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Paul J. Miller, Executive Director

October 13, 2022

Stephanie Pollack, Acting Administrator
U.S. Federal Highway Administration
1200 New Jersey Avenue, SE
Washington, D.C. 20590

Re: National Performance Management Measures; Assessing Performance of the National Highway System, Greenhouse Gas Emissions Measure, Notice of Proposed Rulemaking, Docket No. FHWA-2021-004

Dear Administrator Pollack:

The Northeast States for Coordinated Air Use Management (NESCAUM) submits the following comments in support of the Notice of Proposed Rulemaking issued by the U.S. Federal Highway Administration (FHWA) in the above referenced docket and published in the Federal Register on July 15, 2022 (NPRM), 87 Fed. Reg. 42401.

NESCAUM is the non-profit association of state air quality agencies in Connecticut, Maine, Massachusetts, New Hampshire, New Jersey, New York, Rhode Island, and Vermont. NESCAUM serves as a technical and policy advisor to its member agencies on a wide range of air pollution and climate issues and facilitates multi-state initiatives to improve air quality and mitigate climate change. For more than three decades, NESCAUM and its members have closely collaborated with other states, federal agencies, the automobile industry, and a wide range of stakeholders to promote adoption of low-emission and zero-emission vehicles (ZEVs).

In the NPRM, FHWA proposes to amend its National Highway Performance Program (NHPP) performance management regulations to require state departments of transportation (DOTs) and metropolitan planning organizations (MPOs) to establish declining carbon dioxide (CO_2) targets for the National Highway System (NHS) and to measure and report progress in meeting those targets. As discussed below, NESCAUM strongly supports the proposal and urges FHWA to finalize the rule.[1]

I. Introduction

Earth's climate is changing faster than it has at any point in the history of modern civilization, driven primarily by greenhouse gas (GHG) emissions from human activities. The impacts—including more frequent and intense precipitation and wind events, flooding, heat waves,

[1] These comments are being submitted by NESCAUM as an organization and reflect the NESCAUM members' consensus views. Individual NESCAUM members may hold views different from the NESCAUM majority consensus.

drought, wildfires, retreating snow and ice pack, ocean warming and acidification, accelerating sea level rise, and large-scale biodiversity loss—are being felt by communities across the globe and will worsen in coming years. Because GHGs can persist in the atmosphere for decades to centuries, how much worse these impacts will become depends on how deeply and rapidly humanity can decarbonize all economic sectors.[2] Global CO_2 emissions reached their highest ever annual level in 2021.[3] As FHWA observes in the NPRM, "each additional ton of CO_2 produced by the combustion of fossil fuels contributes to future warming and other climate impacts."[4]

The United States has released more CO_2 into the atmosphere than any country in history and remains the second largest global emitter today.[5] Transportation is the largest source of those emissions[6] and is expected to remain so through 2050, despite improvements in the energy efficiency of passenger vehicles, trucks, and aircraft.[7] Population growth, expansion of urban centers, a growing economy, and increased international trade are expected to generate increased passenger and freight movement. As FHWA correctly states in the NPRM, "[t]hese changes can make GHG reductions and environmental sustainability both more challenging to implement and more important to achieve."[8] FHWA has long recognized that achieving U.S. climate goals will require substantial reductions in GHGs from on-road transportation sources.[9]

The transportation sector not only contributes to climate change, but also is vulnerable to its effects, which increase the cost of maintaining, repairing, and replacing infrastructure and threaten the performance of the entire transportation network.[10] Underserved communities and communities with increased vulnerability to climate change may suffer disproportionately worse impacts to their mobility and quality of life as a result.

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[2] *See, e.g.*, Intergovernmental Panel on Climate Change (IPCC), *Climate Change 2022: Mitigation of Climate Change*, Contribution of Working Group III to the Sixth Assessment Report of the IPCC (AR6) (Apr. 2022), https://www.ipcc.ch/report/ar6/wg3/; IPCC, *Climate Change 2022: Impacts, Adaptation and Vulnerability*, Contribution of Working Group II to the AR6 (Feb. 2022), https://www.ipcc.ch/report/ar6/wg2/; IPCC, *Climate Change 2021: The Physical Science Basis*, Contribution of Working Group I to the AR6 (Aug. 2021), https://www.ipcc.ch/report/ar6/wg1/; *see also* IPCC, AR6 Synthesis Report (forthcoming 2022), https://www.ipcc.ch/ar6-syr/ (visited June 23, 2022).

[3] International Energy Agency, *Global Energy Review: CO2 Emissions in 2021* (Mar. 2022), https://www.iea.org/reports/global-energy-review-co2-emissions-in-2021-2.

[4] NPRM, 87 Fed. Reg. at 42402.

[5] *See* CarbonBrief, *Analysis: Which countries are historically responsible for climate change?* (Oct. 5, 2021), https://www.carbonbrief.org/analysis-which-countries-are-historically-responsible-for-climate-change/.

[6] U.S. Environmental Protection Agency, Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990-2019, https://www.epa.gov/ghgemissions/inventory-us-greenhouse-gas-emissions-and-sinks-1990-2019 (updated Feb. 15, 2022).

[7] NPRM, 87 Fed. Reg. at 42406.

[8] *Id.*

[9] *See, e.g.*, FHWA, National Performance Management Measures; Assessing Performance of the National Highway System, Freight Movement on the Interstate System, and Congestion Mitigation and Air Quality Improvement Program, 81 Fed. Reg. 23806, 23830 (Apr. 22, 2016).

[10] NPRM, 87 Fed. Reg. at 42406-07.

II. Northeast States' Transportation Decarbonization Goals and Policies

In the Northeast states, transportation is the largest source of GHG emissions and a significant source of air pollution that harms public health. Rapid electrification of on-road vehicles is urgently needed to address climate change and improve air quality and health outcomes, especially in communities overburdened by the impacts of climate change and air pollution. Recognizing the urgent need for action, seven NESCAUM states have established ambitious economy wide or transportation sector specific GHG emission reduction targets for 2050 and interim targets that require aggressive emissions reductions by as soon as 2030.

These states are also among the signatories to the 2013 Multi-State Zero-Emission Vehicle Memorandum of Understanding,[11] which set non-binding light-duty ZEV sales targets for ten states to achieve by 2025; memorialized their commitment to work together to develop policies and programs to achieve those targets; and created the Multi-State ZEV Task Force, facilitated by NESCAUM, to enable states to collaborate and coordinate on ZEV policy and program development and implementation. NESCAUM and the Task Force have developed two action plans with recommendations for states to accelerate light-duty ZEV adoption[12] and policy guidance on a wide range of related issues and topics.

In 2020, these states joined the Multi-State Medium- and Heavy-Duty ZEV Memorandum of Understanding.[13] Now signed by a geographically diverse coalition of 17 states, the District of Columbia, and the Canadian province of Quebec, the 2020 MOU commits the participating jurisdictions to collaborate to accelerate the market for zero-emission trucks, vans, and buses.[14] The 2020 MOU sets non-binding targets for the signatories to make at least 30 percent of sales of new Class 2b-8 medium- and heavy-duty (MHD) vehicles ZEVs by 2030, and 100 percent of sales ZEVs by no later than 2050. Some of the signatories have established more ambitious goals. In July 2022, after a two-year development process, NESCAUM and the Task Force released an action plan with more than 65 strategies and recommendations for state policymakers

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[11] Multi-State Zero-Emission Vehicles Program Memorandum of Understanding (Oct. 2013), https://www.nescaum.org/documents/zev-mou-10-governors-signed-20191120.pdf/;

[12] *See, e.g.*, Multi-State ZEV Task Force, *Multi-State ZEV Action Plan 2018-2021: Accelerating the Adoption of Zero Emission Vehicles* (June 2018), https://www.nescaum.org/topics/zero-emission-vehicles/multi-state-zev-action-plan-2018-2021-accelerating-the-adoption-of-zero-emission-vehicles; *Multi-State ZEV Action Plan* (May 2014), https://www.nescaum.org/documents/multi-state-zev-action-plan.pdf/.

[13] Multi-State Medium- and Heavy-Duty Zero-Emission Vehicle Memorandum of Understanding (July 2020), https://www.nescaum.org/documents/mhdv-zev-mou-20220329.pdf/.

[14] Collectively, the U.S. signatories represent 43 percent of the U.S. population, 49 percent of the U.S. economy, and 36 percent of the nation's MHD vehicles. *See* Census Bureau, 2020 Population and Housing State Data (Aug. 12, 2021), https://www.census.gov/library/visualizations/interactive/2020-population-and-housing-state-data.html; Bureau of Economic Analysis, GDP and Personal Income, https://apps.bea.gov/itable/iTable.cfm?ReqID=70&step=1#reqid=70&step=1&isuri=1 (visited June 23, 2022) (2021 Real GDP); Atlas Public Policy, EV Hub, https://www.atlasevhub.com/materials/medium-and-heavy-duty-vehicle-registrations-dashboard/#06f2a5dfc39daf9cc (visited June 23, 2022) (2019 IHS market data).

to support the rapid, equitable, and widespread electrification of MHD vehicles,[15] and are currently working to prioritize and implement those recommendations.

The NESCAUM states have also developed state-specific plans to reduce GHGs from transportation and have adopted a diverse set of market-enabling policies and programs designed to advance the market for ZEVs, including vehicle sales and purchase requirements, vehicle and infrastructure purchase incentives, utility programs and investments in charging infrastructure, consumer and fleet outreach and education programs, innovative financing mechanisms, and deployment of public charging in communities and along major travel corridors. Some states have established requirements or goals to transition state and transit fleets to ZEVs. Each of the NESCAUM states also recently submitted a plan to utilize federal funding made available through the National Electric Vehicle Infrastructure program, and FHWA recently approved these plans and those submitted by other states, the District of Columbia, and Puerto Rico.[16]

The proposed GHG performance measure will help states to make significant progress toward achieving their economy-wide and transportation sector-specific climate goals as well as the national policy goals of reducing CO_2 emissions 50-52 percent below 2005 levels by 2030 and net-zero emissions by 2050.

III. FHWA Should Adopt the Proposed GHG Performance Measure

As discussed above and in the NPRM, the transportation system is both the largest contributor to climate change and also increasingly vulnerable to its impacts. Federally funded state transportation planning should address both considerations. NESCAUM agrees with FHWA that "[t]he environmental sustainability, and specifically the carbon footprint, of the transportation system is a critically important attribute that State DOTs can and should use to assess the performance of the Interstate and non-Interstate [NHS]."[17] In this regard, establishing a GHG performance measure as a component of FHWA's Transportation Performance Management Program would provide an important and effective tool for states and FHWA to support the environmental sustainability goal of the federal-aid highway program.[18]

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[15] *See* Multi-State ZEV Task Force, *Multi-State Medium- and Heavy-Duty Zero-Emission Vehicle Action Plan: A Policy Framework to Eliminate Harmful Truck and Bus Emissions* (July 27, 2022), https://www.nescaum.org/documents/multi-state-medium-and-heavy-duty-zero-emission-vehicle-action-plan/.
[16] *See* Press Release, Historic Step: All Fifty States Plus D.C. and Puerto Rico Greenlit to Move EV Charging Networks Forward, Covering 75,000 Miles of Highway, FHWA (Sept. 27, 2022), https://highways.dot.gov/newsroom/historic-step-all-fifty-states-plus-dc-and-puerto-rico-greenlit-move-ev-charging-networks.
[17] NPRM, 87 Fed. Reg. at 42402.
[18] *See supra* note 11.

a. The Proposed GHG Performance Measure

The proposed GHG performance measure would be codified among the NHPP performance management measures established by FHWA through prior rulemakings.[19] The rule would require state DOTs and MPOs that have NHS mileage within their state geographic boundaries and metropolitan planning area boundaries, respectively, to establish declining targets that reduce CO_2 emissions generated by on-road mobile sources relative to a reference year defined as calendar year 2021, that align with the federal administration's national policy goals of reducing CO_2 emissions 50-52 percent below 2005 levels by 2030 and net-zero emissions by 2050.

The NHPP regulations define the term "measure" as an expression based on a "metric" that is used to establish targets and to assess progress toward achieving them. The "GHG metric" used in the proposed rule is the annual total tailpipe CO_2 emissions on the mainline highways of the Interstate and non-Interstate NHS. The "GHG measure" is the percent change in tailpipe CO_2 emissions on the NHS compared to the reference year and would be calculated by multiplying motor fuel sales volumes already reported by state DOTs to FHWA by FHWA-supplied emissions factors for the CO_2 per gallon of fuel, and the percentage of vehicle miles traveled on the NHS. The percent change from the current year to the 2021 reference year would then be calculated.

State DOTs would establish two- and four-year statewide CO_2 emissions reduction targets, and MPOs would establish four-year emissions reduction targets for their metropolitan planning areas. MPOs serving "urbanized area[s]" (with a population of 50,000 or more) with multiple MPOs would be required to establish additional joint targets to help ensure a coordinated approach to emissions reductions in these areas. State DOTs and MPOs would have the flexibility to set targets that work for their respective climate change policies and other policy priorities, as long as they are consistent with the national 2030 and 2050 economy wide GHG reduction goals. The rule would also require state DOTs and MPOs to report biennially on their progress and require FHWA to assess significant progress toward achieving the targets.

b. FHWA Should Adopt the Proposed GHG Performance Measure

To achieve the magnitude of transportation sector GHG emissions reductions needed to avoid the worst effects of climate change, states will need to adopt a range of strategies to increase the adoption of ZEVs, improve transportation system efficiency, and reduce on-road travel demand. As FHWA correctly observes in the NPRM, "[a]ctions such as these are significantly influenced by the planning activities and investment decisions of State DOTs and MPOs."[20]

[19] The proposed rule would largely reestablish a similar measure FHWA finalized in 2017 but repealed in 2018 before compliance with its requirements was due. *See* NPRM, 87 Fed. Reg. at 42404-05.
[20] *Id*.

In many states, a "missing link" between transportation decarbonization policymaking, typically led by state environmental and energy agencies, and transportation infrastructure planning, the domain of state DOTs and MPOs, has been a requirement for state transportation planning to account for the GHG impacts of on-road transportation and set targets to reduce GHG emissions. As discussed in the NPRM, "relatively few State DOTs are currently addressing GHG emissions, and even fewer are using performance measures and quantitative approaches to do so."[21] The establishment of declining emission reduction targets for the NHS holds the potential to unlock substantial short- and long-term GHG reductions from on-road transportation.

NESCAUM also agrees with FHWA that "[m]easuring and reporting complete, consistent, and timely information on GHG emissions from on-road mobile source emissions is necessary so that all levels of government and the public can monitor changes in GHG emissions over time and make more informed choices about the role of transportation investments and other strategies in achieving GHG reduction targets."[22] The proposed GHG performance measure would provide a consistent basis for estimating emissions from on-road transportation and aid state DOTs and MPOs in planning for GHG reductions and evaluating progress toward national, state, and local emissions reduction targets. Moreover, the measure could yield consistent and timely information about on-road mobile source emissions that could help to inform future state and federal government policy and planning choices and investment decisions.[23]

A coordinated effort within and across all levels of government, in close collaboration with stakeholders and communities, will be needed to successfully implement the proposed GHG measure. All of NESCAUM's member agencies currently monitor GHG emissions by economic sector, including transportation, and periodically prepare and publish GHG emissions inventories for policy planning and programmatic purposes. As noted in the NPRM, state DOTs can draw upon these resources in setting GHG performance targets.[24] NESCAUM's member agencies also possess a wealth of experience and expertise in developing and implementing policies to reduce GHGs from on-road transportation, which can be brought to bear in developing emissions reduction strategies in connection with state transportation planning.

c. Additional Comments

In the NPRM, FHWA requests comments on "whether the proposed measure would support [the administration's] national [climate] policies, the ways in which the proposed measure would do so or why it would not, and whether the final rule should contain any other provisions to better support those national policies."[25] NESCAUM offers the following additional comments.

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[21] *Id.* at 42411.
[22] *Id.* at 42403.
[23] As discussed in the NPRM, the proposed measure would not be duplicative of existing state-by-state reporting on transportation sector emissions by the U.S. Department of Energy and the U.S. Environmental Protection Agency, in part because those data are not disaggregated to reflect CO_2 emissions on on-road sources.
[24] *Id.* at 42412.
[25] *Id.* at 42417.

First, the proposed rule would use calendar year 2021 as the reference year for the GHG measure. NESCAUM observes that 2021 may not be the most appropriate reference year given the uncertain effects of the global pandemic on travel and shipping behavior and the ongoing economic recovery.

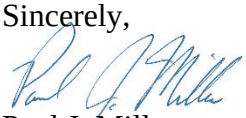
Second, NESCAUM agrees with FHWA's suggestion in the NPRM that, in addition to a requirement for state DOTs and MPOs to establish 2- and 4-year GHG reduction targets, the final rule include a requirement to establish 8- and 20-year GHG reduction targets. Longer term targets will help to inform federal, state, and local decision-making to support longer-term GHG reduction goals. FHWA should consider providing further direction or guidance on how states can set targets that are consistent with national goals of reducing CO_2 emissions 50-52 percent below 2005 levels by 2030 and net-zero emissions by 2050, for example, by identifying the share of emissions reductions needed from the NHS to meet those goals.

IV. Conclusion

As FHWA acknowledges in the NPRM, "time is of the essence in addressing GHG emissions, including those from the transportation sector."[26] The Northeast states have long been at the forefront of national efforts to address climate change and air pollution, including from on-road transportation sources. FHWA's proposed GHG performance measure is a potentially powerful tool that federal, state, and local authorities can use to establish meaningful GHG reduction targets from on-road transportation and measure progress toward achieving those targets. Given recent infusions of federal funding into transportation electrification through the Infrastructure Investment and Jobs Act and the Inflation Reduction Act, it is critically important now more than ever that transportation planning account for and mitigate the system's contributions and vulnerabilities to climate change.

For all of the foregoing reasons, NESCAUM strongly supports the proposed GHG performance measure and urges FHWA to finalize the proposal.

Sincerely,



Paul J. Miller
Executive Director

cc: NESCAUM Directors
Lynne Hamjian, Cynthia Greene, EPA R1
Richard Ruvo, Kirk Wieber, Matthew Laurita, EPA R2

[26] *Id.*at 42412.