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September 22, 2025

U.S. Environmental Protection Agency
EPA Docket Center
Docket ID No. EPA-HQ-OAR-2025-0194
1200 Pennsylvania Avenue NW
Washington, DC 20460

Re: *Proposed Rule: Reconsideration of 2009 Endangerment Finding and Greenhouse Gas Vehicle Standards*

To Whom It May Concern:

The Ozone Transport Commission (OTC) Mobile Sources Committee is submitting these comments on the U.S. Environmental Protection Agency's (EPA's) action titled, "Reconsideration of 2009 Endangerment Finding and Greenhouse Gas Vehicle Standards," 90 Fed. Reg. 36,288 (August 1, 2025). In this action, EPA is proposing to repeal all greenhouse gas (GHG) emission standards for light-duty, medium-duty, and heavy-duty vehicles and engines. Further, EPA proposes that Clean Air Act (CAA) section 202(a) does not authorize EPA to prescribe emission standards to address global climate change concerns and, on that basis, proposes to rescind the Administrator's prior findings in 2009 that GHG emissions from new motor vehicles and engines contribute to air pollution which endangers public health or welfare.

Congress established the OTC when it amended the CAA in 1990 to address regional ground-level ozone pollution affecting the OTC member jurisdictions. The OTC members are Connecticut, Delaware, the District of Columbia, Maine, Maryland, Massachusetts, New Hampshire, New Jersey, New York, Pennsylvania, Rhode Island, Vermont, and Virginia. In addressing their collective regional ozone problem, the OTC members are responsible for developing and implementing initiatives to reduce nitrogen oxides (NOx) and volatile organic compounds (VOCs), the precursor air pollutants that contribute to the formation of ground-level ozone pollution.

While the OTC states have worked together for decades to reduce regional emissions of ozone precursors to attain federal health-based air quality standards, the OTC states must rely on EPA to adequately control federal sources of air pollution, including upwind stationary sources that are beyond states' jurisdictional control and mobile sources that states are otherwise preempted from regulating. As required by the CAA, EPA sets National Ambient Air Quality Standards (NAAQS) for ground-level ozone and other criteria pollutants to protect public health and welfare from poor air quality. Despite dramatic reductions in ozone pollution in the Ozone Transport Region (OTR), the New York City metropolitan area fails to comply with both the 2008 and 2015 NAAQS for ozone. This affects over 20 million people living in the region, including northern New Jersey and over 55% of the population of Connecticut, along with the 65 million people visiting this area each year. As explained below, the EPA's proposal will make matters worse.

Ozone exposure can irritate the respiratory system, reduce lung function, aggravate asthma, damage lung lining, permanently scar lung tissue, and increase the risk of premature death from lung or heart disease. Unsafe ozone levels pose a greater risk to children because their lungs are still developing, and they face higher levels of exposure from spending more time being active and playing sports outside; additionally, children breathe faster than adults, causing them to inhale more pollutants relative to their body weight. The elderly are also at increased risk due to age related changes that decrease their ability to cope with ozone exposure, leading to worsening respiratory and cardiovascular health and reduced cognitive abilities.

1. Climate change threatens local and regional air quality in the OTR.

In the CAA, Congress specified in section 302(h) that "language referring to effects on welfare includes … effects on … weather . . . and climate." While this contradicts EPA's assertion that the scope of the CAA only pertains to "local or regional exposure to dangerous air pollution," even in EPA's constricted view, GHGs have major impacts on local and regional air pollution exposure affecting public health and welfare.

Climate change affects local and regional air quality within the OTR and elsewhere in at least three ways: i) enhanced ozone production during more frequent and intense heat waves; ii) more frequent and widespread wildfires whose smoke plumes transport ozone and its precursors thousands of miles downwind; and iii) rising methane levels contributing to increasing background ozone concentrations. Each of these impacts offset the benefits of local and regional ozone control strategies.

i. *Climate change can increase the frequency and intensity of heat waves, leading to higher ground-level ozone pollution at the local and regional scales.*

Increased GHG emissions are squarely linked to increased global temperatures.[1] Under elevated temperatures along with sunny skies, emissions of NOx and VOCs, known as ozone precursors, more efficiently react to form unhealthy levels of ground-level ozone. In addition, as the impacts of climate change become more severe and the frequency of extreme temperature events increases,[2] emissions from other sources may rise to meet growing demand for interior cooling, further causing increases in ozone-forming

[1] Myers, K. F., Doran, P. T., Cook, J., Kotcher, J. E., & Myers, T. A. (2021). Consensus revisited: quantifying scientific agreement on climate change and climate expertise among Earth scientists 10 years later. *Environmental Research Letters*, *16*(10), 104030, DOI:10.1088/1748-9326/ac2774; Lynas, M., Houlton, B. Z., & Perry, S. (2021). Greater than 99% consensus on human caused climate change in the peer-reviewed scientific literature. *Environmental Research Letters*, *16*(11), 114005, DOI:10.1088/1748-9326/ac2966.

[2] Quilcaille, Y., Gudmundsson, L., Schumacher, D., Gasser, T., Heede, R., Heri, C., ... & Seneviratne, S. (2025). Systematic attribution of heatwaves to the emissions of carbon majors. *Nature*, *645*, 392-398, https://doi.org/10.1038/s41586-025-09450-9.

emissions.[3] Furthermore, climate-driven changes in weather patterns are creating more conducive conditions for local and regional ozone pollution formation, undercutting existing and future ozone control strategies.[4] Taken together, there is no other outcome from this proposal other than an increase to the number of days where the daily maximum 8-hour average concentration of ground-level ozone surpasses the NAAQS. Increasing ground-level ozone concentrations also have adverse impacts on vegetation, including economically important agricultural crops and forests.[5] As such, there is a clear nexus between the existing Endangerment Finding and public health and welfare.

ii. *Climate change is increasing the frequency, intensity, and scale of wildfires whose smoke plumes contribute to higher ground-level ozone far downwind.*

The climate-driven increase in wildfire frequency, intensity, and scale[6] is also affecting ozone levels in the OTR in recent years. Science has definitively linked ozone precursors in

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[3] U.S. EPA, How Climate Change May Impact Ozone Pollution and Public Health through the 21st Century, February 2022, https://www.epa.gov/sciencematters/how-climate-change-may-impact-ozone-pollution-and-public-health-through-21st-century.

[4] Leibensperger, E. M., Mickley, L. J., & Jacob, D. J. (2008). Sensitivity of US air quality to mid-latitude cyclone frequency and implications of 1980–2006 climate change. *Atmospheric Chemistry and Physics*, *8*(23), 7075-7086, https://doi.org/10.5194/acp-8-7075-2008; Shen, L., Mickley, L. J., & Gilleland, E. (2016). Impact of increasing heat waves on US ozone episodes in the 2050s: Results from a multimodel analysis using extreme value theory. *Geophysical Research Letters*, *43*(8), 4017-4025, https://doi.org/10.1002/2016GL068432; East, J. D., Monier, E., Saari, R. K., & Garcia-Menendez, F. (2024). Projecting changes in the frequency and magnitude of ozone pollution events under uncertain climate sensitivity. *Earth's Future*, *12*(6), e2023EF003941, https://doi.org/10.1029/2023EF003941.

[5] Adams, R. M., & Crocker, T. D. (1989). The agricultural economics of environmental change: Some lessons from air pollution, *Journal of Environmental Management, 28*(4), 295-307; Chameides, W. L., Kasibhatla, P. S., Yienger, J., & Levy, H. (1994). Growth of continental-scale metro-agro-plexes, regional ozone pollution, and world food production. *Science*, *264*(5155), 74-77, DOI:10.1126/science.264.5155.74; Ashmore, M. R., & Marshall, F. M. (1998). Ozone impacts on agriculture: an issue of global concern. In *Advances in Botanical Research* (Vol. 29, pp. 31-52). Academic Press, https://doi.org/10.1016/S0065-2296(08)60307-9; Chappelka, A. H., & Samuelson, L. J. (1998). Ambient ozone effects on forest trees of the eastern United States: a review. *New Phytologist*, *139*(1), 91-108, https://doi.org/10.1046/j.1469-8137.1998.00166.x; Murphy, J. J., Delucchi, M. A., McCubbin, D. R., & Kim, H. J. (1999). The cost of crop damage caused by ozone air pollution from motor vehicles. *Journal of Environmental Management*, *55*(4), 273-289, https://doi.org/10.1006/jema.1999.0256; Mauzerall, D. L., & Wang, X. (2001). Protecting agricultural crops from the effects of tropospheric ozone exposure: reconciling science and standard setting in the United States, Europe, and Asia. *Annual Review of Energy and the Environment*, *26*(1), 237-268, https://doi.org/10.1146/annurev.energy.26.1.237; Smith, G., Coulston, J., Jepsen, E., & Prichard, T. (2003). A national ozone biomonitoring program–results from field surveys of ozone sensitive plants in northeastern forests (1994–2000). *Environmental Monitoring and Assessment*, *87*(3), 271-291, https://doi.org/10.1023/A:1024879527764; Fiscus, E. L., Booker, F. L., & Burkey, K. O. (2005). Crop responses to ozone: uptake, modes of action, carbon assimilation and partitioning. *Plant, Cell & Environment*, *28*(8), 997-1011, https://doi.org/10.1111/j.1365-3040.2005.01349.x; Karnosky, D. F., Skelly, J. M., Percy, K. E., & Chappelka, A. H. (2007). Perspectives regarding 50 years of research on effects of tropospheric ozone air pollution on US forests. *Environmental pollution*, *147*(3), 489-506, https://doi.org/10.1016/j.envpol.2006.08.043; Avnery, S., Mauzerall, D. L., Liu, J., & Horowitz, L. W. (2011). Global crop yield reductions due to surface ozone exposure: 1. Year 2000 crop production losses and economic damage. *Atmospheric Environment*, *45*(13), 2284-2296, https://doi.org/10.1016/j.atmosenv.2010.11.045.

[6] Westerling, A. L., Hidalgo, H. G., Cayan, D. R., & Swetnam, T. W. (2006). Warming and earlier spring increase western US forest wildfire activity. *Science*, *313*(5789), 940-943, DOI:10.1126/science.1128834; Moritz, M. A., Parisien, M. A., Batllori, E., Krawchuk, M. A., Van Dorn, J., Ganz, D. J., & Hayhoe, K. (2012). Climate change and disruptions to global fire activity. *Ecosphere*, *3*(6), 1-22, https://doi.org/10.1890/ES11-00345.1; Abatzoglou, J. T., & Williams, A. P. (2016). Impact of anthropogenic climate change on wildfire across western US forests. *Proceedings*

wildfire smoke to enhanced ozone formation (as well as to high concentrations of fine particulate matter).[7] Downwind smoke impacts from wildfires far from the OTR (e.g., in Canada and the western U.S.) can affect local and regional ozone levels in two ways – 1) ozone in the smoke plume downmixing from transported higher altitudes that adds to ground-level ozone formed locally and regionally, and 2) mixing of VOCs transported in an aged smoke plume with high concentrations of local NOx in urban areas to form locally high ozone levels not originally in the smoke plume.[8] While ozone from the second transport pathway is in principle controllable through local controls on emission sources of

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of the National Academy of Sciences, *113*(42), 11770-11775, https://doi.org/10.1073/pnas.1607171113; Jones, M. W., Abatzoglou, J. T., Veraverbeke, S., Andela, N., Lasslop, G., Forkel, M., ... & Le Quéré, C. (2022). Global and regional trends and drivers of fire under climate change. *Reviews of Geophysics*, *60*(3), e2020RG000726, https://doi.org/10.1029/2020RG000726; Xie, Y., Lin, M., Decharme, B., Delire, C., Horowitz, L. W., Lawrence, D. M., ... & Séférian, R. (2022). Tripling of western US particulate pollution from wildfires in a warming climate. *Proceedings of the National Academy of Sciences*, *119*(14), e2111372119, https://doi.org/10.1073/pnas.2111372119; Brown, P. T., Hanley, H., Mahesh, A., Reed, C., Strenfel, S. J., Davis, S. J., ... & Clements, C. B. (2023). Climate warming increases extreme daily wildfire growth risk in California. *Nature*, *621*(7980), 760-766, https://doi.org/10.1038/s41586-023-06444-3; Wang, S. S. C., Leung, L. R., & Qian, Y. (2023). Projection of future fire emissions over the contiguous US using explainable artificial intelligence and CMIP6 models. *Journal of Geophysical Research: Atmospheres*, *128*(14), e2023JD039154, https://doi.org/10.1029/2023JD039154.

[7] *See e.g.*, Val Martin, M., Honrath, R. E., Owen, R. C., Pfister, G., Fialho, P., & Barata, F. (2006). Significant enhancements of nitrogen oxides, black carbon, and ozone in the North Atlantic lower free troposphere resulting from North American boreal wildfires. *Journal of Geophysical Research: Atmospheres*, *111*(D23), https://doi.org/10.1029/2006JD007530; Jaffe, D. A., & Wigder, N. L. (2012). Ozone production from wildfires: A critical review. *Atmospheric Environment*, *51*, 1-10, https://doi.org/10.1016/j.atmosenv.2011.11.063; Buysse, C. E., Kaulfus, A., Nair, U., & Jaffe, D. A. (2019). Relationships between particulate matter, ozone, and nitrogen oxides during urban smoke events in the western US. *Environmental Science & Technology*, *53*(21), 12519-12528, https://doi.org/10.1021/acs.est.9b05241; Kalashnikov, D. A., Schnell, J. L., Abatzoglou, J. T., Swain, D. L., & Singh, D. (2022). Increasing co-occurrence of fine particulate matter and ground-level ozone extremes in the western United States. *Science Advances*, *8*(1), eabi9386, DOI:10.1126/sciadv.abi9386; Zhang, Q., Wang, Y. Xiao, Q., Geng, G., Davis, S. J., Liu, X., … & He, K. (2025). Long-range $PM_{2.5}$ pollution and health impacts from the 2023 Canadian wildfires. *Nature*, https://doi.org/10.1038/s41586-025-09482-1.

[8] Colarco, P. R., Schoeberl, M. R., Doddridge, B. G., Marufu, L. T., Torres, O., & Welton, E. J. (2004). Transport of smoke from Canadian forest fires to the surface near Washington, DC: Injection height, entrainment, and optical properties. *Journal of Geophysical Research: Atmospheres*, *109*(D6), https://doi.org/10.1029/2003JD004248; DeBell, L. J., Talbot, R. W., Dibb, J. E., Munger, J. W., Fischer, E. V., & Frolking, S. E. (2004). A major regional air pollution event in the northeastern United States caused by extensive forest fires in Quebec, Canada. *Journal of Geophysical Research: Atmospheres*, *109*(D19), https://doi.org/10.1029/2004JD004840; Kang, C. M., Gold, D., & Koutrakis, P. (2014). Downwind O_3 and $PM_{2.5}$ speciation during the wildfires in 2002 and 2010. *Atmospheric Environment*, *95*, 511-519, https://doi.org/10.1016/j.atmosenv.2014.07.008; Dreessen, J., Sullivan, J., & Delgado, R. (2016). Observations and impacts of transported Canadian wildfire smoke on ozone and aerosol air quality in the Maryland region on June 9–12, 2015. *Journal of the Air & Waste Management Association*, *66*(9), 842-862, https://doi.org/10.1080/10962247.2016.1161674; Larsen, A. E., Reich, B. J., Ruminski, M., & Rappold, A. G. (2018). Impacts of fire smoke plumes on regional air quality, 2006–2013. *Journal of Exposure Science & Environmental Epidemiology*, *28*(4), 319-327, https://doi.org/10.1038/s41370-017-0013-x; Xu, L., Crounse, J. D., Vasquez, K. T., Allen, H., Wennberg, P. O., Bourgeois, I., ... & Yokelson, R. J. (2021). Ozone chemistry in western US wildfire plumes, *Sci. Adv., 7*, eabl3648, DOI:10.1126/sciadv.abl3648; Jin, X., Fiore, A. M., & Cohen, R. C. (2023). Space-based observations of ozone precursors within California wildfire plumes and the impacts on ozone-NOx-VOC chemistry. *Environmental Science & Technology*, *57*(39), 14648-14660, https://doi.org/10.1021/acs.est.3c04411; Langford, A. O., Senff, C. J., Alvarez, R. J., Aikin, K. C., Ahmadov, R., Angevine, W. M., ... & Zucker, M. L. (2023). Were wildfires responsible for the unusually high surface ozone in Colorado during 2021?. *Journal of Geophysical Research: Atmospheres, 128*(12), e2022JD037700, https://doi.org/10.1029/2022JD037700.

NOx, it adds to the cost-burden of downwind regions to compensate for it. Both smoke transport outcomes diminish the beneficial impacts of local and regional pollution controls and increase the public health burden from poor air quality within the OTR and elsewhere.

iii. *Increasing levels of methane, a GHG, are contributing to higher background levels of ground-level ozone, which diminishes the benefits of local and regional ozone control strategies.*

Methane is a potent GHG included in the Endangerment Finding but is not typically considered in current ozone attainment strategies due to its relatively low chemical reactivity in the context of shorter term episodic peak ozone levels (e.g., 8-hour averages). In the global background context, however, methane has a significant influence on background ozone levels, and increasing anthropogenic emissions of methane are contributing to an increase in the global ground-level ozone background.[9] During the reconsideration of the 2007 ozone standards, the Northeast States for Coordinated Air Use Management (NESCAUM) provided a modeling assessment of methane's influence on broad regional ozone concentrations in the eastern United States. The modeling indicated that elevated methane concentrations above pre-industrial levels are contributing to increased long-term ozone in the OTR.[10] Reducing methane as a GHG will have the co-benefit of reducing the global ozone background, thus lowering the pre-existing ozone load that local and regional pollution sources build upon, facilitating the effectiveness of local and regional ozone reduction strategies.

2. **EPA must address mobile source GHG emissions to assist states in achieving ozone air quality standards to protect the public health and welfare under the CAA.**

In the OTR, the mobile sources sector is the greatest contributor to ground level ozone. While stationary sources of ozone precursor emissions continue to contribute to interstate air pollution in violation of the CAA's good neighbor provisions and must continue to be addressed, it is not possible for areas in the OTR to meet national health-based ozone air quality standards without deep pollution reductions from the mobile source sector.

Unlike stationary sources, mobile source emissions are largely under federal control because states are generally preempted from establishing emissions standards for new

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[9] Fiore, A. M., Jacob, D. J., Field, B. D., Streets, D. G., Fernandes, S. D., & Jang, C. (2002). Linking ozone pollution and climate change: The case for controlling methane. *Geophysical Research Letters*, *29*(19), 25-1, https://doi.org/10.1029/2002GL015601; Nolte, C. G., Gilliland, A. B., Hogrefe, C., & Mickley, L. J. (2008). Linking global to regional models to assess future climate impacts on surface ozone levels in the United States. *Journal of Geophysical Research: Atmospheres*, *113*(D14), https://doi.org/10.1029/2007JD008497; Jacob, D. J., & Winner, D. A. (2009). Effect of climate change on air quality. *Atmospheric Environment, 43*(1), 51-63, https://doi.org/10.1016/j.atmosenv.2008.09.051; Racherla, P. N., & Adams, P. J. (2009). US ozone air quality under changing climate and anthropogenic emissions. *Environmental Science & Technology, 43*(3), 571–577, https://doi.org/10.1021/es800854f; Fiore, A. M., Naik, V., & Leibensperger, E. M. (2015). Air quality and climate connections. *Journal of the Air & Waste Management Association*, *65*(6), 645-685, https://doi.org/10.1080/10962247.2015.1040526; Turnock, S. T., Wild, O., Dentener, F. J., Davila, Y., Emmons, L. K., Flemming, J., ... & O'Connor, F. M. (2018). The impact of future emission policies on tropospheric ozone using a parameterised approach. *Atmospheric Chemistry and Physics*, *18*(12), 8953-8978, https://doi.org/10.5194/acp-18-8953-2018.

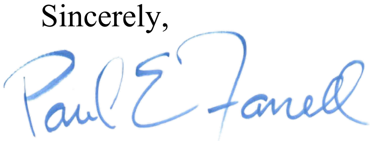
[10] Northeast States for Coordinated Air Use Management, Comments to EPA on Proposed NAAQS for Ozone, submitted to EPA Docket No. EPA-HQ-OAR-2005-0172 on March 22, 2010, available at http://www.nescaum.org/documents/nesc_o3_naaqs_reconsid_comments_20100322-final-all.pdf.

vehicles and engines. One notable exception authorized under the CAA and utilized by many OTC members is the right to adopt and enforce emission standards for new cars and trucks that are identical to California's standards for which an EPA waiver is granted. Although shown to be a cost-effective measure to reduce ozone-forming pollution, Congress passed three resolutions, subsequently signed by President Trump on June 12, 2025, purporting to disapprove the CAA waivers needed for states to enforce California's clean car and truck programs. This action has been challenged as unlawful by California and ten other states.[11] Now EPA, through this proposal, plans to further weaken federal emissions standards for cars and trucks.

EPA claims that the current proposal is limited to removal of vehicle GHG standards only, with no changes to the criteria pollutant standards. The proposal, however, will discourage the uptake of readily available zero-emission vehicle technology[12] and will encourage increased consumption of fossil fuels. Air pollution from cars and trucks will increase over time and further complicate state efforts to reduce ozone levels.

These proposed actions impose significant costs[13] and will harm Americans of all ages, with especially severe impacts on children and the elderly, and undermine the principles of cooperative federalism that have worked to significantly advance clean air and public health in the United States since the adoption of the 1990 CAA Amendments. For these reasons, the OTC strongly opposes the adoption of the proposed actions.

Sincerely,



Paul E. Farrell
Chair, OTC Mobile Sources Committee
Director, Planning & Standards Division, Bureau or Air Management
Connecticut Department of Energy and Environmental Protection

cc: OTC Air Directors

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[11] *State of California, et. al. v. United States of America, et. al.*, No. 4:25-CV-04966 (N.D. Ca. June 12, 2025).

[12] Northeast States for Coordinated Air Use Management, Ten States Reach Goal to Put 3.3 Million Electric Vehicles on the Road by 2025, March 2025, https://www.nescaum.org/documents/ten-states-reach-goal-to-put-3-3-million-electric-vehicles-on-the-road-by-2025.fol.

[13] The proposed rule will impose extremely high net costs. In the Draft Regulatory Impact Analysis (DRIA) EPA presents benefit cost analyses (BCAs) for seven scenarios. Scenario 2 is the most accurate and defensible because it uses the same assumptions that EPA used in its 2024 rulemaking updated by the recent actions taken on the IRA tax credits and repealing the waiver for the ACT rule. Scenario 2 shows negative net savings (a net cost) of $359 billion at a 3% discount rate or $50 billion at a 7% discount rate on a net present value basis over 2017 through 2055.