

Comments of the Attorneys General of California, Colorado, Connecticut, Delaware, Hawai'i, Illinois, Maine, Maryland, Massachusetts, Michigan, Minnesota, New Jersey, New York, North Carolina, Oregon, Rhode Island, Washington, Wisconsin, and the District of Columbia, and the Chief Legal Officers of the City of Chicago, Illinois; the City of New York, New York; the City and County of Denver, Colorado; and the City and County of San Francisco, California

on

Revision of Tier 4 Criteria Pollutant Standards, Part 1: Amendments to Phase-In Schedule for Light-Duty and Medium-Duty Vehicles (May 18, 2026)

EPA-HQ-OAR-2025-3297

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## I. INTRODUCTION

The States and Cities strongly oppose the proposed revision of the Tier 4 criteria pollutant standards for light- and medium-duty vehicles delaying the phase-in of the standards for two years. 91 Fed. Reg. 28,463 (May 18, 2026) (the Proposal). The Environmental Protection Agency's (EPA) proposed delay would prevent the more protective Tier 4 standards from going into effect until model year (MY) 2029, resulting in a loss of the air quality and health benefits associated with the current phase-in schedule for the standards, consequences which EPA failed to evaluate. The Proposal's purported key justification, that it is infeasible for vehicle manufacturers to meet the Tier 4 standards by the original MY 2027 phase-in date, rests on flawed or wholly false assumptions about markets for zero-emission vehicles (particularly electric vehicles), manufacturers' compliance timelines, and the availability of existing technology, including currently available and cost-effective technology that can be applied to gas vehicles to meet the Tier 4 standards. The Proposal is supported by incomplete and flawed analyses that leave out crucial factors that the Agency must consider, and is therefore ultimately arbitrary, capricious, and contrary to law.

EPA's Proposal fails to comply with the statutory requirements of the Clean Air Act (CAA) for at least five reasons. First, EPA may not undermine a state's ability to attain National Ambient Air Quality Standards (NAAQS), yet EPA failed to undertake any such "general conformity" analysis in its Proposal. *See* 42 U.S.C. § 7506(c)(1). Second, EPA was required to comply with the CAA requirement to set criteria pollutant standards for vehicles over a certain weight that reflect the greatest degree of emission reductions achievable, and the Proposal fails to do so. *See* 42 U.S.C. § 7521(a)(3)(A). Third, because any revised light-duty standard for hydrocarbons and nitrogen oxides (NOx) must reflect a reduction from the previously applicable standard, the Proposal to *loosen* hydrocarbon and NOx standards is unlawful. *See* 42 U.S.C. § 7521(b)(1)(C). Fourth, EPA is prohibited from promulgating retroactive rules and thus, to the extent that the Proposal impacts MY 2027 vehicles already in production, it is unlawful. *See* 5 U.S.C. § 551(4). Fifth, EPA is required to promulgate emissions standards that "*shall take effect*" after the period the Agency has determined is necessary for the development and application of required technology. *See* 42 U.S.C. § 7521(a)(2) (emphasis added). EPA's Proposal fails to make the requisite finding that any additional time is "necessary" before the Tier 4 standards take effect.

EPA's Proposal is also arbitrary and capricious. EPA's Proposal fails to adequately consider the reductions in criteria pollutant emissions that are urgently needed to protect public health and welfare and instead proposes increasing emissions in a way that will harm the air quality of our States and Cities. Moreover, EPA's assertion that it is infeasible for manufacturers to comply with the Tier 4 standards under the existing phase-in schedule beginning in MY 2027 rests on two false assumptions: that the battery electric vehicle (BEV) market is in sharp decline, and that compliance pathways for non-BEV vehicles are too costly or otherwise infeasible given the available lead time. EPA failed to justify these assertions with evidence, and the available

evidence contradicts both claims. The BEV market in the United States is showing no signs of long-term decline, but rather, experienced a one-time market disruption following the expiration of federal tax credits and has since then exhibited a steady upward trend as BEVs head toward cost parity with internal combustion engine (ICE) vehicles. EPA's claims that manufacturers have insufficient lead time to meet Tier 4 standards with the required fleet percentage for MY 2027 is similarly erroneous, as manufacturers have had since 2024 to plan their compliance pathways, and have had readily available ICE vehicle tailpipe technology available that evidence suggests is already being incorporated in MY 2027 and 2028 vehicles.

Additionally, by considering only the cost-savings to vehicle manufacturers and failing to quantify the negative consequences to air quality, human health, or public welfare from the proposed delay, EPA has presented a deeply skewed cost-benefit analysis that improperly puts a thumb on the scale in favor of its Proposal. EPA's claim that the significant negative health impacts of its Proposal are too "uncertain" to quantify, while simultaneously quantifying the uncertain (or outright illusory) industry benefits of the Proposal, is nothing short of arbitrary and capricious. Critically, and inexcusably, EPA's faulty cost-benefit analysis altogether devalues the impact of the proposal on public health and welfare, a decision that openly flouts the CAA's express objectives and cannot be supported.

EPA similarly fails to consider other key factors that it should have analyzed in its Proposal, such as the reliance interests of States and Cities in meeting NAAQS goals for air quality, which are not only central to protecting our States and Cities from harmful air pollution, but are also legal obligations. Finally, EPA's Proposal is procedurally defective for several reasons, including EPA's failure to provide an adequate opportunity for public comment, its failure to docket and make available for comment the data and information EPA considered, and its failure to disclose the use of Artificial Intelligence in this action.

For these reasons, EPA should not finalize the Proposal and instead it should preserve the existing Tier 4 phase-in schedule that was finalized in the 2024 Multi-Pollutant Rule. *See* 89 Fed. Reg. 27,842 (Apr. 18, 2024).

## **II. BACKGROUND**

### **A. States and Cities Continue to Confront Growing Public Health Challenges and Poor Air Quality.**

Our States and Cities face immense public health challenges caused by emissions of criteria pollutants such as fine particulate matter ("PM<sub>2.5</sub>"), nitrogen oxides ("NO<sub>x</sub>"), and nonmethane organic gases ("NMOG").<sup>1</sup> While our States and Cities are committed to reducing

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<sup>1</sup> *See, e.g.,* Lake Michigan Air Dirs. Consortium, *Attainment Demonstration Modeling for the 2015 Ozone National Ambient Air Quality Standard: Technical Support Document* (Sep. 21, 2022), [https://www.ladco.org/wpcontent/uploads/Projects/Ozone/ModerateTSD/LADCO\\_2015O3\\_Mod](https://www.ladco.org/wpcontent/uploads/Projects/Ozone/ModerateTSD/LADCO_2015O3_Mod)

emissions of these harmful air pollutants, federal involvement is necessary to help States attain the National Ambient Air Quality Standards (“NAAQS”)<sup>2</sup> and to reduce emissions that harm our residents but that are outside of our control due to motor vehicle traffic (including out-of-state vehicle traffic), cross-state air pollution and upwind air emissions. EPA’s proposed delay of the Tier 4 PM and NMOG+NO<sub>x</sub> emissions standards phase-in schedule will result in increased emissions of harmful air pollutants from new motor vehicles sold nationwide. *See infra* Section IV.A.2. These increases will ultimately hinder our States and Cities’ ability to meet our public health, air quality, and environmental justice goals as well as to protect our residents.

### **1. Particulate Matter, Nitrogen Oxides, Ozone Pollution, and Air Toxics Negatively Impact Human Health.**

The transportation sector is one of the largest sources of emissions of PM<sub>2.5</sub>, NO<sub>x</sub>, and other harmful air pollutants in the United States.<sup>3</sup> In some states and urban areas, mobile sources are the primary contributors of emissions of these harmful air pollutants.<sup>4</sup> In promulgating the Tier 4 standards for criteria pollutant emissions in 2024, EPA projected that the standards would significantly reduce emissions of PM as well as emissions of NO<sub>x</sub> and NMOGs, both of which contribute to ozone formation. 89 Fed. Reg. at 28,099–104, 28,118–20. The Proposal would

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erateNAASIP\_TSD\_21Sep2022.pdf (“Onroad mobile non-diesel sources are the largest contributor to ozone in all of Wisconsin’s remaining 2015 ozone NAAQS nonattainment areas.”); EPA, *Current Nonattainment Counties for All Criteria Pollutants* (June 30, 2026), <https://www3.epa.gov/airquality/greenbook/ancl.html> (listing 11 out of 23 counties in Maryland as nonattainment areas); EPA, *8-Hour Ozone (2008) Nonattainment Areas* (June 30, 2026), <https://www3.epa.gov/airquality/greenbook/hnc.html> (listing New York, Northern New Jersey, and Long Island area as Severe 15 for 8-hour ozone nonattainment); NYC.gov, *Environment and Health Data Portal*, <https://a816-dohbesp.nyc.gov/IndicatorPublic/data-explorer/health-impacts-of-air-pollution> (last accessed July 2, 2026) (tracking over 4,000 average asthma emergency department visits due to ozone per year from 2017 to 2019).

<sup>2</sup> *E.g.*, California Air Resources Board (CARB), *Revised Draft 2020 Mobile Source Strategy* (Apr. 23, 2021), at 14, 68, [https://ww2.arb.ca.gov/sites/default/files/2021-04/Revised\\_Draft\\_2020\\_Mobile\\_Source\\_Strategy.pdf](https://ww2.arb.ca.gov/sites/default/files/2021-04/Revised_Draft_2020_Mobile_Source_Strategy.pdf).

<sup>3</sup> Calvin A. Arter, et al., “Mortality-based damages per ton due to the on-road mobile sector in the Northeastern and Mid-Atlantic U.S. by region, vehicle class and precursor,” 16 *Env’t Rrsch. Letters* 1-2, 5 (June 2021), <https://doi.org/10.1088/1748-9326/abf60b> (“The mobile source sector remains one of the largest contributors to PM<sub>2.5</sub> and O<sub>3</sub> [ozone] globally and in the U.S.”); 88 Fed. Reg. at 29,184, 29,214 (May 5, 2023) (“The primary source of NO<sub>2</sub> is motor vehicle emissions . . .”).

<sup>4</sup> *See, e.g.*, Vt. Dep’t of Env’t Conservation, Agency of Nat. Res., *Mobile Sources*, <https://dec.vermont.gov/air-quality/mobile-sources> (onroad mobile sources contribute 49% of the NO<sub>x</sub> emissions in Vermont); CARB, *2020 Mobile Source Strategy* (Oct. 28, 2021), at 19–20, [https://ww2.arb.ca.gov/sites/default/files/2021-12/2020\\_Mobile\\_Source\\_Strategy.pdf](https://ww2.arb.ca.gov/sites/default/files/2021-12/2020_Mobile_Source_Strategy.pdf) (“Every year, over 5,000 premature deaths and hundreds of illnesses and emergency room visits for respiratory and cardiovascular disease in California are linked to PM<sub>2.5</sub> pollution, of which more than half is produced by mobile sources.”).

substantially delay the benefits from these reductions, which are crucial to avoid the serious adverse health consequences associated with these pollutants.

Specifically, exposure to PM<sub>2.5</sub> is causally related to premature mortality<sup>5</sup> and cardiovascular impacts; consistently associated with asthma and chronic obstructive pulmonary disease exacerbation; and associated with negative birth outcomes, such as low birth weight and negative fetal growth outcomes.<sup>6</sup> Exposure to NO<sub>x</sub> is causally related to asthma exacerbation; likely causally related to respiratory effects; and possibly causally related to cardiovascular effects, mortality, diabetes, cancer, and birth defects. 89 Fed. Reg. at 27,870. NO<sub>x</sub> and NMOGs are significant contributors to ground-level ozone formation. Exposure to ozone is causally related to respiratory effects, including lung function decrements, pulmonary inflammation, exacerbation of asthma, respiratory-related hospital admissions, and mortality; likely causally related to metabolic effects and complications due to diabetes; and possibly causally related to cardiovascular effects and central nervous system effects. *Id.*

The proposed 2-year delay of the Tier 4 standards phase-in will also result in an increase in emissions of air toxics, such as benzene, acetaldehyde, and formaldehyde. 91 Fed. Reg. at 28,473. Increased emissions will serve to harm public health and welfare, given the link between toxic air pollutants and cancer and other serious health effects. *See* 89 Fed. Reg. at 27,873 (“Light- and medium-duty engine emissions contribute to ambient levels of air toxics that are known or suspected human or animal carcinogens, or that have noncancer health effects.”); 72 Fed. Reg. 8,428, 8,430 (Feb. 26, 2007). Of all the outdoor air toxics, benzene contributes the most to nationwide cancer risk, and most of the nation’s benzene emissions come from mobile sources. 72 Fed. Reg. at 8,432. In New Jersey, for example, mobile sources are the largest contributors of air toxics emissions and responsible for over 50% of the state’s ambient benzene.<sup>7</sup> In Allegheny County, Pennsylvania, mobile sources account for over 9% of the estimated cancer risk from hazardous air pollutants, largely due to gasoline-powered vehicles.<sup>8</sup>

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<sup>5</sup> Karn Vohra, et al., “Global mortality from outdoor fine particle pollution generated by fossil fuel combustion: Results from GEOS-Chem”, 195 *Env’t Rsch.* 1 (Apr. 2021) (Researchers “estimate[d] a global total of 10.2...million premature deaths annually attributable to the fossil-fuel component of PM<sub>2.5</sub>.”); Arter, *supra* note 3, at 5 (“The largest source of both PM<sub>2.5</sub> and O<sub>3</sub>[ozone]-attributable premature mortalities are LDT [light-duty trucks] at 1234 and 1229 mortalities, respectively. LDT PPM emissions are responsible for 46% of PM<sub>2.5</sub> mortalities, and LDT NO<sub>x</sub> emissions are responsible for 80% of O<sub>3</sub> [ozone] mortalities.”)

<sup>6</sup> *See* Comment of CARB on “Proposed Rule for National Ambient Air Quality Standards (NAAQS) for Particulate Matter” (June 29, 2020), EPA-HQ-OAR-2015-0072-0975.

<sup>7</sup> N.J. Dep’t of Env’t Protection, *2021 New Jersey Air Quality Report* (Sept. 2022), at 10-14, <https://www.nj.gov/dep/airmon/pdf/2021-nj-aq-report.pdf>.

<sup>8</sup> Cancer & Env’t Network of Sw. Penn. & Clean Air Task Force, *National Air Toxics Assessment and Cancer Risk in Allegheny County Pennsylvania* (updated May 2021), <https://cdn.catf.us/wp-content/uploads/2021/07/21092216/NATA-Factsheet-Final-May-2021.pdf>.

This increase in cancer and respiratory and related illness will also result in additional health care costs for our States and Cities.

## **2. Criteria Pollutant Emissions from Light- and Medium-Duty Vehicles Disproportionately Impact Communities with Environmental Justice Concerns**

Criteria pollutant emissions from light- and medium-duty vehicles disproportionately endanger residents of communities with environmental justice concerns by exposing them to harmful air pollution that causes significant health impacts. Communities with environmental justice concerns bear a disproportionate burden of environmental harms and adverse health outcomes from hazardous air pollution, including criteria pollutants emitted from vehicles. These impacts impede communities' ability to recover from the historic and ongoing disproportionate siting of pollution sources, underinvestment, and lack of access to essential goods and services, including food, clean water, and health care. These populations disproportionately exposed to hazardous air pollution include communities of color, low-income communities, Tribal Nations and Indigenous Peoples, people with low educational attainment, and children. Moreover, vehicle criteria and air toxics' emissions are concentrated along transportation corridors. 89 Fed. Reg. at 27,876. Aggravating historical injustices, decision-makers have disproportionately sited highways and other transportation infrastructure in lower-income communities and communities of color. The burden of vehicle emissions therefore falls inequitably on environmental justice communities, which also face industrial pollution cumulatively with vehicle emissions.<sup>9</sup>

For example, EPA modeling has shown that, nationally, race and income are significantly associated with living near major roadways, even when controlling for other factors.<sup>10</sup> EPA research has also indicated that people of color are more likely to live within 300 feet of major

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<sup>9</sup> See, e.g., EPA, *Estimation of Population Size and Demographic Characteristics among People Living Near Truck Routes in the Coterminous United States* (Feb. 16, 2022), EPA-HQ-OAR-2019-0055-0982, at 11–12, Fig. 3, 17–19, Fig. 9 (finding that individuals living near major truck routes are more likely to be people of color and lower-income); see also M. Meyer & T. Dallmann, *The Real Urban Emissions Initiative, Air quality and health impacts of diesel truck emissions in New York City and policy implications* (2022), at 7 Fig. 5 (concluding that Black and Latino individuals in New York City are disproportionately exposed to PM<sub>2.5</sub> along freight corridors); G.H. Kerr, et al., “COVID-19 Pandemic Reveals Persistent Disparities in Nitrogen Dioxide Pollution,” 118 PNAS 30 (2021); M.A.G. Demetillo, et al., “Space-Based Observational Constraints on NO<sub>2</sub> Air Pollution Inequality from Diesel Traffic in Major US Cities,” *Geophysical Resch. Letters* 48:17, at 9 (2021); P. Allen, et al., *Newark Community Impacts of Mobile Source Emissions: A Community-Based Participatory Research Analysis* (2020); M.C. Pinto de Moura & D. Reichmuth, Union of Concerned Scientists, *Inequitable Exposure to Air Pollution from Vehicles in Massachusetts* (2019); I. Kheirbek, et al., “The Contribution of Motor Vehicle Emissions to Ambient Fine Particulate Matter Public Health Impacts in New York City: a Health Burden Assessment,” 15 *Env't Health* 89 (2016).

<sup>10</sup> EPA, *Estimation of Population Size and Demographic Characteristics among People Living Near Truck Routes in the Coterminous United States*, *supra* note 9, at 20–24.

transportation facilities.<sup>11</sup> Environmental justice communities bear the effects of these land use patterns. In the Northeast and Mid-Atlantic Region, average concentrations of exposures to PM<sub>2.5</sub> are 75%, 73%, and 61% higher for Hispanic and Latino residents, Asian-American residents, and African American residents, respectively, than they are for white residents.<sup>12</sup> PM<sub>2.5</sub> and nitrogen dioxide (NO<sub>2</sub>) concentrations are also highest for Black and Hispanic communities in Massachusetts, in part because of their proximity to industrial facilities and highways, and these concentrations have increased over time even though overall exposure to those pollutants has decreased in the Commonwealth.<sup>13</sup>

More granular data from California illustrate this phenomenon. The census tracts in California with the highest levels of exposure to ozone, PM<sub>2.5</sub>, and air toxics are communities of color bordering major transportation corridors—such as Highway 99 in the San Joaquin Valley and Highways 10 and 60 in the Inland Empire:

**Census Tracts in California with Highest Levels of Ozone, PM<sub>2.5</sub>, and Diesel PM Exposure<sup>14</sup>**

Census Tract	Location	People of Color	Ozone	PM <sub>2.5</sub>	Diesel PM
6071001600	Ontario	96%	89th	97th	86th
6065030300	Riverside	66%	97th	91st	96th
6071003301	Fontana	92%	97th	93rd	94th
6065041203	Jurupa Valley	90%	94th	93rd	76th
6029001600	Bakersfield	75%	94th	100th	97th
6029002000	Bakersfield	94%	94th	100th	91st
6029002700	Bakersfield	82%	94th	100th	79th

Furthermore, communities with environmental justice concerns, including Indigenous Peoples and Tribal Nations, are already environmentally overburdened in general due to greater

<sup>11</sup> Chad Bailey, EPA, *Demographic and Social Patterns in Housing Units Near Large Highways and other Transportation Sources* (2011), EPA-HQ-OAR-2019-0055-0126, at 3.

<sup>12</sup> M.C. Pinto de Moura & D. Reichmuth, Union of Concerned Scientists, *Inequitable Exposure to Air Pollution from Vehicles in the Northeast and Mid-Atlantic* (2019), <https://www.ucsusa.org/sites/default/files/attach/2019/06/Inequitable-Exposure-to-Vehicle-Pollution-Northeast-Mid-Atlantic-Region.pdf>.

<sup>13</sup> Office of Mass. Atty. Gen. Maura Healey, *COVID-19's Unequal Effects in Massachusetts* (2020), at 5, <https://www.mass.gov/doc/covid-19s-unequal-effects-in-massachusetts/download>.

<sup>14</sup> Data from CalEnviroScreen 4.0, California Office of Environmental Health Hazard Assessment (Jul. 7, 2026), <https://oehha.ca.gov/calenviroscreen/report/calenviroscreen-40>. Metrics for ozone, PM<sub>2.5</sub>, and diesel particulate matter exposure are the census tract's percentile ranking as compared to all census tracts in California, demonstrating that these census tracts are among those with the greatest pollution exposure statewide. The raw data for these percentile

existing pollution exposure. This disadvantage manifests in higher rates of chronic disease, premature death, and other adverse public health outcomes.<sup>15</sup> The pollutants emitted by motor vehicles have been shown to harm fetal development,<sup>16</sup> increase the risk of asthma and wheezing among children,<sup>17</sup> and in older adults have been linked to increased risk of neurodegenerative diseases and higher mortality rates from respiratory illnesses.<sup>18</sup> Compounding these disparities, residents of these disproportionately burdened communities also have less access to health care—they are less likely to have health insurance and less likely to be able to afford necessary tests and procedures, and the health care facilities in many such communities are often poorly staffed and equipped.<sup>19</sup> Heat further degrades air quality in historically redlined neighborhoods, leading to heat-related deaths, asthma diagnoses, and lost work.<sup>20</sup>

Accordingly, achieving emissions reductions from light- and medium-duty vehicles is a critical step to begin dismantling historical patterns of environmental injustice burdening communities near transportation infrastructure.

**3. Without co-benefit reductions from federal regulation of greenhouse gas emissions from vehicles, protective criteria pollutant emissions standards are even more crucial.**

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rankings are available on the CalEnviroScreen 4.0 website. The seven census tracts shown here are examples of census tracts in California that rank above the 90th percentile statewide for exposure to fine particulate matter, and above the 75th percentile for ozone and diesel particulate matter. There are all communities in Bakersfield or the Inland Empire near major transportation thoroughfares.

<sup>15</sup> Allison Crimmins, et al., U.S. Global Change Research Program, *The Impacts of Climate Change on Human Health in the United States: A Scientific Assessment* (2016), at 253, [https://health2016.globalchange.gov/low/ClimateHealth2016\\_FullReport\\_small.pdf](https://health2016.globalchange.gov/low/ClimateHealth2016_FullReport_small.pdf) (“USGCRP Study”).

<sup>16</sup> M.D. Willis et al., “A population-based cohort study of traffic congestion and infant growth using connected vehicle data,” 8 *Sci. Advances* 1 (2022), <https://perma.cc/4KJ6-PMBW>.

<sup>17</sup> J. Gasana et al., “Motor vehicle air pollution and asthma in children: A meta-analysis,” 117 *Env’t Rsch.* 36 (2012).

<sup>18</sup> R. Thama & T. Schikowski, “The Role of Traffic-Related Air Pollution on Neurodegenerative Diseases in Older People: An Epidemiological Perspective,” 79 *J. Of Alzheimer’s Disease* 949 (2021); M. Simoni et al., “Adverse effects of outdoor pollution in the elderly,” 7 *J. Of Thoracic Disease* 34 (2015).

<sup>19</sup> Latoya Hill et al., Kaiser Family Foundation, *Health Coverage by Race and Ethnicity, 2010-2024* (2026), <https://www.kff.org/racial-equity-and-health-policy/health-coverage-by-race-and-ethnicity/>; Benjamin Sommers, et al., “Beyond Health Insurance: Remaining Disparities in US Health Care in the Post-ACA Era,” 95 *The Milbank Quarterly* 1 (2017), <https://pubmed.ncbi.nlm.nih.gov/28266070/>.

<sup>20</sup> J. Hoffman, et al., “The Effects of Historical Housing Policies on Resident Exposure to IntraUrban Heat: A Study of 108 US Urban Areas,” 8 *Climate* 1 (2020), <https://perma.cc/K7UW-ZDPH>.

In February 2026, the EPA finalized a rule repealing the federal greenhouse gas (GHG) program regulating the emission of GHGs from mobile sources. 91 Fed. Reg. 7686 (Feb. 18, 2026). The federal GHG program led to reductions of criteria pollutants like nitrogen oxides (NO<sub>x</sub>), volatile organic compounds (VOCs), and particulate matter (PM), over and above the emission reductions attributable to EPA’s criteria standards. *See, e.g.*, 86 Fed. Reg. 74,434, 74,491–92 (Table 36 & 37) (Dec. 30, 2021) (showing criteria emission reductions from revised light-duty GHG standards for model years 2023–26). In the GHG repeal rule, the modeling of criteria and air toxics pollution that EPA provided in the record projected that, by 2055, the repeal would cumulatively add 1.7 million tons of NO<sub>x</sub>, 2.5 million tons of non-methane organic gases (NMOG) and VOCs, 30,000 tons of PM<sub>2.5</sub>, over 31 million tons of carbon monoxide, and thousands or tens of thousands of tons of air toxics like benzene, acetaldehyde, and formaldehyde.<sup>21</sup> In other words, the federal GHG program repeal is likely to lead to significantly dirtier new cars driving through American communities, even with the Tier 4 standards in place. Without the co-benefits from regulation of GHGs from mobile sources, the negative impacts to air quality from the Proposal will be even more consequential.

## **B. History of EPA’s Regulation of Criteria-Pollutant Emissions**

More than half a century ago, Congress established a statutory regime to reduce motor vehicle emissions in light of evidence that “[t]he automobile has had a devastating impact on the American environment” and “automotive pollution constitutes in excess of 60% of our national air pollution problem.”<sup>22</sup> Under this regime, Congress has directed the EPA Administrator to promulgate “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.” 42 U.S.C. § 7521(a)(1). Congress has required that these standards apply “whether such vehicles and engines are designed as complete systems or incorporate devices to prevent or control such pollution.” *Id.*<sup>23</sup> EPA’s 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.” 42 U.S.C. § 7521(a)(2).

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<sup>21</sup> *See* EPA, Projected Criteria, Air Toxics, and GHG Emissions Impacts for the “Rescission of the Greenhouse Gas Endangerment Finding and Motor Vehicle Greenhouse Gas Emission Standards Under the Clean Air Act” Final Rule, EPA-HQ-OAR-2025-0194-31055, at 17 (Table 11) (Feb. 2026). The tables list only annual emissions through 2055, and the cumulative emissions were derived from summing those annual emissions.

<sup>22</sup> *Int’l Harvester Co. v. Ruckelshaus*, 478 F.2d 615, 622 (D.C. Cir. 1973); Pub. L. 89-272 § 201, 79 Stat. 992, 992–93 (1965).

<sup>23</sup> *Compare with* Pub. L. 89-272 § 202(a), 79 Stat. 992, 992–93 (1965) (“[S]uch standards shall apply to such vehicles or engines whether they are designed as complete systems or incorporate other devices to prevent or control such pollution.”).

From 1966 through 1970, pursuant to its statutory mandate, EPA's predecessor<sup>24</sup> promulgated three sets of emissions standards to control crankcase emissions, exhaust emissions of hydrocarbons and carbon monoxide, and evaporative fuel emissions. 31 Fed. Reg. 5,170 (Mar. 30, 1966); 33 Fed. Reg. 8,304 (June 4, 1968); 35 Fed. Reg. 17,288 (Nov. 10, 1970). Since it was formed in 1970, EPA has finalized upward of fifty rules setting or amending emissions standards for various classes of vehicles and myriad air pollutants that EPA determined may endanger public health or welfare. *See e.g.*, 36 Fed. Reg. 12,652 (Jul. 2, 1971) (EPA's first emission standards for NO<sub>x</sub>), 45 Fed. Reg. 14,496 (Mar. 5, 1980) (EPA's first emission standards for PM).

For more than fifty years, EPA has been translating technological progress into increasingly stringent and more protective standards for various pollutants. In general, EPA's standards have anticipated a wider use of existing emission control technologies and the application of new or emerging emission control technologies across vehicle classes. *See, e.g.*, 44 Fed. Reg. 6,650, 6,552 (Feb. 1, 1979) (trap-oxidizers), 66 Fed. Reg. 5002, 5049–54 (Jan. 18, 2001) (NO<sub>x</sub> adsorbers), 75 Fed. Reg. at 25,454–55 (hybrid technologies); *see* 89 Fed. Reg. at 27,844. This long-standing practice is consistent with Congress's "expect[ation that EPA] press for the development and application of improved technology rather than be limited by that which exists today." *NRDC v. EPA*, 655 F.2d 318, 328 (D.C. Cir. 1981); *see* 42 U.S.C. § 7521(a)(2). Accordingly, EPA has routinely analyzed a wide array of technologies—from catalyst and filter technologies to hybrid and zero-emission-vehicle technologies—in its rulemakings to simulate manufacturers' compliance with alternative stringency levels.

### **C. The Existing Tier 4 Standards and Phase-In Schedule Gave Manufacturers Time and Flexibility to Comply.**

In 2024, EPA promulgated the most recent set of criteria pollutant emissions standards in an umbrella rule that included the regulation of both criteria pollutants and GHGs. The 2024 Multi-Pollutant Rule finalized new "Tier 4 Standards" setting criteria pollutant emission limits for light- and medium-duty vehicles, which are set to phase in from model year (MY) 2027 until MY 2032. 89 Fed. Reg. at 27,842. The rule set "NMOG+NO<sub>x</sub>" standards of 15 milligrams per mile (mg/mi) for light-duty vehicles that must be met by MY 2032, *id.* at 27,857, and NMOG+NO<sub>x</sub> standards of 75 mg/mi for medium-duty vehicles that must be met by MY 2031. *Id.* This represents a 50% reduction from Tier 3 for light-duty vehicles and a 58–70% reduction from Tier 3 standards for medium-duty vehicles. *Id.* Additionally, the rule set a PM standard of 0.5 mg/mi for both light- and medium-duty vehicles. *Id.* In this way, the 2024 Multi-Pollutant Rule appropriately set the Tier 4 criteria standards following the regulatory precedent of the Tier 1 (1991), Tier 2 (2000), and Tier 3 (2014) standards, strengthening the standards as technological

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<sup>24</sup> At the time, the federal body responsible for carrying out the statutory mandate was the U.S. Department of Health, Education, and Welfare.

improvement allowed. 56 Fed. Reg. 25,724 (June 5, 1991); 65 Fed. Reg. 6698 (Feb. 10, 2000); 79 Fed. Reg. 23,414 (Apr. 28, 2014).

Under this regulatory framework, EPA's 2024 Multi-Pollutant Rule set criteria emissions standards that gave manufacturers' ample time and flexibility to comply, and which are warranted by the resulting benefits to air quality and public health. By setting a phase-in schedule whereby manufacturers must begin complying in 2027—three years after the rule was issued—with just a percentage of their fleet, until the standards are fully phased-in by the early 2030s, EPA set a flexible rule with ample lead time for manufacturers to plan their compliance pathways. 89 Fed. Reg. at 27,930-32. Moreover, the 2024 Multi-Pollutant Rule was supported by EPA's findings of significant benefits to air quality and health outcomes from reduced criteria pollutant emissions. 89 Fed. Reg. at 27,940. EPA's proposed delay of the Tier 4 standards until 2029 therefore also delays, and ultimately forgoes, some of the emissions and health benefits of the rule. EPA projected an estimated \$13 billion in annualized health benefits from the PM reductions alone, as well as reductions of from the 2024 Multi-Pollutant Rule as a whole of 36,000 tons of NO<sub>x</sub> emissions, 8,700 tons of PM emissions, and 150,000 tons of VOC emissions annually by 2055. 89 Fed. Reg. at 27,858, 28,092; *see supra* Section IV.C. Ultimately, EPA's Proposal to delay implementation of the Tier 4 standards, and thus effectively extend the 2014 Tier 3 standards, diverges from this regulatory history of EPA promulgating periodic regulations with increased stringency in order to achieve the consistent emissions reductions and air quality improvements under the Clean Air Act.

**D. Contrary to EPA's assertion, there is a strong continuing demand for, and investment in, electric vehicles in our States and Cities.**

EPA justifies the proposed delay of the Tier 4 standards in large part on the basis that, in EPA's view, "recent changes in policy, regulations, Federal and State law, and other factors have significantly changed projections of BEV market share in the coming MYs." 91 Fed. Reg. at 28,470. EPA argues that these changed circumstances have negatively impacted the electric vehicle (EV) market and the overall demand for EVs, thereby affecting manufacturers' ability to begin complying by 2027. *See infra* Section IV.B. However, this assertion is unsupported by evidence of recent trends in the EV market, which show continuing demand for EVs and indicate that EPA has greatly overstated the perceived downturn in the EV market. *See* Kenneth Gillingham & Alan Jenn, Analysis of EPA's Proposed Revision of Tier 4 Criteria Pollutant Standards, Part 1 (July 6, 2026), at 10–18 (Gillingham-Jenn).

Zero-emission vehicle technologies<sup>25</sup> continue to be the most effective tailpipe emission control technologies available to date, and demand for zero-emission vehicles remains steady today. In response to the continued demand for these vehicles, significant public and private

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<sup>25</sup> The term "zero-emission-vehicle technologies" includes batteries with on-board chargers and hydrogen stored in a fuel cell stack that transforms chemical energy into electrical energy to propel a vehicle.

investments across the country continue to be made to build sufficient charging infrastructure and develop the domestic battery supply chain, and these investments are projected to keep pace with the growth of the zero-emission vehicle market. Notwithstanding Congress’s repeal of certain tax credits and other incentives for zero- and low-emitting vehicles in the July 4, 2025 “megabill” (the “One Big, Beautiful Bill Act,” Pub. L. No. 119-21 (OBBBA)), the evidence indicates that growth will continue and even accelerate in the coming years.

### **1. Consumer interest in clean vehicles has grown in recent years in the United States and is expected to persist.**

Year after year, U.S. market penetration of zero- and low-emitting vehicles has continued to rise: in 2020, EVs made up 2.2% of the U.S. vehicle market, but that figure doubled in 2021 to 4.4%, increased to 7.6% in 2023, and increased again to 10.2% in 2024.<sup>26</sup> EVs also achieved the highest monthly market share on record for the United States in September 2025 at 12.9%.<sup>27</sup>

Even since the passage of the OBBBA in 2025 and the expiration of federal tax credits that the Proposal cites as a key source of a perceived “downturn” in the EV market, the EV market has stabilized and appears to be trending upward again. Sales data indicates that the dip in the EV market that EPA cites represents a one-time disruption in the market that EPA should not mistake as a larger change in market trends. Gillingham-Jenn at 10–11. Even recent evidence from 2025 and early 2026 shows that monthly sales increased just before the tax credit deadline, dipped for three months, and then resumed increases—even though the tax credit had expired—such that the difference between 2026 and prior year sales has narrowed steadily from about 46 percent at the November 2025 trough to 27 percent by May 2026, and monthly volumes have climbed off their December 2025 low. *Id.* EPA has overstated the extent to which the EV market suffered from the repeal of federal incentives, mistaking an expected market adjustment for a larger trend in consumer demand. *See infra* Section IV.B.1.

Continued consumer interest in EVs is reflected in EV sales figures post-dating the expiration of the federal tax credit in September 2025. The corresponding drop in EV retail share in the fourth quarter of 2025 was limited, with the EV market stabilizing without federal incentives at around 9.5% of U.S. new vehicle sales from January through November 2025.<sup>28</sup>

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<sup>26</sup> Alliance for Automotive Innovation, *Get Connected: Electric Vehicle Quarterly Report, Fourth Quarter, 2024* (Mar. 26, 2025), at 3, <https://www.autosinnovate.org/posts/papers-reports/Get-Connected-EV-Quarterly-Report-2025-Q4.pdf>; *see also* Cox Automotive, “A Record 1.2 Million EVs Were Sold in the U.S. in 2023, According to Estimates from Kelley Blue Book” (Jan. 9, 2024), <https://www.coxautoinc.com/market-insights/q4-2023-ev-sales/>; 88 Fed. Reg. at 29,189.

<sup>27</sup> J.D. Power, “U.S. Automotive Forecast for October 2025” (Oct. 23, 2025), <https://www.jdpower.com/business/press-releases/jd-power-globaldata-forecast-october-2025>.

<sup>28</sup> J.D. Power, “U.S. Automotive Forecast for December 2025” (Dec. 26, 2025), <https://www.jdpower.com/business/press-releases/jd-power-globaldata-forecast-december-2025>; Alliance for Automotive Innovation, *Stay Connected: EV Monthly Recharge, December 2025*

Analysts continue to predict steady, if slower EV growth over the remainder of the decade as battery costs fall and the build-out of public charging infrastructure continues, with 26%–27% EV share of new vehicle sales projected for 2030.<sup>29</sup>

Moreover, rising fuel prices have recently increased consumer demand for EVs and hybrids. Gasoline prices have risen steadily as a result of the war in Iran that began in February 2026 and the resulting disruption of oil flows through the Strait of Hormuz, and likely will not see a return to pre-2026 prices for another year at least. *See* Gillingham-Jenn at 16–18. Literature exploring the link between gas prices and consumer vehicle demand indicates that new-vehicle EV demand is particularly sensitive to rising gas prices, trending in favor of greater demand for EVs. *See id.*

Electrification of the medium- and heavy-duty vehicle market is also expected to substantially increase over the next decade. Global battery-electric truck sales have already been increasing in recent years—a 35% increase year-over-year was observed from 2022 to 2023, with a threefold increase coming in the United States, and an 80% increase from 2023 to 2024.<sup>30</sup> In 2025, electric truck sales increased 25% in the United States, even despite slowing policy momentum.<sup>31</sup> Additionally, School districts in 54 states and U.S. territories have received funds for nearly 15,000 electric school buses, with over 8,400 already delivered in 52 States, the District of Columbia, and U.S. territories.<sup>32</sup> Further announcements by manufacturers and large

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(Dec. 23, 2025), [https://www.autosinnovate.org/posts/papers-reports/Stay\\_Connected\\_12\\_2025.pdf](https://www.autosinnovate.org/posts/papers-reports/Stay_Connected_12_2025.pdf); Int'l Energy Agency (IEA), *Global EV Outlook 2026* (May 2026), at 23, <https://iea.blob.core.windows.net/assets/857aa690-2a43-453f-9f12-147cc8f0a1dd/GlobalEVOutlook2026.pdf>.

<sup>29</sup> Levi McAllister, Morgan Lewis, “2025 US Electric Vehicle Landscape: Market Growth and Regulatory Pressures” (Dec. 15, 2025), <https://www.morganlewis.com/pubs/2025/12/2025-us-electric-vehicle-landscape-market-growth-and-regulatory-pressures>; Robert Walton, “US electric vehicle sales are slowing amid policy shifts: BNEF,” *Utility Dive* (June 18, 2025), <https://www.utilitydive.com/news/us-electric-vehicle-sales-are-slowing-amid-policy-shifts-bnef/751079/>.

<sup>30</sup> IEA, *Global EV Outlook 2025* (May 2025), at 68, <https://iea.blob.core.windows.net/assets/7ea38b60-3033-42a6-9589-71134f4229f4/GlobalEVOutlook2025.pdf>; IEA, *Global EV Outlook 2024* (Apr. 2024), at 62, <https://iea.blob.core.windows.net/assets/a9e3544b-0b12-4e15-b407-65f5c8ce1b5f/GlobalEVOutlook2024.pdf>.

<sup>31</sup> IEA, *Global EV Outlook 2026*, *supra* note 28, at 84.

<sup>32</sup> Electric School Bus Initiative, *Electric School Bus Data Dashboard* (data as of July 2026), <https://electricschoolbusinitiative.org/electric-school-bus-data-dashboard>.

fleet owners regarding their plans to electrify their fleets and introduce new EVs highlight the continued growth in the industry.<sup>33</sup>

## 2. The number and types of clean vehicle models continue to grow.

Automakers continue to expand the range of clean vehicle options available to American consumers. EV market coverage—i.e., the availability of EV options in different segments of the vehicle market—increased to 59% in 2024, driven by a 58% increase in “mass market EVs.”<sup>34</sup> In the fourth quarter of 2025, 164 different EV models were available for sale in the United States. There were 102 different battery-electric models sold comprising 26 car models, 58 utility vehicle models, 7 pickup models, and 11 van models.<sup>35</sup> The growing diversity of EV models means that most EVs produced today offer more than enough range for a great majority of Americans.<sup>36</sup> Most consumers drive less than 75 miles per day, and the average range for an EV is nearly 300 miles per full charge; additionally, there are currently over 50 battery-electric vehicles on the market with a range over 300 miles.<sup>37</sup>

Over the next several years, automakers plan to release for sale in the United States a host of new EV models covering a wide scope of mass market vehicle types including sedans, hatchbacks, compacts, sport utility vehicles, pickup trucks, and sportscars.<sup>38</sup> The new EV

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<sup>33</sup> See, e.g., Jack Ewing, “Tesla’s Newest Electric Vehicle Could Jolt the Trucking Industry,” *N.Y. Times* (May 19, 2026), <https://www.nytimes.com/2026/05/19/business/energy-environment/teslas-semi-truck.html>.

<sup>34</sup> J.D. Power, “U.S. Automotive Forecast for January 2025” (Jan. 23, 2025), <https://www.jdpower.com/business/press-releases/jd-power-globaldata-forecast-january-2025>.

<sup>35</sup> Alliance for Automotive Innovation, *Get Connected: Electric Vehicle Quarterly Report, Fourth Quarter, 2025* (Mar. 25, 2026), at 8, <https://www.autosinnovate.org/posts/papers-reports/Get%20Connected%20EV%20Quarterly%20Report%202025%20Q4.pdf>.

<sup>36</sup> See Christopher Mims, “I Drove an EV Deep Into the Wilderness. I Never Feared Running Out of Juice,” *Wall Street Journal* (Aug. 22, 2025), [https://www.wsj.com/business/autos/electric-vehicle-rivian-charging-infrastructure-b90be73a?st=vXSRon&reflink=desktopwebshare\\_permalink](https://www.wsj.com/business/autos/electric-vehicle-rivian-charging-infrastructure-b90be73a?st=vXSRon&reflink=desktopwebshare_permalink)

<sup>37</sup> Mini USA, “New Consumer Survey Reveals Majority of Americans Are Still Open to Buying Electric Vehicles Despite Changing EV Market” (Jun. 5, 2024), [https://miniusanews.com/newsrelease.do?id=1443&mid=.](https://miniusanews.com/newsrelease.do?id=1443&mid=.;); U.S. Dept. of Energy, Vehicles Tech. Off., “FOTW #1375, December 30, 2024: Median EV Range in Model Year 2024 Reached a Record High of 283 Miles per Charge” (Dec. 30, 2024), <https://www.energy.gov/eere/vehicles/articles/fotw-1375-december-30-2024-median-ev-range-model-year-2024-reached-record>; Jonathan Elfalan, “Edmunds Tested: Electric Car Range and Consumption,” Edmunds (July 10, 2025), <https://www.edmunds.com/car-news/electric-car-range-and-consumption-epa-vs-edmunds.html>.

<sup>38</sup> Caleb Miller, “Future Electric Vehicles: The EVs You’ll Soon Be Able to Buy,” *Car and Driver* (Feb. 14, 2025), <https://www.caranddriver.com/news/g29994375/future-electric-cars-trucks/>; Ford, “Q4 & Full Year 2024 Earnings Presentation” (2025), [https://ford2022rd.q4web.com/files/doc\\_financials/2024/q4/Ford-Q4-2024-Earnings-](https://ford2022rd.q4web.com/files/doc_financials/2024/q4/Ford-Q4-2024-Earnings-)

offerings will include an increasing number of affordable options expected to be priced in the \$20,000 to \$40,000 range.<sup>39</sup> These EVs will include improvements to battery range, acceleration, and other performance metrics that consumers value.<sup>40</sup>

### **3. Zero- and low-emitting vehicles are becoming less expensive than combustion-engine vehicles**

One of the primary drivers of increased consumer enthusiasm for clean vehicles is that the total cost of ownership (which takes into account things such as maintenance costs) of an EV is on average lower than that of a combustion-engine vehicle. EVs generally have fewer moving parts than their gas or diesel counterparts, which typically results in reduced costs for maintenance and repair due to having fewer serviceable parts and potential failures.<sup>41</sup> Accordingly, the average EV owner spends 60% less to power their vehicle over its lifetime.<sup>42</sup> As the differential in up-front purchase costs continues to drop, initial purchase prices for new EVs are beginning to approach parity with Internal Combustion Engine (ICE) vehicles. In fact, current cost projections indicate certain vehicle classes will reach parity as early as next year, with larger vehicles like Midsize SUVs and passenger trucks reaching parity by 2030 or 2031. *See* Gillingham-Jenn at 13. Moreover, several studies predating the Inflation Reduction Act tax credits and incentive programs, and therefore not considering their effects, found that certain heavy-duty EVs battery-electric and fuel-cell tractor-trailers would reach cost parity with comparable diesel vehicles by the end of the decade, if not sooner.<sup>43</sup> The growing second-hand market for light-duty EVs will also improve affordability.

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Presentation.pdf (Ford E-Transit van accounted for 9% of transit sales in Q4 2024); Cody Trotter, “Future EVs: Electric Cars Coming in 2026-2030,” *U.S. News* (Aug. 22, 2025), <https://cars.usnews.com/cars-trucks/advice/future-electric-cars>.

<sup>39</sup> Caleb Miller, “Future Electric Vehicles,” *supra* note 38; Car and Driver, “Cheapest Electric Vehicles,” *Car and Driver*, <https://www.caranddriver.com/rankings/best-electric-cars/cheapest> (last accessed July 3, 2026); Rob Wile, “Bezos-backed Slate Auto unveils affordable EV truck,” *NBC News* (Apr. 25, 2025), <https://www.nbcnews.com/business/autos/bezos-backed-slate-auto-unveils-affordable-ev-truck-rcna203014>; Michael Wayland, “Stellantis CEO says \$25,000 Jeep EV coming to the U.S. ‘very soon,’” *CNBC* (May 29, 2024), <https://www.cnb.com/2024/05/29/stellantis-affordable-jeep-ev.html>.

<sup>40</sup> Caleb Miller, “Future Electric Vehicles,” *supra* note 38.

<sup>41</sup> CARB, Advanced Clean Fleets Regulation, Appendix G: Total Cost of Ownership (Aug. 30, 2022), at § 4, G21–G23, <https://ww2.arb.ca.gov/sites/default/files/barcu/regact/2022/acf22/appg.pdf>.

<sup>42</sup> Steve Patton, “EV price parity with gas vehicles may be closer than we think,” *Fortune* (Oct. 2, 2024), <https://fortune.com/2024/09/13/ev-price-parity-gas-vehicles-automotive-trends/>.

<sup>43</sup> D. Hall & N. Lutsey, ICCT, *Estimating the infrastructure needs and costs for the launch of zero-emissions trucks* (Aug. 9, 2019), at 19–23, <https://theicct.org/publications/zero-emission-truck-infrastructure>; A. Phadke et. al., Lawrence Berkeley Nat’l Laboratory, *Why Regional and*

EVs and other clean vehicles generally enjoy lower total cost of ownership, contributing to consumer interest. Even without any federal or state EV incentives, the owner of an EV generally saves \$6,600 to \$11,000 relative to its combustion-engine counterpart over a six-year ownership period, across all vehicle types.<sup>44</sup> For light-duty vehicles, EVs are cheaper to operate than gas-powered vehicles for every state and every passenger vehicle class—even in regions with lower gas prices or higher electricity rates.<sup>45</sup> Heavy-duty vehicle data similarly shows cost savings for battery-electric and fuel cell technology relative to combustion-engine technologies.<sup>46</sup> Maintenance and service costs are also significantly lower for zero- and low-emitting vehicles across classes. *See* 89 Fed. Reg. at 27,859–60 (Table 8) (\$10–16 billion in annualized maintenance and repair savings from MY 2027–32 light- and medium-duty standards); 89 Fed. Reg. 29,440, 29,659, 29,716 (Apr. 22, 2024) (\$3.3 billion in similar savings from MY 2027–32 heavy duty standards.)

#### **4. Global demand for clean vehicles remains strong.**

Global demand for EVs continues to increase at a rapid pace, presenting an opportunity for domestic manufacturers to plug into a widening consumer base.<sup>47</sup> Electric vehicles accounted for approximately 25% of all cars sold globally in 2025, continuing the upward trend from 20% in 2024, 18% in 2023, and 14% in 2022.<sup>48</sup> The Chinese manufacturer BYD sold 4.27 million

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*Long-Haul Trucks are Primed for Electrification Now* (Mar. 2021), at 3, [https://eta-publications.lbl.gov/sites/default/files/updated\\_5\\_final\\_ehdv\\_report\\_033121.pdf](https://eta-publications.lbl.gov/sites/default/files/updated_5_final_ehdv_report_033121.pdf).

<sup>44</sup> A. Isenstadt & K. Pennington, ICCT, *Tax Credits or No Tax Credits, EV Costs Are Projected to Keep Dropping* (Jul. 30, 2025), <https://theicct.org/tax-credits-or-no-tax-credits-ev-costs-are-projected-to-keep-dropping-jul25/>.

<sup>45</sup> S. Baldwin & J. Connors, Energy Innovation Policy & Technology, *Comparing the Cost to Travel: Electric Vehicle Fill-Up Savings by State* (Aug. 2023), at 1, <https://energyinnovation.org/wp-content/uploads/EV-Fill-Up-Savings-by-State-2.pdf>.

<sup>46</sup> North American Council for Freight Efficiency, *Guidance Report: Viable Class 7/8 Electric, Hybrid and Alternative Fuel Tractors* (2019), at 57, [https://nacfe.org/wp-content/uploads/2024/05/Viable-Class-7-8-Alternative-Vehicles-Final-12-10-\\_compressed.pdf](https://nacfe.org/wp-content/uploads/2024/05/Viable-Class-7-8-Alternative-Vehicles-Final-12-10-_compressed.pdf); S. Nadel & E. Junga, Amer. Council for an Energy-Efficient Economy, *Electrifying Trucks: From Delivery Vans to Buses to 18-Wheelers* (Jan. 2020), at 3–4, [https://www.mobilifutur.eu/wp-content/uploads/2022/06/electric\\_trucks\\_1.pdf](https://www.mobilifutur.eu/wp-content/uploads/2022/06/electric_trucks_1.pdf).

<sup>47</sup> Chris Marquette & Alex Guillen, “Auto experts doubt Duffy’s CAFE standards review will lower prices,” E&E News (Jan. 30, 2025), <https://www.eenews.net/articles/auto-experts-doubt-duffys-cafe-standards-review-will-lower-prices/>; Camila Domonoske, “Trump’s pulling a U-turn on EVs, but not much has changed — yet,” NPR (Jan. 30, 2025), <https://www.npr.org/2025/01/30/nx-s1-5272749/donald-trump-ev-electric-vehicles-subsidies-auto-industry>.

<sup>48</sup> IEA, *Global EV Outlook 2026*, *supra* note 28, at 16; IEA, *Global EV Outlook 2024*, *supra* note 30, at 17; IEA, “More than 1 in 4 cars sold worldwide this year is set to be electric as EV sales continue to grow” (May 14, 2025), <https://www.iea.org/news/more-than-1-in-4-cars-sold-worldwide-this-year-is-set-to-be-electric-as-ev-sales-continue-to-grow>.

EVs and plug-in hybrids in 2024, a 41% increase over its 2023 sales.<sup>49</sup> EV sales are on track to account for over a quarter of all cars sold globally in 2025 and to reach over 40% by 2030.<sup>50</sup> In China, the world’s largest auto market, EV sales accounted for almost 55% of all sales in 2024,<sup>51</sup> and electric heavy trucks have experienced a similar boom.<sup>52</sup> EV sales continue to grow across the globe, including in markets outside the major EV markets.<sup>53</sup>

Concurrent with rising consumer demand, major global markets—including China, the European Union, and Canada—have enacted significant phase-downs of combustion-engine vehicles.<sup>54</sup> That means U.S. automakers will have to become global leaders in zero-emission technologies in the next ten years or lose some of their largest markets.<sup>55</sup>

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<sup>49</sup> Indrabati Lahiri, “Chinese EV giant BYD beats domestic layers to hit record 2024 sales,” *Euro News* (Mar. 1, 2025), <https://www.euronews.com/business/2025/01/03/chinese-ev-giant-byd-beats-domestic-players-to-hit-record-2024-sales>.

<sup>50</sup> IEA, “More than 1 in 4 cars sold electric,” *supra* note 48; *see also* L. Fisher et al., McKinsey & Co., *Exploring consumer sentiment on electric-vehicle charging* (Jan. 9, 2024), <https://www.mckinsey.com/features/mckinsey-center-for-future-mobility/our-insights/exploring-consumer-sentiment-on-electric-vehicle-charging>.

<sup>51</sup> IEA, *Global EV Outlook 2026*, *supra* note 28, at 18.

<sup>52</sup> *See, e.g.*, Sam Li & Lewis Jackson, “Soaring electric truck sales deal new blow to diesel use in China,” *Reuters* (Jul. 10, 2025), <https://www.reuters.com/sustainability/climate-energy/soaring-electric-truck-sales-deal-new-blow-diesel-use-china-2025-07-11/>.

<sup>53</sup> IEA, *Global EV Outlook 2026*, *supra* note 28, at 23–32 (80% growth in EVs in non-Chinese emerging markets and developing economies).

<sup>54</sup> Theo Leggett, “EU waters down plans to end new petrol and diesel car sales by 2035,” *BBC* (Dec. 16, 2025), <https://www.bbc.com/news/articles/crk78y7k8ezo> (European Commission’s new plan requires 90% of new car sales in 2035 to be zero-emission, rather than 100%); Leticia Pineda et al., Int’l Council on Clean Transp., *Does Canada’s announced greenhouse gas standard stringency align with its electric vehicle uptake projection?* (July 2, 2026) (Canada’s target greenhouse gas standards correspond to up to 68% EV adoption by 2035); Sean Fleming, “China joins list of nations banning the sale of old-style fossil-fuelled vehicles,” *World Economic Forum* (Nov. 11, 2020), <https://www.weforum.org/stories/2020/11/china-bans-fossil-fuel-vehicles-electric/>.

<sup>55</sup> For example, China was General Motors’ top sales market from 2010 to 2023, but GM’s market share collapsed as Chinese firms out-competed on battery-electric vehicles and plug-in hybrids. *See* Keith Bradsher, “G.M. Led in China for Years. Here’s How It Ended Up 16th in Sales,” *N.Y. Times* (Dec. 19, 2024), <https://www.nytimes.com/2024/12/19/business/gm-china.html> (“G.M. has not competed effectively in battery electric vehicles and plug-in hybrid cars. These models together accounted for 52.3 percent of the Chinese market in November [2024] ... [but] less than 20 percent of G.M. sales this year – while its sales of gasoline-powered cars have halved.”); Michael Wayland, “U.S. automakers like GM are rapidly losing ground in China, once an engine for growth,” *CNBC* (May 6, 2024), <https://www.cnbc.com/2024/05/06/us-automakers-like-gm-rapidly-lose-ground-in-china.html>.

### **III. EPA’s Proposal to delay the Tier 4 emissions standards is unlawful because it is contrary to statute.**

EPA’s Proposal fails to comply with the clear statutory requirements of the Clean Air Act. First, EPA’s decision to delay the implementation of the emission-reducing Tier 4 standards violates the Clean Air Act’s general conformity requirement, which disallows federal agency action that would serve to undermine NAAQS air quality goals. *See* 42 U.S.C. § 7506(c)(1). Second, the Proposal fails to set standards that reflect the greatest degree of emission reductions achievable. *See id.* § 7521(a)(3)(A). Third, the Proposal violates the Clean Air Act’s anti-backsliding provision under section 202(b)(1)(C). *See id.* § 7521(b)(1)(C). Fourth, to the extent EPA is attempting to regulate vehicles that have already been manufactured, the Proposal is an impermissible retroactive rule. Finally, the Proposal clearly fails to consider the statutorily required factors necessary to regulate pollution that harm the public health and welfare.

#### **A. The Proposal violates the Clean Air Act’s general conformity requirement.**

The Clean Air Act prohibits federal agencies from engaging in any activity that does not conform with state implementation plans (SIPs) for the attainment of national ambient air quality standards, or that may cause or contribute to violations of those standards. 42 U.S.C. § 7506(c)(1).<sup>56</sup> In particular, this general conformity requirement specifies that EPA may not engage in activities that:

- (i) cause or contribute to any new violation of any standard in any area;
- (ii) increase the frequency or severity of any existing violation of any standard in any area; or
- (iii) delay timely attainment of any standard or any required interim emission reductions or other milestones in any area.

*Id.* § 7506 (c)(1)(B). Moreover, the implementing regulations further specify that a federal agency must clearly demonstrate conformity when an action’s emissions impacts “[i]nterfere with provisions in the applicable SIP for maintenance of any standard.” 40 C.F.R. § 93.153(g)(1)(ii).

SIPs are central to reducing harmful air pollution through the Clean Air Act’s National Ambient Air Quality Standards program, “the engine that drives nearly all of Title I” of the Clean Air Act. *Whitman v. Am. Trucking Associations*, 531 U.S. 457, 468 (2001). SIPs are federally enforceable plans designed and implemented by states that identify how a state will attain and maintain NAAQS. SIPs for nonattainment and maintenance areas must identify both the

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<sup>56</sup> Under CAA section 176, “[n]o department, agency, or instrumentality of the Federal Government shall engage in, support in any way or provide financial assistance for, license or permit, or approve, any activity which does not conform to an implementation plan after it has been approved or promulgated under section 7410 of this title.” 42 U.S.C. § 7506(c)(1).

magnitude of reductions needed and the actions necessary to achieve those reductions in order to maintain or attain the NAAQS. SIPs for nonattainment areas also must include a demonstration that the area: (i) will make reasonable further progress toward attainment, (ii) is implementing reasonably available control technology on all major sources, (iii) has a program in place to address emissions from new stationary sources, and (iv) meets transportation conformity requirements. SIPs, once approved by EPA, are incorporated into the Code of Federal Regulations and become enforceable as federal law under Clean Air Act section 304, 42 U.S.C. § 7604(f). *See Trustees for Alaska v. Fink*, 17 F.3d 1209, 1210 n.3 (9th Cir. 1994) (noting approved SIPs have “the force and effect of federal law” and are enforceable in federal court).

Because of the chief importance of SIPs and NAAQS attainment to the statutory scheme of the Clean Air Act, the statute and EPA’s implementing regulations require federal agencies to make a general conformity determination (i.e., of conformity with relevant, approved state implementation plans for criteria pollutants) whenever a federal action increases the “total of direct and indirect emissions” of criteria pollutants above a certain threshold in areas currently or previously designated as in nonattainment with air-quality standards. 40 C.F.R. §§ 93.153(b), 93.158. Agencies are required to conduct a conformity analysis when the emission impacts are “reasonably foreseeable,” 40 C.F.R. § 93.153(c)(3), and, for indirect emissions, when they are of the type the agency can “practicably control” over which they have a “continuing responsibility,” 40 C.F.R. § 93.152.<sup>57</sup> The Clean Air Act’s clear mandate is such that any agency with authority over programs with “air-quality related transportation consequences” must give “priority” to such actions that support the successful implementation of SIPs. 42 U.S.C. § 7506(d). To this end, most federal actions affecting levels of pollutants in nonattainment regions, including the Proposal, require that the responsible agency make a “conformity determination.” 40 C.F.R. §§ 93.150–.160.

Here, EPA was required to make a conformity determination analyzing the Proposal’s impact on nonattainment areas and their ability to comply with their SIPs, and it failed to do so in plain violation of the Clean Air Act. First, an increase in criteria pollutant emissions clearly is reasonably foreseeable because the agencies quantified those emissions increases.<sup>58</sup> Given EPA’s estimate, *see infra* section IV.C.2, there is no argument supporting the proposition that the Proposal will have *no* impact on criteria pollutant emissions. Second, EPA can practicably control the emissions at issue because it possesses ultimate regulatory authority over standards

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<sup>57</sup> *See also* EPA, General Conformity Training Module 2.1: Applicability Process (May 28, 2026) <https://www.epa.gov/general-conformity/general-conformity-training-module-21-applicability-process#table2>.

<sup>58</sup> EPA, Revision of Tier 4 Criteria Pollutant Standards, Part One: Amendments to Phase-In Schedule for Light-Duty and Medium-Duty Vehicles: Draft Regulatory Impact Analysis, at 2-3–2-5, EPA-HQ-OAR-2025-3297-0055 (DRIA).

that govern criteria pollutant emissions; and it is clear that EPA, as mandated by the CAA, has a continuing interest in regulating such emissions.

Additionally, it is reasonably foreseeable that these emissions increases would directly affect nonattainment and maintenance areas. EPA's current list of nonattainment counties shows numerous counties currently designated nonattainment for PM and ozone.<sup>59</sup> In counties with serious or extreme nonattainment concerns even what EPA claims would be "marginal" increases in emissions could cause dramatic deviations from SIPs.<sup>60</sup> 91 Fed. Reg. at 28,475; *see* CARB Response to U.S. EPA Notice of Proposed Rulemaking: Revision of Tier 4 Criteria Pollutant Standards EPA-HQ-OAR-2025-3297 at 19–20 (CARB App'x). And as discussed, *see supra* Section IV.A.1.ii, criteria pollutant emissions from vehicles disproportionately affect overburdened communities near transportation corridors in major air basins, many of which are in nonattainment.

Although EPA has exempted from its conformity regulations some actions involving "[r]ulemaking and policy development and issuance," 40 C.F.R. § 93.153(c)(2), this Proposal is not one of them. That provision only applies to "[a]ctions which would result in no emissions increase or an increase in emissions that is clearly de minimis." *Id.*; *see Pub. Citizen v. Dep't of Transp.*, 316 F.3d 1002, 1029–30 (9th Cir. 2003), *rev'd on other grounds*, 541 U.S. 752 (2004) (holding that DOT's claim that rulemakings are categorically exempt from general conformity requirements was an incorrect interpretation of the statute).<sup>61</sup> EPA expressly acknowledges that the Proposal would result in increased emissions of criteria pollutants across the board in 2027 and 2028. DRIA at 2-3. EPA has not claimed, much less demonstrated, that these emissions increases would be clearly de minimis in non-attainment areas, and the available evidence suggests the impacts would in fact be greater than a de minimis level. *See* CARB App'x at 19–20.

Even if EPA were to conclude that the emissions impacts of the Proposal would be clearly de minimis, it would be required to conduct at least that part of the conformity analysis in order to make a determination that general conformity did not apply.<sup>62</sup> EPA failed to do that, too, instead neglecting to mention the general conformity rule at all. *See Pub. Citizen v. Dep't of Transp.*, 316 F.3d at 1030 (holding that petitioners did not meet their burden of proof on whether a conformity determination was required by simply suggesting that it was an "open question" whether the emissions limits would be exceeded (*citing Olmsted Falls*, 292 F.3d at 270–73)); *Env't Def. Fund, Inc. v. EPA*, 82 F.3d 451 (D.C. Cir. 1996), *as amended*, 92 F.3d 1209 (D.C.

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<sup>59</sup> EPA, *Current Nonattainment Counties for All Criteria Pollutants*, *supra* note 1.

<sup>60</sup> *Id.*

<sup>61</sup> The de minimis thresholds applicable to general conformity determinations are outlined in 40 C.F.R. § 93.153(b)(1).

<sup>62</sup> EPA guidance further outlines the steps any agency must take to comply with general conformity when an agency believes emission impacts may be de minimis. *See* General Conformity Training Module, *supra* note 57.

Cir.1996) (per curiam) (holding that EPA was required to determine if rulemaking would result in greater than de minimis emissions impacts).

Further, by failing to conduct any conformity analysis, or impacts on states' and counties' ability to comply with SIPs, EPA failed to consider an important aspect of the regulatory problem, rendering the Proposal arbitrary and capricious. *See Motor Vehicle Mfr. Ass'n v. State Farm Mut. Auto. Ins. Co.*, 463 U.S. 29, 43 (1983) (*State Farm*); *see infra* section IV.D.

The plain language of the Clean Air Act expressly prohibits federal agencies, including EPA, from taking discretionary actions that interfere with or undermine approved SIPs. 42 U.S.C. § 7506(c). The Proposal fails to make a conformity determination in the first instance, and the emissions data, *see* DRIA at 2-3, suggests that this agency action would lead to emissions increases in nonattainment areas that could “cause or contribute to,” “delay,” or “interfere” with SIP compliance in these regions. *See* 42 U.S.C. § 7506 (a)(1)(B); CARB App'x at 20. The delay of the implementation of the Tier 4 standards for MY 2027 and 2028 under the Proposal therefore violates the Clean Air Act's general conformity provision.

**B. The Proposal contravenes the Clean Air Act requirement that EPA set standards for criteria pollutants that achieve the greatest degree of emission reduction possible.**

Section 202 of the Clean Air Act requires EPA to set criteria pollutant standards, including standards for NOx and particulate matter, that “reflect the greatest degree of emission reduction achievable through the application of technology which the Administrator determines will be available for the model year to which such standards apply.” 42 U.S.C. § 7521(a)(3)(A)(i). This provision of the Clean Air Act, which textually applies to heavy-duty vehicles standards, is applicable to this rule because the statutory definition of “heavy-duty vehicle” encompasses some light-and medium-duty vehicles that fall within the purview of EPA's Proposal.<sup>63</sup> 42 U.S.C. § 7521(b)(3)(C); *see NRDC v. EPA*, 655 F.2d 318, 338 (D.C. Cir. 1981) (applying Clean Air Act section 202(a)(3)(A) to certain light and medium duty criteria pollutant emissions standards). As such, when setting criteria pollutant emissions standards for these vehicles, EPA was required to set standards reflecting the greatest degree of emission reduction achievable. By delaying the phase-in of the Tier 4 standards, thereby setting the criteria pollutant emissions standard to the Tier 3 standards for MY 2027 and 2028, EPA failed to fulfill its statutory obligation under section 202(a)(3)(A).

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<sup>63</sup> The term “heavy duty vehicle” is defined “[f]or the purposes of this part” (i.e., including all of section 202) as a “truck, bus, or other vehicle manufactured primarily for use on the public streets, roads, and highways . . . which has a gross vehicle weight . . . in excess of six thousand pounds.” 42 U.S.C. § 7521(b)(3)(C). The requirement that EPA regulate emissions to the “greatest degree” possible is therefore applicable to any standards promulgated under section 202(a)(3)(A) for vehicles in excess of six thousand pounds. Indeed, the 2024 Tier 4 rule applied the “greatest degree” standard when setting the Tier 4 requirements. 89 Fed. Reg. at 27,890, 27,932, 27,934, 27,937, 27,939.

This statutory mandate—that standards “reflect the greatest degree of emission reduction achievable through the application of technology” which “will be available for the model year to which such standards apply,” 42 U.S.C. § 7521(a)(3)(A)(i)—requires EPA to set standards at least as stringent as, if not more stringent than, what the current state of the art allows. *See Nat’l Petrochemical & Refiners Ass’n v. EPA*, 287 F.3d 1130, 1140 (D.C. Cir. 2002) (noting that the statute does not require “present availability” of technology at issue). To bring about critical air quality improvements, Congress authorized EPA to set technology-forcing standards that require manufacturers to develop entirely new technologies or significantly improve existing ones. *See NRDC*, 655 F.2d at 328 (stating that “Congress intended the agency to project future advances in pollution control capability”); *Crete Carrier Corp. v. EPA*, 363 F.3d 490, 491 (D.C. Cir. 2004) (stating that this section “is a technology-forcing provision; it mandates regulations with which manufacturers can comply only by adopting new technologies as they become available”); *NRDC v. Thomas*, 805 F.2d 410, 428–30 & n.30 (D.C. Cir. 1986) (“Congress intended the EPA...to engage in reasonable predictions and projections in order to force technology.”).

Here, evidence shows that even using *existing* available technology, let alone what is achievable with future technological development, EPA’s delay of the Tier 4 standards does not represent the greatest emission reduction possible. In the 2024 Multi-Pollutant Rule that set the Tier 4 standards and phase-in schedule, EPA highlighted the existing technologies that would allow manufactures to comply with these criteria pollutant standards. 89 Fed. Reg. at 27,845. EPA recognized that even as manufacturers produce EVs that easily comply with the Tier 4 standards, manufacturers will also apply readily available advanced technologies to reduce criteria pollutant emissions from ICE vehicles. *Id.* at 27,844. The Proposal does not dispute that manufacturers can still meet the Tier 4 standards with EVs and existing ICE technology, and EPA does not claim, much less demonstrate, that the technology needed to meet these standards will not be available by MY 2027. In fact, the DRIA acknowledges that there are “many technology options for improving NMOG+NOx emissions,” DRIA at 1-3, and that “[Gasoline Particulate Filters, or GPFs] would be a cost-effective method to achieve the [PM] standard,” because they are a technology that is “already in production and familiar to manufacturers,” DRIA at 1-7. Indeed, GPFs have been in production for more than a decade globally, and suppliers are prepared for increasing demand from the U.S. *See* 89 Fed. Reg. at 27,939–40. As such, the Proposal contravenes the statutory requirement to set standards meant to achieve the greatest emissions reduction possible with available technology. *See* 42 U.S.C. § 7521(a)(3)(A).

Further, as discussed in Section IV.B, *infra*, many vehicle manufacturers, responding to the 2024 Multi-Pollutant Rule, have likely already taken action to comply with the Tier 4 standards by 2027 as outlined in the original phase-in schedule—therefore, any argument that the available technology can only support the existing Tier 3 standards cannot be supported. In fact, depending on the automaker, much of the core development of a new model occurs from three to five years in advance of shipping, and by roughly one year before shipping, their focus is simply on manufacturing. Gillingham-Jenn at 7. These timelines suggest that the technologies necessary

to comply under the existing schedule were likely already added to the MY 2027 and 2028 vehicles. *Id.* at 7–8. As such, because the CAA obligates EPA to choose the most effective achievable standards, the decision to retreat from Tier 4 standards, which EPA determined fulfilled the greatest degree of emission reduction achievable requirement<sup>64</sup> based on technology available in 2024, and which automakers will have already planned to meet under the existing phase-in schedule, EPA’s Proposal violates the CAA.

Moreover, while the statutory language also requires EPA to “giv[e] appropriate consideration to cost, energy, and safety factors associated with the application of technology” that “will be available,” *id.*, it must place primary importance on achieving the greatest degree of emissions reduction. *See Husqvarna AB v. EPA.*, 254 F.3d 195, 200 (D.C. Cir. 2001) (concluding that “EPA did not deviate from its statutory mandate or frustrate congressional will by placing primary significance on the ‘greatest degree of emission reduction achievable’ and by considering cost, noise, energy and safety factors as important but secondary factors”). Courts have continually held that the “overriding goal” of this statutory mandate for criteria pollutant regulation is achieving emissions reductions, and the other statutory factors “are subordinate to that goal.” *See, e.g., id.; Am. Petroleum Inst. v. EPA.*, 52 F.3d 1113, 1120 (D.C. Cir. 1995). As such, EPA’s failure to prioritize achieving the greatest degree of emission reduction possible violates the statutory requirement.

Finally, EPA’s failure to set standards that would achieve the greatest degree of emission reduction possible, and failure to justify why it believed it either did set such standards or was not required to do so, is arbitrary and capricious, in addition to being contrary to the Clean Air Act. *See infra* Section IV.C.2. First, EPA’s failure to provide an adequate explanation as to why it is retreating from the Tier 4 standards, when the 2024 Multi-Pollutant Rule determined these standards to be supported by the available technology, fails to support a “rational connection between the facts found and the choice made.” *State Farm*, 463 U.S. at 43. Second, if EPA did not set criteria pollutant standards that reflect the greatest degree of emission reduction possible due to its consideration of other factors, EPA was required to explain this reasoning and justify this regulatory change in position. *FCC v. Fox Television Stations, Inc.*, 556 U.S. 502, 515 (2009). Third, EPA must grapple with each “important aspect of the [regulatory] problem” when promulgating rules, and here, as explained above, the primary, overriding factor is achieving emissions reductions, and the Proposal fails to adequately address this. *State Farm*, 463 U.S. at 43.

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<sup>64</sup> The 2024 Multi-Pollutant Rule setting the Tier 4 standards states “EPA finds that the standards in this final rule satisfy the requirement for ‘greatest degree of emission reduction achievable’ for vehicles above 6,000 lb GVWR, and has adopted a default compliance schedule to ensure adequate lead time and stability for these vehicles, as well as an optional compliance schedule.” 89 Fed. Reg. at 27,932.

In sum, EPA’s proposal to loosen the existing emission standards’ stringency for Model Year 2027 and 2028 does not “reflect the greatest degree of emission reduction achievable through the application of technology” that “will be available,” in violation of the CAA’s plain mandate. 42 U.S.C. § 7521(a)(3)(A)(i). Moreover, EPA’s failure to explain or support its position to loosen standards below what would achieve the “greatest degree” of emission reduction renders the Proposal arbitrary and capricious.

**C. The Proposal violates the Clean Air Act’s anti-backsliding provision under section 202(b)(1)(c).**

While the Clean Air Act gives EPA discretion in determining future emissions standards subject to the considerations set forth in statute, *see, e.g.*, 42 U.S.C. § 7521(a)(1), (2), (4), such discretion does not extend to delaying, and thereby weakening, the criteria pollutant standards at issue here. In Clean Air Act section 202(b)(1)(C), Congress established substantive constraints on EPA’s ability to revise certain light-duty criteria pollutant emissions standards: while EPA may exercise its section 202(a)(1) authority to revise “any standard prescribed or previously revised under this subsection [202(b)],” “[a]ny revised standard shall require a reduction of emissions from the standard that was previously applicable.” 42 U.S.C. § 7521(b)(1)(C). This anti-backsliding provision is a statutory backstop prohibiting EPA from prescribing light-duty NOx and hydrocarbon emissions standards for motor vehicles that are more lenient than those already established.

In Clean Air Act section 202(b)(1)(A)–(B), Congress set forth the minimum emissions standards for hydrocarbons, NOx, and carbon monoxide (CO), requiring a 90 percent reduction in emissions from light-duty vehicles and engines manufactured during the model years 1980 and 1981 and applying by default to *all* model years thereafter. 42 U.S.C. § 7521(b)(1)(A)–(B). For example, section 202(b)(1)(A) prescribes a hydrocarbon standard applicable to “light-duty vehicles and engines manufactured during *or after* model year 1980,” while section 202(b)(1)(B) prescribes a NOx standard applicable to “light-duty vehicles and engines manufactured during the model year 1981 *and thereafter*.” *Id.* § 7521(b)(1)(A) (emphasis added). EPA has subsequently revised those emissions standards for later model years in accordance with section 202(b)(1)(C) “as needed to protect public health or welfare,” setting progressively more stringent vehicle emission standards for criteria pollutants.<sup>65</sup> *Id.* § 7521(b)(1)(C). For example, in 1991, EPA adopted the Tier 1 standards for criteria pollutants, including hydrocarbons, CO, and NOx. 56 Fed. Reg. 25,724 (June 5, 1991). In 2000, EPA adopted the Tier 2 standards, which required passenger vehicles to be 77 to 95 percent cleaner and created the current systems of certifying vehicles to “bins.” 65 Fed. Reg. 6,698 (Feb. 10, 2000). In 2014, EPA adopted the Tier 3 emissions standards, which required a further reduction of 60 to 80 percent of emissions,

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<sup>65</sup> EPA’s recent criteria pollutants rulemakings for passenger cars and light trucks can be found on EPA’s website at <https://www.epa.gov/regulations-emissions-vehicles-and-engines/regulations-smogsoot-and-other-air-pollution-passenger>.

depending on the criteria pollutant and vehicle class. 79 Fed. Reg. 23,414 (Apr. 28, 2014). The Tier 3 standards also required manufacturers to meet a fleet average NMOG + NOX standard for each model year, which declined over a phase-in period.<sup>66</sup> *Id.* In 2024, EPA adopted the Tier 4 standards, which utilized the same structure but further strengthened emissions standards for the regulated criteria pollutants. 89 Fed. Reg. 27,842 (Apr. 18, 2024).

Each of the subsequently adopted criteria pollutant emissions standards described above revised the emissions standards for hydrocarbons and NOx emissions that otherwise would have applied under section 202(b)(1)(A)–(B) for later model years, along with other standards including those adopted pursuant to Clean Air Act sections 202(a), (g), (h), and (i). Thus, each of EPA’s subsequently adopted set of emissions standards (including the Tier 1, 2, 3, and 4 standards) has been a “regulation[] under subsection (a)(1) revising any standard prescribed or previously revised under this subsection [section 202(b)(1)(C)]” which EPA was authorized to adopt “as needed to protect public health or welfare” pursuant to section 202(b)(1)(C). 42 U.S.C. § 7521(b)(1)(C). Consequently, each of EPA’s subsequently adopted criteria pollutant emissions standards must constitute “a reduction of emissions from the standard that was previously applicable.” *Id.*

EPA itself has long adhered to this best reading of the statute. EPA promulgated its own consistent interpretation shortly after the 1990 Clean Air Act Amendments that enacted the current version of section 202(b)(1)(C). *See Loper Bright*, 603 U.S. at 385-86 (according “very great respect” to the “contemporaneous construction” of statutes by the agency charged with administering the statute, “especially” “when an Executive Branch interpretation was issued roughly contemporaneously with enactment of the statute and remained consistent over time”). Under EPA’s longstanding interpretation of section 202(b)(1)(C), it “has no legal basis on which to eliminate the existing [total hydrocarbon] standards” because “EPA is prohibited from doing so by section 202(b)(1)(C) of the Act, which states that ‘Any revised standard shall require a reduction of emissions from the standard that was previously applicable.’” 56 Fed. Reg. 25,724, 25,731 (June 5, 1991) (EPA Response to Comments on Tier 1 Rule).

The plain text of section 202(b)(1)(C) also aligns with the Clean Air Act’s statutory structure and purpose. The D.C. Circuit, while examining section 172(e) in particular, has found that the Clean Air Act “[c]onsidered as a whole ... reflects Congress’s intent that air quality should be improved until safe and never allowed to retreat thereafter. Even if EPA set requirements that proved too stringent and unnecessary to protect public health, EPA [is] forbidden from releasing states from these burdens.” *S. Coast Air Quality Mgmt. Dist. v. EPA*, 472 F.3d 882, 900 (D.C. Cir. 2006); *cf. Kentucky Res. Council, Inc. v. EPA*, 467 F.3d 986, 995 (6th Cir. 2006) (Clean Air Act anti-backsliding protections prevent EPA from approving a SIP

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<sup>66</sup> “NMOG” or “nonmethane organic gas” is defined under the Clean Air Act as “the sum of nonoxygenated and oxygenated hydrocarbons contained in a gas sample.” 42 U.S.C. § 7581(3). Thus, NMOG is a form of hydrocarbon.

revision if “the agency finds it will make the air quality worse”). This general anti-backsliding policy is implemented in several places throughout the Act, including in requirements for State Implementation Planning (*see* 42 U.S.C. § 7410(l)) and Prevention of Significant Deterioration and Non-Attainment Areas (*see, e.g.*, 42 U.S.C. §§ 7470–7479, 7502(e), 7503, 7505(a), 7506(c), 7515).

All of EPA’s previously adopted standards revising the hydrocarbon and NOx standards (including the Tiers 1, 2, 3, and 4 standards) were lawfully adopted under section 202(b)(1)(C) as they all constituted “a reduction of emissions from the standard that was previously applicable.” 42 U.S.C. § 7521(b)(1)(C). The Proposal that EPA now puts forth, however, would *increase* the emissions of hydrocarbons and NOx as compared to the Tier 4 standards applicable to model years 2027 and subsequent. *See* 91 Fed. Reg. at 28,477, tbl.12; DRIA at 2-5, tbl.2-3. This is plainly in violation of section 202(b)(1)(C), which requires that any revisions to these standards—“standard[s] prescribed or previously revised under this subsection”—be “a reduction of emissions from the standard that was previously applicable”—i.e., the Tier 4 standards. 42 U.S.C. § 7521(b)(1)(C). Accordingly, EPA’s Proposal is contrary to law.

#### **D. EPA lacks authority for retroactive rulemaking.**

Under the Administrative Procedure Act, federal agencies, including EPA, are prohibited from promulgating retroactive rules, as Congress has only expressly authorized agencies to prescribe regulations that have a “future effect” on the regulated activity. 5 U.S.C. § 551(4); *see Bowen v. Georgetown Univ. Hosp.*, 488 U.S. 204, 208 (1988) (“Retroactivity is not favored in the law.”). Here, EPA’s Proposal to revise the phase-in schedule for the Tier 4 emissions standards acts as a retroactive rule as applied to MY 2027 vehicles, as vehicle manufacturers have already begun to manufacture MY 2027 vehicles in accordance with the Tier 4 program.<sup>67</sup> EPA does not contest this fact, noting that “some manufacturers have already certified some vehicle models to the final Tier 4 Standards for MY 2027.” DRIA at 1-3. EPA’s decision to retroactively regulate MY 2027 vehicles thus exceeds its statutory authority.

The language of the Clean Air Act points to the reading that the statute cannot apply retroactively. Section 202(a)(1) is, by its plain language, forward looking, expressly stating that it shall apply to “new motor vehicles or new motor vehicle engines,” 42 U.S.C. § 7521(a)(1), and subject to a feasible lead-time requirement, *id.* § 7521(a)(2), indicating that the Administrator’s standard-setting analysis must focus on *future* model years, not past model years. Similar forward-looking language is apparent throughout section 202(a), highlighting that statute’s intent to govern future production of vehicles.<sup>68</sup> Indeed, any contrary interpretation allowing for

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<sup>67</sup> 40 C.F.R. § 85.2304(a) outlines the definition of an “annual production period,” which states that the production of vehicles for a particular model year can begin as early as January 2 of the *prior* calendar year.

<sup>68</sup> For example, section 202(a)(1) asks whether dangerous air pollution “may reasonably be anticipated,” 42 U.S.C. § 7521(a)(1), and section 202(a)(3)(A)(i) directs EPA to promulgate

retroactive standards would amount to EPA prescribing standards for *non-new* vehicles—a power specifically denied EPA and preserved for the States. *Id.* § 7543(d). Similarly, section 202(a)(2)’s lead time provision, and specifically the term “after,” is inimical to retroactive rulemaking, in which EPA’s regulatory action would “take effect” in the past. *Id.* § 7521(a)(2).

Further, the Supreme Court has expressly held that “a statutory grant of legislative rulemaking authority will not ... be understood to encompass the power to promulgate retroactive rules unless that power is conveyed by Congress in express terms.” *Bowen*, 488 U.S. at 208. As such, since the language of the CAA has not given EPA “express” authority to issue retroactive rules, EPA may not do so. *See id.* Thus, to the extent manufacturers have begun producing MY 2027 vehicles, EPA may not relax standards applicable to those vehicles, and any attempt to do so is contrary to the law.

**E. EPA did not make the requisite finding that it is “necessary” to delay the Tier 4 Standards, and therefore the Proposal is contrary to statute.**

Clean Air Act section 202(a)(2) provides that standards promulgated under section 202(a)(1) “*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.” 42 U.S.C. § 7521(a)(2) (emphasis added). EPA has long characterized this as a constraint on its authority. *See, e.g.*, 83 Fed. Reg. at 43,227 (standards are “to take effect only after” sufficient lead time). And the statute does, in fact, require EPA to determine “that the technology needed for compliance will be available when the standards take effect.” *NRDC v. EPA*, 655 F.2d 318, 337 (D.C. Cir. 1981). But this statutory language is not only a constraint; it, along with section 202(a)(1), is also a mandate—that EPA’s standards *shall* take effect after the period the agency has determined is necessary for the development and application of the technology.

Here, EPA failed to propose (and could not support) a finding that it is “necessary” to delay the Tier 4 standards by two years in order to “permit the development and application of the requisite technology.” 42 U.S.C. § 7521(a)(2). EPA previously explicitly found the Tier 4 standards to be both technologically and economically feasible and necessary to protect public health and welfare. Moreover, critically, EPA admits that technologies that would support compliance with Tier 4 standards such as GPFs are “already in production and familiar to manufacturers.” DRIA at 1-7. It is therefore perhaps not surprising that EPA fails to propose a finding that two years (or any other amount of lead time) is “*necessary* to permit the *development and application* of the requisite technology, giving appropriate consideration to the cost of compliance within such period.” 42 U.S.C. § 7521(a)(2) (emphasis added). In fact, EPA treats this statutory requirement to make a finding not as a mandatory predicate to setting emissions

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standards reflecting “the greatest degree of emission reduction achievable” based on technology that “will be available” for the model year to which such standards apply.

standards, but as one of several factors it may consider when setting standards under section 202(a). But a finding required by statute is not optional food for thought. *North Carolina v. EPA*, 531 F.3d 896, 910 (D.C. Cir. 2008), citing *Whitman v. Am. Trucking Ass'ns*, 531 U.S. 457, 485 (2001) (“All the policy reasons in the world cannot justify reading a substantive provision out of a statute.”).

EPA pays lip service to its statutory mandate, asserting that it considered “planning and production requirements and associated lead times.” *See, e.g.*, 91 Fed. Reg. at 28,472. Yet, EPA fails to support its Proposal to delay the Tier 4 standards by two years with any explicit “finding” of the necessity for such a delay—not to mention any evidence to support such a delay. *See infra* Section IV.B. There is, thus, neither a proposed finding that this additional lead time is “necessary,” as required by section 202(a)(2), nor a basis that could support such a finding. *See Bluewater Network v. EPA*, 370 F.3d 1, 21-22 (D.C. Cir. 2004) (“We can defer to the Agency’s prediction of the feasible pace of implementation only if it has adequately explained the basis of that prediction.”).

EPA’s failure to propose a finding that it is “necessary” to provide additional lead time also flies in the face of congressional intent. Congress “expected [EPA] to press for the development and application of improved technology rather than be limited by that which exists.” *NRDC*, 655 F.2d at 328, quoting S. Rep. No. 91-1196, at 24 (1970) (other citations omitted). Here, in contrast, EPA proposes to adopt standards that would *increase* emissions of air pollutants and derail the progress the automotive industry is already on pace to achieve. *See infra* Section IV.A.2. This cannot be reconciled with the statutory text or congressional intent.

EPA has entirely failed to propose, and cannot make, the finding required by section 202(a)(2)—the very section EPA claims authorizes this action. EPA has not and cannot make a finding that it is “necessary” to allow for a two-year delay on the Tier 4 standards that the Agency previously found to be both technologically and economically feasible, as well as necessary to protect public health and welfare. *See* 42 U.S.C. § 7521(a)(1). The determination of whether the regulation is “necessary” is the lawful endpoint in the decision of whether to promulgate a rule – and without such a finding, EPA must not do so. Even further, EPA’s proposal is also inconsistent with the Agency’s prior recognition of the “limited flexibility” section 202(a)(2) affords it. 77 Fed. Reg. at 62,627, citing *Coalition for Responsible Regulation v. EPA*, 684 F.3d 102, 127 (D.C. Cir. 2012), *rev’d in part on other grounds*, *Utility Air Regulatory Grp. v. EPA*, 573 U.S. 302 (2014) (non-discretionary duty in section 202(a)(1) and limited flexibility available under section 202(a)(2)).

#### **IV. The Proposal is Arbitrary and Capricious and Therefore Unlawful.**

In addition to being contrary to numerous statutory requirements of the Clean Air Act, EPA’s decision to delay the phase-in of the Tier 4 standards is also arbitrary and capricious, and wholly lacks proper explanation or justification. EPA remains obligated under the Clean Air Act and the APA to exercise its regulatory discretion reasonably, including by considering

“responsible alternatives to its chosen policy,” *Am. Radio Relay League, Inc. v. FCC*, 524 F.3d 227, 242 (D.C. Cir. 2008), serious reliance interests in a policy before departing from or upending that policy, *Fox Television*, 556 U.S. at 515, and all other “important aspect[s] of the problem,” *Motor Vehicle Manufacturers Ass’n v. State Farm Mut. Auto. Ins. Co.*, 463 U.S. 29, 43 (1983). Ultimately, EPA fails to justify the proposed delay rule. EPA’s rationale that complying with Tier 4 standards according to the existing phase-in schedule is infeasible for manufacturers is based on false assumptions and unsupported by the facts, and EPA’s analysis of the costs and impacts of the Proposal fails to take into account numerous important factors. This skewed, short-sighted analysis is therefore arbitrary, capricious, and an abuse of EPA’s discretion.

**A. EPA’s Proposal is arbitrary and capricious because it fails to reduce or eliminate threats to public health and welfare.**

Under section 202(a)(1) of the Clean Air Act, EPA “shall by regulation prescribe . . . standards applicable to the emission of any air pollutant from any class or classes of new motor vehicles . . . , 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). “By employing the verb ‘shall,’ Congress vested a non-discretionary duty in EPA,” *Coalition for Responsible Regulation*, 684 F.3d at 126, the purpose of which is clear: reduce or eliminate the threats to public health and welfare of deleterious air pollutants. 42 U.S.C. § 7521(a)(1); *see also id.* § 7401(b)(1) (declaring a goal of the Clean Air Act “to protect and enhance the quality of the Nation’s air resources so as to promote the public health and welfare and the productive capacity of its population”); *Massachusetts v. EPA*, 549 U.S. 497, 532 (2007) (explaining that “EPA has been charged with protecting the public’s ‘health’ and ‘welfare’” in section 202(a)). This core directive has remained the same, with only minor edits, since Congress first enacted it in the Motor Vehicle Pollution Control Act of 1965. Pub. Law 89-272. EPA fell short of meeting this directive in the Proposal, and accordingly the Proposal is arbitrary and capricious.

**1. Reductions in criteria pollutant emissions standards are urgently needed to protect the public health and welfare.**

EPA’s Tier 4 standards for criteria pollutants directly aid our States and Cities in attaining and maintaining NAAQS for criteria pollutants, securing better health and welfare outcomes for our residents, and promoting environmental justice in our communities. EPA’s Proposal to delay these standards endangers our States and Cities’ public health and welfare.

i. The Tier 4 standards are needed to protect public health.

Air pollution from motor vehicles continues to impact public health, welfare, and the environment. Motor vehicle emissions contribute to ozone, increased levels of PM, and air toxics, which are linked with premature deaths and other serious health impacts, including respiratory illness, cardiovascular problems, and cancer. *See supra* Section II.A. Addressing these public health and welfare risks requires reductions in criteria pollutants from the

transportation sector, including those reductions which EPA adopted in the 2024 Multi-Pollutant Rule. 89 Fed. Reg. 27,842. In 2023, mobile sources accounted for approximately 54 percent of anthropogenic NO<sub>x</sub> emissions, 5 percent of PM<sub>2.5</sub> emissions, and 23 percent of volatile organic compound (VOC) emissions.<sup>69</sup> *Id.* at 27,844. Light- and medium-duty vehicles accounted for approximately 23 percent, 20 percent, and 52 percent of 2023 mobile source NO<sub>x</sub>, PM<sub>2.5</sub>, and VOC emissions, respectively. *Id.* The Tier 4 reductions are therefore critical to avoid the serious adverse health consequences associated with these pollutants, including those previously described in Section II.A.1, *supra*.

- ii. The Tier 4 standards are needed to reduce air pollution dangers faced by environmental justice communities.

While criteria pollutant emissions from light- and medium-duty vehicles affect the health and welfare of people nationwide, they disproportionately endanger residents of environmental justice communities by exposing them to harmful air pollution that causes significant health impacts. Light- and medium-duty vehicle emissions are concentrated along transportation corridors. 89 Fed. Reg. at 27,844. And, as previously described in Section II.A.2, *supra*, decision-makers disproportionately have sited highways and other transportation infrastructure in lower-income communities and communities of color. The burden of vehicle emissions therefore falls disproportionately on communities with environmental justice concerns, which also experience disproportionate levels of industrial pollution from other sources.

- iii. The Tier 4 standards are needed to help support NAAQS attainment for states.

Various locations throughout our States and Cities have been unable to attain, or face difficulty maintaining, the NAAQS for ozone and PM<sub>2.5</sub>.<sup>70</sup> For example, multiple counties in California are designated as serious, severe, or extreme nonattainment with the 8-Hour Ozone NAAQS. The two major precursors to ozone are NO<sub>x</sub> and VOCs. 89 Fed. Reg. at 27,866. The Proposal would make ozone NAAQS attainment even more difficult, as it proposes to delay implementation of Tier 4 standards that require reductions in the emissions of NO<sub>x</sub> and VOCs.

Nonattainment areas will experience harm from EPA's Proposal to delay the Tier 4 standards. For example, the Proposal may result in an increase of ozone precursors in Colorado's Denver Metro/North Front Range, which includes a major transportation corridor and is currently designated in serious nonattainment with the 2015 8-Hour Ozone NAAQS.<sup>71</sup> Likewise,

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<sup>69</sup> "Volatile organic compounds" or VOCs are defined in the Code of Federal Regulations as "any compound of carbon, excluding carbon monoxide, carbon dioxide, carbonic acid, metallic carbides or carbonates, and ammonium carbonate, which participates in atmospheric photochemical reactions." 40 C.F.R. § 51.100(s).

<sup>70</sup> EPA, *Current Nonattainment Counties for All Criteria Pollutants*, *supra* note 1.

<sup>71</sup> *Id.*

counties in Connecticut, New Jersey, and New York are in serious to severe nonattainment with the 2008 8-Hour Ozone NAAQS and 2015 8-Hour Ozone NAAQS.<sup>72</sup> Three areas in Wisconsin, including the Milwaukee area, are also designated nonattainment for the 2015 8-Hour Ozone NAAQS.<sup>73</sup> These challenges in attaining the NAAQS are due in part to ozone-forming pollution from out-of-state upwind sources, which EPA's Tier 4 standard help to reduce. 84 Fed. Reg. 44,238, 44,245 (Aug. 23, 2019) ("EPA acknowledges the role interstate transport of precursors to ozone pollution plays in the efforts of downwind areas to attain and maintain the NAAQS.").

Additionally, several counties in our States are in moderate to serious nonattainment for the 1997, 2006, and 2012 PM<sub>2.5</sub> NAAQS.<sup>74</sup> Moreover, PM<sub>2.5</sub> exposure *at any level* is associated with adverse health impacts, so EPA's proposed increases in PM<sub>2.5</sub> emissions will harm public health in our States and Cities regardless of whether our regions have attained the NAAQS.<sup>75</sup>

## **2. EPA's Proposal *increases* rather than decreases emissions of criteria pollutants under the Clean Air Act.**

EPA's 2024 adoption of the Tier 4 criteria pollutant standards comported with its statutory mandate in section 202(a) and further the Clean Air Act's statutory objective by reducing the threats from vehicle pollution to public health and welfare. By now proposing to delay the phase-in of those standards for two years, without considering this requirement, explaining its change in position, or otherwise providing adequate justification, in addition to being clearly contrary to the CAA, EPA's Proposal is also arbitrary and capricious. Indeed, EPA's Proposal worsens air pollution, contributing to rather than reducing or eliminating threats to public health and welfare. EPA itself acknowledges that "[m]otor vehicle emissions contribute to ozone, PM<sub>2.5</sub>, and air toxics, which are linked to premature death and other serious health impacts, including respiratory illness, cardiovascular problems, and cancer." 91 Fed. Reg. at 28,478. EPA projects that the Proposal will *increase* emissions of those pollutants relative to the Tier 4 standards. EPA estimates that the rule adds 389 tons of NO<sub>x</sub>, 353 tons of VOC, and 51 tons of PM<sub>2.5</sub> in 2027, rising to 976 tons of NO<sub>x</sub>, 859 tons of VOC, and 145 tons of PM<sub>2.5</sub> in 2028. *Id.* at 28,477, Table 12; Gillingham-Jenn at 20. Because the affected model year 2027 and 2028 vehicles remain in service for decades, the increases persist long after those model years close. The annual impact grows through the 2030s as these vehicles accumulate mileage and their air pollution control

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<sup>72</sup> *Id.*

<sup>73</sup> *Id.*

<sup>74</sup> *Id.*

<sup>75</sup> EPA, *Policy Assessment for the Reconsideration of the National Ambient Air Quality Standards for Particulate Matter* (May 2022), at 3-178, [https://www.epa.gov/system/files/documents/2022-05/Final%20Policy%20Assessment%20for%20the%20Reconsideration%20of%20the%20PM%20NAAQS\\_May2022\\_0.pdf](https://www.epa.gov/system/files/documents/2022-05/Final%20Policy%20Assessment%20for%20the%20Reconsideration%20of%20the%20PM%20NAAQS_May2022_0.pdf) ("Studies that examine the shapes of concentration-response functions over the full distribution of ambient PM<sub>2.5</sub> concentrations have not identified a threshold concentration, below which associations no longer exist").

systems deteriorate, peaking at 1,058 tons of NOx (2034), 909 tons of VOC (2034), and 174 tons of PM<sub>2.5</sub> (2038), then declining with fleet turnover but remaining positive through the end of EPA’s modeling horizon in 2055. *Id.* The agency projects a positive increase in emissions in every calendar year from 2027 through 2055. EPA’s blatant disregard for its statutory duty to enact rules that reduce “air pollution which may reasonably be anticipated to endanger public health or welfare,” 42 U.S.C. § 7521(a)(1), is arbitrary and capricious.

**B. EPA’s Analysis of “Feasibility and Changed Circumstances” as Justification for the Delay is Flawed and Does Not Justify the Regulatory Shift.**

**1. EPA’s main justification for the rule relies on the assertion that the EV market has drastically dipped, which EPA fails to properly support and is contrary to factual evidence.**

EPA’s main justification for the Proposal is that “recent changes in policy, regulations, Federal and State law, and other factors have significantly changed projections of BEV market share in the coming MYs.” 91 Fed. Reg. at 28,470. But EPA failed to support this justification with evidence. In fact, the best available evidence shows that EPA has drastically overstated the temporary downturn in the EV market and that the EV market has since stabilized. EPA’s feasibility analysis is arbitrary and capricious because EPA has “offered an explanation for its decision that runs counter to the evidence.” *State Farm*, 463 U.S. at 42–43.

EPA’s central case analysis on feasibility and costs uses a national BEV market share adoption rate of 8 percent for its central case, with a low-adoption case at 4 percent and a high-adoption case at 12 percent.<sup>76</sup> But the low and central cases fall below the market’s established trajectory and cannot reasonably bound future EV adoption. Gillingham-Jenn at 10. Electric vehicle sales have grown rapidly over the past six years. New EV market share rose from 2.3 percent in 2020 to 9.9 percent in 2024, a compound annual rate near 45 percent, and has held above 9 percent for three consecutive years through 2025. *Id.* Indeed, demand for EVs has continued to rise with each year. As one example, BEV registrations in the state of Illinois grew by approximately 32% in 2025 alone.<sup>77</sup> The U.S. market passed EPA’s 4-percent low case in 2021 and its 8-percent central case in 2023. Gillingham-Jenn at 10. Both cases therefore describe adoption levels the United States exceeded years ago. Anchoring a 2027-2055 analysis to such unsubstantiated, outdated projections requires the wholly unsubstantiated assumption that future adoption levels will drop below levels the market reached years ago and has consistently maintained even in the face of concerted federal actions to suppress or slow EV adoption. Such an assumption bears no “rational relationship” to the reality of the EV market. *Appalachian Power Co. v. EPA*, 249 F.3d 1032, 1053 (D.C. Cir. 2001) (“While courts routinely defer to

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<sup>76</sup> See DRIA at 1-10.

<sup>77</sup> See Illinois Secretary of State, *Electric Vehicle Counts by County*, <https://www.ilsos.gov/departments/vehicles/statistics/electric.html>.

agency modeling of complex phenomena, model assumptions must have a ‘rational relationship’ to the real world.”).

Indeed, EPA’s low and central cases both fall below the EV adoption rate in the last quarter of 2025, when the EV market was at its lowest ebb after repeal of the IRA tax credits in September 2025.<sup>78</sup> The 2025 expiration of the federal tax credits produced a sharp, one-time disruption that EPA should not mistake for a change in the market’s direction. Monthly sales ran well above prior-year levels through September 2025 as buyers advanced their purchases ahead of the September 30 deadline, then fell as the credits lapsed, reaching a trough in November 2025. Gillingham-Jenn at 11. This pattern is the signature of a pull-forward followed by a level adjustment, not a structural decline in demand. *Id.* at 10–11. In the months since, the apparent year-over-year decline has narrowed steadily, from about 46 percent at the November 2025 trough to 27 percent by May 2026. *Id.* at 11. As these year-over-year declines continue to shrink, the annual average EV adoption continues to grow as EVs remain an important segment of the U.S. automobile market, driven by consumer interest and ongoing product innovation. Taken together, the established pre-expiration level of EV adoption near 9 to 10 percent and the post-expiration recovery of the marketplace will likely yield an EV market share for 2027 at or above EPA’s high case of 12 percent. *Id.* Accordingly, EPA’s low, central, and high case model predictions are arbitrary and capricious as they do not reflect the likely EV adoption in 2027 and subsequent years.

Additionally, EPA’s EV adoption cases inherit cost assumptions that are already obsolete, biasing the case toward under-adoption of EVs. EPA’s BEV market-share projections are generated by its OMEGA model, in which battery price drives the modeled EV prices, making up as much as 40 percent of the EV’s total cost. Gillingham-Jenn at 12. Those battery prices inputs, which are inherited from the 2024 Multi-Pollutant Rule,<sup>79</sup> are out of date and assume battery prices much higher than what the market has already delivered. Gillingham-Jenn at 12. Observations from Bloomberg New Energy Finance (BNEF) put average EV battery costs at \$112/kWh in 2025 and Goldman Sachs analysts project further declines with battery costs around \$80/kWh in 2026.<sup>80</sup> *Id.* This is in contrast to EPA’s battery cost assumptions from the 2024 Multi-Pollutant Rule, which set battery costs at \$147/kWh when adjusted for inflation. 89 Fed. Reg. at 27,997, Table 68; Gillingham-Jenn at 12, n. 18. EPA’s battery cost projections for 2030 and 2035 are similarly overstated. While EPA estimates battery costs at \$108/kWh in 2030,

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<sup>78</sup> Alliance for Automotive Innovation, *Get Connected: Electric Vehicle Quarterly Report, Fourth Quarter, 2025*, *supra* note 35, at 3.

<sup>79</sup> See 89 Fed. Reg. at 27,997, Table 68.

<sup>80</sup> BloombergNEF, *Electric Vehicle Outlook 2025*, Table 193 Lithium-ion battery pack price outlook, <https://about.bnef.com/insights/clean-transport/electric-vehicle-outlook>; Goldman Sachs, *Electric vehicle battery prices are expected to fall almost 50% by 2026* (Oct. 7, 2024), <https://www.goldmansachs.com/insights/articles/electric-vehicle-battery-prices-are-expected-to-fall-almost-50-percent-by-2025>.

the BNEF and Goldman Sachs projections estimate \$69 and \$60/kWh respectively. Gillingham-Jenn at 12. And EPA estimates \$89/kWh in 2035, while the BNEF projection estimates \$54/kWh. *Id.* EPA’s EV cost basis therefore starts too high and declines too slowly, understating EV cost-competitiveness throughout the regulatory period and therefore underestimating EV adoption. *Id.* Using actual 2025 battery costs and BNEF projections, estimated BEV MSRPs reach parity with comparable ICE vehicles across light-duty classes over the regulatory period even without federal consumer subsidies. *Id.* at 13. In fact, even before any fuel or maintenance savings are taken into account, EVs are projected to carry lower upfront prices than comparable ICE vehicles, which will drive consumer demand for EVs higher than EPA’s projections. *Id.*; Table 2. Because EPA used outdated figures on EV battery costs, its low, central, and high cases sit well below the trajectory the market is on. EPA’s failure to tie its analysis to real world data is arbitrary and capricious. *State Farm*, 463 U.S. at 43; *Appalachian Power*, 249 F.3d at 1053–55.

Moreover, EPA’s assumptions about the EV market fail to account for the shift in new vehicle demand toward EVs driven by the high gasoline prices, which have risen sharply and are expected to stay elevated for the foreseeable future. The U.S. and Israeli war with Iran that began on February 28, 2026 disrupted oil flows through the Strait of Hormuz, the transit point for more than 20% of global oil flows, and pushed Brent crude from an average near \$71 per barrel in February to \$117 in April, bringing the 2026 annual average to about \$95 per barrel, the highest since 2022. Gillingham-Jenn at 16. The national retail gasoline average crossed \$4 per gallon for the first time since 2022 and stood above \$4.10 in early June 2026, roughly a third higher than a year earlier. *Id.* This increase is not a transient spike, but one that is durable, as retail prices rise quickly but fall slowly as retailers work down higher-cost inventory. *Id.* Wholesale gasoline prices are forecast to run roughly 50% higher in 2026 and nearly 40% higher in 2027 than the U.S. Energy Information Administration expected before the war. *Id.* Empirical literature consistently finds that gasoline price increases of this kind shift new vehicle demand toward EVs by raising the operating costs of ICE vehicles relative to EVs. *Id.* at 17. For example, a study found that in California, gasoline prices move EV demand four to six times as much as an equivalent percentage change in electricity prices.<sup>81</sup> *Id.* In China, a study found that a one-yuan-per-liter increase in gasoline prices (which converts to a roughly 56 cents per gallon increase) raises EV market sales by 4.67%, with BEV models responding more strongly than PHEVs.<sup>82</sup> *Id.*

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<sup>81</sup> Bushnell, James, Erich Muehlegger, and David S. Rapson. “Energy prices and electric vehicle adoption”, (National Bureau of Economic Research, Working Paper 29842, 2022), <https://www.nber.org/papers/w29842>.

<sup>82</sup> Fei, Yinxin, Ping Qin, Yanlai Chu, Huanhuan Zheng, Jie-Sheng Tan-Soo, and Xiao-Bing Zhang, “Does high gasoline price spur electric vehicle adoption? Evidence from Chinese cities,” 142 *Energy Economics* 108188 (2025).

And in Nordic countries, a study found that a 1% increase in gasoline price raises EV sales by roughly 0.85% on average.<sup>83</sup> *Id.*

Here, EPA’s low, central, and high cases share an important omission: none are conditioned on gasoline prices at any level. *Id.* at 17–18. EPA’s sensitivity range therefore not only sits below the market’s established level and its likely trajectory, as shown above, but also wholly excludes the one force most clearly pushing EV adoption upward—gasoline prices, a force that EPA’s own fuel-price agency, the U.S. Energy Information Administration, now expects to persist into 2027. *Id.* at 17. An analysis that omits the gasoline-price response bears no rational relationship to real world EV adoption and is, therefore arbitrary and capricious. *Appalachian Power*, 249 F.3d at 1053.

In addition, EPA failed to consider vehicle manufacturers’ ability to change the prices of their EVs to compensate for lost purchasing and/or leasing tax incentives—another factor pushing EV adoption upward. While EPA mentions this as a possible means by which vehicle manufacturers could respond to the changing market following the expiration of federal tax incentives and still comply with the Tier 4 standards, 91 Fed. Reg. at 28,472, it performs no analysis on what the impacts of such actions would be on the EV market and on the feasibility of the rule. Evidence shows that some manufacturers are, in fact, making those price changes that drive EV demand higher. There are numerous examples of automakers dramatically lowering prices for EVs in recent years, including Tesla, Hyundai, Ford, and GM. Gillingham-Jenn at 16. Automakers will price EVs in a way that meets all of their objectives and allows them to maximize profits, which can easily involve lowering prices for EVs, especially as manufacturing scale increases and EV technology continues to improve. *Id.* EPA’s failure to consider this is also arbitrary and capricious. *State Farm*, 463 U.S. at 43; *Appalachian Power*, 249 F.3d at 1053.

Finally, EPA’s analysis of the impact of legislative and regulatory efforts spearheaded by this Administration, including the June 2025 Congressional Review Act (CRA) resolution purporting to void the EPA’s preemption waiver for California’s Advanced Clean Cars II (ACC II) standards and the One Big Beautiful Bill (OBBB) enacted in July 2025, is lacking and conclusory. 91 Fed. Reg. at 28,466-28,467. Such “conclusory statements will not do; an ‘agency’s statement must be one of reasoning.’” *Amerijet Int’l, Inc. v. Pistole*, 753 F.3d 1343, 1350 (D.C. Cir. 2014) (quoting *Butte Cnty., Cal. v. Hogen*, 613 F.3d 190, 194 (D.C. Cir. 2010)). Indeed, the only “evidence” that EPA points to in support of its analysis on BEV market shares are cherry-picked statements from automobile manufacturers’ announcements about their product lines. *See* 91 Fed. Reg. at 28,471-28,472. EPA conflates these statements from ICE vehicle

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<sup>83</sup> Zhang, Xiao-Bing, Jiayi Xu, Ying Zheng, Ramazan Sari, and Yanlai Chu, “Electric vehicle adoption and energy prices: Empirical evidence from four Nordic countries,” 154 *Energy Economics* 109148 (2026).

manufacturers about their production plans with decreased consumer demand for BEVs.<sup>84</sup> Additionally, no announcement cited by the EPA signals a cessation or decrease of existing BEV production: while some *plans* are being delayed or scrapped by automakers, other new BEV models are still on target and slated for release before MY 2030. CARB App’x at 10.

Rather than look to the statements of a few ICE vehicle manufacturers, EPA should rely upon the best available evidence of the current and expected status of the BEV market based on the factors articulated above. EPA’s failure to consider real world empirical data about the BEV market is arbitrary and capricious. *See State Farm*, 463 U.S. at 43 (An agency “must examine the relevant data and articulate a . . . ‘rational connection between the facts found and the choice made’” (quoting *Burlington Truck Lines, Inc. v. United States*, 371 U.S. 156, 168 (1962)); *Comcast Corp. v. FCC*, 579 F.3d 1, 8 (D.C. Cir. 2009) (“[W]e have not hesitated to vacate a rule when the agency has not responded to empirical data or to an argument inconsistent with its conclusion.”). The Proposal’s lack of even a “minimal level of analysis” about the real world status and projections for the BEV market renders it arbitrary and capricious. *Encino Motorcars, LLC v. Navarro*, 579 U.S. 211, 221 (2016).

**2. Separate from concerns about the EV market, EPA’s assertion that automakers need additional lead time to meet the Tier 4 standards through other technologies is inconsistent with the available evidence.**

Even if EPA’s assertions about BEV market share were correct, EPA’s feasibility analysis would still be fundamentally flawed. EPA failed to consider evidence that vehicle manufacturers would be able to meet the Tier 4 standards in MY 2027 and 2028 through ICE-based and hybrid technologies<sup>85</sup> that are readily available and affordable. Thus EPA “entirely failed to consider an important aspect of the problem.” *State Farm*, 463 U.S. at 43.

As mentioned in Section III.E, *supra*, Clean Air Act section 202(a) requires that emissions standards “shall take effect after such period as the Administrator finds necessary to permit the development and application of the requisite technology, giving appropriate

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<sup>84</sup> Moreover, the same manufacturers that have moderated some EV investments in the United States continue to aggressively pursue electrification in global markets. For example, General Motors has announced that all new Buick models introduced in China from 2025 onward will be New Energy Vehicles, spanning BEV, PHEV, and extended-range EV segments. *See* General Motors, *GM China Sustains Growth with Strong NEV Momentum* (Oct. 9, 2025), <https://investor.gm.com/news-releases/news-release-details/gm-china-sustains-growth-strong-nev-momentum>. Globally, the electric vehicle market continues to grow rapidly. European EV sales increased by over 30% in 2025, and electric vehicles now account for approximately 28% of all new vehicle sales in Europe. *See* International Energy Agency, *Global EV Outlook 2026: Trends in Electric Cars*, <https://www.iea.org/reports/global-ev-outlook-2026/trends-in-electric-cars>.

<sup>85</sup> In this comment, “ICE-based technologies” refer to pollution-control technologies other than hybrid-electric powertrain technology.

consideration to the cost of compliance within such period.” 42 U.S.C. § 7521(a)(2). Thus, EPA cannot delay implementation of its Tier 4 standards unless it finds such delay is “necessary” to permit the development and application of the requisite technology (given the rule does not violate the statutory bars on anti-backsliding and retroactive rulemaking, where, here, it also does, *see supra* Sections III.C and D). EPA has made no such finding here, and even if it had, it could not support such a finding with evidence.

EPA asserts that one year to 18 months would be necessary for vehicle manufacturers to adjust their production plans to meet the Tier 4 standards. 91 Fed. Reg. at 28,467. But EPA does not support that assertion with evidence. *See State Farm* at 43 (It is “the agency” that “must examine the relevant data.”). Notably, while EPA has access to data that vehicle manufacturers have already submitted on their production fleet averages for MY 2027, EPA failed to include that information in the Proposal, thus indicating that EPA either failed to disclose and docket that required information in its rulemaking as required under 42 U.S.C. § 7607(d)(3), *see infra* Section V.B, or failed to consider that evidence altogether. Either failure would render the rule arbitrary and capricious. *See State Farm*, 463 U.S. at 43; *Comcast Corp.*, 579 F.3d at 8.

The best available evidence demonstrates that ICE-based and hybrid technologies can meet the Tier 4 standards now, without any additional lead time required. In the 2024 Multi-Pollutant Rule that set the Tier 4 standards and phase-in schedule, EPA highlighted the existing technologies that would allow manufactures to comply with these criteria pollutant standards, including through the application of advanced technologies to reduce criteria emissions from ICE vehicles. 89 Fed. Reg. at 27,844. The Proposed Rule does not dispute that manufacturers can still meet the Tier 4 standards with EVs and existing ICE technology, *see* 91 Fed. Reg. at 28,472, and EPA does not attempt to argue that the technology needed to meet these standards will not be available by MY 2027. In fact, the DRIA points out that there are “many technology options for improving NMOG+NO<sub>x</sub> emissions.” DRIA at 1-3.

With respect to PM standards, EPA has not demonstrated infeasibility with the Tier 4 PM standard of 0.5 mg/mile. Tier 4 feasibility was previously supported by EPA based on demonstrated technologies such as gasoline particulate filters (GPFs). 89 Fed. Reg. at 27,939–40. GPFs are commercially available and have been widely deployed on tens of millions of vehicles every year in Europe and China. *Id.* at 27,940. Automakers are also already selling vehicle equipped with GPFs in the United States. *Id.* at 27,939–40. Due to their extensive use for more than a decade globally, robust supply chains exist for GPFs, and suppliers are prepared for U.S. applications. *Id.* Even in this Proposal, EPA acknowledges this fact, noting that “GPF[s] would be a cost-effective method to achieve the [PM] standard,” because they are a technology that is “already in production and familiar to manufacturers,” DRIA at 1-7.

Additionally, measurement concerns at 0.5 mg/mile are addressed through well-established laboratory protocols, including clean-room controls, static-control measures, filter selection requirements, sampling optimization practices, dilution-tunnel quality control, and

weighing improvements. EPA's own testing in addition to the round robin programs detailed in the preamble Section III.D.3.iv and Regulatory Impact Analysis Chapter 3.2.6<sup>86</sup> of the 2024 Multi-Pollutant Rule demonstrated reliable measurement of PM mass at well below 0.5 mg/mile standard with low variability and detection precision across multiple labs. 89 Fed. Reg. at 27,945–27,946; CARB App'x at 4. These results provide evidence that the existing measurement methodology is capable of reliably quantifying PM emissions at the level of the Tier 4 standards. *Id.* In EPA's Response to Comments document for the 2024 Multi-Pollutant Rule,<sup>87</sup> EPA justified that measuring PM emission levels reliably is feasible by adopting appropriate measurement protocols, laboratory controls, and implementation of best practices. CARB App'x at 4. Indeed, the current test procedures outline in 40 C.F.R. Parts 1065 and 1066 allow for PM measurements well below 0.5 mg/mile when paired with appropriate laboratory practices. *Id.*

With respect to the NMOG+NOx standards, EPA has also not demonstrated infeasibility with the Tier 4 NMOG+NOx fleet averages of 25 mg/mile in model year 2027 and 23 mg/mile in model year 2028. On the contrary, CARB has received information that automakers are already planning high-volume ICE vehicles certifying to bins below 30 mg/mile. *Id.* at 11. Considering EPA's own projection that MY 2027-2028 Tier 4 standards can be met with fleet average NMOG+NOx emissions of 26-27 mg/mi based on updated BEV market shares, DRIA at Table 1-2, automaker plans for high-volume production below bin 30 indicate the Tier 4 standards are readily achievable without additional lead time. CARB App'x at 11. In fact, delaying Tier 4 implementation risks stranding the investments automakers have already made towards Tier 4 compliance and testing. *Id.*

Other data also point to the conclusion that additional lead time is not needed for compliance with the NMOG+NOx standards. Certification level and compliance margin of over four hundred fifty MY 2025 test groups shows 11 vehicles already certifying to bin 20.<sup>88</sup> CARB App'x at 11. More than half of Bin 30 certified groups have low emissions and sufficient compliance margin to match or exceed the compliance margin of the highest-emitting Bin 20 group. *Id.* at 12. Similarly, nearly half of Bin 50 groups could certify to Bin 30 with at least as much compliance margin as the highest-emitting Bin 30 group. *Id.* More than half of Bin 70 and Bin 125 groups could certify to Bin 50 and Bin 70, respectively, using similar compliance margin

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<sup>86</sup> EPA, Multi-Pollutant Emissions Standards for Model Years 2027 and Later Light-Duty and Medium-Duty Vehicles: Regulatory Impact Analysis at 3-65, 3-77, EPA-420-R-24-004, <https://nepis.epa.gov/Exe/ZyPDF.cgi?Dockey=P1019VPM.pdf>

<sup>87</sup> EPA, Multi-Pollutant Emissions Standards for MY 2027 and Later Light-Duty and Medium-Duty Vehicles: Response to Comments, EPA-420-R-24-005, <https://nepis.epa.gov/Exe/ZyPdf.cgi?Dockey=P1019WE6.pdf>.

<sup>88</sup> Ingevity Corporation. (2025). Public comment to Reconsideration of 2009 Endangerment Finding and Greenhouse Gas Vehicle Standards, Docket No., EPA-HQ-OAR-2025-0194. Comment ID: EPA-HQ-OAR-2025-0194-1238. <https://www.regulations.gov/comment/EPA-HQ-OAR-2025-0194-1238>

criteria. *Id.* Shifting to lower bins is even easier under Tier 4 as EPA introduced additional bins between Bins 20, 30, 50, and 70. *Id.* Specifically, EPA created a bin for every 5 mg/mi increment between 0 and 70 mg/mi.<sup>89</sup> *Id.* Thus, significant compliance margin exists in *already produced vehicles* to bring fleet average NMOG+NO<sub>x</sub> values down more than the 3-4 mg/mi projected to be needed by EPA. *Id.* And as reported in its comment letter in 2025, the Manufacturers of Emission Controls Association (MECA) reports that automakers can meet the MY 2027 NMOG+NO<sub>x</sub> standards with the existing emissions control technologies and the current mix of powertrain types.<sup>90</sup> *Id.* Specifically, MECA identifies twenty-two Bin 30 test groups covering a broad range of vehicle types that match the compliance margin of current Bin 20 vehicles. *Id.* Additionally, credit banking and trading provide flexibility, effectively extending lead time. *See infra* Section IV.B.2.iii.

EPA's analysis of feasibility is deficient for the following additional reasons, as further discussed below: (1) its analysis of the lead time required to comply with the Tier 4 standards using tailpipe technology on ICE vehicles is flawed; (2) it failed to consider the impact of the growing hybrid market on feasibility; and (3) it failed to consider alternative methods of compliance.

- i. EPA's analysis on the lead time required to comply with the Tier 4 standards using tailpipe technology on ICE vehicles is flawed.

Vehicle manufacturers have more than enough lead time to comply with the Tier 4 standards using tailpipe technology on ICE vehicles that is both readily available and affordable. These technologies do not require a significant amount of time to acquire or install on ICE vehicles. To comply with the Tier 4 standards automakers can use off-the-shelf technologies that are very well documented and understood, including advanced catalytic converters, particulate filters, direct injection, turbocharging, and cylinder deactivation. Gillingham-Jenn at 8. Indeed, EPA's own regulatory impact analysis of the feasibility of the Tier 4 standards shows that there are ample off-the-shelf tailpipe technologies and other technologies to meet the standards. *See, e.g.,* DRIA at 1-8.

In fact, based on how vehicle manufacturers make planning and compliance decisions, it is likely that manufacturers have long ago made specific business decisions to comply with Tier 4 standards for their MYs 2027 and 2028. By the time a vehicle model is within two years of shipping, the manufacturer's focus shifts to preparing the supply chain and manufacturing lines to produce the vehicle, and only minor cosmetic and interior changes are typically made without

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<sup>89</sup> For example, a vehicle with low emissions that certifies to Bin 50 but *could* certify to, say, Bin 35 if such a bin existed in Tier 3, can now do so under Tier 4.

<sup>90</sup> MECA, Public Comment to Reconsideration of 2009 Endangerment Finding and Greenhouse Gas Vehicle Standards (2025), Docket No., EPA-HQ-OAR-2025-0194, Comment ID: EPA-HQ-OAR-2025-0194-0931, <https://www.regulations.gov/comment/EPA-HQ-OAR-2025-0194-0931>.

impinging upon the planned schedule. Gillingham-Jenn at 7. Here, it is also important to note that many MY 2027 vehicles are already being shipped to dealers and generally should be fully shipped by mid-fall. *Id.* Thus, the automakers have already made many of the most important decisions about the technologies that will be included in their MY 2027 and 2028 vehicles to accommodate the Tier 4 standards. *Id.* at 7–8.

Moreover, manufacturers have sophisticated knowledge about markets and are overly cautious in ensuring they can comply with regulations, taking into account market conditions and anticipated shifts. Not to mention, in this case, it is the *manufacturers themselves* who have lobbied for the very changes that EPA points to in its explanation for why manufacturers allegedly need more time to comply with the Tier 4 standards.<sup>91</sup> See 91 Fed. Reg. at 28,466-28,467. Manufacturers have had four years to prepare for compliance since the Tier 4 standards were proposed, and two years since they were finalized, to incorporate compliance into their product plans and laboratory testing capabilities. CARB App’x at 8–13.

Indeed, vehicle manufacturers had several points in time in which they could have and should have foreseen shifts in the BEV market and shifted their compliance plans, if necessary, to achieve compliance with the Tier 4 standards by MY 2027. First, when President Trump was elected in November 2024, vehicle manufacturers were well aware of President Trump’s oft-expressed plans to launch attacks on the EV market “on day one” of his presidency—a message that was central to President Trump’s campaign throughout 2024.<sup>92</sup> Second, on the first day of President Trump’s presidency on January 20, 2025, he released the “Unleashing American Energy” Executive Order, which called for eliminating the so-called “electrical vehicle (EV) mandate” by “removing regulatory barriers,” “terminating . . . state emissions waivers that function to limit sales of gasoline-powered automobiles,” and “considering the elimination of unfair subsidies and other ill-conceived government-imposed market distortions that favor EVs over other technologies.”<sup>93</sup> Third, in June 2025, EPA submitted the preemption waiver for California’s Advanced Clean Cars II (ACC II) standards to Congress for congressional resolution, purporting to void the waiver under the Congressional Review Act (CRA).<sup>94</sup> Fourth,

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<sup>91</sup> See, e.g., Influence Map, “Vehicle Manufacturers’ Contribution to US Regulatory Instability” (May 7, 2026), <https://influencemap.org/insight/Vehicle-Manufacturer-s-Contribution-to-Regulatory-Instability-in-the-US-38064>; Chelsea Hodgkins & Alan Zibel, “Stuck in Neutral: Big Automakers Lobby Against Cleaner Vehicles, Make Record Profits from Dirty Cars”, *Public Citizen* (Mar. 2024), <https://www.citizen.org/article/stuck-in-neutral/>.

<sup>92</sup> See, e.g., Scott Waldman, “What to Expect from Trump’s Day 1 Orders on Climate and Energy”, *E&E News* (Jan. 17, 2025), <https://www.eenews.net/articles/what-to-expect-from-trumps-day-1-orders-on-climate-and-energy/>.

<sup>93</sup> The White House, *Unleashing American Energy Executive Order* (Jan. 20, 2025), <https://www.whitehouse.gov/presidential-actions/2025/01/unleashing-american-energy/>.

<sup>94</sup> See “Providing congressional disapproval under chapter 8 of title 5, United States Code, of the rule submitted by the Environmental Protection Agency relating to ‘California State Motor Vehicle and Engine Pollution Control Standards; Advanced Clean Cars II; Waiver of Preemption;

in July 2025, the OBBB was enacted, which ended federal EV tax credits as of September 2025.<sup>95</sup> Thus, to the extent that the recent decrease in EV sales has in fact made compliance with the Tier 4 standards more challenging—and we explain above why EPA’s EV analysis is deeply flawed and unreliable—all of these events were points in which vehicle manufacturers could have, should have, and likely did foresee changes in the EV market in the United States, and made plans to achieve compliance with the Tier 4 standards by MY 2027. Further, all of these events occurred within 12-18 months in advance of the start of MY 2027, which is the amount of lead time that EPA itself estimated was needed for manufacturers to make shifts in their production plans to ensure compliance with the Tier 4 standards. 91 Fed. Reg. at 28,467. And indeed, every vehicle manufacturer announcement on expanded ICE production cited by EPA was made prior to the release of this proposed delay. Thus, these statements reinforce the fact that automakers were already planning to offer greater shares of ICE vehicles than previously expected well in advance of the Proposal. For these reasons, EPA’s assertion that more lead time is necessary is unsupported by any evidence.

- ii. EPA’s analysis is also deficient because it failed to consider the impact of the growing hybrid market on the feasibility of Tier 4 compliance.

In addition, EPA’s attempt to justify the Proposal with the alleged downturn in the EV market ignores the fact that losses in BEV and PHEV sales have largely translated to increased sales in hybrid vehicles, not high-emitting ICE vehicles, over the same period.<sup>96</sup> From 2016 through 2025, the market share of purely gasoline-powertrain ICE vehicles has steadily declined. In 2016, such ICE vehicles accounted for more than 97 percent of all light-duty sales; by 2025, year-to-date share had fallen to 72.9 percent, a cumulative decline of 24.2 percentage points.<sup>97</sup> That shift in the market has been absorbed by mild-to-strong hybrids (which have seen a 15.5 percentage point increase), BEVs (7.4 percentage point increase), and PHEVs (1.3 percentage point increase) over the same period.<sup>98</sup> This trend towards hybridization of new vehicle offerings is likely to intensify, as car analysts forecast that the number of hybrid models will rise significantly through the end of the decade. Gillingham-Jenn at 9. Indeed, in April 2026, the only powertrain that showed sales gains was conventional hybrids. *Id.*

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Notice of Decision,” Public Law 119–16, June 12, 2025, 139 Stat. 66; *see also* 91 Fed. Reg. at 28,466. This action is currently being challenged in court.

<sup>95</sup> *See* “An act to provide for reconciliation pursuant to title II of H. Con. Res. 14.” (“One Big Beautiful Bill Act”), Public Law 119–21, July 4, 2025, 139 Stat. 72; 91 Fed. Reg. at 28,466.

<sup>96</sup> Alliance for Automotive Innovation, *Get Connected: Electric Vehicle Quarterly Report, Fourth Quarter, 2025*, *supra* note 35, at 2 (explaining that sales in ICE vehicles over this time period rose by only 0.9 percentage points while sales in hybrid vehicles rose by 3.9 percentage points).

<sup>97</sup> *Id.* at 4.

<sup>98</sup> *Id.*

EPA’s feasibility analysis failed to consider this shift in the market to greater hybrid sales and how the growing hybrid market supports compliance with the Tier 4 standards. Hybrids are inherently lower-emitting and require less tailpipe or other technology to meet the Tier 4 standards compared to higher-emitting ICE vehicles. Gillingham-Jenn at 9–10. An increase in hybrid sales results in a greater number of vehicles that can be certified in lower bins for the NMOG+NO<sub>x</sub> standards, giving vehicle manufacturers more flexibility in making any additional technology adaptations to meet fleet average requirements. Additionally, due to their high voltage electrical systems, powerful motors and large batteries (compared to non-hybrid vehicles), hybrid vehicles are well-suited to incorporate highly cost-effective technologies that further reduce engine-out and tailpipe NMOG+NO<sub>x</sub> emissions beyond levels currently demonstrated in the market. CARB App’x at 15–16. EPA’s failure to consider how the growing hybrid market has in fact helped enable automakers to comply with the Tier 4 standards is arbitrary and capricious, as it amounts to EPA “entirely fail[ing] to consider an important aspect of the problem.” *State Farm*, 463 U.S. at 43.

iii. EPA’s analysis is also flawed because it failed to consider alternative methods of compliance.

EPA’s feasibility and lead time analysis is also deficient because EPA failed to consider alternative methods of compliance with the Tier 4 standards (outside of selling more EVs or installing the technologies discussed above on more ICE vehicles).

For the NMOG+NO<sub>x</sub> standards in particular, EPA’s feasibility and lead time analysis failed to consider credit banking and trading. The Tier 4 standards contemplate credit banking and trading as a mechanism for compliance with the NMOG+NO<sub>x</sub> standards. 40 C.F.R. § 86.1811-17(h)(1)(iii) (vehicles “may generate emissions credits and they may use banked or traded emissions credits relative to the alternate fleet-average FTP standard for NMOG+NO<sub>x</sub> only in model years 2022 through 2027”). While EPA now proposes amending this section to expand the use of credit banking and trading through 2028, *see* 91 Fed. Reg. at 28,482, it fails to conduct any analysis whatsoever on the impact of credit banking and trading on the feasibility of compliance with the Tier 4 standards and required lead time. This failure is arbitrary, given how important credit trading is in the vehicles market.

Manufacturers differ structurally in fleet composition, in their access to low-cost emissions-control technology, and in the pace of their electrification. Gillingham-Jenn at 19. Credit banking allows a manufacturer that over-complies in one model year to carry credits forward to smooth compliance across the standards’ phase-in period — precisely the MY 2027–2028 window the DRIA examines. *Id.* By assuming that each manufacturer will comply with the Tier 4 standards independently and contemporaneously through its own catalyst upgrades, the DRIA captures none of the reality of credit trading and its impact on feasibility. *Id.* at 18–19.

Indeed, many vehicle manufacturers can comply with the Tier 4 standards now merely by using the compliance credits they have already banked and/or traded for. CARB collects and

tracks certification data submitted by manufacturers during year-end reporting. Based on these data for MY 2025, many large-volume automakers already average below 30 mg/mile for their passenger car fleets in California and the Section 177 states. CARB App'x at 12. Based on this state-level data, nearly all automakers have net credit balances. *Id.* This suggests that automakers may similarly have national-level credit balances that could be used to offset excess emissions when Tier 4 standards begin phasing in. *Id.* This credit banking feature of the NMOG+NO<sub>x</sub> program is specifically designed to offer flexibility to manufacturers by effectively providing more lead time for portions of an automaker's fleet. *Id.* Credit banking and trading provisions thus obviate the need for additional lead time as proposed by EPA. *Id.* EPA's failure to consider credit banking and trading at all in its feasibility analysis amounts to EPA "entirely fail[ing] to consider an important aspect of the problem." *State Farm*, 463 U.S. at 43. For this additional reason, EPA's feasibility analysis is arbitrary and capricious.

Even putting aside EPA's failure to examine various compliance options in its feasibility analysis, EPA has provided no reasoned explanation for why its reported cost projections—which are inaccurate, as described in Section IV.C, *infra*—show that timely Tier 4 compliance is infeasible for the industry. Indeed, EPA has previously found much higher per-vehicle costs—ten times as much as that projected in the proposal—to be feasible for the industry. For example, when adopting the 2024 Multi-Pollutant Rule, EPA explained that the per-vehicle costs of the 2024 Multi-Pollutant Rule (which contained the Tier 4 standards along with GHG standards) fell within the range of prior rules and were, for example, less costly than those of the 2012 GHG Rule.<sup>99</sup> EPA fails to acknowledge or provide a reasoned explanation for its change in position on feasibility given its cost projections here. Its failure to admit the change in position, as well as its failure to provide any explanation for it, is arbitrary and capricious. *See Fox Television*, 556 U.S. at 515 (agency must "display awareness that it *is* changing position" and support that change in position with "factual findings that contradict those which underlay its prior policy").

- iv. EPA's argument that the Tier 4 standards will force manufacturers to stop offering certain vehicle models, and thus compromise consumer choice, is flawed and unsupported.

Throughout the Proposal, EPA makes several statements that the Tier 4 standards would "negatively impact consumers through reduced choices of vehicle models." 91 Fed. Reg. at 28,472; *see also* 91 Fed. Reg. at 28,477 ("EPA believes that, under the current MYs 2027 and 2028 standards, there is the potential that companies would no longer be able to provide certain vehicle models, which would result in customers being required to purchase alternative models which may compromise their ideal choice."). EPA provides no data or any evidence at all indicating that the Tier 4 standards reduce the number or diversity of vehicles available for

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<sup>99</sup> EPA Response to Comments, Multi-Pollutant Emissions Standards for Model Years 2027 and Later Light-Duty and Medium-Duty Vehicles, p. 305, Table 2, <https://nepis.epa.gov/Exe/ZyPdf.cgi?Dockkey=P1019WE6.pdf>.

consumers to purchase. Nor does the Draft RIA address the impact of the Proposal on the choice set of vehicles available for purchase under the Tier 4 standards. Thus, these unsupported statements about consumer choice are arbitrary and capricious.

In fact, evidence indicates that the Tier 4 standards do not limit the vehicle choices available to consumers. Importantly, adding off-the-shelf technology to a vehicle to comply with the Tier 4 standards should not change the MY 2027 and 2028 vehicle offerings in any meaningful way. Gillingham-Jenn at 8. Thus, consumers would continue to have access to a wide variety of vehicle attributes like size—e.g., small cars, sport utility vehicles, and trucks—across both ICE and electrified powertrains, under the Tier 4 standards. *Id.*

Additionally, EPA has changed its position on consumer choice without acknowledging that change or rebutting the findings in its own prior rules. In the 2024 Multi-Pollutant Rule, EPA took the position that the Tier 4 criteria pollutant standards are “performance-based with averaging, banking and trading (ABT) flexibilities, phased-in over six model years [which] enables manufacturers to choose which technologies to apply to which vehicles and when to apply them, which increases consumer choice and reduces costs.” 89 Fed. Reg. at 28,087. EPA further emphasized that “manufacturers have considerable choice in how they meet the NMOG+NO<sub>x</sub> standards, including through the application of a range of technologies, such as electrification and improved ICE engine and exhaust aftertreatment designs.” *Id.* at 27,932. EPA recognized the ability of manufacturers to “choose[] to comply with our standards in ways that the Agency did not anticipate” and thus “while EPA sets standards that are feasible based on our modeling of potential compliance pathways, manufacturers may find what they consider to be better pathways to meet the standards and may opt to comply by following those pathways instead.” *Id.* at 27,896. EPA anticipated that “manufacturers are likely to continue to offer vehicles with a diverse range of technologies, including advanced gasoline technologies as well as zero- and near-zero emission vehicles for the duration of these standards and beyond.” *Id.* at 27,845.

EPA fails to acknowledge or provide a reasoned explanation for its change in position on the impact of the Tier 4 standards on consumer choice. Its failure to admit the change in position is itself arbitrary and capricious. *See Fox Television*, 556 U.S. at 515 (agency must “display awareness that it *is* changing position”). Also arbitrary and capricious is its failure to provide any explanation for this change in position, let alone the “more detailed justification” required to support a policy that “rests upon factual findings that contradict those which underlay its prior policy.” *Id.*

**C. EPA’s cost-benefit analysis for the Proposal overstates the Tier 4 Standards’ compliance costs and arbitrarily fails to account for the health consequences of delaying the rule.**

EPA justifies its Proposal in large part on what it perceives to be the cost savings to vehicle manufactures from being able to continue to follow Tier 3 standards until 2029. 91 Fed.

Reg. at 28,473. However, EPA fails to conduct even a cursory evaluation of the disbenefits associated with the Proposal, including the cost to human health and public welfare. As such, EPA's purported cost-benefit analysis is not a cost-benefit analysis at all—but merely a calculation of compliance cost savings that wholly ignores the myriad of benefits from greater emissions reductions under the Tier 4 standards. EPA thus has put its thumb on the scale in favor of looser regulations, rendering its action arbitrary and capricious. *See Bus. Roundtable v. SEC*, 647 F.3d 1144, 1148–49 (D.C. Cir. 2011) (agency acted arbitrarily and capriciously where it “inconsistently and opportunistically framed the costs and benefits of [a] rule; failed adequately to quantify the certain costs or to explain why those costs could not be quantified; neglected to support its predictive judgments; [and] contradicted itself” in the course of its analysis); *Ctr. for Biol. Diversity v. NHTSA*, 538 F.3d 1172, 1198 (9th Cir. 2008) (agency “cannot put a thumb on the scale by undervaluing the benefits and overvaluing the costs”); *Michigan v. EPA*, 576 U.S. 743, 753 (2015) (“[R]easonable regulation ordinarily requires paying attention to the advantages and the disadvantages of agency decisions.”).

### **1. EPA's analysis vastly overstates compliance costs for Tier 4 standards.**

As an initial matter, EPA's analysis of the anticipated costs to manufacturers to comply with the Tier 4 standards under the existing phase-in schedule, and therefore, EPA's projected cost savings to manufacturers associated with the Proposal, are vastly overstated. As discussed above, EPA's cost calculations rest on its incorrect assumptions about the projected EV market share for MY 2027 and 2028, and therefore underestimates the role that EVs, which require lower costs to comply with Tier 4 standards, will play in manufacturers' compliance decisions. *See supra* Section IV.B. Additionally, EPA's cost analysis fails to factor in the availability of NMOG+NOX banking and trading credits altogether. DRIA at 1-8. By resting its cost calculations on faulty assumptions, there is no rational connection between the available evidence about the EV market and EPA's policy decision, which is based solely on the incorrect perceived cost savings to manufacturers, rendering the cost analysis arbitrary and capricious. *See State Farm*, 463 U.S. at 43 (An agency “must examine the relevant data and articulate a ... ‘rational connection between the facts found and the choice made’” (quoting *Burlington Truck Lines, Inc. v. United States*, 371 U.S. 156, 168 (1962))); *Comcast Corp. v. FCC*, 579 F.3d 1, 8 (D.C. Cir. 2009) (“[W]e have not hesitated to vacate a rule when the agency has not responded to empirical data or to an argument inconsistent with its conclusion.”).

#### **i. EPA's cost analysis rests on incorrect assumptions about the EV market and fails to factor in an analysis of hybrid vehicles.**

EPA's analysis uses incorrect figures for BEV market, therefore overestimating the cost savings to manufacturers of not needing to comply with Tier 4 standards by 2027. The DRIA reports that the Proposal would produce net benefits of \$1.66 billion to \$1.77 billion in present value DRIA at 1-9, Table ES-1, Table 3-1, and as stated, this “benefits” figure only takes into account cost savings to manufacturers. In its cost analysis, EPA used a projected BEV market

share of eight percent for MY 2027 and 12 percent in MY 2028 for all light-duty vehicles. DRIA at 1-2. As discussed above, these assumptions do not reflect the state of the EV market. *See supra* Section IV.B.1; Gillingham-Jenn at 10–18. By using these low EV projections, EPA’s cost analysis overstates the true compliance costs to manufacturers of meeting the existing Tier 4 standards phase-in schedule. *See id.*

Further, EPA’s evaluation of compliance costs with Tier 4 makes no mention of the hybrid vehicle market or how increased demand for hybrids could lower compliance costs for manufacturers due to the fact that hybrids require less emission control technology to comply. *See supra* Section IV.B.2.ii; CARB App’x at 15.

ii. EPA’s inadequate cost and emissions analysis skews the cost-benefit analysis of the Proposal.

Additionally, EPA’s cost and emissions analyses rest on inconsistent modeling of EV-adoption assumptions. The two halves of the DRIA, one discussing cost impacts to manufacturers and one discussing emissions impacts of the Proposal, do not use the same electric vehicle assumption. EPA’s cost analysis takes its BEV market share from the OMEGA model, 8 percent of new light-duty vehicles in model year 2027 and 12 percent in model year 2028 (DRIA Chapter 1). Gillingham-Jenn at 21. EPA’s emissions analysis, on the other hand, is based on the MOVES model, which uses a higher EV share for the same model year—a weighted light-duty figure of 11.7 percent in 2027 and 12.5 percent in 2028 (Tables 2-1, 2A-1). *Id.* This discrepancy runs in one direction. EPA used the lower share where it enlarges the cost savings the agency books as the rule’s benefit, and the higher share where it shrinks the emissions the agency declines to monetize. *Id.* at 22. A single consistent assumption cannot produce both results. EPA’s self-serving use of two contradictory models in its analysis is arbitrary and capricious. *See State Farm*, 463 U.S. at 43 (An agency “must examine the relevant data and articulate a ... ‘rational connection between the facts found and the choice made.’”).

Even further, another discrepancy in EPA’s emissions data highlights the inadequacy of its analysis. In EPA’s emissions appendix, Tables 2A-4 and 2A-5 report the year-by-year emission increases by source, gasoline cars, gasoline trucks, and diesel vehicles, for the Low EV case and the High EV case respectively. Gillingham-Jenn at 22. However, the two tables show identical values for every pollutant in every year from 2027 through 2055. *Id.* There is no reason that the Low-EV and High-EV cases should yield identical results in the emissions analysis, indicating EPA made an error in the tables. Moreover, this error is consequential, as the EPA’s sensitivity analysis based on different EV assumption is central to its consideration of the Proposal’s costs and benefits. EPA’s failure to use the “relevant data,” instead relying on incorrect numbers, is arbitrary and capricious. *See State Farm*, 463 U.S. at 43.

iii. EPA failed to take into account credit trading in its analysis of compliance costs.

Finally, as discussed above, EPA neglects to include any analysis or discussion of trading credits as a potential and highly-cost effective compliance pathway for the NMOG+NO<sub>x</sub> standard, thereby artificially inflating costs even further. The DRIA handwaves away any consideration of credit trading by simply stating that “[t]he EPA has seen little trading of NMOG+NO<sub>x</sub> credits between companies during the Tier 3 program,” without offering the public and data to demonstrate actual credit use. DRIA at 1-2. However, evidence suggests that credit trading would allow manufacturers to comply with the Tier 4 NMOG+NO<sub>x</sub> standard easily and at a significantly lower cost than what EPA’s analysis shows. Gillingham Jenn at 18–19. And further, if EPA’s statement that credit trading has not been a large component of Tier 3 compliance pathways is true, then this is even stronger support for the notion that there are readily available compliance credits that manufacturers can use to comply with Tier 4. EPA failed to explore this compliance pathway, *see supra* Section IV.B.2.iii, and therefore did not factor these compliance costs savings into the cost analysis.

By ignoring the availability of such an efficient compliance pathway, EPA has failed to take into account the relevant data. See *State Farm*, 463 U.S. at 43. EPA’s refusal to quantify the impact of credit trading and factor this data into its analysis of Tier 4 compliance costs—particularly when its reason for doing so is cursory at best—is arbitrary and capricious and resulted in a faulty cost-benefit analysis.<sup>100</sup> See *Bus. Roundtable v. SEC*, 647 F.3d at 1149 (agency’s failure to “adequately [] quantify the certain costs or to explain why those costs could not be quantified” was arbitrary and capricious.).

## **2. EPA wholly failed to consider or quantify the costs of delaying the Tier 4 standards, rendering the cost-benefit analysis arbitrary and capricious.**

In the Proposal, EPA declares that while the Agency generally performs air quality modeling to conduct a “full assessment of the PM<sub>2.5</sub>-related and ozone-related human health” impacts of a proposal and conducts an analysis to monetize these impacts, it chose not to do so here. 91 Fed. Reg. at 28,478. This decision, and EPA’s purported rationale that such values are too “uncertain,” to be of value to the regulatory decisionmaking process, is unsupportable. See *id.*; DRIA at 2-6. Even if it could lawfully do so, which it cannot, EPA’s failure to give any explanation as to why the “uncertainty” that is inherent to the analysis of any future values allows EPA to effectively set the cost of the health impacts at zero renders the Proposal arbitrary and capricious. *Ctr. for Biological Diversity v. NHTSA*, 538 F.3d at 1201 (finding NHTSA’s action arbitrary where NHTSA failed to provide any evidence or explanation to support decision not to monetize or quantify the value of carbon emissions reduction at all); see *State Farm*, 463 U.S. at 43 (an agency “must examine the relevant data and articulate a . . . ‘rational connection between the facts found and the choice made’”). The Proposal lacks even a “minimal level of analysis” supporting its decision to ignore the negative health consequences and air quality

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<sup>100</sup> The Proposal also failed to calculate other costs into its cost analysis with little to no explanation, including the proposal’s effects on vehicle insurance costs. DRIA at 1-2.

impacts of its proposal renders the action arbitrary and capricious. *Encino Motorcars, LLC v. Navarro*, 579 U.S. 211, 221 (2016).

i. EPA’s failure to conduct any modeling of air quality impacts is arbitrary and capricious.

EPA’s omission of any assessment of air quality impacts from the Proposal is egregiously deficient. In promulgating the Proposal, EPA did not conduct any air quality modeling to determine how the projected emission increases resulting from delaying the Tier 4 standards would impact the ambient concentrations of air pollutants contributing to poor air quality. 91 Fed. Reg. at 28,478; DRIA at 2-6. That failure is arbitrary and capricious.

By failing to conduct modeling, the Proposal entirely fails to assess the impact of increased “air pollution” that is reasonably anticipated to “endanger public health and welfare.” 42 U.S.C. § 7521(a)(1). EPA’s stated reason for failing to conduct any air quality modeling is its claim that doing so is “extremely difficult” and that emissions changes are “spatially variable.” 91 Fed. Reg. at 28,478. This cursory explanation is insufficient to justify the lack of air quality modeling, particularly when poor air quality and pollution impacts are the exact type of harm that the Clean Air Act was designed to curtail. 42 U.S.C. § 7521(a)(1). The core objective of the regulation of criteria pollutants under the Clean Air Act is to improve air quality, and EPA has dedicated one single paragraph in the Proposal to addressing the question of the projected impacts to air quality. See 91 Fed. Reg. at 28,478. EPA thus has failed to consider air pollution—an undoubtedly important, indeed fundamental, aspect of the regulatory problem—that the Clean Air Act seeks to address. See *State Farm*, 463 U.S. at 43.

Moreover, EPA failed to explain its change in practice here. Past rules setting criteria pollutant standards have not found it too difficult and instead consistently conducted air quality modeling and endeavored to quantify the changes in ambient pollution resulting from such standards. See, e.g., 65 Fed. Reg. 35,430, 35,439 (Jun. 2, 2000); 79 Fed. Reg. at 23,426; 89 Fed. Reg. at 27,860; 2024 Multi-Pollutant Rule RIA at 7-53. For example, when it adopted the Tier 4 standards in 2024, EPA conducted air quality modeling through 2055 to estimate the pollution impacts of the proposal. 2024 Multi-Pollutant Rule RIA at 7-53. EPA’s failure to do the same when delaying the implementation of these standards is unexplained and unsupported. EPA acknowledges the existence of “air quality modeling conducted for recent vehicle rules,” but fails to engage with the results of this modeling or explain why additional air quality modeling is not needed here or why it is suddenly too difficult to conduct it. 91 Fed. Reg. at 28,478. The failure to explain its change in policy is arbitrary and capricious. *Fox Television*, 556 U.S. at 515.

Had EPA conducted even a minimal modeling analysis of air quality impacts, it is likely such an analysis would reveal that the Proposal would have not insubstantial air quality impacts, particularly in areas that rely on federal emissions reduction policies to meet or maintain compliance with NAAQS. See CARB App’x at 17–20. EPA’s departure from its general practice of conducting air quality modeling, and therefore its wholesale failure to factor in air quality

impacts when considering disbenefits of the proposal, is arbitrary and capricious. *See Ctr. for Biological Diversity*, 538 F.3d at 1198 (holding that the agency’s action “undervaluing the benefits and overvaluing the costs of more stringent standards” rendered it arbitrary and capricious).

- ii. EPA’s failure to quantify the negative health consequences from the Tier 4 delay and incorporate such considerations into the cost benefit analysis is arbitrary and capricious.

EPA’s Proposal and its DRIA fail to adequately examine the negative health impacts that would result from delaying the phase-in of the Tier 4 standards. *See* 91 Fed. Reg. at 28,478; DRIA at 2-6 – 2-12. While the Proposal acknowledges that “[m]otor vehicle emissions contribute to ozone, PM<sub>2.5</sub>, and air toxics, which are linked to premature death and other serious health impacts, including respiratory illness, cardiovascular problems, and cancer,” 91 Fed. Reg. at 28,478, EPA refused to conduct any analysis quantifying or monetizing these harms that they acknowledge will occur. Moreover, since EPA did not monetize these harms, it did not make any attempt to factor such costs into its cost benefit analysis—opting, as outlined above, to only consider what it views as the cost savings to vehicle manufacturers instead. Moreover, as EPA acknowledges, 91 Fed. Reg. at 28,478, this decision not to factor in costs from health impacts is a shift from prior rules—but EPA does not (and cannot) offer a reasoned explanation for this radical departure. This failure to consider this central issue associated with the regulation of criteria pollutants is thus arbitrary and capricious.

This unexplained change in approach conflicts with three decades of Agency practice, including analysis supporting the 2024 Multi-Pollutant Rule setting the Tier 4 standards, that quantified health benefits. Over the years, EPA has developed expertise in quantifying and monetizing the benefits of emission reductions, which ensures that EPA’s rules and regulations for regulating air pollution “maximize net benefits,” including “public health benefits,” rather than simply minimizing costs borne by regulated industries. In the 2024 Multi-Pollutant Rule, for instance, EPA quantified the expected benefits from the rule. It estimated that the rule would prevent between 1,000 and 2,000 premature deaths associated with exposure to PM<sub>2.5</sub> and prevent between 25 and 550 premature deaths associated with exposure to ozone, and result in estimated net benefits through 2055 of \$1.7 trillion to \$2.1 trillion in present value.<sup>101</sup> 89 Fed. Reg. at 28,093. Ultimately, EPA’s deviation from its foundational policy of quantifying health impacts—here, disbenefits—of the rule requires a more detailed explanation than EPA offered here. EPA’s previous policy of quantifying health impacts was supported by the factual findings of EPA’s guidance documents, which addressed how to account for the analytic uncertainty

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<sup>101</sup> These values represented the net benefit of the entire 2024 Multi-Pollutant Rule, including criteria pollutant standards and GHG standards promulgated under that rule.

involved in monetizing health impacts.<sup>102</sup> EPA’s Proposal, which declines to monetize health impacts because of purported uncertainty, contradicts these findings. Therefore, EPA was required to provide a more detailed justification for its change in policy. *See Fox Television*, 556 U.S. at 515-16.

Despite the longstanding policy and practice to quantify health impacts, EPA states in the preamble that it did not attempt to monetize the health impacts of added emissions from the Tier 4 delay because such “monetized values introduce[] additional uncertainty.” 91 Fed. Reg. at 28,478. As noted, EPA’s failure to use the available data to quantify these impacts, however uncertain, effectively sets the cost of these factors at zero, resulting in a wholly insufficient analysis. *See Mont. Wilderness Ass’n v. McAllister*, 666 F.3d 549, 559 (9th Cir. 2011) (“[T]he proper response to [uncertainty] is for the Service to do the best it can with the data it has, not to ignore [it].”); *Ctr. for Biological Diversity*, 538 F.3d at 1198 (holding that it was arbitrary and capricious not to monetize benefits of emission reductions when agency monetized other uncertain factors). Indeed, when the data is uncertain, “the agency’s job is to exercise its expertise to make tough choices about which of the competing estimates is most plausible, and to hazard a guess as to which is correct, even if . . . the estimate will be imprecise.” *Pub. Citizen v. Fed. Motor Carrier Safety Admin.*, 374 F.3d 1209, 1221 (D.C. Cir. 2004). If EPA suddenly lacks the confidence to make those tough choices, it could still discharge its statutory duties with respect to this requirement by considering a range of health benefits. *See Chamber of Com. of U.S. v. SEC*, 412 F.3d 133, 143 (D.C. Cir. 2005) (finding that although an agency sometimes “can determine only the range” of costs or benefits due to uncertainty, the agency still must conduct an economic analysis under those circumstances). Even if the specific value of health impacts carries uncertainty, there is no colorable argument for setting that value at zero. Thus, in effect, the cost-benefit analysis in the Proposal gives full weight to the compliance costs borne by industry while giving no weight to public health benefits, essentially reducing the value of human life to zero.

Additionally, it is arbitrary and capricious not to monetize public health benefits based on purported concerns about uncertainty while continuing to monetize regulatory costs when such costs are also uncertain and also rely on various assumptions and estimates. For example, EPA’s analysis of the compliance costs to manufacturers for meeting the Tier 4 standards rests on numerous assumptions about the status of the EV market, many of which contradictory evidence indicates are incorrect. *See Gillingham Jenn* at 10–18. Ultimately, calculating compliance costs with “precision” while declining to calculate benefits arbitrarily elevates industry interests over other interests. *See Ctr. for Biological Diversity*, 538 F.3d at 1198 (holding that an agency “cannot put a thumb on the scale by undervaluing the benefits and overvaluing the costs of more stringent standards” when conducting cost-benefit analysis). And it fails to account for “an

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<sup>102</sup> *See* EPA, EPA-240-R-24-001, Guidelines for Preparing Economic Analyses app. B (3d ed. Dec. 2024)

important aspect of the problem” of emissions regulation. *See Motor Vehicle Mfrs. Ass’n of the U.S., Inc. v. State Farm Mut. Auto. Ins. Co.*, 463 U.S. 29, 43 (1983); *Michigan v. EPA*, 576 U.S. at 753; *Bus. Roundtable v. SEC*, 647 F.3d at 1148-49; *Pub. Citizen v. Fed. Motor Carrier Safety Admin.*, 374 F.3d at 1218–19 (“The mere fact that the magnitude of [the] effects is uncertain is no justification for disregarding the effect entirely.”). As such, the “uncertainties” that EPA cites, which are themselves overblown, are also not a justification to fail to monetize health impacts. *See* Tom Luben & Jonathan Buonocore, Comment on EPA's Proposed Rule, "Revisions of Tier 4 criteria Pollutant Standards, Part 1: Amendments to Phase-in Schedule for Light-Duty and Medium-Duty Vehicles," (July 6, 2026), at 22-35 (Luben-Buonocore).

Had EPA quantified the health disbenefits of the delay rule, the results would have clearly shown that any cost benefits to manufacturers, using EPA’s own cost calculations, would be greatly outweighed by harms to human health, *see* CARB App’x at 24–29. An analysis and quantification of the health disbenefits of the Proposal indicates that in California alone, the delay of emission reductions are projected to result in 47 cardiopulmonary mortality cases, 10 hospitalizations for cardiovascular illness, 27 respiratory emergency room visits, 112 cases of asthma onset, and nearly 7,000 lost work days due to health issues, among other impacts. *See* CARB App’x at 26. Moreover, through their own admission, the compliance cost calculated by EPA represents an “upper bound” for costs to manufacturers, and even this upper bound is relatively small, DRIA at 1-3. And further, as noted above, EPA’s use of inconsistent modeling for costs and emissions likely overstates the gap between cost savings for manufacturers and negative emissions impacts from the Proposal. *See* Gillingham Jenn at 21-22. As such, the true impact of quantifying the negative health impacts of delaying the Tier 4 requirements are likely even more stark than they would have been had EPA analyzed these impacts.

Further, EPA’s failure to quantify and monetize public health benefits violates a range of guidance materials. These materials include Circular A-4, the Office of Management and Budget’s (“OMB”) longstanding guidance to federal agencies on the development of regulatory and economic analyses.<sup>103</sup> According to Circular A-4, “[s]ound quantitative estimates of benefits and costs, where feasible, are preferable to qualitative descriptions of benefits and costs because they help decision makers understand the magnitudes of the effects of alternative actions.” OMB Circular A-4, at 26 (Sep. 17, 2003). When cost and benefit estimates are uncertain, OMB directs agencies to “report benefit and cost estimates . . . that reflect the full probability distribution of potential consequences” and emphasizes that an agency “should monetize quantitative estimates whenever possible.” *Id.* at 18, 27.

EPA’s own guidance is consistent with OMB guidance on the topic of monetization. For example, EPA’s Guidelines for Preparing Economic Analyses, all of which underwent external peer review, include detailed guidance about how to prepare mortality risk valuation

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<sup>103</sup> OMB, Circular No. A-4 (Sep. 17, 2003)  
[https://obamawhitehouse.archives.gov/omb/circulars\\_a004\\_a-4](https://obamawhitehouse.archives.gov/omb/circulars_a004_a-4).

estimates.<sup>104</sup> The Guidelines also describe how to address and account for analytic uncertainty, which is a part of every cost-benefit analysis, and explain that in assessing uncertainty, EPA should present outcomes or conclusions based on the most plausible values and perform sensitivity analysis on key assumptions. *See id.* at 5-29 – 5-34. As the Guidelines point out, “[e]ven for highly uncertain benefits[,] zero is not usually the best quantitative weight, and available evidence can often be used to produce some estimate that is more accurate than assuming these effects do not occur.” *Id.* at 7-9. Even though the DRIA discusses the negative health impacts associated with the criteria pollutants at issues here, *see* DRIA section 2.3, the Proposal merely recites the conclusory assertion that the health consequences are too uncertain to calculate and does not in any way suggest that monetization of health benefits is unwarranted. *See* 91 Fed. Reg. at 28,478.

Finally, EPA’s failure to provide a reasoned explanation for its change in longstanding practice is arbitrary and capricious under the change-in-position doctrine. Since 1993, EPA has employed the best available science to quantify and monetize benefits of regulatory changes aimed at reducing pollution. In fact, to ensure compliance with Executive Order 12866,<sup>105</sup> EPA has been at the forefront of developing the rigorous, peer-reviewed methodologies that have allowed the agency to consider and communicate to the public the economic value of reductions in adverse health outcomes and avoided hospitalizations and deaths. *See* Luben-Buonocore at 37. And further, EPA’s prior evaluations of the health effects of criteria pollutant exposure have shown that exposure is causally related to mortality. *See* Luben-Buonocore at 22-25. In the Proposal, EPA fails to even acknowledge its abrupt departure, much less confront the voluminous scientific evidence and guidelines underlying past practice, nor does it point to new scientific evidence to justify the agency’s change in policy. While EPA asserts that its prior practice of monetizing health benefits “may not have presented the full range of uncertainties and associated confidence level regarding the potential benefit estimates from reduction in exposure to PM<sub>2.5</sub> and ozone,” 91 Fed. Reg. at 28,478, EPA does not explain what has changed to prompt its change in position, nor does EPA explain its decision not to comply with Executive Order 12866 or agency guidance that directs agencies to quantify benefits when feasible, *see FCC v. Fox Television Stations, Inc.*, 556 U.S. 502, 514-15 (2009).

Ultimately, EPA’s new practice of declining to quantify and/or monetize the public health benefits associated with emission reductions while continuing to quantify compliance costs, embodied in this Proposal, will lead the Agency to adopt weaker regulations that prioritize industry interests over public health, something that is in direct conflict with the Clean Air Act’s express objectives. The States urge EPA to reconsider this approach and to restore the Agency’s longstanding practice of monetizing the health benefits of avoided emissions.

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<sup>104</sup> EPA, Guidelines for Preparing Economic Analyses App. B [EPA-240-R-24-001] (Dec. 2024).

<sup>105</sup> Exec. Order No. 12,866, 3 C.F.R. 638 (1994).

**D. EPA did not adequately consider States’ and Cities’ reliance on criteria pollutant standards to meet crucial attainment goals for air pollution.**

The Proposal provides only a cursory mention of States’ and Cities’ reliance interests in the Tier 4 standards. Rather than considering the potential consequences of the Tier 4 delay, EPA simply stated—without support—that any reliance concerns, including compliance with NAAQS and related planning obligations, are outweighed by the savings to vehicle manufacturers. *See* 91 Fed. Reg. at 28,475. This inadequate treatment of reliance interests is arbitrary and capricious, especially when those industry savings are so small. *See supra* Section IV.C. Where an agency’s “prior policy has engendered serious reliance interests that must be taken into account,” “the agency must provide a more detailed justification” for its change in policy, including “a rational connection between the facts found and the choice made.” *Mingo Logan Coal Co. v. EPA*, 829 F.3d 710, 719 (D.C. Cir. 2016) (quoting *Fox Television*, 556 U.S. at 515 and *State Farm*, 463 U.S. at 43 (internal quotation marks omitted)). The Proposal arbitrarily fails to analyze States’ and Cities’ serious reliance on Tier 4 emissions reductions to support compliance with SIPs and NAAQS attainment.

As discussed above, under the Clean Air Act, each state has the “primary responsibility” for assuring air quality within its geographic area with respect to the NAAQS, and, to that end, is required to submit to EPA for approval a SIP that specifies the manner in which the State will attain or maintain the NAAQS. *See supra* Section III.A; 42 U.S.C. §§ 7407(a), 7410(a)(1). If EPA finds that the State has failed to submit a SIP or that the SIP submitted by the State is inadequate, it may override the State’s sovereign prerogatives by promulgating a Federal Implementation Plan, impose severe sanctions, or both. *Id.* §§ 7407(a); 7410(c), (m); 7509. As such, the consequences for failing to comply with SIPs can be severe.

States have relied on the existence of federal vehicles regulations, particularly for criteria pollutant emissions, when designing their plans to attain or maintain the NAAQS. In recent submissions for the Northern New Jersey-New-York-Connecticut Nonattainment Area, for example, New Jersey, New York, and Connecticut relied on the projected emission reduction benefits from the 2024 Multi-Pollutant Rule, the Phase 3 Greenhouse Gas Standards for Heavy-Duty Vehicles, and MY 2023–26 light-duty greenhouse gas standards to attain the 2015 70 ppb 8-hour ozone NAAQS.<sup>106</sup> Without the aid of federal standards, states would have to take additional actions and expend significant resources. For example, CARB has spent up to \$33,000 to mitigate a single ton of NOx emissions in California.<sup>107</sup>

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<sup>106</sup> N.J. Dep’t Of Env’t Prot., *State Implementation Plan (SIP) Revision For The Attainment And Maintenance Of The Ozone National Ambient Air Quality Standards, 2015 70 Ppb 8-Hour Ozone, Moderate Classification, For The Northern New Jersey-New York-Connecticut Nonattainment Area And The Southern New Jersey-Pennsylvania-Delaware-Maryland Nonattainment Area* at 3-31, 4-5, App. 4-6 (Feb. 2025), <https://perma.cc/C349-B43F>.

<sup>107</sup> CARB, *Proposed Fiscal Year 2021-22 Funding Plan For Clean*

Additionally, because States depend on early planning to reduce the costs of compliance, changes in federal regulatory approaches that significantly increase criteria-pollutant emissions can be costly and disruptive to the States, as well as to regulated industries within those States. As with the climate action plans, States have made high-stakes, sensitive policy and planning decisions about pollution control while relying on federal vehicle regulations as their baseline. Reductions in emissions of criteria pollutants like NO<sub>x</sub> and PM from federal standards are central to the States' efforts to attain and maintain NAAQS and to achieve regional haze visibility goals in sensitive areas, and the lost reductions from the delay of the Tier 4 standards will have attainment consequences for many jurisdictions. *See, e.g.*, CARB App'x at 18–20 (discussing the Proposal's emission impacts and likely consequences for nonattainment areas across California).

Further, by removing expected emission increases associated with the Tier 4 standards, the Proposal may impact the ability of Metropolitan Planning Organizations (MPOs) to demonstrate transportation conformity as required under the Clean Air Act. *See* 42 U.S.C. § 7506(c). Under the Clean Air Act's transportation conformity requirements, MPOs must make initial conformity determinations for any metropolitan transportation plans or other such transportation projects to show that the plans will not cause new air quality violations, worsen existing violations, or delay timely attainment of NAAQS. 42 U.S.C. § 7506(c); *see* CARB App'x at 19–20. Such conformity determinations by local government entities are crucial for securing federal funding for transportation initiatives, as the general goal of the requirement is to ensure funding approvals are consistent with federal air quality goals.<sup>108</sup> As such, these entities rely on expected federal emissions increases when crafting their SIPs, and in turn rely on the plans outlined in their SIPs when making long term transportation planning decisions that must conform to these SIPs. Therefore, emissions increases from the on-road sector as a result of the

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*Transportation Incentives Accompanied By Proposed Carl Moyer Program Changes, Agricultural Burning Incentives For Combustion Equipment, And The Climate Heat Impact Response Program*, Resol. 21–24 at 8 (Nov. 19, 2021), <https://perma.cc/F8WL-MLL7>. Within certain California air districts, prices per ton are even higher. For instance, the South Coast Air Quality Management District's maximum cost-effectiveness value for NO<sub>x</sub> best available control technology ranged from \$38,355–38,706 per ton in 2023. S. Coast Air Quality Mgmt. Dist., 2023 South Coast Air Quality Management District BACT Maximum Cost Effectiveness Values (\$/Ton), <https://perma.cc/2KSS-XMLA>. And the twelve-month rolling average price per ton for South Coast's NO<sub>x</sub> RECLAIM Trading Credits was \$47,864 for January–December 2022 and \$17,686 for January–December 2023. S. Coast Air Quality Mgmt. Dist., *Twelve-Month And Three-Month Rolling Average Price Of Compliance Years 2023 And 2024 NO<sub>x</sub> And SO<sub>x</sub> Rtc's (October – December 2023): January 2024 Report To The Stationary Source Committee*, <https://perma.cc/T6CU-T8FY>.

<sup>108</sup> U.S. DOT & Federal Highway Administration, *Transportation Conformity: A Basic Guide for State & Local Official*, at 8 (Feb. 2017), [fhwahep17034.pdf](https://www.fhwahep17034.pdf).

Proposal could make conformity demonstrations more difficult for MPOs. *See* CARB App'x at 19–20. EPA was required to take these considerations into account.

Ultimately, EPA's hand-waving statement that the Proposal's "marginal[]" increases in emissions should not meaningfully impact states' pollution planning processes and initiatives in unsupported by any evidence and fails to grasp the extent of the issue. *See* 91 Fed. Reg. at 28,475. States rely on the expected outcomes of federal regulation in designing and implementing pollution control plans, and it is incumbent on the agency to give meaningful consideration to these serious reliance interests. *See Fox Television*, 556 U.S. at 515

## **V. The Proposal is Procedurally Defective and Must be Withdrawn.**

The Proposal was also issued "without observance of procedure required by law" for myriad reasons. 42 U.S.C. § 7607(d)(9)(D). Specifically, EPA has failed to provide a meaningful opportunity for comment, has failed docket data and other information considered, and has failed to explain if and how it plans to employ artificial intelligence in the decision making process. Each of these failures is of central relevance to the outcome of this rulemaking and warrants withdrawal.

### **A. EPA has not provided a meaningful opportunity for comment.**

Notice and sufficient time for public comment are critically important "(1) to ensure that agency regulations are tested via exposure to diverse public comment, (2) to ensure fairness to affected parties, and (3) to give affected parties an opportunity to develop evidence in the record to support their objections to the rule and thereby enhance the quality of judicial review." *Prometheus Radio Project v. FCC*, 652 F.3d 431, 449 (3rd Cir. 2011) (citing *Int'l Union, United Mine Workers of Am. v. Mine Safety & Health Admin.*, 407 F.3d 1250, 1259 (D.C. Cir. 2005)). This same logic applies to any "amendment, modification, or repeal" of a rule, as the notice and comment period "ensures that an agency will not undo all that it accomplished through its rulemaking without giving all parties an opportunity to comment." *California by & through Becerra v. DOI*, 381 F. Supp. 3d 1153, 1172 (N.D. Cal. 2019) (citing *Consumer Energy Council of America v. FERC*, 673 F.2d 425, 446 (D.C. Cir. 1982)). For the following reasons, and as discussed in our Request for Extension of Comment Period, attached as Appendix A, EPA failed to provide a meaningful opportunity for comment on the Proposal as required by the Clean Air Act. 42 U.S.C. §7607(d)(9)(D). That request was denied. *See* Appendix B.

*First*, EPA provided insufficient opportunity to comment. EPA offered a comment period of only 49 days on the Proposal. Given the massive public health and economic implications of the Proposal, along with its technical complexity, that abbreviated comment period is wholly

inadequate. Indeed, it is inconsistent not only with general Executive Branch practice,<sup>109</sup> but also with past EPA practice in the context of vehicles emission standard rulemakings.<sup>110</sup>

The 49-day comment window is especially inadequate given that EPA failed to conduct air quality modeling or monetize the Proposal's health impacts in its regulatory impact analysis, a significant departure from EPA's longstanding rulemaking procedures. Indeed, when EPA proposed the multi-pollutant emissions standard in 2023, the Agency conducted extensive modeling "to capture how changes in vehicle design and use will impact human health, the environment, and other factors that are relevant to a societal benefits-costs analysis." 88 Fed. Reg. at 29,294. But here, despite acknowledging that emissions of criteria pollutants such as fine particulate matter, nitrogen oxides, and non-methane organic gases are linked to premature death, respiratory illnesses, cardiovascular disease, and cancer, the Agency declined to model impacts to air quality as a result of the Proposal or quantify its likely health impacts, leaving that considerable and crucial task to commenters. 91 Fed. Reg. at 28,478. Because of EPA's deficient regulatory impact analysis, the States and other commenters have been prejudiced and have had to expend significant time and resources to evaluate the effects of the Proposal on public health and welfare, something that EPA should have done in the first instance.

Relatedly, the comment period is insufficient because the Proposal cites technical feasibility and lead time concerns to justify the two-year delay of Tier 4 criteria pollutant standards, *see* 91 Fed. Reg. at 28,466, but the Agency failed to publish any data from vehicle manufacturers that would allow the public to evaluate and comment on these justifications. *See Solite Corp. v. EPA*, 952 F.2d 473, 484 (D.C. Cir. 1991) ("An agency commits serious procedural error when it fails to reveal portions of the technical basis for a Proposal in time to allow for meaningful commentary.") (citation omitted); *Chamber of Commerce of U.S. v. SEC*, 443 F.3d 890, 900 (D.C. Cir. 2006) ("By requiring the 'most critical factual material' used by the agency be subjected to informed comment, the APA provides a procedural device to ensure that agency regulations are tested through exposure to public comment[.]"). For instance, EPA should have had relevant Tier 3 and Tier 4 data within its possession and control, such as emissions compliance data, certification reports, and production data, but EPA did not publish any of these data with the Proposal, despite relying on technical feasibility and lead time as bases for the delay. By failing to include such data in the Proposal, EPA has not only committed a serious procedural error, but it has also forced the States and other public commenters to track down any

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<sup>109</sup> Executive Order No. 12866, 58 Fed. Reg. 51,735, 51,740 (Oct. 4, 1993) (comment period should be "not less than 60 days")

<sup>110</sup> E.g., 84 Fed. Reg. 32,520 (July 8, 2019) (providing 150 days for comment on Clean Power Plan repeal); 80 Fed. Reg. 37,758 (July 1, 2015) (providing 60 days for comment on proposed aircraft greenhouse gas standards); 75 Fed. Reg. 25,324, 25,328 (May 7, 2010) (60-day comment period; 129,000 comments on light-duty vehicles greenhouse gas standards); 76 Fed. Reg. 57,106, 57,362 (62-day comment period; 41,000 comments on medium- and heavy-duty vehicles greenhouse gas standards).

relevant data from state agencies or submit FOIA requests to EPA, further prejudicing commenters.

Finally, given the Proposal's impact on vehicle manufacturers, along with the States' substantial investments in cleaner vehicles to protect their residents' health and welfare, the Proposal implicates serious reliance interests that EPA failed to address in any meaningful way. *See Dep't of Homeland Sec. v. Regents of the University of California*, 591 U.S. 1, 30 (2020) (holding that an agency must be cognizant that its "policies may have engendered serious reliance interests that must be taken into account" (cleaned up)). For instance, with respect to states' reliance interests on the Tier 4 Criteria Pollutant Standards to comply with the National Ambient Air Quality Standards for particulate matter and nitrogen oxides, EPA merely stated that any emissions increases are "marginal" and "do not supersede the Agency's obligation" to ensure that standards reflect "market realities." 91 Fed. Reg. at 28,475. Because EPA did not grapple with such reliance interests, the States and other public commenters had to expend considerable time to evaluate and address potential harms to their interests and robustly articulate those interests in public comments.

In sum, EPA failed to provide a "meaningful opportunity" for comment on the Proposal. *Prometheus Radio*, 652 F.3d at 450 ("meaningful opportunity" must include "enough time with enough information to comment" (quoting *Rural Cellular Ass'n v. FCC*, 588 F.3d 1095, 1101 (D.C. Cir. 2009))). EPA has therefore deprived the public of a meaningful opportunity to comment, substantially limiting the ability of the public to protect their rights and interests.

#### **B. EPA has failed to docket and make available for comment data and other information considered.**

EPA has also violated the Clean Air Act's requirement that "[a]ll data, information, and documents ... on which the Proposal relies shall be included in the docket on the date of publication of the Proposal." 42 U.S.C. § 7607(d)(3); *see also id.* § 7607(d)(3)(A) (requiring EPA to publish "a summary of...the factual data on which the Proposal is based"); *id.* § 7607(d)(6)(C) ("[A] promulgated rule may not be based (in part or whole) on any information or data which has not been placed in the docket as of the date of such promulgation."); *Sierra Club v. Costle*, 657 F.2d 298, 398 (D.C. Cir. 1981) (if "documents of central importance upon which EPA intended to rely had been entered on the docket too late for any meaningful public comment prior to promulgation, then both the structure and spirit of section 307 would have been violated.")).

Here, EPA's factual assertions, findings, and conclusions in the Proposal rely on light- and medium-duty vehicle emissions information—including compliance data, certification reports, and production data—that are within EPA's possession and control. *See, e.g.*, DRIA at 1-2 (referencing EPA tracking the "trading of NMOG+NOX credits between companies during the Tier 3 program" and the prospect that "companies who have banked credits may use those credits in MYs 2027 and 2028"). But EPA has failed to include that information in its rulemaking docket or otherwise make that information available to the public. These failures have impeded the

public's ability to compile and evaluate such information to determine, for example, the progress that automakers have made toward complying with the Tier 3 and Tier 4 vehicle emissions standards, and to evaluate the alleged feasibility and lead time concerns that EPA claims to address in its Proposal. By failing to timely disclose and docket this information, EPA has failed to fulfill its statutory duty, deprives the public of a meaningful opportunity to comment, and rendered the Proposal procedurally defective. *Conn. Light & Power v. Nuclear Regul. Comm'n*, 673 F.2d 525, 530-31 (D.C. Cir. 1982) (“An agency commits serious procedural error when it fails to reveal portions of the technical basis for a proposed rule in time to allow for meaningful commentary.”); *Am. Pub. Gas Ass'n v. DOE*, 72 F.4th 1324, 1338-39 (D.C. Cir. 2023) (faulting agency for finalizing rule that relied on new data without opportunity for notice and comment on that data).

Because EPA's arbitrary procedural violations have significantly prejudiced the public, incurably tainted this rulemaking process, and would render any final rule unlawful, *see* 42 U.S.C. § 7607(d)(9)(D), EPA should immediately withdraw the Proposal.

**C. To the extent EPA relies on Artificial Intelligence in this action, the failure to disclose that use violates applicable procedural requirements.**

It is well-established that in agency rulemakings, “the most critical factual material that is used to support the agency's position on review must have been made public *in the proceeding* and exposed to refutation.” *Air Transp. Ass'n of Am. v. FAA*, 169 F.3d 1, 7 (D.C. Cir. 1999) (emphasis in original). Not only the substance of EPA's decision, but also the methods used to reach it, must be made available for public comment. Although agencies may utilize computer models—including artificial-intelligence models—in the course of decision making, that use must be disclosed and subjected to comment. Among other things, “[w]hen an agency uses a computer model, it must explain the assumptions and methodology used in preparing the model and, if the methodology is challenged, must provide a complete analytic defense.” *U.S. Air Tour Ass'n v. FAA*, 298 F.3d 997, 1008 (D.C. Cir. 2002) (cleaned up).

The Proposal and accompanying documents that EPA placed in its rulemaking docket for this rule neither assert nor, insofar as commenters have been able to discern, reveal any role of AI or other computer models in the Proposal's formulation (beyond the modeling done for the prior rule, as noted above), or any plans to utilize AI in formulating the final rule, including in reviewing public comment. The Agency, however, has recently announced that it “uses software with AI methods to more efficiently complete resource-intensive tasks like screening literature for relevance and data extraction.”<sup>111</sup> If, at any point during the rulemaking process, EPA has used or will use AI or other computer models, EPA must disclose—and solicit comment on—why a model was used; which model was selected and why, whether, and how the model has

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<sup>111</sup> EPA, *AI tools used in EPA's Systematic Review Process*, (Aug. 11, 2025), <https://perma.cc/BL44-JYE5>.



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