated the Section 30D, 25E, and 45W clean vehicle tax credits ahead of schedule.³⁵

³⁰ See Declaration of Reginald Modlin (attached as Exhibit A).

³¹ *Id.*

³² See *id.* at 28,466, 28,474.

³³ *Id.* at 28,470.

³⁴ See Pub. L. No. 119-16, 139 Stat. 66 (2025); 91 Fed. Reg. at 28,470.

³⁵ See Pub. L. No. 119-21, 139 Stat. 72 (2025); 91 Fed. Reg. at 28,470.

Confronting this altered landscape, EPA now projects that battery-electric vehicles will reach a market share of just 8 percent in MY 2027 and 12 percent in MY 2028.³⁶

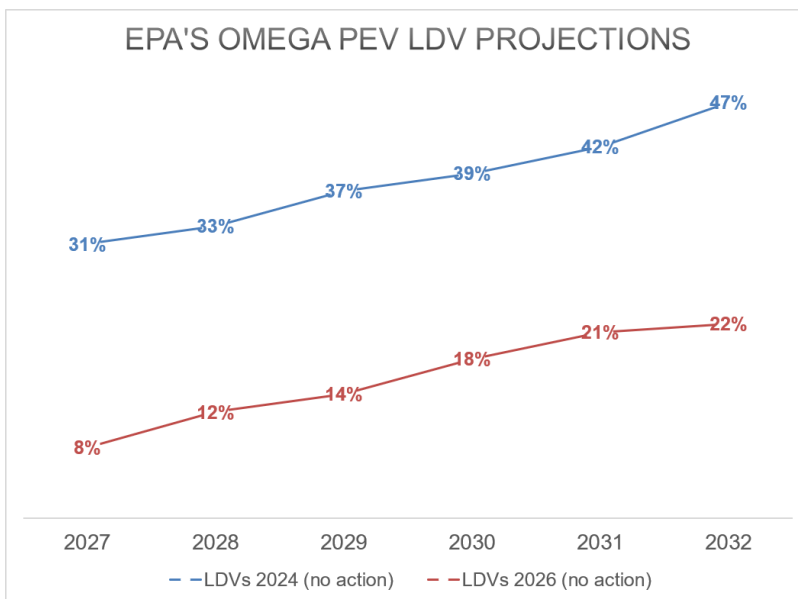


Figure 4: Comparison of updated predictions under no-action scenarios vs. Table 75 of the multi-pollutant table predicting no-action PEV share.³⁷

These updated baseline projections are detailed in the Agency’s May 2026 docket memorandum regarding the BEV Projected Market Share Analysis and the updated OMEGA modeling, which sharply contrast with the original predictions. Independent market indicators confirm this sharp deceleration; following the termination of the federal purchase subsidies, consumer demand experienced a precipitous decline, with electric vehicles dropping from a peak market share of over 10 percent in 2025³⁸ to an expected 5.9 percent in the second quarter of 2026.³⁹

³⁶ See 91 Fed. Reg. at 28,470.

³⁷ See Memorandum from Transp. Sector Impacts & Standards Div., Off. of Transp. & Air Quality, U.S. Env’t Prot. Agency, to Docket EPA-HQ-OAR-2025-3297, Battery Electric Vehicle Projected Market Share Analysis (May 2026).

³⁸ See *EV Sales Decline Slows in First Quarter of 2026, Share Stabilizes Near 6%*, Cox Automotive (Apr. 10, 2026), <https://www.coxautoinc.com/insights/q1-2026-ev-sales-report-commentary/>.

³⁹ See *Q Cox Automotive Mid-Year Review Script 2026* (June 24, 2026), <https://www.coxautoinc.com/wp-content/uploads/2026/06/Q2-2026-Cox-Automotive-Mid-Year-Review-Script.pdf>.

Without high electric vehicle sales to offset fleetwide averages, automotive manufacturers will need to deploy unplanned, extensive modifications to internal-combustion engines on an impossible timeline. Achieving the Tier 4 parameters would require immediate hardware integration, including better three-way catalytic converters, complex engine recalibrations, and the widespread application of gasoline particulate filters (GPFs).⁴⁰ Given that a typical automobile development cycle requires four to five years to conceptualize, tool, and industrialize new hardware across high-volume production lines, manufacturers lack the requisite statutory lead time to adapt for the imminent 2027 and 2028 model years.⁴¹

These severe technological bottlenecks and legal exposures have compelled EPA to propose its two-part reconsideration. In the current Part 1 rulemaking, the Agency acknowledges the near-term compliance infeasibility and proposes extending the established Tier 3 criteria-pollutant standards through MY 2027 and 2028, delaying the initial phase-in of the Tier 4 standards until MY 2029 to avoid severe economic disruptions.⁴² Long-term adjustments to the standards, test procedures, and vehicle classes will be deferred to a separate, subsequent Part 2 rulemaking.⁴³

ARGUMENT

1. THE PROPOSED DELAY IS A LAWFUL AND NECESSARY EXERCISE OF EPA’S AUTHORITY

The Clean Air Act does not authorize EPA to promulgate emission standards divorced from technological and economic reality. Section 202(a)(2) explicitly conditions the effective date of any new or revised standard on the Administrator finding that a sufficient transition period has been provided “to permit the development and application of the requisite technology, giving appropriate consideration to the cost of compliance within such period.”⁴⁴ This practical analysis is required even where the statute demands more aggressive technological progress. For heavy-duty vehicles, Section 202(a)(3) generally requires the “greatest degree of emission reduction achievable.”⁴⁵ Yet Congress explicitly constrained this technology-forcing mandate by requiring the Administrator to give appropriate consideration to “cost, energy, and safety factors associated

⁴⁰ 91 Fed. Reg. at 28,472.

⁴¹ *Id.* at 28,471–72.

⁴² *Id.* at 28,463, 28,466.

⁴³ *Id.* at 28,463, 28,466.

⁴⁴ 42 U.S.C. § 7521(a)(2); 91 Fed. Reg. at 28,465–66.

⁴⁵ 42 U.S.C. § 7521(a)(3).

with the application of such technology.”⁴⁶ A technology-forcing directive, in other words, is not a blank check to ignore insurmountable market or practical barriers.

The D.C. Circuit has provided clear guidance on how to interpret these statutory instructions, emphasizing that the Administrator possesses “extraordinarily broad” discretion in balancing these factors. In *California v. EPA*, Judge Rao examined similarly phrased standard-setting language in Section 231 of the Clean Air Act. The court confirmed that the statute does not dictate the substantive content of the standards or strictly mandate a “technology-forcing approach,” instead leaving the stringency of such standards to the agency’s reasonable discretion.⁴⁷ Consistent with this view, courts routinely afford “particular deference” to EPA when it makes complex technological and predictive judgments within its area of expertise under the Clean Air Act.⁴⁸

This administrative discretion encompasses the inherent authority to reconsider, pause, or revise existing rules when their underlying factual and predictive predicates shift.⁴⁹ Section 202(a) is not a one-way ratchet requiring ever-tightening regulations. Rather, it includes the inherent authority to reconsider prior standards when the agency determines they are no longer appropriate, provided the agency supplies a reasoned explanation. For example, the D.C. Circuit has affirmed that EPA may use temporary regulatory bridges to defer more aggressive standards while it reassesses the regulated industry’s practical compliance capabilities.⁵⁰

As detailed below, the collapsing consumer market for electric vehicles has completely undermined the compliance pathways established in the 2024 final rule. Because the original timeline would now trigger severe market disruptions and noncompliance through no fault of the manufacturing sector, a temporary regulatory pause is exactly the type of safety-valve mechanism that Section 202(a)(2) authorizes and supports.

⁴⁶ *Id.*

⁴⁷ *California v. EPA*, 72 F.4th 308, 314 (D.C. Cir. 2023).

⁴⁸ *Bluewater Network v. EPA*, 372 F.3d 404, 410 (D.C. Cir. 2004); *see also Nat’l Petrochemical & Refiners Ass’n v. EPA*, 287 F.3d 1130, 1135 (D.C. Cir. 2002).

⁴⁹ *See Motor Vehicle Mfrs. Ass’n v. State Farm Mut. Auto. Ins. Co.*, 463 U.S. 29, 42 (1983) (“An agency’s view of what is in the public interest may change, either with or without a change in circumstances.”).

⁵⁰ *Sierra Club v. EPA*, 325 F.3d 374, 378 (D.C. Cir. 2003).

1.1. The Factual Foundation of the Tier 4 Phase-In Has Collapsed (C-9)

Because the original Tier 4 phase-in schedule was dependent on aggressive, subsidized market adoption of electric vehicles that has failed to materialize, the factual basis supporting the current compliance timeline has entirely collapsed. As explained in Background, *supra*, EPA's 2024 modeling projected that, to comply, battery-electric vehicles would capture a majority of the light-duty market and a substantial share of the medium-duty market by MY 2032.⁵¹

As EPA now acknowledges in the proposed rule, the legislative and economic assumptions supporting those high adoption curves have evaporated.⁵² The enactment of the One Big Beautiful Bill Act in July 2025 rescinded the purchase and production tax credits that the 2024 rule treated as primary drivers of consumer electric vehicle demand.⁵³ And Congress's June 2025 disapproval of the California Advanced Clean Cars II preemption waiver eliminated the state-level electric vehicle mandates that EPA relied upon to force incremental production volumes.⁵⁴

Faced with this shift, EPA has been forced to drastically reduce its near-term market expectations. While the 2024 rule relied on light-duty electric vehicle market shares of 26 percent for MY 2027 and 31 percent for MY 2028, the Agency now projects market shares of just 8 percent and 12 percent, respectively.⁵⁵ Because manufacturers cannot use electric vehicle sales to credit and offset their traditional lineups, the Tier 4 criteria limits have become unachievable within the original timeframe.⁵⁶

1.2. EPA Should Extend the Delay to 2029 and Revise the Phase-in Period to Start in 2030 at 20 Percent Tier 4 (C-4, C-7)

Extending the established Tier 3 program provides a reliable regulatory bridge that maintains EPA's environmental protections without triggering severe automotive supply shortages or price increases. The Tier 3 standards already enforce highly demanding caps on NMOGs, NO_x, PM,

⁵¹ 89 Fed. Reg. at 28,057.

⁵² 91 Fed. Reg. at 28,470.

⁵³ *Id.*

⁵⁴ *Id.*

⁵⁵ 91 Fed. Reg. at 28,474.

⁵⁶ *Id.*

HCHO, and CO.⁵⁷ Maintaining these limits ensures that new vehicle lines remain strictly regulated while EPA completes a comprehensive long-term restructuring of the Tier 4 framework.⁵⁸

Conversely, forcing immediate compliance with the original Tier 4 schedule would cause severe economic harm without producing any of the environmental benefits originally projected. When an emission standard cannot be met by an existing internal-combustion fleet, manufacturers must artificially restrict traditional vehicle sales or raise cross-subsidizing prices to avoid catastrophic compliance penalties.⁵⁹ This artificial restriction drives up new vehicle costs across the board, which directly penalizes consumers and causes them to retain older, higher-emitting vehicles longer—a perverse environmental outcome known as the “Gruenspecht effect.”⁶⁰

Although the Prime Mover Institute strongly supports EPA’s choice to delay the criteria program in recognition of its unachievable electric vehicle projections, the proposed two-year window is still insufficient to resolve lead-time constraints. EPA’s own findings indicate that a minimum of 12 to 18 months is required for manufacturers to implement basic production and sourcing adjustments.⁶¹ For major hardware changes—like integrating advanced three-way catalysts and validating gasoline particulate filters—the industry requires a typical development cycle of four to five years.⁶²

Because MY 2027 production is already substantially underway and MY 2028 lines will be locked in before this Part 1 rule can be finalized, a pause that terminates at the end of MY 2028 provides no practical planning runway. Manufacturers would be forced to develop their MY 2029 portfolios under total regulatory uncertainty while the Part 2 reconsideration is still pending.⁶³

To satisfy the statutory commands of Section 202(a)(2) and afford companies the advance lead time necessary to adjust physical assembly lines, EPA should expand the proposed delay.⁶⁴ The

⁵⁷ 91 Fed. Reg. at 28,466–67.

⁵⁸ *Id.* at 28,467.

⁵⁹ 91 Fed. Reg. at 28,466.

⁶⁰ See Howard Gruenspecht, *Differentiated Regulation: The Case of Auto Emissions Standards*, 72 Am. Econ. Rev. 328 (1982).

⁶¹ 91 Fed. Reg. at 28,467.

⁶² *Id.* at 28,471–72.

⁶³ *Id.* at 28,467.

⁶⁴ See *id.* at 28,472; see also *Int’l Harvester Co. v. Ruckelshaus*, 478 F.2d 615, 628 (D.C. Cir. 1973).

Prime Mover Institute therefore urges EPA to finalize at least a three-year extension of the Tier 3 standards through MY 2029, with the phase-in period beginning in MY 2030 at 20 percent Tier 4 rather than 100 percent Tier 4 as proposed in the NPRM. EPA must also implement revised Tier 4 requirements that begin no earlier than MY 2030, to give manufacturers sufficient lead time for compliance.

2. EPA CORRECTLY DECLINES TO MONETIZE SPECULATIVE PER-TON HEALTH COSTS IN PART 1

EPA correctly decided against providing monetary estimates for per-ton health costs associated with emissions increases. Attempting such estimations yields speculative results that fall entirely outside the statutory bounds of Section 202.

2.1. Existing Epidemiological Models Produce Misleading Estimates When Applied to Emission Differences of This Magnitude

EPA prudently proposes to bypass providing monetary health cost estimates because the minor national emissions increases associated with this proposal render full air quality modeling unnecessary.⁶⁵ The benefit-per-ton (BPT) values are intended to offer a proxy substitute for full photochemical air quality modeling when applying the latter methodology proves computationally prohibitive. The BPT method translates modeled emission changes into ambient concentration shifts using national-average coefficients and then converts those figures into health impacts and corresponding dollar values. As EPA acknowledges, however, BPT originated as a “screening tool” uniquely “suited to model emissions that are geographically more uniform” and in environments where “the pollutant species are better mixed.”⁶⁶ National-average coefficients provide a defensible approximation of spatially variable atmospheric chemistry only under those specific, uniform conditions.

The proposed rule confirms that the conditions prerequisite for reliable BPT application remain absent in this context. EPA proposes to defer air quality modeling for this delay because “the atmospheric chemistry related to ambient concentrations of PM, ozone, and air toxics is very complex, and the emissions changes are spatially variable.”⁶⁷ The resulting emissions changes will constitute only minor fractions of total on-road vehicle emissions, with projected NO_x increases capped at 0.2 percent, VOC increases limited to 0.1 percent, and PM_{2.5} increases ranging between

⁶⁵ See 91 Fed. Reg. 28,478.

⁶⁶ 91 Fed. Reg. at 28,478.

⁶⁷ *Id.*

0.2 and 1.6 percent in the years modeled.⁶⁸ Consequently, EPA anticipates only “relatively small changes in ambient concentrations.”⁶⁹ BPT serves to evaluate expansive, geographically consistent emissions shifts rather than estimating health costs from highly localized, dispersed changes where ambient concentration modeling lacks reliability.

The guidelines in the 2003 Circular A-4, which have been readopted by the current administration, reinforce the Agency’s position here. They emphasize that it will “not always be possible” to monetize all benefits and costs and recommend the use of “professional judgment” in circumstances where factors cannot be accurately monetized.⁷⁰ The circular also requires that estimates “cannot be more precise than their most uncertain component” and that reports should not “create a false sense of precision.”⁷¹

Rule-specific issues with BPT application compound the broader uncertainties present in the underlying epidemiological and economic literature. The concentration-response functions forming the empirical foundation of BPT values stem from population-level studies observing ambient PM_{2.5} concentrations vastly higher than those currently prevailing in most U.S. metropolitan areas. Additionally, the science regarding health effects and their valuation “at low concentrations of PM and ozone” remains in an ongoing state of evolution “with better data and methods.”⁷² This ongoing scientific development indicates the empirical foundation lacks the stability required to support confident monetization.

2.2. Section 202 Does Not Require the Monetization of Costs and Benefits

Section 202(a) functions independently of any mandate for a formal cost-benefit analysis that requires the strict monetization of health and environmental effects. The statute directs the EPA Administrator to establish emission standards “applicable to the emission of any air pollutant from any class or classes of new motor vehicles ... which in his judgment cause, or contribute to, air pollution which may reasonably be anticipated to endanger public health or welfare.”⁷³ When

⁶⁸ *Id.* at 28,477.

⁶⁹ *Id.* at 28,478.

⁷⁰ Office of Mgmt. & Budget, Exec. Office of the President, Circular No. A-4, Regulatory Analysis (2003).

⁷¹ *Id.*

⁷² 91 Fed. Reg. at 28,478.

⁷³ 42 U.S.C. § 7521(a)(1).

determining the effective date of such regulations, the Administrator must evaluate the “cost of compliance” alongside the time required to permit the “development and application of the requisite technology.”⁷⁴

While the Administrator must weigh compliance costs against the advantages of a regulation, the statute does not demand that these statutory benefits be reduced to strict dollar figures. The D.C. Circuit recently addressed this dynamic in *Sinclair Wyoming Refining Co. v. EPA*, noting that environmental frameworks are often “designed to yield benefits that [Congress] deemed important but understood are not easily monetizable.”⁷⁵ The court explained that assuming that nonmonetized benefits cannot be compared to financial costs is a flawed premise, and “simply weighing the monetizable costs against the monetizable benefits ... will yield a misleading result.”⁷⁶

Courts consistently interpret statutory instructions as controlling an agency’s obligation to consider specific factors during rulemaking. The statutory framework here omits any instruction requiring the Administrator to construct a strict economic ledger estimating the marginal, monetized health benefits of implementing moderate timelines. Because qualitative environmental and health benefits can lawfully justify regulatory compliance costs, Section 202 does not require monetized per-ton health-cost estimates as a precondition to adjusting compliance timing.

3. THE FINAL PART 1 RULE SHOULD BE SEVERABLE AS TO DIFFERENT CLASSES OF VEHICLES
EPA should include an explicit severability provision clarifying that if a reviewing court invalidates any portion of the phase-in delay, the regulatory relief for all other vehicle classes will stand.

The Part 1 rulemaking extends the Tier 3 bridge period across multiple distinct categories of new motor vehicles, including light-duty vehicles below 6,000 pounds gross vehicle weight rating, light-duty trucks above 6,000 pounds, medium-duty passenger vehicles, and class 2b and class 3 work trucks and vans. As explained above, regulations governing vehicles exceeding 6,000 pounds face additional statutory directives under the Clean Air Act, including mandatory minimum lead times, periods of regulatory stability, and specific cost and technology assessments.⁷⁷ As a result, they introduce a distinct legal risk profile during judicial review, and opponents have different avenues of challenging the proposed delay for different vehicle classes.

⁷⁴ *Id.* § 7521(a)(2).

⁷⁵ *Sinclair Wyo. Refin. Co. LLC v. EPA*, 101 F.4th 871, 889 (D.C. Cir. 2024).

⁷⁶ *Id.*

⁷⁷ See 42 U.S.C. §§ 7521(a)(3)(A), 7521(b)(3)(C).

To protect the core relief this rulemaking provides, the Agency must specify that the delay for each vehicle class is a legally independent regulatory determination and severable from the other. Without this language, a successful challenge targeting the requirements of one class could undermine the delay for the other classes unnecessarily.

Severability doctrine in administrative law dictates whether valid portions of a rule can survive the judicial invalidation of other components. The D.C. Circuit evaluates this question using a two-prong framework: (1) whether there is substantial doubt that the agency would have adopted the same disposition regarding the unchallenged portion if the challenged portion were subtracted; and (2) whether the surviving parts of the regulation can function sensibly without the stricken provision.⁷⁸

The D.C. Circuit's decision in *American Fuel & Petrochemical Manufacturers v. EPA* provides an example of how EPA can properly protect the independent portions of the rule.⁷⁹ In that case, the court gave controlling weight to the Agency's preamble statements regarding severability in both directions. Where EPA declared that certain provisions established a single, unified program, the court honored that intent by vacating those provisions together; conversely, where the Agency stated that a section operated independently and was severable, the court severed accordingly.⁸⁰

To foreclose risk, the preamble should contain an unequivocal statement that the delay for each vehicle class is a legally independent determination, accompanied by a clear explanation of why EPA would have adopted each timeline independently. The regulatory text of the final rule should include a matching severability provision codifying these statements, ensuring that a reviewing court can directly apply them to leave a sensible, functioning regulation in place.

4. THE TIER 4 NMOG + NOX STANDARDS ARE UNLAWFUL ELECTRIC VEHICLE MANDATES AND MUST BE REPEALED IN PART 2

While EPA is not considering revising the Tier 4 standards as part of this proposed rule, EPA must understand that a phase-in delay will not help manufacturers if the standards are not themselves revisited long before the delay expires. The Tier 4 fleet-average NMOG + NO_x standard functions as an unlawful mandate calibrated to a target that even the most advanced internal-combustion vehicles cannot achieve. Furthermore, because the Clean Air Act does not authorize fleet averaging, the entire architecture of the program lacks a valid statutory basis. In Part 2 of this rulemaking, EPA must repeal the standard entirely. Alternatively, at a minimum, the Agency must

⁷⁸ See *Nasdaq Stock Mkt. LLC v. SEC*, 38 F.4th 1126, 1144 (D.C. Cir. 2022); *Nat. Res. Def. Council v. Wheeler*, 955 F.3d 68, 81–82 (D.C. Cir. 2020).

⁷⁹ 3 F.4th 373 (D.C. Cir. 2021).

⁸⁰ *Id.* at 384.

establish powertrain-specific standards that exclude battery-electric vehicles from the NMOG + NOx class.

4.1. The Fleet-Average NMOG + NOx Standard Is an Unlawful Electric Vehicle Mandate

The Tier 4 NMOG + NOx standard is set so stringently that compliance requires large-scale electrification. The mechanism relies on a fleetwide average where a manufacturer's entire covered fleet must achieve a specific aggregate tailpipe emission level. Battery-electric vehicles are factored into this average as producing zero exhaust emissions, regardless of upstream contributions from electricity generation and battery manufacturing.

A manufacturer producing exclusively optimized internal-combustion vehicles cannot mathematically meet the 2024 rule's fleet-average targets. The only compliance pathway is producing enough electric vehicles to offset the fleet average. EPA lacks the statutory authority to force this nationwide transition.

The Supreme Court's decision in *West Virginia v. EPA* provides the controlling analytical framework.⁸¹ There, the Court confronted EPA's use of its Section 111 authority over power-plant emissions to attempt to force a nationwide transition from coal-fired to gas and renewable electricity generation, rather than to regulate the emissions of individual power plants. The Court held that this exceeded EPA's authority because decisions of such "vast economic and political significance"—the restructuring of a foundational sector of the American economy—require "clear congressional authorization" that Section 111's text did not provide.⁸²

The Tier 4 NMOG + NOx standard attempts an analogous change for motor vehicles. EPA is not using Section 202(a) to require that internal-combustion-engine vehicles emit less NMOG + NOx. Rather, it requires the mass adoption of electric vehicles and the phaseout of conventional internal combustion engine vehicles nationwide, a sweeping transformation that Congress did not authorize. The restructuring of the nation's transportation sector is a decision of at least equal economic and political significance to the shift from coal to renewables at issue in *West Virginia*. Congress has not provided the "clear congressional authorization" the major-questions doctrine demands for that transformation.

⁸¹ 597 U.S. 697 (2022).

⁸² *Id.* at 716, 723.

4.2. Fleet Averaging Is Not Authorized by the Clean Air Act (C-3)

The NMOG + NO_x standard is further rendered unlawful by its reliance on an averaging, banking, and trading credit scheme that has no basis in the Clean Air Act. This complex credit scheme allows manufacturers to meet emissions targets on a fleetwide average basis rather than a per-vehicle basis. This is the essential mechanism that allowed the Biden EPA to set standards so stringent that no internal-combustion motor vehicles could meet them and thereby force electrification. Although EPA has used a similar credit scheme for decades, this scheme has no basis in the Act. When it was reviewed, averaging's legality was sustained only by applying *Chevron*-style deference to the Agency's "expertise" in the absence of "clear evidence" prohibiting averaging.⁸³ Following the Supreme Court's decision in *Loper Bright Enterprises v. Raimondo*, which overruled *Chevron*, that deferential scheme no longer applies. The ABT program thus lacks a valid statutory basis and must be rescinded.

The best reading of the Clean Air Act requires that emission standards under section 202(a) apply to individual vehicles, not to a manufacturer's fleet on average. The text and structure of Title II are fundamentally incompatible with a fleetwide averaging scheme. As EPA itself once admitted, "the structure of Title II ... assume[s] individual vehicle compliance with the applicable standards."⁸⁴

This is evident from the Act's interlocking compliance and enforcement provisions, which are rendered nonsensical by the averaging program. Averaging clashes with "the design and structure of [Title II] as a whole."⁸⁵ Title II sets forth a comprehensive, interlocking scheme for enforcing emission standards through testing, certification, warranties, remediation, and penalties. Averaging is incompatible with these provisions, which are "designed to apply to" individual vehicles and "cannot rationally be extended" to fleets.⁸⁶

Testing and certification. Under Title II, EPA must "test, or require to be tested in such manner as [it] deems appropriate, any new motor vehicle or new motor vehicle engine submitted by a manufacturer to determine whether such vehicle or engine conforms with the regulations prescribed under [Section 202]."⁸⁷ If the "vehicle or engine conforms to such regulations," EPA

⁸³ *Nat. Res. Def. Council v. Thomas*, 805 F.2d 410, 425 (D.C. Cir. 1986).

⁸⁴ 45 Fed. Reg. 14,496, 14,502 (Mar. 5, 1980).

⁸⁵ *Utility Air Regulatory Group v. EPA (UARG)*, 573 U.S. 302, 321 (2014).

⁸⁶ *Id.* at 322.

⁸⁷ 42 U.S.C. § 7525(a)(1).

must issue a “certificate of conformity.” EPA may also later test a vehicle or engine, and if “such vehicle or engine does not conform with such regulations and requirements, [EPA] may suspend or revoke such certificate insofar as it applies to such vehicle or engine.”⁸⁸ A manufacturer may not sell a vehicle or engine not “covered by a certificate of conformity.”⁸⁹

Averaging is incompatible with these requirements in at least two respects. First, by using the singular terms “vehicle” and “engine,” along with “any” and “such,” the statute contemplates that *individual* vehicles will be tested for conformity. If an individual vehicle does “not conform” with the standards, the certificate of conformity may be suspended or revoked “as it applies to such vehicle.”⁹⁰ In an averaging regime, testing an individual vehicle or engine cannot show whether it “conforms with the regulations prescribed under” Section 202 because conformity turns on the relevant fleet’s (*i.e.*, the averaging set’s) average performance overall.

Second, averaging makes it impossible to determine compliance with applicable emission standards *before* a vehicle is sold to obtain the required certificate of conformity.⁹¹ As EPA has previously acknowledged, “[b]efore a manufacturer may introduce a new motor vehicle into commerce, the manufacturer must obtain an EPA certificate of conformity indicating compliance with all applicable emission standards.”⁹² Yet under EPA’s averaging regime, conformity cannot be determined until after the manufacturer calculates its net balance of emissions credits at the end of the model year. The regulation requires a manufacturer to “[c]alculate [its] fleet average value for each model year” using “actual nationwide sales for the model year.”⁹³ And even when a manufacturer lacks sufficient credits to show compliance for a given model year, EPA allows it to “have a credit deficit for up to three model years[.]”⁹⁴ Only later, “[i]f [the manufacturer] fail[s] to meet the fleet-average standard for four consecutive model years,” will “the vehicles causing

⁸⁸ *Id.* § 7525(b)(2)(A)(ii).

⁸⁹ *Id.* § 7522(a)(1).

⁹⁰ *Id.* § 7525(b)(2)(A)(ii).

⁹¹ *Id.* § 7522(a)(1).

⁹² 71 Fed. Reg. 2810, 2810 (Jan. 17, 2006).

⁹³ 40 C.F.R. § 86.1860-17(b).

⁹⁴ *Id.* § 86.1860-17(e)(3)(i).

[it] to exceed the fleet-average standard ... be considered not covered by the certificate of conformity.”⁹⁵

Unable to issue certificates based on actual “conform[ity] with the regulations prescribed under [Section 202],” as the Clean Air Act requires, EPA instead awards certificates if the manufacturer attests that “to the best of [its] belief,” it “will not have a negative balance of emission credits for any averaging set when all emission credits are calculated at the end of the year.”⁹⁶ Such certificates are conditioned on a manufacturer’s further demonstration of compliance based on its actual model year production, and paradoxically state that they will be “void *ab initio*” if, at the end of the year, the manufacturer fails to comply with the averaging, banking, and trading provisions. This “need to rewrite clear provisions of [Title II] should have alerted EPA that it had taken a wrong interpretive turn” in allowing averaging.⁹⁷

Warranties and remediation. Averaging similarly clashes with Title II’s warranty provisions, which EPA has previously recognized “assume individual vehicle compliance with the applicable standards.”⁹⁸ Under Section 207, a manufacturer must “warrant to the ultimate purchaser and each subsequent purchaser ... *at the time of sale*” that each new vehicle complies with “applicable regulations under [Section 202].”⁹⁹ Yet, as with certificates of conformity, manufacturers cannot warrant compliance at the time of sale because compliance using averaging can be determined only at year-end.¹⁰⁰

Averaging is also inconsistent with Title II’s remediation and notification provisions. If EPA “determines that a substantial number of any class or category of vehicles or engines ... do not conform to the regulations prescribed under [Section 202],” the manufacturer must remedy “the nonconformity of any such vehicles or engines.”¹⁰¹ If “a motor vehicle fails to conform,” the manufacturer bears the cost.¹⁰² “[D]ealers, ultimate purchasers, and subsequent purchasers” must

⁹⁵ *Id.*

⁹⁶ *Id.* § 1037.725(b)(1).

⁹⁷ *UARG*, 573 U.S. at 328.

⁹⁸ 45 Fed. Reg. at 14,502.

⁹⁹ 42 U.S.C. § 7541(a)(1) (emphasis added).

¹⁰⁰ *See* 40 C.F.R. §§ 1037.120(a), 1037.725, 1037.730.

¹⁰¹ 42 U.S.C. § 7541(c)(1).

¹⁰² *Id.* § 7541(h)(1).

be given notice of any nonconformity, which requires identification of specific nonconforming vehicles.¹⁰³ None of this is possible if the nonconformity depends on the end-of-year emissions from the entire averaging set. Instead, EPA has effectively rewritten the statute by instructing manufacturers to decide for themselves, at year-end, which vehicles in a nonconforming averaging set to “designate” as conforming and which to “designate” as nonconforming.¹⁰⁴

Penalties. Finally, EPA’s averaging regime is inconsistent with the statute’s penalty provision. Under Section 205, any violation “shall constitute a separate offense with respect to each motor vehicle or motor vehicle engine,” with each offense subject to its own civil penalty of up to nearly \$60,000.¹⁰⁵ Under EPA’s approach, however, no individual vehicle or engine can violate the applicable standard, only the averaging set as a whole. But the statute provides no method for calculating penalties when an averaging set fails to meet its target standard—because the statute does not authorize averaging.

Other provisions. A specific heavy-duty-vehicle emission standard prescribed by Section 202 itself confirms that the statute does not permit averaging. For MY 1998 and thereafter, Congress specified that the regulations governing NOx emissions “from gasoline and diesel-fueled heavy-duty trucks shall contain standards which provide that such emissions may not exceed 4.0 grams per brake horsepower hour.”¹⁰⁶ This provision requires that the standards apply to “heavy duty trucks[,]” not “heavy duty trucks *on an average basis across an ‘averaging set’*.” Construing this provision to allow averaging would, in effect, impermissibly add words to the statute.¹⁰⁷ And the extra words “on average” would have a significant substantive effect: “Roller coaster riders must be 48 inches tall” means something very different from “roller coaster riders must be 48 inches tall *on average*.”

Other parts of Section 202 further demonstrate that emission standards cannot be met through averaging. Section 202(b)(3), for example, authorizes EPA to grant waivers from certain NOx emission standards—which, again, are standards “under” Section 202(a)—for no “more than 5 percent of [a] manufacturer’s production or more than fifty thousand vehicles or engines,

¹⁰³ *Id.* § 7541(c)(2).

¹⁰⁴ *See, e.g.*, 40 C.F.R. § 1037.730(b)(7).

¹⁰⁵ 42 U.S.C. § 7524(a); 40 C.F.R. § 19.4.

¹⁰⁶ 42 U.S.C. § 7521(a)(3)(B)(ii).

¹⁰⁷ *See Rotkiske v. Klemm*, 589 U.S. 8, 14 (2019).

whichever is greater.”¹⁰⁸ That is nonsensical under an averaging regime, which could effectively grant a “waiver” to 50 percent or more of a manufacturer’s fleet if enough other vehicles outperform the standard.

Each time Congress directed EPA to issue specific emission standards, it mandated standards applicable to vehicles individually. Just as specific terms clarify the meaning of general ones, the specific emission standards Congress required clarify EPA’s general Section 202(a) authority.

The broader text and history of Title II. Finally, other indicia of statutory meaning demonstrate that the rule exceeds EPA’s statutory authority under Section 202(a). Elsewhere in Title II, Congress showed that it knew how to legislate with respect to “average annual aggregate emissions.”¹⁰⁹ Thus, “if Congress wanted to adopt [an averaging] approach” for motor vehicle standards under Section 202(a), “it knew exactly how to do so.”¹¹⁰ It did not choose that approach.

The Energy Policy and Conservation Act reinforces that conclusion. There, Congress directed the Secretary of Transportation to issue “average fuel economy standards for automobiles manufactured by a manufacturer” in a given model year—that is, fleetwide-average fuel economy.¹¹¹ That Congress has not used similar language in Section 202(a) of the Clean Air Act is a “telling clue” that the Act does not permit fleetwide averaging.¹¹²

The Clean Air Act’s history also reflects Congress’s understanding that emission standards would apply to vehicles individually. Before 1970, EPA relied on testing prototypes, rather than vehicles rolling off the assembly line. But in the 1970 amendments, Congress permitted EPA to test any individual vehicle coming off the assembly line.¹¹³ The House Report explained that while some testing of prototypes “will continue,” “tests should require each prototype rather than the average

¹⁰⁸ 42 U.S.C. § 7521(b)(3).

¹⁰⁹ *Id.* § 7545(k)(1)(B)(v)(II) (directing EPA to take certain actions if “the reduction of the average annual aggregate emissions of toxic air pollutants in a [designated district] fails to meet” certain standards).

¹¹⁰ *SAS Inst., Inc. v. Iancu*, 584 U.S. 357, 365 (2018).

¹¹¹ 49 U.S.C. § 32902(a).

¹¹² *See Epic Sys. Corp. v. Lewis*, 584 U.S. 497, 517 (2018).

¹¹³ *See* Pub. L. No. 91-604, § 8, 84 Stat. 1676, 1694–96.

of prototypes to comply with regulations establishing emission standards.”¹¹⁴ If Congress forbade averaging across *prototypes*, it certainly did not permit averaging across entire *fleets*.

For many of these reasons, the D.C. Circuit has previously cast substantial doubt on EPA’s authority to set fleetwide-average emission standards, explaining in *Natural Resources Defense Council v. Thomas* that the “engine specific thrust” of Title II’s “testing and compliance provisions” is evident both in Congress’s choice to “speak of ‘any,’ ‘a,’ or ‘such’ motor vehicle or engine” and in the “troubling” legislative history recounted above.¹¹⁵ The arguments were not dispositive in *Thomas* only because the parties there failed to present them.¹¹⁶

The Supreme Court’s recent decision in *Loper Bright* should eliminate any doubt: “In the business of statutory interpretation, if it is not the best, it is not permissible.”¹¹⁷ The best reading of Title II of the Clean Air Act requires individual vehicle compliance and does not authorize a fleetwide credit trading system. The NMOG + NO_x standards are not feasible or appropriate without averaging. As a result, the current standards are unlawful and must be rescinded.

4.3. At a Minimum, EPA Must Establish Powertrain-Specific Standards that Exclude Battery-Electric Vehicles

Even if fleet averaging were somehow consistent with the Clean Air Act, electric vehicles should be treated as a separate class because of their significant differences from traditional internal combustion engine vehicles. More fundamentally, electric vehicles do not emit the pollutants in question at all so they should not properly be considered a “class of new motor vehicles” from which regulated air pollutants are emitted in the first place.

The Clean Air Act gives EPA discretionary authority to classify vehicles differently when setting standards, including by powertrain.¹¹⁸ Confirming this, in an amendment relating to emission standards for heavy-duty vehicles, Congress provided that EPA “may base such classes or categories on gross vehicle weight, horsepower, *type of fuel used*, or other appropriate factors.”¹¹⁹ For example, the Agency has prescribed distinct emission standards for spark-ignition (gasoline-

¹¹⁴ H.R. Rep. No. 91-1146, at 6 (1970).

¹¹⁵ 805 F.2d 410, 425 n.24 (D.C. Cir. 1986).

¹¹⁶ *Id.*

¹¹⁷ *See Loper Bright Enters. v. Raimondo*, 603 U.S. 369, 400 (2024).

¹¹⁸ *Cf. Nat. Res. Def. Council, Inc. v. EPA*, 655 F.2d 318, 338 (D.C. Cir. 1981).

¹¹⁹ 42 U.S.C. § 7521(a)(3)(A)(ii) (emphasis added).

fueled) and compression-ignition (diesel-fueled) vehicles across multiple regulatory programs.¹²⁰ Battery-electric vehicles represent a far more fundamental technological departure from internal-combustion-engine vehicles than gasoline-fueled vehicles depart from diesel-fueled ones, and the case for separate classification is correspondingly stronger. EPA should similarly set powertrain-specific standards for light-duty vehicles, separating fully electric vehicles when setting emissions standards and determining fleet performance.

Battery-electric vehicles have no tailpipes. They produce no exhaust emissions of non-methane organic gases or nitrogen oxides. They are not a class of motor vehicles “from which” NMOG + NO_x is “emitted” within the meaning of Section 202(a). Their inclusion in the NMOG + NO_x averaging set is not required by the statute; it is a policy choice EPA made in order to use their zero tailpipe emissions as a compliance lever—a lever that, as described above, has the effect of compelling conventional vehicle manufacturers to produce electric vehicles rather than to improve internal combustion engine emissions. EPA’s action subverted the statute’s purpose by creating a regulatory incentive structure having nothing to do with reducing NMOG + NO_x emissions from the vehicles that produce them. Battery-electric vehicles are simply not regulated under this provision; there are no emissions to regulate.

Additionally, electric vehicles are not in actuality zero-emissions vehicles as EPA currently treats them. Rather, they shift their emissions upstream by running on electricity that is often generated by natural gas, coal, and other fossil fuels at power-generating facilities. EPA’s treatment of upstream emissions as irrelevant has no basis in the environmental reality of regional air quality. Upstream power-sector NMOG + NO_x generation is appropriately regulated by other sections of the Clean Air Act and should not result in a fictional “zero” credit within the motor vehicle program. By including electric vehicles and crediting them at zero, EPA has created a compliance mechanism that simultaneously disguises actual emissions, distorts the regulatory market for conventional emission-reduction technology, and compels a technology transition that Section 202(a) does not authorize.

If EPA preserves its fleet averaging framework, EPA should at minimum establish a distinct regulatory class for internal-combustion-engine vehicles—including traditional gasoline and diesel vehicles and mild hybrids—to which the NMOG + NO_x standards apply. The standard for this class should be set at a level achievable by the best available ICE emission-reduction technology, without reliance on cross-subsidization from battery-electric vehicles.

¹²⁰ See, e.g., 40 C.F.R. § 1036.108(a).

Plug-in hybrid vehicles, which have attributes of both internal combustion engine and battery-electric propulsion, present a more complex question, but the appropriate treatment is to include them in the internal combustion engine class and test them in charge-sustaining mode, where their internal-combustion engines are actually operating and producing NMOG + NO_x emissions. EPA already applies this approach to plug-in hybrid vehicles for purposes of compliance with the NMOG + NO_x standards, and there is no reason to depart from it in Part 2. The different treatment of battery-electric vehicles creates a perverse incentive that discourages plug-in hybrid vehicles for no good reason.

This restructured approach would have several advantages over the current design. It eliminates the perverse incentive for manufacturers to produce battery-electric vehicles not because consumers want them but to comply with otherwise impossible fleet-average requirements. It also restores competitive neutrality between competing technologies, eliminating the unfair advantage battery-electric vehicles have from the disregard of their upstream emissions production.

5. THE TIER 4 PARTICULATE-MATTER STANDARD IS TECHNOLOGICALLY INFEASIBLE AND UNNECESSARY AND MUST BE REPEALED IN PART 2

The Tier 4 particulate-matter standard of 0.5 mg/mile for light- and medium-duty vehicles suffers from two compounding defects that EPA must address during the Part 2 reconsideration. First, the standard is technologically infeasible because the specified emission rate exceeds current reliable measurement capabilities. Second, the standard regulates a category of emissions that already constitutes a *de minimis* fraction of the total ambient particulate-matter burden. The marginal air quality benefit of reducing exhaust PM from the stringent Tier 3 level to 0.5 mg/mile is negligible. Ultimately, the standard functions primarily to force the adoption of costly gasoline particulate filters, serving as a backdoor mechanism to compel vehicle electrification. The Agency should repeal or fundamentally restructure this standard in Part 2.

5.1. The 0.5 mg/mile Standard Exceeds Reliable Measurement Capability

EPA measures particulate matter from motor vehicle exhaust using a gravimetric filter-based methodology. Exhaust gases from a vehicle operated over a standardized drive cycle pass through a collection filter, and the mass of deposited particles is determined by weighing the filter before and after testing. The precision of this method inherently depends on the ratio between the mass of particulate actually collected and the variability in filter weight from environmental sources

unrelated to vehicle emissions. Measurement noise arises from fluctuating background particulate levels in the test tunnel, filter handling, static charge removal, and microbalance instability.¹²¹

At the extremely low concentrations demanded by the Tier 4 standard, this measurement uncertainty obscures the actual emission rate. Vehicles emitting exactly 0.5 mg/mile would deposit merely 4 to 16 micrograms of particulate during standard testing.¹²² That yield often falls below the five-microgram correction limit permitted for background particulate levels.¹²³ Consequently, filter weight measurements at these concentrations reflect a blend of vehicle-emitted particulate and background noise of comparable magnitude. This noise makes it impossible to determine with confidence whether a vehicle's true emission rate complies with the limit.

In its adoption of the Tier 4 standards, EPA effectively conceded that reliably measuring below this threshold would require transitioning to extraordinary “clean room” engineering practices, suggesting that manufacturers adopt robotic auto-handling for weighing, select highly specific filter media with fluorinated ethylene propylene or polymethyl pentene support rings, elevate filter face velocities, and use strict “alpha-emitter static charge removal.”¹²⁴ EPA's measurement protocols reinforce this difficulty, requiring elaborate filter-conditioning procedures—including equilibration at controlled temperatures and humidity for specified periods, multiple weightings, and blank-filter corrections—precisely because variability at low concentrations is so high.¹²⁵ Although such hyper-controlled conditions may be theoretically possible, they are exceedingly difficult to reproduce consistently across standard manufacturer and third-party facilities during high-volume pre-production and in-use compliance testing. Instead, at Tier 4's 0.5 mg/mile standard, the remaining margin of error equals or exceeds the standard itself.

This mismatch is inconsistent with the requirements of the Clean Air Act. Section 206 requires the Administrator to establish testing methods “appropriate ... to determine whether such vehicle

¹²¹ See *Challenges in PM Measurement at 1 mg/mile: Tunnel Background Correction*, SAE Tech. Paper 2023-01-0370 (2023), <https://saemobilus.sae.org/papers/challenges-pm-measurement-1-mg-mile-tunnel-background-correction-2023-01-0370>.

¹²² Cf. *id.* (finding at 1 mg/mile emission rate there is 8 to 32 micrograms of particulate net mass on the filter).

¹²³ See 40 C.F.R. § 1066.110(b)(2)(i)(D).

¹²⁴ 89 Fed. Reg. at 27,946.

¹²⁵ See 40 C.F.R. §§ 1065.190, 1065.390 (requiring continuous temperature and humidity maintenance for minimum specified periods with a $\pm 1^{\circ}\text{C}$ tolerance).

or engine conforms with the regulations.”¹²⁶ If the prescribed testing methodology lacks the real-world precision necessary to accurately distinguish a non-compliant vehicle from environmental background noise, then the Agency has failed to provide appropriate test methods under Section 206. At 0.5 mg/mile, the current testing procedures are not reliable and therefore fail to meet the statutory requirement.

5.2. Light- and Medium-Duty Vehicle Exhaust PM Contributions Are *De Minimis*

Modern light-duty gasoline vehicles operating under the existing Tier 3 standards are extraordinarily clean. Through the decades-long optimization of computerized fuel injection and catalytic converters, the automotive industry has reduced exhaust particulate from passenger cars to levels that were essentially unmeasurable a generation ago. As discussed in the Background, *supra*, modern cars are 99 percent cleaner for most tailpipe pollutants compared to MY 1970 vehicle models.¹²⁷

Today, the entire transportation sector accounts for less than 10 percent of direct PM_{2.5} and PM₁₀ emissions in the United States.¹²⁸ Within that sector, light-duty vehicles make up a tiny fraction, and new vehicles make up, of course, even less.¹²⁹ Indeed, modern tailpipes operate so efficiently that indirect or non-exhaust sources—specifically brake and tire wear—now produce more road-vehicle particulate emissions than exhaust pathways.¹³⁰ Battery-electric vehicles, due to their

¹²⁶ 42 U.S.C. § 7525(a)(1).

¹²⁷ See EPA, *Accomplishments and Success: Air Pollution from Transportation* (Jan. 19, 2021), https://19january2021snapshot.epa.gov/transportation-air-pollution-and-climate-change/accomplishments-and-success-air-pollution-transportation_.html.

¹²⁸ EPA, *Smog, Soot, and Other Air Pollution from Transportation*, <https://www.epa.gov/transportation-air-pollution-and-climate-change/smog-soot-and-other-air-pollution-transportation> (Aug. 7, 2025) (referencing EPA’s 2020 National Emissions Inventory).

¹²⁹ Cf. C. Li & S. Managi, *Contribution of on-road transportation to PM_{2.5}*, 11 Sci Rep 21320 (2021), <https://doi.org/10.1038/s41598-021-00862-x> (“On-road transportation marginally contributes to PM_{2.5}, only 1.09% on average.”).

¹³⁰ See Stephen Edelstein, *Research: Tires and Brakes Emit More Particulates Than Tailpipes*, Green Car Rep. (May 23, 2022), https://www.greencarreports.com/news/1138892_research-tires-and-brakes-emit-more-particulates-than-tailpipes; see also Michael Buschbacher & Taylor Myers, *Electric Cars Emit More Particulate Pollution*, Wall St. J. (Mar. 3, 2024), <https://www.wsj.com/opinion/electric-cars-emit-more-soot-california-ban-gas-powered-vehicles-521b29e3>.

increased mass and instantaneous torque, exacerbate this non-exhaust particulate pollution compared to conventional internal-combustion vehicles.

As a result, as EPA correctly explained, delaying Tier 4's stricter particulate standards would result in a marginal tailpipe PM_{2.5} increase of just 0.2 percent and 0.5 percent for those years.¹³¹ Imposing substantial compliance costs to regulate a pollution source constituting a fraction of one percent of the national particulate burden violates core principles of administrative rationality. Section 202(a) does not empower EPA to drive motor vehicle emissions to an absolute zero floor regardless of their actual contribution to air quality. The statute explicitly conditions regulatory authority on a judgment that the emissions "cause, or contribute to, air pollution which may reasonably be anticipated to endanger public health or welfare."¹³²

This mandate operates against established background legal principles, recognizing that agencies need not regulate *de minimis* or trivial matters.¹³³ The maxim that the law does not concern itself with trifles (*de minimis non curat lex*) is a doctrine designed to avoid allowing agencies to pursue regulatory actions that fail to meaningfully solve a problem. As the D.C. Circuit has recognized under the Clean Air Act, "[u]nless Congress has been extraordinarily rigid, there is likely a basis for an implication of *de minimis* authority when the burdens of regulation yield a gain of trivial or no value."¹³⁴

A source's emissions must therefore be non-trivial to warrant regulation.¹³⁵ Categorical exemptions are permissible as an exercise of agency power to overlook circumstances that are *de minimis* in context.¹³⁶ Furthermore, to justify regulation, emissions must involve more than a *de minimis* contribution.¹³⁷ Where a category of emissions contributes negligibly to ambient concentrations, and where non-exhaust pathways dwarf the exhaust contribution regardless, the justification for imposing extraordinary compliance costs fails.

¹³¹ See Draft Regulatory Impact Analysis 2-3, tbl 2.2.

¹³² 42 U.S.C. § 7521(a)(1).

¹³³ See, e.g., *Ala. Power Co. v. Costle*, 636 F.2d 323, 360 (D.C. Cir. 1979).

¹³⁴ *Ala. Power Co.*, 636 F.2d at 360.

¹³⁵ See *Blewater Network v. EPA*, 370 F.3d 1, 13 (D.C. Cir. 2004).

¹³⁶ *Ala. Power Co.*, 636 F.2d at 360.

¹³⁷ *Blewater Network*, 370 F.3d at 15.

5.3. The Standard Primarily Serves to Compel Electric Vehicle Production (C-8)

The 0.5 mg/mile limit was established not to achieve meaningful ambient particulate reductions, but rather to force manufacturers to adopt gasoline particulate filters or abandon internal-combustion vehicles entirely. Gasoline particulate filters remain the only established exhaust-reduction technology capable of achieving the Tier 4 limit on internal-combustion engines.

Mandating this hardware imposes severe economic burdens. EPA estimates the per-vehicle cost of particulate control technology at approximately \$162 to \$171, representing hundreds of millions of dollars in industry-wide compliance costs.¹³⁸ These figures underestimate the total economic impact by failing to fully account for the complex sensors, controllers, and software calibrations required to integrate these filters into existing vehicle architectures.

Imposing such heavy costs for an unmeasurable reduction in a *de minimis* pollution source reveals the standard's true function: it acts as a secondary mechanism to mandate fleet electrification. During the Part 2 reconsideration, EPA should abandon the Tier 4 particulate standard and return to limits bounded by current measurement capabilities and economic rationality. The existing Tier 3 standard of 3.0 mg/mile—which the industry consistently meets without the use of gasoline particulate filters and without the measurement anomalies that afflict the Tier 4 threshold—provides a proven and defensible baseline. Before imposing more stringent requirements on manufacturers and consumers, EPA must demonstrate that any proposed standard produces tangible ambient air quality benefits commensurate with its true compliance costs.

CONCLUSION

For the reasons stated above, the Prime Mover Institute supports EPA's proposed Part 1 delay maintaining the Tier 3 criteria-pollutant standards for light- and medium-duty vehicles through model years 2027 and 2028. EPA should extend that Tier 3 bridge through model year 2029, so any revised Tier 4 requirements begin no earlier than model year 2030 and manufacturers receive a workable planning period. EPA should also include express severability language making each vehicle-class delay an independent regulatory determination. In Part 2, EPA should repeal or substantially restructure the Tier 4 NMOG + NO_x and particulate-matter standards because they raise EV-forcing, lead-time, measurement, cost, and statutory concerns. PMI therefore urges EPA to finalize the Part 1 delay, extend the bridge through model year 2029, and adopt lawful, technologically grounded standards in Part 2.

¹³⁸ See 91 Fed. Reg. at 28,476.