UTAH CLEAN ENERGY

September 18, 2025

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

Re: Docket ID No. EPA-HQ-OAR-2025-0194: Reconsideration of 2009 Endangerment Finding and Greenhouse Gas Vehicle Standards

Administrator Zeldin:

I am submitting this comment on behalf of the non-profit Utah Clean Energy, and as a geophysicist with over 30 years' experience working in air quality and earth systems science, to oppose any efforts to revoke or undermine the EPA's Endangerment Finding[1] ("Finding") under Section 202(a) of the Clean Air Act. The Finding is grounded in rigorous science, validated by national and international consensus, and legally mandated by Supreme Court precedent. In these comments, EPA's filing is referred to as "Reconsideration".

The EPA's 2009 Endangerment Finding was based on expansive scientific literature, including findings and references from:

- IPCC Fourth Assessment Report (2007)[2]
- USGCRP 'Global Climate Change Impacts in the United States' (2009)[3]
- NRC 'Climate Change Science: An Analysis of Some Key Questions' (2001)[4]
- Multiple peer-reviewed epidemiological and atmospheric studies (see Docket ID EPA-HQ-OAR-2009-0171)[5]

[1] EPA, "Endangerment and Cause or Contribute Findings for Greenhouse Gases Under Section 202(a) of the Clean Air Act," 74 Fed. Reg. 66,496 (Dec. 15, 2009).
[2] Pachauri, Rajendra K., and Andy Reisinger. "IPCC fourth assessment report." *IPCC, Geneva* 2007.673 (2007): 044023.
[3] US Global Change Research Program. *Global climate change impacts in the United States*. Cambridge University Press, 2009.
[4] National Research Council, et al. *Climate change science: An analysis of some key questions*. National Academies Press, 2001.
[5] EPA, Reconsideration of 2009 Endangerment Finding and Greenhouse Gas Vehicle Standards, 90 Fed. Reg. 36288 (Aug. 1, 2025).

In sum, the scientific research presented in the Finding are conclusive that greenhouse gas emissions (GHGs) contribute to climate change which in turn causes significant harm to public health and welfare. These findings have only become more conclusive and pressing over the 16 years since the Finding was enacted.

In my professional judgment as a geophysicist who has worked in air quality and climate science for over 30 years, the scientific basis for the Endangerment Finding and the need for robust greenhouse gas emission standards for vehicles has only grown stronger since 2009. Specifically:

1. The proposal to revoke the "Finding" uses climate uncertainties as a basis for revocation. "The Endangerment Finding itself acknowledged significant uncertainties related to climate change and its potential impacts when it states that the "inherent uncertainty in the direction, magnitude and/or rate of certain future climate change impacts opens up the possibility that some changes could be more or less than expected, and the possibility of unanticipated outcomes.""[6]
    a. The climate system is a complex system with many inter-related components. There will never be exact specifications of *exactly* what will happen at a particular time in the climate system, just as we cannot exactly predict the weather, or who will have heart disease, who will live to be 100 years old, or who will be killed in a car accident. This is why statistics and scientific evidence are important. For example, many studies show that people who wear seatbelts are less likely to die in a car crash. A seat belt does not eliminate the potential that someone can die in a car crash, but it reduces the probability. According to the National Highway Transportation Safety Administration, seatbelts saved 14,955 lives in 2017[7]. Because of this, we have seatbelt laws to protect public health and welfare. Likewise, there is a preponderance of evidence that human produced greenhouse gas emissions are warming Earth's atmosphere, creating wide-ranging impacts such as more severe droughts, floods, and heatwaves, which then contribute to the associated health impacts from extreme weather events such as illness, death, and lack of adequate resources. The uncertainty mentioned in the Endangerment Finding does not indicate a reduced potential of uncontrolled warming and associated risks, but states that the exact nature of these risks cannot be predicted with *exact* certainty.

[6] https://www.regulations.gov/docket/EPA-HQ-OAR-2025-0194
[7] https://crashstats.nhtsa.dot.gov/Api/Public/ViewPublication/812683

b. Furthermore, the science of attribution has advanced since the Finding to the point that we now know that GHG emissions have exacerbated extreme events. "For example, the record-setting Pacific Northwest heat wave of 2021 was made about eight times more likely by greenhouse gas emissions[8]. Absent mitigation, the future will be more dangerous than the past[9]."[10]

2. "With respect to projected increases in GHG concentrations and global temperatures, the projections relied upon in the Endangerment Finding appear unduly pessimistic in light of empirical observations made after it was finalized in 2009 through 2024."[6]
    a. As an organization that is based in Utah in the desert Southwest, we are experiencing the impacts of a warming climate in terms of extended drought, excessive heat, reduced snowpack and water supply, wildfire, and toxic dust storms. All of these impacts, in one way or another, negatively impact our local air quality with the resultant negative impacts on health. The Finding produces a pathway to reduce GHGs from vehicles, which has the co-benefit of reducing vehicle air pollution. Furthermore, reducing GHGs from vehicles is one contributor to mitigating anthropogenic climate change and thus reducing the likelihood of drought, excessive heat, reduced snowpack and water supply, wildfire, and toxic dust storms. There is no doubt from temperature and precipitation observations, that temperature has been rising consistently and rapidly in the United States Southwest and precipitation has been decreasing [Figure 1].[11]

---

[8] Leach, N. J., Roberts, C. D., Aengenheyster, M., Heathcoate, D., Mitchell, D. M., Thompson, V., et al. (2024). Heatwave attribution based on reliable operational weather forecasts. *Nature Communications*, **15**, 4530. **https://doi.org/10.1038/s41467-024-48280-7**

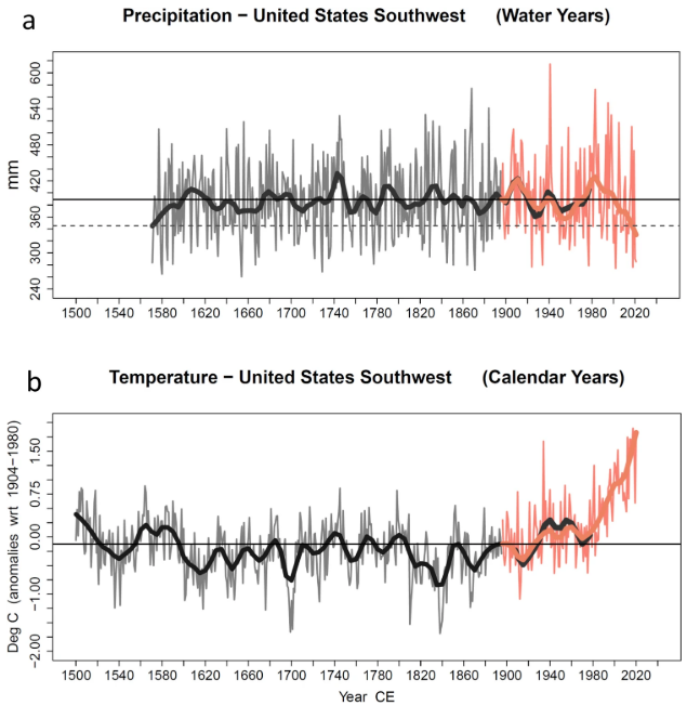
[9] Kemp, L., Xu, C., Depledge, J., Ebi, K. L., Gibbins, G., Kohler, T. A., et al. (2022). Climate endgame: Exploring catastrophic climate change scenarios. *Proceedings of the National Academy of Sciences of the United States of America*, **119**(34), e2108146119. **https://doi.org/10.1073/pnas.2108146119**

[10] What Is Endangered Now? Climate Science at the Crossroads, Saleska, et. al. AGU Advances, 19 June 2025, https://doi.org/10.1029/2025AV001808

[11] Wahl, E.R., Zorita, E., Diaz, H.F. et al. Southwestern United States drought of the 21st century presages drier conditions into the future. Commun Earth Environ 3, 202 (2022).

Fig. 1: Southwest historical water year precipitation and calendar year annual mean temperature.

From: Southwestern United States drought of the 21st century presages drier conditions into the future



Water year (Oct_{t-1} to $Sept_t$) precipitation (**a**), 1571-2021, and calendar year temperature (**b**), 1500-2020, in the SW. Gray and dark gray indicate paleoreconstructions (RECON, through 1895), salmon indicates instrumental (INST, 1896-on) data; heavy lines indicate ~21-year lowess smoothing filters. Solid horizontal lines indicate means of full RECON+INST time series; dashed horizontal line (top) indicates smooth value for 1571. Correlations between RECON and INST smooths during period of overlap (to 1977 precipitation, to 1980 temperature) are 0.88 and 0.92, respectively.

Studies show that the United States Southwest is in a period of intensifying aridification due to higher temperatures which is leading to Southwest water reservoirs declining with little likelihood of their recovery. The cascade of impacts from this warming is clear. "Rising temperatures will, by themselves, lead to more precipitation delivery as rain and less as snow. The loss of snowpack and related earlier drying of winter-moist soils in spring will in turn have major impacts in the southwest, given the importance of mountain snow as a critical water reservoir in the region and the non-capture of excess runoff that higher extreme rainfall can possibly entail. Related vegetation drying and high temperature "fire weather" impacts on fire regimes are also indicated and have already been detected."[11]

3. "Terrestrial ecosystems have demonstrated a greater than anticipated sensitivity to elevated CO_2 concentrations in the form of enhanced plant growth, which results in greater removal of CO_2 from the atmosphere as plants take up CO_2 and return it to the soil through natural life cycles."[6]

a. While there are situations where plants can take up more CO_2 if it is available, there are climate extremes and tipping points which negate this effect. Notably, as temperatures warm, plants' capacity to uptake CO_2 generally diminishes as the plant's ability to survive in higher temperatures diminishes. "While the overall impact of warming at high latitudes is expected to increase plant productivity and carbon uptake, high-temperature anomalies increasingly induce negative net biospheric production (NBP) extremes toward the end of the 21st century. … The larger proportion of negative NBP extremes raises a concern about whether the Earth is capable of increasing vegetation production with a growing human population and rising demand for plant material for food, fiber, fuel, and building materials. The increasing proportion of negative NBP extremes highlights the consequences not only of reduction in total carbon uptake capacity but also of conversion of land to a carbon source."[12]

4. In northern Utah, a primary area of concern for Utahns is the fate of the Great Salt Lake (GSL). The GSL is a terminal lake whose surface elevation is dependent upon the relationship between inflow from rivers and outflow due to evaporation. Evaporation rates go up as temperatures go up. And inflow goes down as snowpack decreases. The level of the GSL has dropped significantly over the last century and is at critically low levels exposing a lakebed heavy with particulates and toxins which, when airborne, have significant health impacts. "As temperatures increase and droughts persist, climate change will amplify the decline in lake elevation, creating more dust from the exposed lakebed. Dust blowing into inhabited valleys will worsen air quality with particulates and may be laden with the pollutants collected by the lake."[13]

5. Almost all of the references within the "Reconsideration" refer to an unpublished, secretive document which was not peer reviewed and which misrepresents many of the peer reviewed articles it references. This document[14] is subject to a lawsuit[15]

---

[12] Sharma, B., Kumar, J., Ganguly, A. R., and Hoffman, F. M.: Carbon cycle extremes accelerate weakening of the land carbon sink in the late 21st century, Biogeosciences, 20, 1829–1841, https://doi.org/10.5194/bg-20-1829-2023, 2023.

[13] Baxter, B.K., Butler, J.K. (2020). Climate Change and Great Salt Lake. In: Baxter, B., Butler, J. (eds) Great Salt Lake Biology. Springer, Cham. https://doi.org/10.1007/978-3-030-40352-2_2

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

[15] https://www.pacermonitor.com/public/case/59482921/Environmental_Defense_Fund,_Inc_et_al_v_Wright_et_al

filed by the Environmental Defense Fund and the Union of Concerned Scientists which contends that this working group was operating outside transparency requirements of the law and therefore cannot be used for policymaking. For this reason, the Reconsideration filing is invalid.

The scientific evidence supporting the endangerment finding is overwhelming. The EPA must uphold the Endangerment Finding and continue its regulatory obligations under the Clean Air Act. Any repeal would be arbitrary and capricious under the APA and would expose the public to avoidable harm.

Sincerely,

Jennifer Eden

Jennifer Eden, M.S.
Senior Climate & Clean Energy Associate
Submitted On Behalf of Utah Clean Energy