September 22, 2025

Lee Zeldin, Administrator
U.S. Environmental Protection Agency
William J. Clinton Building
1200 Pennsylvania Avenue, NW
Washington, DC 20460

Re: Proposed Rule: Reconsideration of 2009 Endangerment Finding and Greenhouse Gas Vehicle Standards (Docket ID: EPA–HQ–OAR–2025–0194)[1]

Dear Mr. Zeldin:

The undersigned health organizations forcefully oppose the United States Environmental Protection Agency's (EPA) proposed repeal of the 2009 "Endangerment Finding"[2] and greenhouse gas standards for vehicles. EPA's proposal disregards science, jeopardizes public health, and misinterprets the law in direct contradiction to its statutory obligations to regulate and reduce air pollutants under the Clean Air Act. EPA is a science-based regulatory body that exists to protect human health and the environment – that is its stated mission.[3] This proposal stands in direct contrast to that mission. We very strongly urge EPA to withdraw this proposal and instead fully implement the 2024 vehicle greenhouse standards, which are based on scientific consensus, lawfully promulgated under the Clean Air Act and very strongly supported by the public.

EPA's proposal to repeal the Endangerment Finding and greenhouse gas standards for vehicles is invalid on legal, procedural, scientific and technological grounds, as we show below.

1. Legal authority to regulate greenhouse gases

Clean Air Act Section 202(a)(1) requires EPA to apply a two-prong test to regulate air pollutant emissions from new motor vehicles or engines:

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[1] US EPA. (08/01/2025). Federal Register: Reconsideration of 2009 Endangerment Finding and Greenhouse Gas Vehicle Standards
[2] US EPA. (12/15/2009). Endangerment and Cause or Contribute Findings for Greenhouse Gases Under Section 202(a) of the Clean Air Act; Final Rule
[3] Our Mission and What We Do | US EPA

i. Endangerment Finding: first determine if an air pollutant causes or contributes to air pollution that endangers public health or welfare.
ii. Cause or Contribute Finding: then determine if the emission sources "cause, or contribute significantly to, air pollution which may reasonably be anticipated to endanger public health or welfare."

Greenhouse gas emissions from vehicles clearly meet both prongs of this test and must therefore be regulated. The U.S. Supreme Court set judicial precedent in *Massachusetts v. EPA* (2007) where it held that greenhouse gases are air pollutants under the Clean Air Act and that EPA must regulate them if they endanger public health or welfare. Based on the overwhelming scientific data already available at that time, and consistent with the statutory requirements of the Clean Air Act, EPA made the Endangerment Finding on greenhouse gases in 2009: "The Administrator finds that the current and projected concentrations of the six key well-mixed greenhouse gases—carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulfur hexafluoride (SF_6)—in the atmosphere threaten the public health and welfare of current and future generations."[4]

EPA also determined that vehicle greenhouse gas emissions met the significant contribution threshold and subsequently made the "Cause or Contribute" Finding on the health harms of greenhouse gases from the transportation sector: "The Administrator finds that the combined emissions of these well-mixed greenhouse gases from new motor vehicles and new motor vehicle engines contribute to the greenhouse gas pollution that threatens public health and welfare."[5] Courts have since upheld EPA's authority and obligation to regulate greenhouse gases from motor vehicles and other sources. Additionally, courts have consistently held that endangerment findings must be based on scientific and public health evidence and not economic or political considerations (*e.g.* in Coalition for Responsible Regulation v. EPA (2012), the D.C. Circuit upheld EPA's GHG endangerment finding as grounded in science).

The Clean Air Act also provides EPA flexibility to regulate pollutants as a group when they share similar properties, have similar health effects or have the same emission sources. EPA has historically done so in regulating some pollutants, including particulate matter (PM) and volatile organic compounds (VOCs). Coarse PM (PM_{10}) and fine PM ($PM_{2.5}$) are two pollutant groups that comprise diverse physical and chemical substances (*e.g.* dust, soot, metals, organic compounds). National Ambient Air Quality Standards are set for PM_{10} and $PM_{2.5}$ as two single groups based on the size and the health impacts (*e.g.* respiratory and cardiovascular harm) shared by the constituent pollutants in each group. Photochemically reactive VOCs are chemically diverse compounds which are also regulated as a group based on their similar function, *i.e*. they contribute to ozone formation. These decades-old regulatory precedents have been consistently upheld by various courts. EPA is therefore justified in regulating the six greenhouse gases as a single group based on their shared properties, including global warming potential, contribution to climate change, very long atmospheric residence times and the fact that they are transported gases.

2. Procedural Issues with Proposal

This proposed rule rolls into one rulemaking what should actually be addressed in several separate, major rulemakings, with adequate opportunity for input on each. The proposal seeks to rescind the endangerment finding for greenhouse gases under the Clean Air Act and to repeal all greenhouse gas emission standards for light, medium, and heavy-duty vehicles, the latter of which were set with multiple separate rulemakings. The Lung Association and many

[4] https://www.epa.gov/climate-change/endangerment-and-cause-or-contribute-findings-greenhouse-gases-under-section-202a
[5] *Ibid* 4

other organizations filed comments asking EPA to extend the comment period to at least 120 days given the sweeping nature of this proposal, but EPA only extended the comment period an additional 7 days, posing challenges to meet the Clean Air Act's requirement of a "reasonable period for participation" given the scope and scale of this proposal.

3. Costs of Climate Change Impacts

Climate change is already wreaking havoc in the U.S. and imposing enormous costs on the nation as a whole. These costs are sweeping, including direct costs from health impacts. The most comprehensive way to measure these costs remains the estimates of the Social Cost of Greenhouse Gases issued by EPA in November 2023 or the product of the Interagency Working Group proceeding the EPA report. These figures were developed with a robust interagency process including extensive expert and stakeholder engagement. The 2023 EPA figures, which range from $120 to $600 per metric ton of CO_2 depending on year and discount rate, provide a science-based sense of the scale of the costs of climate change.[6] The total greenhouse gas emissions from the U.S. transportation sector in 2022 were 1,751 million metric tons of CO_2 – a staggering cost in the hundreds of billions.[7] Our organizations continue to support these figures as the most robust way to account for the sweeping costs associated with climate change, while acknowledging that there are still health impacts with difficult-to-calculate costs that aren't included in these estimates.

However, the cost of an ever-increasing number of extreme weather events alone is enough to illustrate the enormous costs imposed by climate change. Recent reports have shown that climate change is already affecting every region of the country through increased frequency and intensity of extreme weather events, causing disproportionate harm to vulnerable communities and straining health and infrastructure systems. In 2023, in the first three quarters alone, the U.S. experienced 25 weather and climate disasters that cost hundreds of lives and incurred more than $73 billion in damages.[8]

The U.S. saw a repeat of this scenario in 2024, only with more disasters and with much worse impacts – 27 weather and climate disasters (tropical cyclones, winter storms, flooding, drought/heat wave and wildfire events) costing several hundred lives and $182.7 billion. What's more, this cost may rise substantially as additional costs are reported over time. This makes 2024 the calendar year with the second most billion-dollar disasters, the fourth highest in costs of disasters, and the eighth highest in number of fatalities on record.[9] Spring 2025 in the US was its second warmest on record.[10]

Through May 2025, different regions of the U.S. have been experiencing severe weather anomalies. Thirteen states had one of their five wettest Mays on record, while dry conditions persisted across much of the Northwest. The same time period saw two significant severe weather outbreaks resulting in over 200 tornados, very large hail and damaging winds.[11]

Even based on the costs of these weather disasters alone, the need to act on mitigating climate

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[6] US EPA (11/2023). Supplementary Material for the Regulatory Impact Analysis for the Final Rulemaking, "Standards of Performance for New, Reconstructed, and Modified Sources and Emissions Guidelines for Existing Sources: Oil and Natural Gas Sector Climate Review." EPA Report on the Social Cost of Greenhouse Gases: Estimates Incorporating Recent Scientific Advances

[7] US EPA. Inventory of U.S. Greenhouse Gas Inventory Data Explorer. Greenhouse Gas Inventory Data Explorer | US EPA. Site accessed 09-11-25.

[8] 11/09/2023. FACT SHEET: Fifth National Climate Assessment Details Impacts of Climate Change on Regions Across the United States | OSTP | The White House;

[9] NOAA - National Centers for Environmental Information (NCEI). Assessing the U.S. Climate in 2024

[10] NOAA - National Centers for Environmental Information (NCEI). Assessing the U.S. Climate in May 2025

[11] NOAA - National Centers for Environmental Information (NCEI). Assessing the U.S. Climate in May 2025

change is abundantly clear. To deny the underlying cause of these record-breaking extreme weather occurrences and their devastating impacts, as this proposal does, is denying current and future generations the resources to lead healthy lives on a habitable planet.

4. Scientific Evidence on Greenhouse Gases, Climate Change and Public Health

In this proposal, EPA asserts that the 2009 EPA's Endangerment Finding was based on what it calls an "unreasonable analysis" of the scientific record. It claims that new developments and scientific uncertainties cast "significant doubt" on the reliability of the original Endangerment Finding. This agency is basing these assertions on a very hastily developed *ad hoc* "climate report" (the July 2025 *Climate Working Group Report*) from a now disbanded working group at the Department of Energy.[12]

The Climate Working Group report distorts and misrepresents the overwhelming international consensus on climate science, including the causes and impacts of climate change; downplays the increases in greenhouse gases from human activities and their contribution to climate change; distorts extreme event (temperature extremes, wildfire activity) attribution to anthropogenic climate change; misrepresents health disparities and mortality rates from extreme temperatures; and misrepresents the substantial contributions of motor vehicle emissions to climate change.

Many of our organizations filed separate comments to the Department of Energy on the report, from which we summarize key points here:

- The report systematically overstates uncertainties regarding greenhouse gas emissions while dismissing decades of peer-reviewed science. The Intergovernmental Panel on Climate Change's (IPCC's) 6th Assessment Report, the U.S. National Climate Assessment and every major scientific body conclude with very high confidence that anthropogenic greenhouse gas emissions are the primary drivers of observed warming since the mid-20th century.[13]
- The report misrepresents temperature extremes. The IPCC Sixth Assessment Report finds with high confidence that the frequency and intensity of heatwaves have increased across North America due to anthropogenic greenhouse gas emissions.[14] An analysis by more than two dozen scientists at World Weather Attribution documents that record-breaking events – including the 2021 Pacific Northwest heat dome – were virtually impossible without climate change.[15]
- The report claims that wildfire activity cannot be conclusively attributed to greenhouse gas emissions, which is scientifically indefensible. Research shows that anthropogenic climate change has doubled cumulative burned area in the western U.S. since 1984.[16]

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[12] Department of Energy Climate Working Group. (Jul 23, 2025). A Critical Review of Impacts of Greenhouse Gas Emissions on the U.S. Climate. https://www.energy.gov/sites/default/files/2025-07/DOE_Critical_Review_of_Impacts_of_GHG_Emissions_on_the_US_Climate_July_2025.pdf

[13] Intergovernmental Panel on Climate Change (IPCC), *Sixth Assessment Report: Synthesis Report 3-5* (2023); U.S. Global Change Research Program, *Fifth National Climate Assessment, Chapter I: Understanding Risks, Impacts, and Responses* (2023); Nat'l Acad. of Sci., Eng'g, & Med., *Climate Change: Evidence and Causes: Update 2020* (2020); Am. Meteorological Soc., *State of the Climate: 2024 Report* (2025); Am. Ass'n for the Advancement of Sci., *What We Know: The Reality, Risks, and Response to Climate Change* (2014).

[14] J.A. Hicke et al., *North America*, in *Climate Change 2022: Impacts, Adaptation and Vulnerability. Contribution of Working Group II to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change* 1929, 1929-2042 (H. -O. Portner et al. eds., Cambridge Univ. Press 2022).

[15] S.Y. Philip et al., *Rapid Attribution Analysis of the Extraordinary Heat Wave on the Pacific Coast of the U.S. and Canada in June 2021*, 13 Earth Syst. Dynam. 1689, 1689-1713 (2022). https://doi.org/10.5194/esd-13-1689-2022

[16] Y. Zhuang, R. Fu, B.D. Santer, R.E. Dickinson & A. Hall, *Quantifying Contributions of Natural Variability and Anthropogenic Forcings on Increased Fire Weather Risk over the Western United States*, 118 Proc. Nat'l Acad. Sci. U.S. (2021). https://doi.org/10.1073/pnas.2111875118

Drought, high temperatures, and aridity—all strongly linked to greenhouse gas forcing—are the primary contributors.[17]

- The report dismisses event attribution science, despite the fact that it is a mature field recognized by the National Academies of Sciences as robust.[18] The IPCC AR6 devotes entire chapters to attribution, underscoring the methodological consensus.
- The report minimizes the contribution of U.S. motor vehicle emissions to climate change. EPA's Inventory of U.S. Greenhouse Gas Emissions finds that transportation is the largest source of U.S. GHGs, accounting for 28% of national emissions. Vehicle miles traveled and freight demand continue to rise, offsetting efficiency gains.
- In addition to lacking scientific credibility, the report violates four federal laws - Information Quality Act, Federal Advisory Committee Act (FACA), Administrative Procedure Act (APA), Environmental Research, Development, and Demonstration Authorization Act (ERDDAA) - and is thus procedurally deficient in addition to being scientifically deficient.[19]

In response to this EPA proposal, the US National Academies of Sciences, Engineering, and Medicine's (NASEM's) Committee on Anthropogenic Greenhouse Gases and U.S. Climate conducted an independent assessment of the science underlying the Endangerment Finding to meet the (September 22) deadline for public comment. This Committee comprising 16 world-renowned NASEM members released its peer-reviewed consensus report on September 17, 2025.[20] Based on the scientific evidence outlined in the report, the report reached the following overarching conclusion: "EPA's 2009 finding that the human-caused emissions of greenhouse gases threaten human health and welfare was accurate, has stood the test of time, and is now reinforced by even stronger evidence. Today, many of EPA's conclusions are further supported by longer observational records and multiple new lines of evidence. Moreover, research has uncovered additional risks that were not apparent in 2009." The committee emphasized its conclusion explicitly stating that "the evidence for current and future harm to human health and welfare created by human-caused GHGs is beyond scientific dispute...The United States faces a future in which climate-induced harm continues to worsen and today's extremes become tomorrow's norms."

Another ad hoc scientific group, The Expert Working Group on Climate Change and Health in the United States, a convening of more than 100 independent scientists with research expertise in the health effects of climate change, in greenhouse gas emission inventories, and in climate science, has unequivocally stated that "EPA is incorrect in its assessment of uncertainties in the 2009 Endangerment Finding as a reason to reconsider the rule, given that the scientific

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[17] *Id.*

[18] Nat'l Acads. Of Scis., Eng'g & Med., *Attribution of Extreme Weather Events in the Context of Climate Change* (2016). https://doi.org/10.17226/21852

[19] American Lung Association *et al*. (09/02/2025). Comment on DOE's Critical Review of Impacts of Greenhouse Gas Emissions on the U.S. (Doc ID: DOE-HQ-2025-0207-0001, Tracking #: mf3-basi-465m) submitted on Regulations.gov

[20] National Academies of Sciences, Engineering, and Medicine. (Sept 17, 2025). Consensus Study Report: Effects of Human-Caused Greenhouse Gas Emissions on U.S. Climate, Health, and Welfare. https://doi.org/10.17226/29239; The report's overarching conclusion is supported by the following five conclusions:
(1) Emissions of greenhouse gases from human activities are increasing the concentration of these gases in the atmosphere; (2) Improved observations confirm unequivocally that greenhouse gas emissions are warming Earth's surface and changing Earth's climate; (3) Human-caused emissions of greenhouse gases and resulting climate change harm the health of people in the United States; (4) Changes in climate resulting from human-caused emissions of greenhouse gases harm the welfare of people in the United States; (5) Continued emissions of greenhouse gases from human activities will lead to more climate changes in the United States, with the severity of expected change increasing with every ton of greenhouse gases emitted.

evidence since that time reduces the uncertainty regarding health harms from climate change stemming from greenhouse gas emissions. Greenhouse gas emissions, by altering the climate and disrupting earth systems, pose a clear and indisputable danger to human health and well-being."[21]

The NASEM report and the Expert Working Group both invalidate EPA's proposal to repeal the Endangerment Finding which is based on an entirely unreasonable analysis of the overwhelming scientific record on greenhouse gases and climate change as we show in the sections below.

Greenhouse gases such as carbon dioxide and methane absorb heat radiated from Earth's surface. Increases in the atmospheric concentrations of greenhouse gases raise Earth's temperature by trapping more of this heat. When carbon-based fuels including petroleum (gasoline, diesel, etc.), coal, natural gas and biofuels are burned, they release greenhouse gases and numerous co-pollutants. EPA's own websites[22] as well as other federal agencies[23] attest to these scientific facts.

Overwhelming scientific evidence has shown that greenhouse gases including CO_2 are the primary drivers of accelerated climate change because of their heat trapping properties (global warming potential) and their very long atmospheric residence times.[24] Empirical data, atmospheric measurements and climate modeling have all shown that atmospheric CO_2 concentrations have increased by more than 40% since the start of the Industrial Revolution (more than half of that occurring since 1970). This is primarily due to human activities - particularly from burning fossil fuels.[25,26,27,28] Climate change is a health emergency that increases the risks of various physical and mental morbidities through its multiple impacts on air, water and land.[29]

Among the multitude of climate change impacts caused by the increasing concentrations of greenhouse gases is the degradation of air quality with serious consequences to public health. Climate change imposes a "climate penalty" on air quality.[30] The levels of the two critical current determinants of air quality - ozone[31] and PM - will rise because of more extremely warm days and changing weather patterns. These include the combination of intense precipitation and more frequent and prolonged droughts, which results in more extensive and intense wildfires

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[21] The Expert Working Group on Climate Change and Health in the United States. (09/22/2025). Comment on EPA's Reconsideration of 2009 Endangerment Finding and Greenhouse Gas Vehicle Standards (Docket # EPA–HQ–OAR–2025–0194), submitted to https://www.regulations.gov/docket/EPA-HQ-OAR-2025-0194/comments

[22] US EPA. Greenhouse Gases; US EPA. Overview of Greenhouse Gases; Sites accessed 09/08/2025

[23] NOAA Are humans causing or contributing to global warming?; CDC. Climate Change & Health; Sites accessed 09/08/2025

[24] US EPA. Climate Change Indicators: Greenhouse Gases

[25] The Keeling Curve - daily record of global atmospheric carbon dioxide concentration maintained by Scripps Institution of Oceanography at UC San Diego

[26] The UK Royal Society and the US National Academy of Sciences (2020). Climate Change - Evidence & Causes.

[27] NASA. Climate Change Causes; Accessed 09/08/2025

[28] Intergovernmental Panel on Climate Change Sixth Assessment Report (AR6) published between 08/2021 – 03/2023: "(s)ince systematic scientific assessments began in the 1970s, the influence of human activity on the warming of the climate system has evolved from theory to established fact." "Human influence on the climate system is the primary driver of impacts such as worsening heat waves, sea level rise, extreme weather, and health risks."

[29] https://www.who.int/health-topics/climate-change#tab=tab_1; https://www.apa.org/news/press/releases/2017/03/mental-health-climate.pdf

[30] Pollution and climate change upsurge the risk of 'climate penalty' | UN News

[31] Ozone is a secondary pollutant generated by the reaction of nitrogen oxides (NOx) and VOCs in the presence of sunlight whose formation is accelerated at higher temperatures.

and a longer wildfire season. These changing weather patterns also drive increased dust emissions, increased stagnation and changing emissions from vegetation and human sources.[32] As one 2024 study in the Journal of the American Medical Association noted, "The compound occurrence of elevated air pollution and extreme weather highlights the potential for climate change to act as a risk multiplier that will magnify adverse health outcomes beyond any single event."[33]

The American Lung Association's 2025 "State of the Air" report[34] found that wildfires are worsening air quality across the U.S., driving increasing levels of both $PM_{2.5}$ and ozone, and endangering the health of more people.[35] Fine particles penetrate deep into lung tissues, leading to respiratory and cardiovascular problems and causing lung cancer and premature death.

In fact, these climate change impacts, particularly poor air quality and temperature extremes, affect every organ system, resulting in various morbidities and mortality. Below we highlight key impacts on several systems of the body, highlighting studies published since the original Endangerment Finding and added to the enormous weight of scientific evidence on the health harms of climate change.

i. Respiratory Health

Climate change impacts including worsening air quality, increasing allergen levels and extreme variations in weather cause or worsen respiratory morbidities.[36] High temperatures increase ozone formation, while wildfires and floods contribute to elevated PM and mold concentrations. Higher temperatures, along with elevated CO_2 levels, also stimulate plant growth and extend the pollen season, which leads to an increase in airborne allergens.[37,38] These environmental changes cause or aggravate chronic respiratory conditions such as coughing, wheezing, shortness of breath, breathing difficulties, asthma, chronic obstructive pulmonary disease (COPD), respiratory tract infections (e.g. pneumonia, influenza), allergic rhinitis, sinusitis, decline in lung function over time, increased emergency room visits and hospitalizations, lung cancer and increased mortality.[39,40]

ii. Cardiovascular Health

Climate change profoundly impacts cardiovascular health by increasing heart attacks, strokes, and heart failure deaths through increasing air temperature, more extreme weather events and worsening air quality. Air pollution and wildfire smoke trigger oxidative stress and systemic inflammation, exacerbating cardiovascular diseases. One 2022 study found that "climate change-related cardiovascular disease is mediated by air pollution, increased ambient temperatures, vector-borne disease and mental health disorders."[41] A 2024 study noted,

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[32] NOAA Science Advisory Board. (2023). Climate Working Group Report on Air Quality in a Changing Climate
[33] Berman, J. D. (Mar 1, 2024). Invited Commentary: Air Pollution and Health - New Advances for an Old Public Health Problem. JAMA Netw Open, 7;(3):e2354551. doi:10.1001/jamanetworkopen.2023.54551
[34] https://www.lung.org/research/sota
[35] The Hazy Truth: Tracking Wildfire Smoke's Impact on Our Air | American Lung Association
[36] D'Amato G, et al. (2014). Climate change and respiratory diseases. Eur Respir Rev. 23(132):161-9.
[37] Singh AB, and Kumar P. (2022). Climate change and allergic diseases: An overview. Front Allergy. 13;3:964987; Climate Change and ENT Allergies: Understanding the Impact on Respiratory Health
[38] Vicedo-Cabrera, A. M. et al. (2023). Climate change and respiratory health: a European Respiratory Society position statement. European Respiratory Journal 62(2): 2201960
[39] Vicedo-Cabrera, A. M. et al. (2023). Climate change and respiratory health: a European Respiratory Society position statement. European Respiratory Journal 62(2): 2201960
[40] Covert, H. H. et al. (2023). Climate change impacts on respiratory health: exposure, vulnerability, and risk. Physiological Reviews, 103(4):2507-2522
[41] Jacobsen, A. P. et al. (2022). Climate change and the prevention of cardiovascular disease - State-of-the-Art Review. American Journal of Preventive Cardiology, 12, 100391.

"Extreme temperatures cause physiological changes including increasing risk of blood clots, faster heart rates, and inflammation… Long-term changes, such as food insecurity and migration, further strain heart health due to poor diets and psychological stress."[42] An aging population and urbanization further increase the heat-related burden of the disease imposed by climate change.[43] A 2024 systematic review of 492 observational studies clearly showed that exposure to climate change-related environmental stressors like extreme temperature and hurricanes was associated with increased morbidity and mortality from cardiovascular disease.[44]

iii. Metabolic Health

Climate change compromises metabolic health by disrupting physiological processes through multiple mechanisms including heat stress, oxidative stress, nutritional deficiency from compromised food security and increased sugar consumption driven by higher temperatures. These environmental stressors compromise metabolism by increasing the risks of morbidities such as obesity and diabetes through insulin resistance and reduced vasodilation and sweating increasing the vulnerability to diabetes-related complications.[45] Increasing temperatures lead to increase in adipose tissue (which stores energy and functions as a thermoregulator, interacting with other tissues to regulate systemic metabolism) resulting in "reduced adaptive thermogenesis, decreased physical activity, and increased carbon footprint production. In addition, the impact of climate change makes obese individuals more prone to developing type 2 diabetes mellitus," according to a 2024 study.[46] A 2016 study found, "Climate change and low water intake are increasing our risk for dehydration–associated kidney diseases, including kidney stones, heat stroke, and CKD. Hyperosmolarity, especially in a sedentary environment, may also increase the risk for obesity and diabetes."[47]

iv. Reproductive Health

Climate change impacts such as rising temperatures, extreme weather events, poor air quality, and disruptions to food and water security significantly compromise fertility, pregnancy outcomes, fetal development and neonatal health.[48] A 2025 systematic review of data from across the world on the heat impacts on maternal, fetal and neonatal health found significant correlation between heat exposure and multiple adverse maternal, fetal and neonatal health outcomes including preterm births, low birth weight, hypertensive disorders of pregnancy, congenital anomalies and stillbirths.[49]

v. Neurological Health

Climate change adversely impacts neurological health through increased heat, air pollution and neurotoxin exposure. Extreme heat is associated with stroke incidence and severity, migraine headaches, hospitalization in patients with dementia, and multiple sclerosis exacerbations. It can also lead to dehydration, making blood thicker and increasing the risk of clot-related

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[42] Katznelson E, et al. (2024). Impact of Climate Change on Cardiovascular Health. Curr Atheroscler Rep.,27(1):13.
[43] Zhang, S. et al. (2022). Climate change and cardiovascular disease – the impact of heat and heat-health action plans. European Society of Cardiology e-Journal of Cardiology Practice, 22(18)
[44] Kazi, S. D. et al. (2024). Climate Change and Cardiovascular Health - A Systematic Review. JAMA Cardiol, 9;(8):748-757. doi:10.1001/jamacardio.2024.1321
[45] Stojchevski, R. et al. (2024). Adipose Tissue Dysfunction Related to Climate Change and Air Pollution: Understanding the Metabolic Consequences. *International Journal of Molecular Sciences,* 25(14):7849.
[46] Stojchevski, R. et al. (2024). Adipose Tissue Dysfunction Related to Climate Change and Air Pollution: Understanding the Metabolic Consequences. *International Journal of Molecular Sciences,* 25(14):7849.
[47] Johnson, R. J. et al. (2016). Metabolic and Kidney Diseases in the Setting of Climate Change, Water Shortage, and Survival Factors. J Am Soc Nephrol., 27(8):2247–2256.
[48] Papadiochou, A. et al. (2024). Impact of Climate Change on Reproductive Health and Pregnancy Outcomes: A Systematic Review. Cureus, 16(8):e68221
[49] Lakhoo, D.P. *et al.* (2025). A systematic review and meta-analysis of heat exposure impacts on maternal, fetal and neonatal health. *Nat Med* 31, 684–694.

strokes.[50] Heat waves disrupt sleep, a critical component of neurological health; impair brain circulation; disrupt the brain's ability to regulate body temperature; potentially trigger migraines; affect brain function; and worsen conditions like epilepsy by lowering the seizure threshold.[51] Exposure to airborne pollutants, especially $PM_{2.5}$, increases neuroinflammation and the risk of cognitive decline, dementia risk, stroke incidence and severity, Parkinson's disease and Multiple Sclerosis exacerbation.[52] A 2024 study found, "Climate-induced stressors like anxiety and malnutrition also contribute to neurocognitive and psychiatric disorders, highlighting a critical, growing neurological health crisis."[53]

vi. Psychiatric Health

Accelerated climate change harms not only physical health but also mental health. A 2020 review noted, "The effects of climate change can be direct or indirect, short-term or long-term. Acute events can act through mechanisms similar to that of traumatic stress, leading to well-understood psychopathological patterns. In addition, the consequences of exposure to extreme or prolonged weather-related events can also be delayed, encompassing disorders such as posttraumatic stress, or even transmitted to later generations."[54]

Extreme weather events and disasters (heat waves, floods, hurricanes, droughts) can elicit psychological responses such as anxiety, depression, grief, and post-traumatic stress disorder (PTSD) from social instability, economic disruption, loss and displacement, and increased hospital admissions for psychiatric issues.[55,56] Exposure to heat extremes and poor air quality can increase stress, irritability, and aggression and worsen existing mental health issues.[57,58]

A 2021 scoping review of 120 original research studies related to climate change-related exposures and mental health in high-income countries showed a clear association between the two, which manifested in "psychological distress, worsened mental health (particularly among people with pre-existing mental health conditions), increased psychiatric hospitalizations, higher mortality among people with mental illness, and heightened suicide rates."[59]

vii. Additional Health Impacts

The health effects of climate change caused by greenhouse gases are compounded by exposures to the co-pollutants of these gases, which are emitted during the combustion of carbon-based fuels. Exposure to one or a combination of these pollutants, which include $PM_{2.5}$, nitrogen oxides (NO_x), sulfur oxides (SO_x) and VOCs, along with ozone, a secondary pollutant, can trigger or worsen respiratory illnesses, cardiovascular diseases, adverse reproductive and developmental outcomes, increased risk of metabolic disorders, increased need for medical

[50] Climate change is linked to worsening brain diseases – new study
[51] Imperatives and co-benefits of research into climate change and neurological disease | Nature Reviews Neurology
[52] Louis, S. et al (2023). Impacts of Climate Change and Air Pollution on Neurologic Health, Disease, and Practice - A Scoping Review. Neurology, 100(10):474-483
[53] Climate change is linked to worsening brain diseases – new study
[54] Cianconi, P. et al. (2020). The Impact of Climate Change on Mental Health: A Systematic Descriptive Review. Frontiers in Psychiatry,11
[55] Nature Editorial. (2024). What happens when climate change and the mental-health crisis collide? Nature, 628:235
[56] Mental Health and Stress-Related Disorders | Climate and Health | CDC
[57] Miles-Novelo, A. & Anderson, C.A. (2019)Climate Change and Psychology: Effects of Rapid Global Warming on Violence and Aggression. *Curr Clim Change Rep* **5**:36–46.
[58] Novotney, A. (2023). How does climate change affect mental health? American Psychological Association.
[59] Charlson, F. et al. (2021). Climate change and mental health: A scoping review. Int. J. Env. Res. Pub. Health, 18(9):4486.

care and increased emergency room visits and premature death.[60,61,62,63]

Additional climate change impacts including food and water insecurity, healthcare disruptions, increased prevalence of zoonotic diseases,[64] ecological changes (loss of green spaces and wildlife), etc. compound the physical and mental health risks outlined above. The cumulative impact of the manifold effects of climate change – their complexity, scale, interconnectedness - is only just beginning to be evaluated. Climate change has a profound effect on all and vulnerable populations including the elderly, children and those with pre-existing morbidities, those in poorer economic conditions and those experiencing social isolation face the greatest risks.

In direct contrast to this EPA proposal to rescind the Endangerment Finding and remove regulations to reduce GHG emissions, the eminent medical journal *The Lancet, in its* 2024 "Countdown on Health and Climate Change" addressed the gravity of the twin interlinked crises of climate change and health crisis by calling for urgent government action: "Climate change has created a health crisis that will continue to worsen unless the U.S. takes decisive action to end its fossil fuel dependence, reduce greenhouse gas (GHG) emissions, and invest in strong health systems and climate resilience. An equitable fossil fuel phase-out requires proactive attention to the health and well-being of both the historically marginalized communities impacted by fossil fuel pollution and the communities and fossil fuel workers most impacted by the clean energy transition. Such a transition will improve the health of everyone in the U.S. and strengthen our nation in other fundamental ways, benefiting our economy, security, and the wellbeing of current and future generations."[65]

5. Responsibility of the U.S. in Global Climate Change Mitigation

Global climate change is the result of the cumulative contributions of greenhouse gases emitted by all nations across the world. Reducing the global greenhouse gas load and mitigating climate change is every nation's responsibility and requires each nation to reduce its own local greenhouse gas contributions to the global pool. Those emitting the most need to do the most to reduce the emissions. The United States ranks second in the world for total greenhouse gas emissions and is among top 20 countries in *per capita* greenhouse gas emissions.[66]

The scientific consensus is that the world's average temperature must not exceed that of preindustrial times by more than 1.5 °C (2.7 °F) to prevent worsening of global warming and potentially irreversible impacts of climate change.[67] According to the 2024 Lancet Countdown report, the annual mean global surface temperature reached a record high of 1.45°C above the pre-industrial baseline in 2023 and is dangerously close to exceeding the 1.5°C threshold. New temperature highs were recorded throughout 2024. The resulting climatic extremes are increasingly claiming lives and livelihoods worldwide.[68]

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[60] Clean Air Scientific Advisory Committee (CASAC). (Jun 2023). Review of the EPA's Policy Assessment (PA) for the Reconsideration of the Ozone National Ambient Air Quality Standards (External Review Draft Version 2)
[61] EPA. Supplement to the 2019 Integrated Science Assessment for Particulate Matter (Final Report, 2022).
[62] EPA. Integrated Science Assessment (ISA) for Sulfur Oxides – Health Criteria (Final Report, Dec 2017).
[63] EPA. Integrated Science Assessment (ISA) for Oxides of Nitrogen – Health Criteria (Final Report, Jan 2016).
[64] Louis, S. et al (2023). Impacts of Climate Change and Air Pollution on Neurologic Health, Disease, and Practice - A Scoping Review. Neurology, 100(10):474-483
[65] Beyeler, N. S. *et al*. (2024). Lancet Countdown on Health and Climate Change - Policy Brief for the United States of America
[66] CO2 Emissions – Global Energy Review 2025 – Analysis - IEA
[67] Explained: The 1.5 C climate benchmark | MIT News | Massachusetts Institute of Technology
[68] Romanello, M. *et al*. (11/09/2024). The 2024 report of the Lancet Countdown on health and climate change: facing record-breaking threats from delayed action. The Lancet 404 (10465),1847-1896

Through strong policies and climate actions to reduce its greenhouse gas emissions, the U.S. can help lower the global surface temperatures to stave off the worst effects of climate change.[69] A recent independent assessment of U.S. greenhouse gas emissions found that if the U.S. were to continue with the meaningful decarbonization policies currently on the books, the country would be on track to reduce its emissions by 26-41% in 2040 relative to 2005 levels.[70] Clearly, the U.S. must do its part by reducing emissions from its transportation, energy and industrial sectors.

To continue on this path and secure greenhouse gas reductions, EPA must expeditiously implement the 2024 emission standards for vehicles and carbon pollution standards for power plants and continue to advance emissions controls based on the most up-to-date scientific understanding. These are some of the many actions that the U.S. must undertake to reduce its economy-wide greenhouse gas contributions. By doing so, EPA can help the U.S. retain a leadership position in climate mitigation efforts and set a global precedent that could influence international climate policy and negotiations. The uncertainty inherent in failing to meet this challenge risks climate catastrophe while the U.S. falls ever further behind technology investments, development and deployment.

6. Vehicle Standards: Technological Feasibility, Pathways and Benefits

Decades of peer-reviewed research have established that transportation pollution results in a wide range of public health risks and emergencies.[71] EPA's legacy of addressing the harms of transportation pollution is similarly well established, both in terms of criteria air pollutants and greenhouse gases. In proposing to eliminate greenhouse gas standards for light-, medium- and heavy-duty trucks, EPA has rejected its own leadership, health science and decades of manufacturing innovation, cost-savings and technological advancement to curb harmful emissions. The transportation sector is the largest source of greenhouse emissions in the U.S., accounting for 28% of total emissions, followed by the power sector (25%) and industrial sector (23%).[72] Within the global transportation sector, the United States is the leading contributor to greenhouse gas emissions.[73] Despite this, EPA bases the proposed repeal on a range of false premises related to the underlying Endangerment Finding and ancillary claims about the vehicle standards themselves.

Under the guise of addressing a non-existent technology "mandate", EPA has proposed to eliminate all past, current and future greenhouse gas standards for on-road vehicles. Under the existing standards finalized in 2024, and under all previous standards, there is no mandate for specific technology for passenger cars or heavier trucks, and no justification for EPA to make ongoing claims to the contrary. The rules adopted and implemented by EPA have set science-based, technologically feasible and health-protective standards to reduce pollutants over time – with significant flexibilities for compliance – and manufacturers have worked to achieve the required emission levels through a mix of technologies based on their preferred pathway. One clear example of technology pathway recognitions comes via the EPA Regulatory

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[69] Explained: The 1.5 C climate benchmark | MIT News | Massachusetts Institute of Technology; The scientific consensus is that the world's average temperature must not exceed that of preindustrial times by more than 1.5 °C (2.7 °F, Paris Agreement) to prevent worsening of global warming and potentially irreversible impacts of climate change. According to the 2024 Lancet Countdown report the annual mean global surface temperature reached a record high of 1·45 °C above the pre-industrial baseline in 2023 and is dangerously close to exceeding the 1.5 °C threshold.

[70] King, B., et al. (Sep 10, 2025). Taking Stock 2025. Energy & Climate Report from the Rhodium Group

[71] Systematic Review and Meta-analysis of Selected Health Effects of Long-Term Exposure to Traffic-Related Air Pollution. Health Effects Institute. 2023.

[72] Sources of Greenhouse Gas Emissions | US EPA 2024.

[73] Vehicle Sector GHG Contribution Issue Brief. Institute for Policy Integrity, NYU School of Law. 2025.

Announcement related to the Phase 2 GHG Standards for Heavy-Duty Trucks and Trailers (2021-2027), which noted a range of technology deployments *could* be employed to meet standards across a range of vehicle classes, engine types and trailers, specifically noting:

> These technologies include improvements in engines, transmissions, and lower rolling resistance tire technologies. Under Phase 2, the agencies expect newer, advanced technologies such as engine stop start and powertrain hybridization will also become available in this segment of the market. These newer technologies are NOT mandated but some manufacturers may choose to use them to meet the standard. [Emphasis EPA's][74]

EPA's proposal claims that requisite technologies to impact global climate change do not exist, ignoring decades of advancements crafted by engineers in service to greater efficiency, reduced consumer costs and reductions in health-harming emissions from passenger vehicles, and various truck classes. While zero-emission technologies offer the most viable strategy for greenhouse gas and (and criteria pollutant) reductions available, combustion engine technologies have greatly improved performance and emission reductions through a range of technologies beyond electrification. As noted in the most recent EPA Greenhouse Gas Trends Report,[75] real-world reductions from the passenger fleet dropped by 53% between 1975 to 2023. Excluding the benefits of zero-emission technologies, the fleet achieved a 48% reduction. Further, real world greenhouse gas emissions had dropped by 41% prior to the Endangerment Finding. As EPA explains in the Trends report, these gains follow the implementation of a wide range of existing technologies:

> In addition to electrification technologies, other technologies continue to improve the performance of internal combustion engines (ICE), including the engines found in hybrids and PHEVS. These technologies include a combination of turbocharged engines (Turbo), gasoline direct injection (GDI), fuel injection systems that can alternate between GDI or port fuel injection (GDPI), and cylinder deactivation (CD). Higher speed transmissions and continuous variable transmissions (CVT) also enable the engine to operate in the most efficient way possible.
>
> Manufacturers are continuing to implement both electrification and engine technology improvements across their vehicles to improve CO2 emissions, fuel economy, and performance.

EPA makes further unsubstantiated claims in the current proposal that vehicle standards increase costs across the board, without reference to the benefits (climate, health, consumer savings, national security) attained to date and projected into the future under various vehicle greenhouse gas standards. In reality, more efficient light-, medium- and heavy-duty vehicles will continue to result in major benefits, according to previous, robust cost-benefit analyses in prior EPA rulemakings. Further, the Department of Energy's own Annual Energy Outlook for 2025 projects a $0.75 per gallon increase under scenarios that exclude the existing standards.[76] The benefits of clean vehicle programs are significant, and they are ignored in the EPA proposals.

For example, EPA's current "Phase 2" Greenhouse Gas Standards for 2021-2027 were developed with significant attention to benefits to heavy-duty truck owners, customers and

[74] Regulatory Announcement: EPA and NHTSA Adopt Standards to Reduce Greenhouse Gas Emissions and Improve Fuel Efficiency of Medium- and Heavy-Duty Vehicles for Model Year 2018 and Beyond. 2016.
[75] US EPA The 2024 EPA Automotive Trends Report: Greenhouse Gas Emissions, Fuel Economy, and Technology since 1975 (EPA-420-R-24-022, November 2024) at Table 2.1 and Overall Industry Trends (p. 48). 2024.
[76] DOE, Energy Information Agency: Annual Energy Outlook 2025 at Table 12. 2025.

businesses who rely on trucking and the public:

> At every step of the Phase 2 program, the standards have fuel savings that more than offset the costs and have favorable payback periods for truck owners. The typical buyer of a new long-haul truck in 2027 could recoup the extra cost of the technology in under two years through fuel savings. The program will also benefit consumers and businesses by reducing the costs for transporting goods. In total, the program will result in up to $230 billion in net benefits to society over the lifetime of vehicles sold under the program. This includes fuel savings, carbon reductions, health benefits, energy security benefits…[77]

Similarly, EPA's Phase 3 standards for trucks finalized in 2024 would add $13 billion in annual societal benefits, including an estimated $300 million in annual health benefits associated with reductions in deadly particle pollution through 2055.[78]

Finally, the proposal repeatedly notes that "only" greenhouse gas emissions are being addressed, but it is clear that broader deregulatory efforts to limit the effectiveness of existing criteria pollutant reduction programs from the vehicle sector are also being taken concurrent to these proposals. In recent months, the administration has provided guidance to shelve compliance with fuel economy standards and to allow excess vehicle emissions related to on-board diagnostic system warnings, and has championed the revocation of waivers for state-level programs to dramatically cut harmful emissions. In September 2025, EPA proposed the partial rejection of the California State Implementation Plan for Ozone due to the inclusion of a life-saving program designed to identify and address excess emissions from the operation of heavy-duty trucks in the state – as with the above proposals, there is no basis for this action.

Given the lack of analysis of the sweeping harms that the proposed actions will wreak across the United States, as well as the international scientific consensus, ever-worsening climate change indicators, health impacts, and consumer impacts, EPA must abandon the proposed repeal of greenhouse gas emission standards for vehicles.

7. Conclusion

EPA has a legal obligation to protect human health and the environment. This very dangerous proposal fails that obligation and pushes the country backward at a time when the nation urgently needs bold, science-based action to confront the climate crisis. This proposal completely undermines decades of progress, innovation and investment in cleaner vehicles. EPA must not revisit the 2009 greenhouse gas Endangerment Finding and must not repeal the greenhouse gas standards for vehicles - both are firmly grounded in science. Instead, we ask that EPA withdraw this reckless and harmful proposal and start implementing the greenhouse gas and co-pollutant emission standards for motor vehicles and power plants finalized in 2024. The health of the patients and communities our organizations serve depends on it.

Sincerely,

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[77] Regulatory Announcement: EPA and NHTSA Adopt Standards to Reduce Greenhouse Gas Emissions and Improve Fuel Efficiency of Medium- and Heavy-Duty Vehicles for Model Year 2018 and Beyond. 2016.
[78] Regulatory Announcement: Final Standards to Reduce Greenhouse Gas Emissions from Heavy-Duty Vehicles for Model Year 2027 and Beyond. 2024.

Alliance of Nurses for Healthy Environments

American College of Chest Physicians

American College of Physicians

American Lung Association

American Public Health Association

Asthma and Allergy Foundation of America

Center for Climate Change Communication

Children's Environmental Health Network

Climate Psychiatry Alliance

Health Care Without Harm

Medical Society Consortium on Climate and Health (MSCCH)

National Association of Pediatric Nurse Practitioners

National League for Nursing

OUCH - Int'l (Oncology Advocates United for Climate and Health International)

Physicians for Social Responsibility

Public Health Institute