UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Reconsideration of 2009 Endangerment Finding and Greenhouse Gas Vehicle Standards **90 Fed. Reg. 36288 (August 1, 2025)**	Docket No. EPA–HQ–OAR–2025–0194; FRL–12715–01–OAR *Via regulations.gov* *September 22, 2025*

CORRECTED COMMENTS OF CLEAN AIR TASK FORCE

I. Introduction

The transportation sector accounts for 28% of U.S. greenhouse gas (GHG) emissions[1] as well as a notable portion of U.S. criteria air pollutant (CAP) emissions, including 48% of nitrogen oxides (NOx), 15% of volatile organic chemicals (VOCs), and approximately 2–3% of direct particulate matter ($PM_{2.5}$ and PM_{10}).[2] Criteria pollutant emissions have decreased year over year as more stringent federal vehicle regulations, alongside improved emission control technologies for internal combustion engines, have been introduced. Yet the rate of decrease of CAP emissions has slowed during this decade.[3] This is because, regardless of the emission control technology employed, combustion vehicles will always emit some level of CAPs. Thus, the most effective and readily available way to achieve deep reductions in CAP pollution from vehicles is to accelerate the deployment of zero-emission vehicles.

Absent deeper reductions, CAP emissions from vehicles will continue to cause adverse health impacts, especially in areas near industrial or urban hubs as well as along major trucking routes. Ultimately, this results in health disparities that further inequitable harms for those that live in these areas. Specifically, direct fine particulate matter, sulfur dioxide, nitrogen oxide, and volatile organic compounds all contribute to ambient concentrations of particulate matter less than 2.5 microns in diameter ($PM_{2.5}$). This air pollutant has been linked to a variety of serious health effects, including asthma attacks, chronic bronchitis, other illnesses that require a hospital admission, and premature mortality.[4] The people most at risk of these negative health impacts live near high concentrations of diesel vehicles, especially large trucks or non-road equipment, but it is still a concern for those living in regions with a relatively high proportion of light- and medium-duty vehicles.

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[1] EPA, *Fast Facts on Transportation Greenhouse Gas Emissions* (June 6, 2025), https://perma.cc/DB87-QNCA.

[2] *See* EPA, *National Tier 1 CAPS Trends* (April 28, 2025) (Attachment A).

[3] *See id*.

[4] EPA, *Particle Pollution and Respiratory Effects* (June 6, 2025), https://perma.cc/GF8D-W5L5.

With vehicles, the most effective criteria pollutant mitigation technologies are often the same technologies used to eliminate greenhouse gas (GHG) emissions. Technologies such as selective catalytic reduction (SCR) to reduce NOx to its constituent parts (nitrogen and oxygen), diesel particulate filters (DPFs) to trap particulate matter, and diesel oxidation catalysts (DOCs) to convert carbon monoxide, reduce emissions from combustion vehicles to some extent, but continued reliance on exhaust gas treatment technologies will still result in emissions of health-damaging CAPs that could be **eliminated** through the deployment of zero-emission vehicles. Utilizing electric powertrain technologies like those found in battery electric vehicles (BEVs) and fuel cell electric vehicles (FCEVs) would eliminate CAPs alongside GHGs.[5]

Clean Air Task Force (CATF) analyzed the health impacts of repealing the most recent light-, medium-, and heavy-duty vehicles GHG emissions rules. As detailed below, repealing just these most recent rules will lead to spikes in deaths, incidences of lung cancer, and healthcare costs. This is because although GHG standards do not directly control criteria and air toxics pollutants, automakers are likely to meet the standards by adopting clean vehicle technologies that simultaneously reduce such emissions. These emissions reductions are highly relevant considerations under the statute, particularly as EPA continues to acknowledge the importance of reducing criteria and toxic pollutants from motor vehicles[6] and the paramount importance Congress placed on reducing such emissions.[7] In addition to the harms to public health from the impacts of worsening climate change, rescinding vehicles regulations will further slow the rate at which CAP emissions decrease. This will worsen health across the country and increase healthcare costs relative to a future where GHG regulations remain in place. Thus, finalizing this rule without considering its impacts on CAP emissions and their associated health risks would be arbitrary and capricious, as it would fail to consider an important aspect of the problem.

Below, we examine the national and county level health impacts that will occur if the penetration of electric drivetrain technology is disrupted by eliminating the endangerment finding and two rules that would otherwise go into effect in model year 2027. Those rules are Multi-Pollutant Emissions Standards for Model Years 2027 and Later Light-Duty and

[5] The drivetrains in BEVs and FCEVs are fully electric and significantly more efficient than combustion vehicles; the energy used to power a BEV is stored in an electrochemical battery, whereas the energy that powers an FCEV is stored in the form of hydrogen and then chemically converted to electricity via a fuel cell.

[6] 90 Fed. Reg. 36288, 36314 (Aug. 1, 2025) ("we are not proposing to reopen or substantively revise emission standards or compliance provisions related to criteria pollutant exhaust emissions . . . air toxic emissions, or evaporative and refueling emissions").

[7] *See, e.g.*, 42 U.S.C. § 7521(a)(3)(A), (b), (g)-(i), (l). *Cf.* 42 U.S.C. § 7521(a)(4)(B) (requiring consideration of whether emissions control technologies "causes, increases, reduces, or eliminates emissions of any unregulated pollutants"). To the extent EPA does not view criteria and air toxics emissions as statutory factors in relation to a GHG rule, such emissions nonetheless remain relevant factors and important aspects of the problem.

Medium-Duty Vehicles[8] (hereinafter "Light- and Medium-Duty Rule") and the Greenhouse Gas Emissions Standards for Heavy-Duty Vehicles - Phase 3[9] (hereinafter "Heavy-Duty Rule"). Our analysis makes use of the U.S. Environmental Protection Agency's (EPA's) CO–Benefits Risk Assessment (COBRA) screening model[10] to show why eliminating the endangerment finding and these two vehicles regulations will increase health-related damages over the next few decades.

II. Background on criteria air pollution and health impact modeling

To assess the impact of future regulatory scenarios, it is necessary to understand the nation's current air quality and resulting health impacts. While all combustion vehicles emit CAPs that are damaging to health, diesel CAP emissions are a key contributor to the problem. Using COBRA and the methodology outlined below, we have quantified the various health impacts tied to diesel CAP emissions, and we reference the data here as a useful proxy for current transportation related harms.

The methodology used to determine the health impacts from criteria emissions uses a damage function in COBRA, which involves modeling changes in ambient air pollution levels, calculating the associated change in adverse health effects, such as premature mortality, and then assigning an economic value to these effects. Assessing changes in the concentrations of particulate matter is typically done by translating a change in pollutant levels into associated changes in human health effects. The health effects associated with changes in the ambient air quality are then translated into economic values.

To estimate the $PM_{2.5}$-related damages associated with vehicle emissions, COBRA first calculates the impact of emissions on ambient $PM_{2.5}$ levels. Using the results from epidemiological studies, it then estimates the number of adverse health impacts (e.g., premature deaths) due to the associated PM changes. Finally, COBRA calculates the associated monetized economic damages. This three-step process is the standard approach for evaluating the health and economic benefits of reduced air pollution.

Digging into the details, COBRA calculates the emissions impact on ambient $PM_{2.5}$ levels and applies health impact functions to that change in ambient pollution attributable to diesel exhaust. Health impact functions are a specific type of damage function that look just at health, rather than at more generalized, often economic, damages. And health impact functions are derived from concentration-response functions reported in the peer-

[8] Multi-Pollutant Emissions Standards for Model Years 2027 and Later Light-Duty and Medium-Duty Vehicles, 89 Fed. Reg. 27842 (Apr. 18, 2024).

[9] Greenhouse Gas Emissions Standards for Heavy-Duty Vehicles - Phase 3, 89 Fed. Reg. 29440 (Apr. 22, 2024).

[10] EPA, *CO-Benefits Risk Assessment Health Impacts Screening and Mapping Tool (COBRA)*, https://cobra.epa.gov (last updated Apr. 12, 2021).

reviewed, published epidemiological literature. A typical health impact function has four components:

1. an effect estimate, which quantifies the change in health effects per unit of change in a pollutant and is derived from a particular concentration-response function from an epidemiology study;
2. a baseline incidence rate for the health effect;
3. the affected population; and
4. the estimated change in the concentration of the pollutant.

The result of these functions is an estimated change in the incidence of a particular health effect for a given increment of air pollution across the affected population.

The second step in the damage function approach involves estimated unit values that give the estimated economic value of avoiding a single case of a particular endpoint – a single death, for example, or a single hospital admission. These unit values are derived from economics literature and come in several varieties. For endpoints such as hospital admissions, cost of illness unit values (which estimate the cost of treating or mitigating the effect) were used. The estimated unit values include hospital costs and lost wages but do not include estimates of avoided pain and suffering.

Finally, the calculation of total damages involves summing damages across all non-overlapping health effects, such as hospital admissions for pneumonia, chronic lung disease, and cardiovascular-related problems.

A map that quantifies total particulate from CAP emissions for diesel-fueled vehicles as well as the resulting health impacts is available on the CATF website.[11] The map reflects the COBRA output for our current air quality, using the 2026 diesel emissions inventory. Nationally, there will be a projected 8,468 premature deaths in 2026 attributable to diesel particulate emissions. Additionally, there will be 3,566 heart attacks, 5,397 cases of acute bronchitis, and an increase in lifetime lung cancer risk of 220 cases per million, all attributable to CAPs from diesel. The total estimated societal & economic cost will be nearly $94B *for 2026 alone*.[12]

[11] CATF, *Deaths by Dirty Diesel*, https://www.catf.us/deathsbydiesel/.

[12] *Id*.

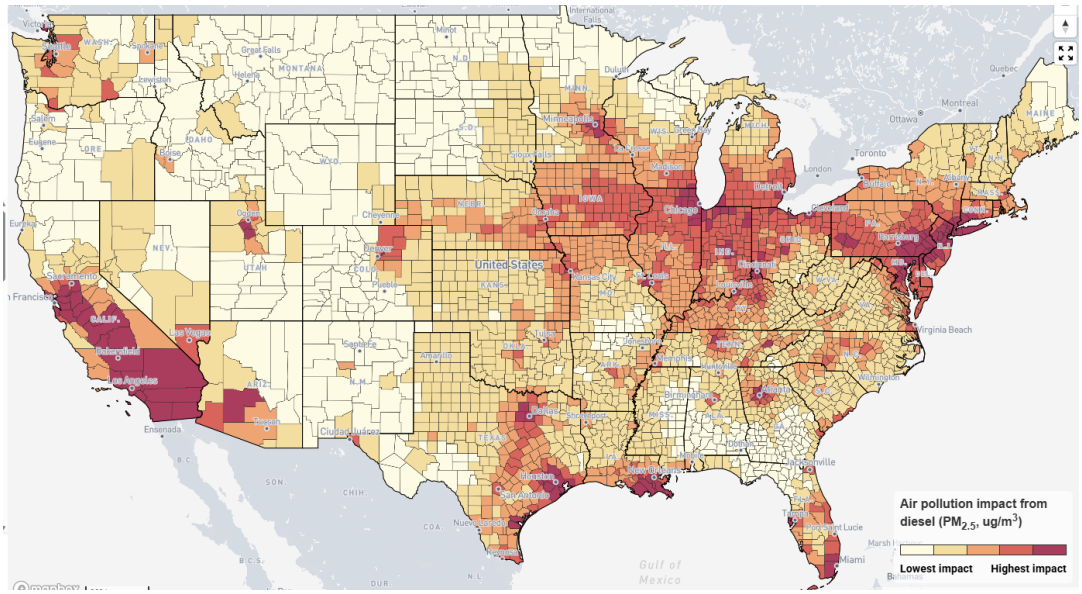

Figure 1: CATF Death by Dirty Diesel Map[13]

In many counties across the country, health damages from diesel particulate emissions exceed $100 million annually, including Allen County, Indiana ($112M); Jefferson County, Louisiana, ($280M); and Knox County, Tennessee ($190M)—as illustrated in the three maps below (also available on CATF's website).

[13] CATF, *Deaths by Dirty Diesel*, https://www.catf.us/deathsbydiesel/.

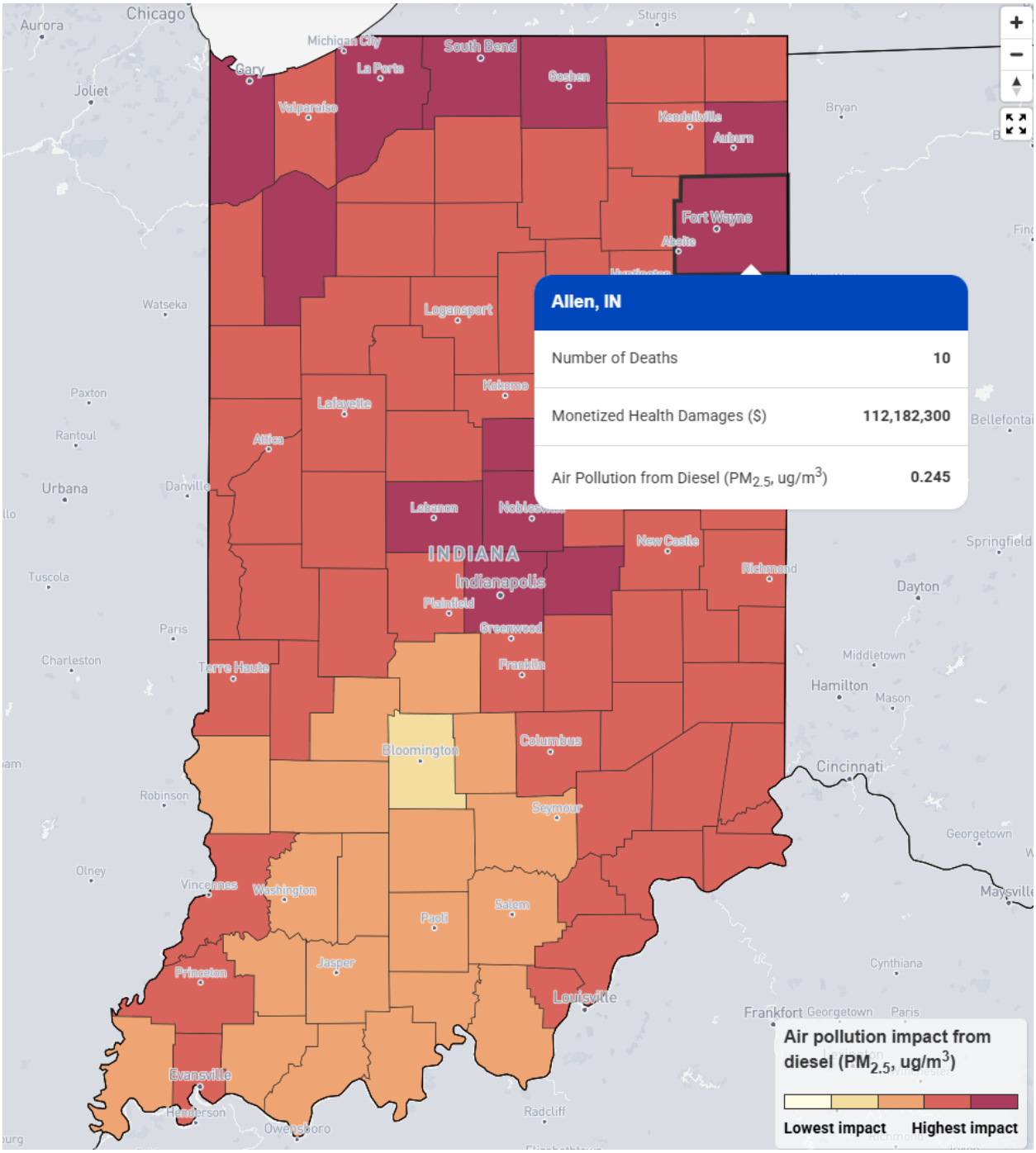

Figure 2. Projected deaths and health damages in Allen, IN in 2026.[14]

[14] CATF, *Deaths by Dirty Diesel*, https://www.catf.us/deathsbydiesel/.

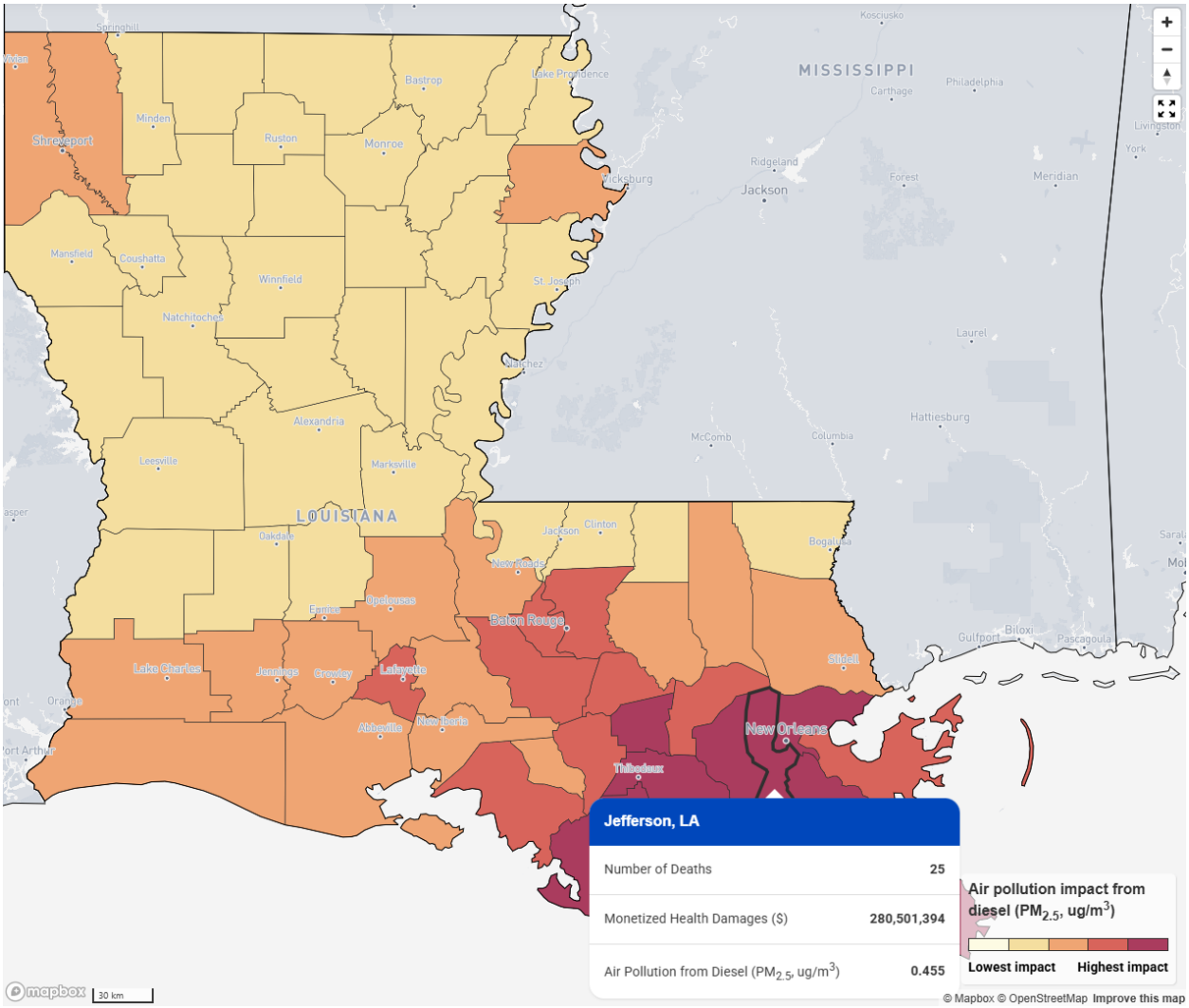

Figure 3. Projected deaths and health damages in Jefferson County, Louisiana in 2026.[15]

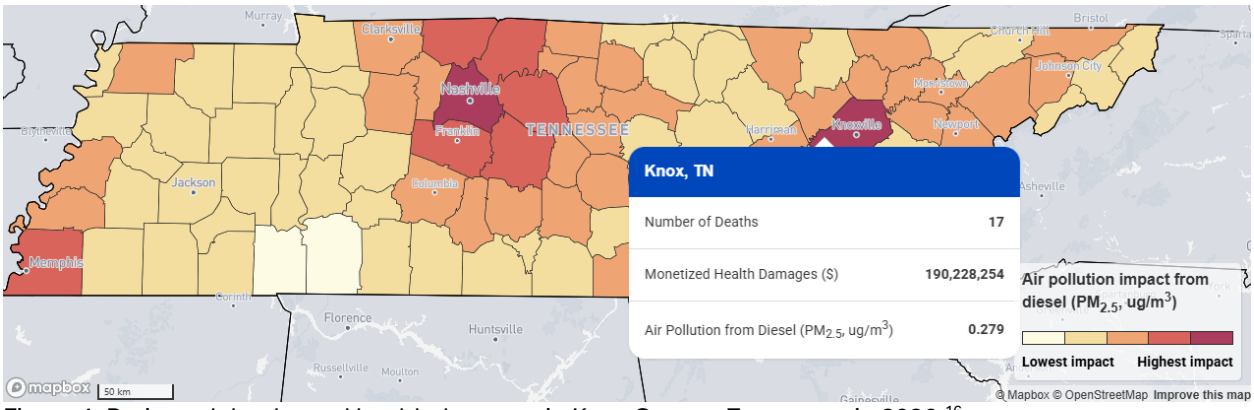

Figure 4. Projected deaths and health damages in Knox County, Tennessee in 2026.[16]

[15] CATF, *Deaths by Dirty Diesel*, https://www.catf.us/deathsbydiesel/.

[16] CATF, *Deaths by Dirty Diesel*, https://www.catf.us/deathsbydiesel/.

The damages illustrated above, as well as health and economic damages tied to CAPs other than diesel-based particulate matter, would be even higher in the absence of the endangerment finding and EPA's GHG standards for light-duty, medium-duty, and heavy-duty vehicles. The GHG regulations helped lower CAPs via the introduction of electric and hybrid drivetrain technologies. Rescinding the endangerment finding and the GHG standards for vehicles will exacerbate air quality-related health impacts compared to a future where GHG emissions regulations continue to exist.

III. Quantifying the Impact of Future Policy-Driven Emissions Scenarios

An understanding of how the transportation sector adversely affects current health and air quality allows us to quantify the impact of future emissions scenarios for all classes of regulated on-road vehicles. As stated, if EPA repeals vehicle GHG emissions regulations, the expectation is a significant slowing of market share growth of zero emission vehicle technologies, which will adversely affect health. This is backed up by data from a study carried out by the EPA published in the Regulatory Impact Analysis for the Light- and Medium-Duty Rule.[17]

We use three emissions scenarios to conduct our assessment of EPA's proposed rescissions:

1. 2026 Current Policy Baseline Scenario ("**2026 Baseline Scenario**"): Estimates the emissions levels associated with relevant vehicle classes that will be achieved in 2026, and as such *does not* reflect the emissions reductions and associated benefits that EPA projected would result from future implementation of ACT, ACCII, the Light- and Medium-Duty Rule, or the Heavy-Duty Rule.[18] As such, this scenario holds CAP emissions constant at current levels through 2055.
2. 2055 Current Policy Reference Scenario ("**2055 BAU Scenario**"): Estimates the emissions levels that will be achieved in 2055 assuming continued implementation of ACT and ACCII, two policies that states could adopt at the time EPA modeled the regulatory landscape in 2024. The 2055 BAU Scenario does not assume future implementation of the Light- and Medium-Duty Rule or the Heavy-Duty Rule.
3. 2055 Full Implementation BAU and LD/MD/HDV GHG Policies Scenario ("**2055 Intact Scenario**"): Estimates the emissions levels that will be achieved in 2055 in a

[17] *See* EPA, Chapter 7; Multi-Pollutant Emissions Standards for Model Years 2027 and Later Light-Duty and Medium-Duty Vehicles Regulatory Impact Analysis (2024), https://nepis.epa.gov/Exe/ZyPDF.cgi?Dockey=P1019VPM.pdf; *see also id.* Figures 8–4 & 8–5.

[18] Note that because EPA also proposes to repeal *all* GHG vehicles regulations going back to 2010, this 2026 baseline likely underestimates baseline negative health impacts from vehicles pollution. And because those standards would have otherwise continued to affect air quality in the future after the repeal of the MY 2027 and later standards, our analysis underestimates the impacts of EPA's repeal efforts.

scenario in which ACT, ACCII, the Light- and Medium-Duty Rule, and the Heavy-Duty Rule are all implemented.

In 2024, EPA used its Motor Vehicle Emission Simulator (MOVES) modeling system to estimate air pollution emissions for criteria air pollutants, greenhouse gases, and air toxics for light-, medium-, and heavy-duty on-road vehicles to create an emissions reference case for 2055[19] (the 2055 BAU Scenario). For this reference case, EPA first estimated "no action" (i.e., business-as-usual) light-duty EV adoption based on projections of fleet size, market share, fuel prices, consumer preference, and other factors, with the OMEGA model.[20] Medium-duty EV adoption in states implementing the Advanced Clean Truck (ACT) in 2024 were estimated from ACT, while non-ACT states used the same methodology as LDV described above. As this is the reference case, (i.e., not impacted by a particular federal rule) it also includes heavy-duty EV penetration estimates which were based entirely on ACT. EPA's modeling indicates that the uptake of BEV and PHEV technology for light- and medium-duty vehicles was expected to reach 33% market share in the 2055 BAU Scenario.[21]

The disapproving of ACT and Advanced Clean Cars II (ACC II) through the Congressional Review Act in 2025,[22] as well as the sunsetting of electric vehicle economic incentives in the One Big Beautiful Bill Act of 2025,[23] complicate this scenario analysis because EPA has not released modeling that accounts for these policy changes.[24] The 2055 BAU Scenario developed by EPA in 2024 and used here likely overstates the emission reductions that will be achieved through implementation of the current suite of policies, because policy developments in 2025 have diminished that suite. Regardless, any delay in the deployment of zero-emission vehicles will increase criteria air pollutant emissions relative to the 2055 BAU scenario, negatively impacting health.

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[19] *See* EPA, Chapter 7.2, Multi-Pollutant Emissions Standards for Model Years 2027 and Later Light-Duty and Medium-Duty Vehicles Regulatory Impact Analysis (2024), https://nepis.epa.gov/Exe/ZyPDF.cgi?Dockey=P1019VPM.pdf

[20] *See* EPA, Chapter 8.1, Multi-Pollutant Emissions Standards for Model Years 2027 and Later Light-Duty and Medium-Duty Vehicles Regulatory Impact Analysis (2024), https://nepis.epa.gov/Exe/ZyPDF.cgi?Dockey=P1019VPM.pdf

[21] *See* EPA, Figure 8–4, Multi-Pollutant Emissions Standards for Model Years 2027 and Later Light-Duty and Medium-Duty Vehicles Regulatory Impact Analysis (2024), https://nepis.epa.gov/Exe/ZyPDF.cgi?Dockey=P1019VPM.pdf

[22] *See* Pub. L. No. 119-16, 139 Stat. 66 (2025) (disapproval of ACC II); Pub. L. No. 119-15, 139 Stat. 65 (2025) (disapproval of ACT).

[23] *See* One Big Beautiful Bill Act of 2025, Pub. L. No. 119-21, 139 Stat. 72, §§ 70501–03.

[24] Due to the truncated comment process, *see* Comments of Environmental and Public Health Organizations, Docket ID No. EPA–HQ–OAR–2025–0194 (Sept. 22, 2025) section IV., CATF has not had time to conduct its own modeling to update the MOVES data with these developments.

A. Comparison of the 2055 BAU Scenario to the 2026 Baseline Scenario

CATF compared the modeled health impacts that result from current air quality conditions (the 2026 Baseline Scenario) to the modeled health impacts that will result from vehicle emissions in the 2055 reference case (the 2055 BAU Scenario). We have done this by running COBRA using the same methodology that was used to generate the diesel health impact maps above. Our analysis of this data indicates that nationally, the 2055 BAU Scenario results in approximately 3,207 fewer deaths, reduces health care costs approximately $48B, and reduces lung cancer by 128 cases[25] —all relative to the 2026 Baseline scenario, in which CAP emissions levels remain the same in 2055 as they are today. In a future scenario where CAP emissions are not reduced in compliance with the policies modeled in the 2055 BAU Scenario, all of those benefits could go unrealized.

B. Comparison of the 2055 Intact Scenario to the 2055 BAU Scenario

Under a scenario in which the Light- and Medium Duty Rule and the Heavy-Duty Rule are fully implemented (the 2055 Intact Scenario), EV penetration rates through 2055 exceed the rates modeled in the 2055 BAU scenario, thus further reducing CAPs. CATF applied COBRA-based health impact analysis to the emissions levels achieved in the 2055 Intact Scenario, as modeled by EPA using MOVES. This analysis indicates that, nationwide, implementing the Light- and Medium-Duty rule would prevent an additional 1,172 deaths, further reduce health care costs by approximately $26B, and decrease lung cancer by another 32 cases, as compared to the 2055 BAU Scenario. And maintaining the Heavy-Duty Rule would prevent an additional 450 deaths, reduce health care costs another $10B, and further decrease lung cancer by 8 cases (nationwide, by 2055). The impact that implementing the BAU policies along with the Light- and Medium-Duty Rule and the Heavy-Duty Rule is illustrated in the bar charts shown in Figure 3.

[25] The lung cancer results in A. – C. are expressed in cases, not cases per million. Lifetime cancer cases per million were computed with a different methodology, and are only used above for the Death by Dirty Diesel results in the background section (II.)

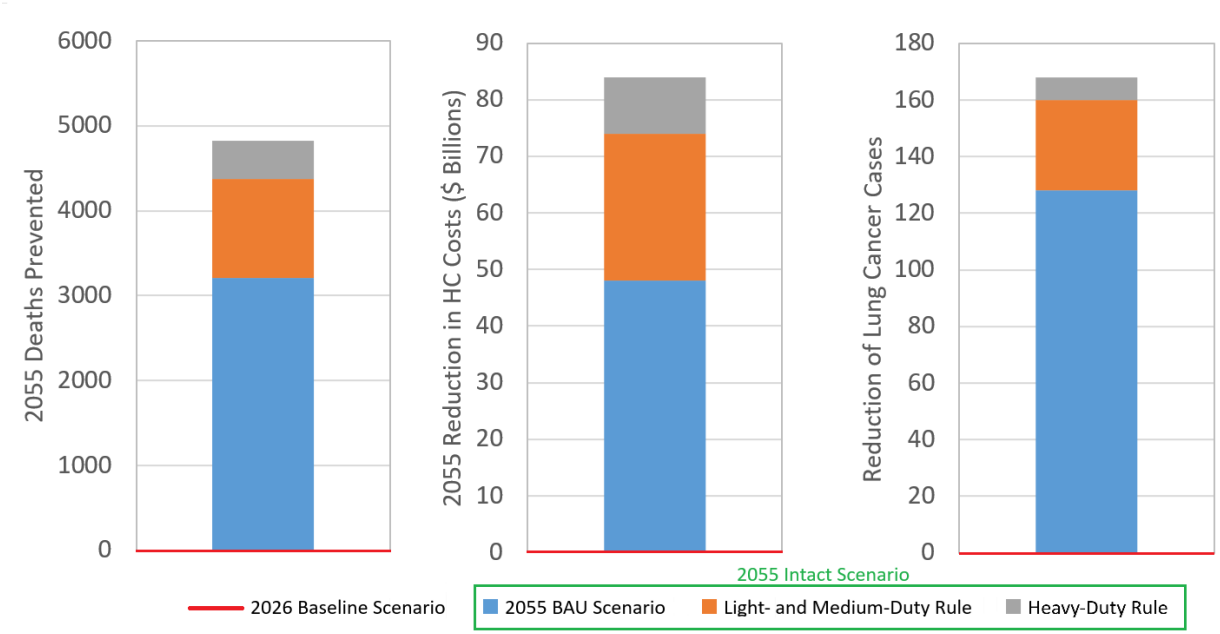

Figure 5: Health Impacts for the 2055 Intact Scenario. Figure 5 shows the deaths prevented, monetized health impacts avoided, and the reduction of lung cancer cases that are estimated to result from the implementation of the 2055 BAU Scenario, the light/medium-duty rule, and the heavy-duty rule. This is presented in comparison, as a change in number of health impacts, to the 2026 baseline scenario (zero, or the red line at the bottom of the charts). The impact of all three cases together is referred to as the 2055 Intact Scenario below. Note, again, that the benefits from the 2055 BAU Scenario are likely overstated, as that Scenario still assumes the existence of ACT and ACCII, which have since been disapproved by Congress under the Congressional Review Act.[26]

C. Comparison of the 2055 Intact Scenario to the 2026 Baseline Scenario

Figure 5 shows that combining the reference case and the two rules, denoted as the 2055 Intact Scenario, could prevent 4,829 deaths, reduce health care costs by $84B, and reduce lung cancer by 168 cases, as compared to the 2026 Baseline Scenario, in which CAPs remain at the level they are today through 2055. Emission levels may improve over the next three decades in spite of recent rollbacks of regulatory protections and EPA proposed rescission of light-, medium-, and heavy-duty vehicle rules (along with the endangerment finding), but in the absence of such rules it would be extraordinarily unlikely that CAP emissions are reduced to the level projected in the 2055 Intact Scenario. The result is increased risk of the deaths and health harms shown in Figure 5 occurring when they could have been prevented with better air quality. On the local level, comparing the 2055 Intact Scenario to the 2026 Baseline Scenario in the same three counties discussed above the avoided cost of health impacts are $62M in Allen County, $107M in Jefferson County, and $205M in Knox County.

[26] For the data used to create Figure 5, *see* 2055 BAU Scenario (Attachment B); Light- and Medium-Duty Rule (Attachment C); Heavy-Duty Rule (Attachment D).

IV. Conclusion

Eliminating criteria pollutants from motor vehicles will help reduce premature mortalities and collectively lower the cost of healthcare. For vehicles, reducing these air pollutants is often closely tied to eliminating GHGs due to overlapping technological solutions. If EPA repeals GHG emissions regulations for motor vehicles, that decision would be arbitrary and capricious because—among other issues—EPA completely fails to account for how a repeal will threaten health around the country, especially in counties that are already struggling with negative health impacts from the air quality today. We urge EPA to withdraw its proposal in light of this information and fulfill its obligations under the Clean Air Act to protect human health and welfare.

Respectfully submitted,

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