

**Comments of the American Council for an Energy-Efficient Economy (ACEEE) on Notice of Proposed Rulemaking for the National Performance Management Measures: Assessing Performance of the National Highway System, Greenhouse Gas Emissions Measure Docket No. FHWA–2021–0004**

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The American Council for an Energy-Efficient Economy (ACEEE) welcomes the opportunity to comment on the Federal Highway Administration’s Notice of Proposed Rulemaking for National Performance Management Measures: Assessing Performance of the National Highway System, Greenhouse Gas Emissions Measure (Docket No. FHWA–2021–0004). ACEEE is an independent non-profit organization dedicated to advancing energy efficiency policies, programs, technologies, investments, and behaviors. ACEEE aims to build a vibrant and equitable economy, one that uses energy more productively, reduces costs, protects the environment, and promotes public health and safety. For any questions or follow-up, please contact Shruti Vaidyanathan, Transportation Program Director, ACEEE at [svaidyanathan@aceee.org](mailto:svaidyanathan@aceee.org).

**DOT needs to address GHG emissions from transportation**

The transportation sector is responsible for 28% of total greenhouse gas (GHG) emissions in the United States and has overtaken electricity generation as the largest contributor of climate pollution. The Biden Administration has set aggressive targets to stave off the worst impacts of climate change this century. To achieve the 50-52% reduction by 2030 from a 2005 baseline and net zero emissions economy-wide by 2050, a concerted effort to reduce transportation emissions will be essential. ACEEE applauds the Federal Highway Administration (FHWA) for proposing this rule and strongly supports the requirement for States to track GHG emissions from transportation and set declining targets.

To make the necessary progress, the federal government will need to coordinate with States and cities to understand current transportation GHG activity and set targets to reduce future emissions. As FHWA mentions in the NPRM, requiring States to create an appropriate inventory of transportation GHG emissions will help them make progress towards the administration’s targets and provide a robust data set which can be used to create low-carbon transportation policy.<sup>1</sup> Understanding baselines and setting targets will also allow States, regions, and municipalities to coordinate efforts on transportation policies, and supplement efficient vehicle strategies such as vehicle electrification with broader efforts to reduce vehicle miles traveled (VMT), creating transportation systems that are low-carbon and serve everyone.

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<sup>1</sup> NPRM, pg. 42403

While several States are tracking transportation GHG or VMT,<sup>2</sup> these approaches are often inconsistent and vary widely in methodology, making it difficult to evaluate state contributions to transportation GHG trends and mitigation efforts. And ACEEE research shows that just nine States have transportation-specific GHG or VMT reduction targets in place.<sup>3</sup> This finding is supported by FHWA's survey that found that "relatively few State Departments of Transportation (DOTs) are currently addressing GHG emissions, and even fewer are using performance measures and quantitative approaches to do so."<sup>4</sup> Therefore, there is a clear need for this rule to create consistent approaches to tracking GHG and VMT from transportation and require States and metropolitan planning organizations (MPOs) to set declining targets for the transportation sector. If designed correctly, this GHG performance measure rule could help achieve critical GHG reductions from transportation by 2050.

### **FHWA should require GHG targets that ensure further progress toward national goals**

FHWA's NPRM proposes to establish a method for the measurement and reporting of GHG emissions to track the environmental performance of the National Highway System (NHS). States and MPOs will be required to establish declining carbon dioxide (CO<sub>2</sub>) reduction targets.<sup>5</sup> FHWA's proposed regulation will not mandate the level of the target and gives States and MPOs the flexibility to determine their own rates of improvement. However, to have transformative impact on transportation GHG, the agency should require States to meet certain conditions as they establish their declining targets.

While the NPRM asserts that targets will need to be "consistent with" national GHG goals for 2030 and 2050,<sup>6</sup> the proposed regulatory language does not include any such requirement, stating only that targets "shall be declining targets for reducing tailpipe CO<sub>2</sub> emissions on the NHS, that demonstrate reductions toward net-zero targets."<sup>7</sup> The final language should explicitly require that States individually set targets to achieve net-zero on-road emissions by 2050.

Aligning State on-road emissions reductions by 2030 with national goals would require the existence of a national transportation-specific target for 2030, but the NPRM cites only the economy-wide goal of 50-52% reduction from 2005 levels. Increases in transportation emissions since 2005 underscore the urgent need for a multipronged approach to transportation decarbonization but also make clear that achieving a 50-52% decrease by 2030 would be extremely difficult within the transportation sector. Therefore, it would be highly beneficial if FHWA created and adopted a national goal for on-road emissions reductions from 2005 levels by 2030. In that case, FHWA should require that each State's GHG targets lead to

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<sup>2</sup> [Multi-state GHG letter to FHWA](#)

<sup>3</sup> [The 2020 State Energy Efficiency Scorecard, ACEEE](#)

<sup>4</sup> NPRM, pg. 42411

<sup>5</sup> NPRM, pg. 42402

<sup>6</sup> NPRM, pg. 42412

<sup>7</sup> NPRM. pg. 42420

meeting that goal, and also achieve net-zero emissions by 2050 on their own roadways. Indeed, given that transportation GHG reduction efforts are not generally coordinated across States and that emissions trading is not part of the FHWA proposal, such State-by-State targets for 2030 and 2050 will be essential to ensuring that on-road transportation contributes adequately to the achievement of the national economy-wide targets.

If it is not possible to establish a national transportation emissions reduction goal for 2030 in the final rule, an interim approach will be needed until such a goal can be adopted. We recommend that FHWA require States and MPOs to set target reductions beyond the reductions anticipated from declining vehicle emissions rates. Vehicle electrification is ramping up faster than previously expected, and we cannot allow declining transportation system efficiency to squander the emissions reductions that will result from improved vehicle efficiency. Instead, system efficiency should contribute substantially and positively to transportation decarbonization. Recent analyses have found that even if we account for updated technology estimates and the impacts of relevant policies from the Bipartisan Infrastructure Law and the Inflation Reduction Act, the U.S. will need further measures to achieve the national 2030 economy-wide GHG reduction goal of 50-52% reduction from 2005 levels.<sup>8</sup> Improvements in transportation system efficiency, for example through increased use of transit, other shared use mobility, freight rail, and non-motorized modes, along with more sustainable land use planning, can complement vehicle technology gains to help close this gap in 2030 reductions. Furthermore, even with a full transition to zero emissions vehicles and a carbon-free grid before 2050, achieving net zero emissions by 2050 will require using all effective emissions reduction strategies in the meantime.

Setting targets that are declining net of improvements in vehicle emissions rates is feasible for the States and MPOs subject to National Highway Performance Program (NHPP) requirements. Many will be well-equipped to estimate the trajectory of on-road GHG emissions using transportation demand and vehicle emissions models already in use for other performance measures. If there are States and MPOs that find making such projections overly burdensome, FHWA should provide default national rates of decline in vehicle tailpipe emissions that they can use, together with VMT projections, to set their targets.

### **FHWA should require planning for longer term goals and promote coordination between States and MPOs**

The NPRM states that “the States should be able to demonstrate how their targets fit into a longer timeframe of emissions reductions that will reach the national GHG goals for 2030 and 2050.”<sup>9</sup> This is an important aspect of State target-setting that should be explicitly required once a 2030 national goal for transportation sector emission reductions has been established. Adding 8- and 20-year targets as suggested in the proposal would help to formalize these

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<sup>8</sup> See, e.g., analyses of the [Rhodium Group](#) and [Energy Innovations](#).

<sup>9</sup> NPRM, pg. 42412

demonstrations of progress towards national goals. ACEEE supports the addition of these longer-term targets to the final rule.

In addition, States and MPOs should be coordinating during the target setting process. To help ensure coordination, FHWA should require States and MPOs to set targets at the same frequency. Currently the NPRM proposes that States set targets every 2 and 4 years while MPOs need only establish emissions reduction goals every 4 years. Putting States and MPOs on the same 2-year target setting cycle would allow them to coordinate more effectively to create declining targets that correlate. FHWA should also set out guidelines for how these jurisdictions should be working with each other through the standard setting process to ensure consistency.

**FHWA should require States to provide their assumptions and rationale regarding vehicle emissions rates and vehicle miles traveled in the target years when submitting their GHG emissions reduction targets. States should be required to provide this information separately for light- and heavy-duty vehicles.**

The success of the GHG performance measure depends upon States' and MPOs' adoption of targets for on-road GHG emissions reduction that are both meaningful and achievable. Hence the rule should require that States explain key assumptions and rationale underlying their targets. Given that on-road GHG emissions depend upon motor vehicle emissions rates and vehicle miles traveled, State assumptions regarding these two factors separately are essential information for understanding the targets. The final rule should specify that this information be submitted along with State and MPO targets, consistent with 23 CFR §490.107 (b)(1)(ii)(A), which requires that State DOTs provide in each Baseline Performance Period Report "a discussion, to the maximum extent practicable, of the basis for each established target".

Such requirements are necessary for target-setting to serve the purpose described in the proposal: "The process of setting targets creates transparency, allowing stakeholders and the public to see what goals are being set, how they are being pursued, and results produced by the measure."<sup>10</sup> Developments that are outside State and MPO control, such as federal vehicle emissions standards and the pace of electric vehicle advances, will strongly influence the trajectory of vehicle GHG emissions rates. State and MPO actions, including investment in transportation infrastructure, will need to complement these external factors to jointly produce the necessary reductions in on-road GHG emissions. The targets and the approach to meeting the targets can be transparent only if the State or MPO provides their assumptions and analysis, including projections of future vehicle emissions rates and VMT levels, to make clear their own role and the role of federal requirements and funding in meeting the targets.

It should be noted that if States are required to demonstrate that their targets are declining net of improvements in vehicle emissions rates, as we recommend in the absence of a national transportation GHG emissions goal for 2030, they would need to show their assumptions

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<sup>10</sup> NPRM, p. 42411.

regarding VMT and vehicle emissions rates anyway (which in some cases could be default values provided by FHWA). Once a national transportation target has been established for 2030, however, this “bottom up” analysis will need to be consistent with the “top down” emissions reduction goal that FHWA sets for 2030. In that case, providing vehicle emissions rates and vehicle miles traveled in the target year may require additional work on the part of the States, but that work would be necessary to develop a plan for how and how much State actions will drive emissions reductions beyond what vehicle emissions trends will accomplish.

Ensuring that State and MPO GHG targets are transparent also requires that assumptions and rationale be shown separately for passenger and freight vehicles. Not only are light- and heavy-duty vehicles subject to different emissions regimes and trajectories of electrification, but the planning processes, stakeholders, and economic considerations that shape freight infrastructure investments are distinct from those for passenger infrastructure investments.<sup>11</sup> State freight plans could more meaningfully address the State’s environmental goals, for example, if the expected contributions to GHG reductions from freight vehicles and freight system improvements were identified separately in the basis for the State’s GHG performance targets. Hence, the final rule should require that the basis provided for GHG targets include separate assumptions and analysis of vehicle emissions rates and vehicle miles traveled for light- and heavy-duty vehicles.

**FHWA should define significant progress toward GHG targets more narrowly than the term is defined in the current NHPP rule. States failing to achieve such progress should be required to demonstrate how any further federal transportation funding will contribute to meeting their GHG targets.**

The proposal notes that, under the existing NHPP regulation, a State DOT is considered to have made “significant progress” toward a target if it has achieved the target or has performed at a level better than the baseline level.<sup>12</sup> This notion of significant progress should be adjusted for the proposed GHG measure to require performance better than the level that would be achieved through reductions in vehicle emission rates alone. Furthermore, once there is a well-defined national goal for transportation GHG reductions by 2030, significant progress in the near term should be defined as either meeting the State’s target or achieving at least a certain percentage (e.g., 75%) of the rate of GHG reduction required to meet the 2030 target assuming a constant rate of improvement.

Failure to achieve significant progress towards GHG target s should have implications for a State’s use of and/or eligibility for federal funding. For any formula or discretionary funding program with GHG emissions reduction or sustainability as an objective, FHWA should require States that have not made significant progress towards their

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<sup>11</sup> [Energy Efficiency and Greenhouse Gas Emissions Reductions through State Freight Planning](#), ACEEE.

<sup>12</sup> NPRM, p. 42415, footnote 38

transportation GHG targets to demonstrate how the formula funding or proposed grant would contribute to eliminating the State's deficit in GHG reductions.

FHWA's GHG performance measure rule has the potential to significantly ramp up GHG reductions from the transportation sector and help stave off the worst impacts of climate change, if designed correctly. ACEEE applauds FHWA for moving forward with this proposal and believes that collecting detailed data on transportation emissions and setting targets will help maximize the climate benefits of infrastructure investments and lead to the creation of sustainable transportation policy at the State and regional levels. ACEEE thanks FHWA for the opportunity to comment and improve the final rule.