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October 13, 2022

Stephanie Pollack
Deputy Administrator, Federal Highway Administration
U.S. Department of Transportation
1200 New Jersey Avenue SE
Washington, D.C. 20590

RE: Docket No. FHWA-2021-0004, Greenhouse Gas Emissions Measure

Dear Deputy Administrator Pollack,

Thank you for the opportunity to comment on the U.S. Department of Transportation's Notice of Proposed Rulemaking (NPRM) to amend the national performance management measures to require that states and metropolitan planning organizations (MPOs) set declining greenhouse gas (GHG) emissions targets for roadway travel on the National Highway System (NHS).

As the comprehensive regional planning organization of northeastern Illinois, the Chicago Metropolitan Agency for Planning (CMAP) is committed to securing a regional transportation system that is climate resilient and reduces emissions. ON TO 2050, the region's long-range plan, [identified the need to intensify regional climate mitigation efforts](#) and [set GHG reduction targets](#) with the goal of reducing greenhouse gas emissions by 80% below 1990 levels by 2050. CMAP intends to continue setting GHG reduction targets in future plan updates and is working on several complementary projects, such as an [updated regional greenhouse gas inventory](#), [local emissions summaries for the region's counties and communities](#), and a transportation emissions mitigation plan.

CMAP supports this NPRM and intends to set emissions reduction targets on the NHS as part of a larger process of setting regionwide transportation sector targets.

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Please see below for CMAP's primary recommendations in response to this NPRM:

1. FHWA should require emissions reduction targets on all public roads, instead of only the NHS subset, and should encourage states and regions to set comprehensive targets for all mobile source emissions, to ensure progress towards the Administration's net-zero goal.
2. CMAP urges that MPOs have the flexibility to develop their own estimates for greenhouse gas emissions, to allow for methodologies that reflect local conditions and data. Additionally, the reporting requirements for this measure should be consistent with the requirements for transportation conformity.
3. CMAP urges that FHWA provide enhanced and direct technical assistance to states and MPOs to implement the proposed rulemaking in a timely manner, including guidance on how best to incorporate the Greenhouse Gas Emissions Measure within Carbon Reduction Program goals and funding.
4. Finally, if states and MPOs are not meeting established emissions reduction targets, FHWA should require that they report on actions to be taken to achieve those targets, and they should be required to obligate a percentage of funds towards projects that are proven to reduce emissions.

The transportation sector is one of the leading contributors of GHGs in the region, with [27% of regional greenhouse gas emissions coming from on-road passenger and commercial vehicles](#), and with [56% of annual vehicle miles travelled \(VMT\)](#) in the region occurring on the NHS. Setting, tracking progress towards, and ultimately achieving a net-zero target for roadway travel on the NHS, consistent with the Administration's goal to achieve net-zero emissions economy-wide by 2050, is critical to slowing the worst impacts of the climate crisis.

Sincerely,

A handwritten signature in black ink, appearing to read 'Erin Aleman', with a long, sweeping underline.

Erin Aleman
Executive Director

CMAP did not prepare a response to every question within the Notice of Proposed Rulemaking. The answers below aim to provide both technical and policy feedback, to support successful implementation of the Greenhouse Gas Emissions Measure in northeastern Illinois.

A. Establishing Targets That Lead to Improved Environmental Performance

NPRM Prompt: The proposed measure is intended to support the national policy established under section 1 of [E.O. 13990](#) and [E.O. 14008](#) and at the Leaders Summit on Climate. This policy calls for GHG emissions reductions of 50 to 52 percent below 2005 levels by 2030 and for the U.S. to achieve net-zero emissions by 2050. FHWA encourages comments that address whether the proposed measure would support those national 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.

CMAP's long-range plan, ON TO 2050, recognizes the need to transform our transportation systems to reduce emissions and establishes a long-term GHG reduction target in line with the Paris Agreement. CMAP has been exploring establishing transportation subsector GHG reduction targets (including on-road, rail, waterborne navigation, aviation, and off-road), and a corresponding strategy to achieve those objectives. CMAP sees value in setting long-range transportation GHG reduction targets for the entire region and will likely calculate the proposed measure for the NHS in the MPO area as a component of that larger process.

Overall, CMAP believes this GHG performance measure is a critical step in the effort to reach net-zero by 2050. CMAP urges FHWA to encourage target-setting for all mobile source emissions. Additionally, FHWA should require targets for all public roads, as opposed to only the NHS subset, as is required for the safety performance measure. 23 U.S.C. 150(b)(1) sets a goal to achieve a significant reduction in traffic fatalities and serious injuries on "all public roads," and FHWA requires that safety targets be set on all public roads. Taking this same approach for greenhouse gas emissions will establish more comprehensive reduction targets, and will help ensure progress towards the Administration's net-zero goal.



NPRM Prompt: FHWA is proposing to require declining targets for reducing tailpipe CO₂ emissions compared to the reference year. State DOTs would establish 2- and 4-year statewide targets, and MPOs would establish 4-year targets for the metropolitan planning area. In addition, MPOs would establish 4-year targets for select urbanized areas jointly with other applicable MPOs. However, it may be appropriate to implement improving targets that are structured to support longer-term GHG reduction goals. FHWA encourages comments on how to structure improving targets for the GHG measure, as well as the associated reporting and significant progress requirements in [23 CFR part 490, subpart A](#).

Below are CMAP's technical comments and follow-up questions on how to structure targets and on measuring progress towards those targets.

Reference Year: Establishing 2021 as a reference year is problematic, as that was not a typical year for travel due to the impacts of COVID-19. Transit trips were significantly impacted by COVID-19, to the point that the federal government provided significant operating assistance to transit providers to offset the loss of ridership. [Vehicle mile travelled \(VMT\) on the NHS system for 2021 was also depressed by the impacts of COVID-19](#), thus having a reference year with historically low VMT may impact the ability to achieve meaningful GHG targets. A more representative reference year would be 2019. Some MPOs—including CMAP—have already developed GHG inventories for 2019, and [FHWA references 2019 as part of this NPRM](#). It would be preferable to use 2019 as a more representative reference year, or MPOs should have the flexibility to determine a reference year that can be mutually agreed upon by the MPO, the state DOT, and FHWA.

2030 Reduction Setting: The goal of a 50%-52% reduction from 2005 to 2030 is laudable, however it would require a calculation of emissions already reduced between 2005 and the reference year, to then be able to set targets based on the remaining emissions reduction gap. CMAP urges for guidance on calculating GHGs from 2005 to both the reference year and future years. Otherwise, setting targets based on achieving net-zero GHGs by 2050 would be appropriate. The data requirements shown in section 490.509 would need to be made available for 2005 and the reference year so that the baseline data is known to both state DOTs and MPOs.

Scope: The measure proposes that states DOTs and MPOs calculate and report tailpipe emissions on all public roads, to then calculate tailpipe emissions on the NHS. CMAP recommends that "all public roads" be defined as any highway, road, or street under the jurisdiction of and maintained by a public authority and open to public travel, including non-State-owned public roads and roads on tribal land, as defined for the Highway Safety



Improvement Program (23 CFR 924.3). CMAP recommends that FHWA provide clarifying guidance as such.

Fuel Calculation vs. MOVES Model: Using the fuel calculation may be appropriate for states, but MPOs should be provided the flexibility to use more precise methods suited to their needs, particularly those in nonattainment areas. While the use of an FHWA provided emissions factor each year would provide consistency in the calculations across the country, it is an imprecise method that does not consider local conditions, vehicle/fleet composition, inspection and maintenance programs in nonattainment areas, etc. Vehicle types and vehicle performance can impact GHG emissions, [as stated by the US EPA](#). Additionally, understanding fuel consumption is key, but it would be challenging to predict fuel consumption without knowledge of the fleet mix at future points in time. Finally, the fuel calculation does not capture other vehicle impacts on producing GHGs, [such as idling](#).

CMAP urges for MPOs to have the flexibility to develop their own estimates for greenhouse gas emissions. MPOs in nonattainment areas are required to use MOVES (outside of California) and can develop emission rates that are reflective of local conditions and data. MPOs should be allowed to decide on how best to approach this measure, in consultation with state DOTs, but concurrence from the state on methodology should not be required.

If an MPO should choose to use MOVES, the inputs for GHG target-setting should be the same or similar to those used for transportation conformity, and when they are different that should be documented. This would enable consistency in an MPOs approach without the burden of having to do extra work for this performance measure. For example, MPOs use travel demand models, which likely do not cover all public roads, but remain very useful for estimating emissions in MOVES. Setting 4-, 8-, or even 20-year targets using MOVES would enable MPOs to incorporate anticipated changes in the transportation network, land use, socioeconomic forecast, etc., along with regulatory changes that are built into MOVES in a way that is both consistent with the MPO planning process and incorporates the best use of existing data, information, and resources.



NPRM Prompt: For example, FHWA seeks comment on potentially introducing a new requirement for State DOTs and MPOs to establish 8- and 20-year targets at the beginning of each 4-year performance period. These targets could inform decision-making to support of longer-term GHG reduction goals. The 8- and 20-year improving targets established as part of the first 4-year performance period would indicate a reduction as compared to the reference year, while subsequent 8- and 20-year targets would indicate a reduction as compared to previous 8- and 20-year targets. These targets could inform decision-making to support of longer-term GHG reduction goals. FHWA also seeks comments on how these targets could align with and inform existing transportation planning and programming processes.

8- and 20-Year Targets: As noted above, providing MPOs the flexibility to calculate GHG emissions is critical to target-setting, particularly if FHWA will require longer term targets (8-year or 20-year). Transportation conformity calls for modeling years to not be more than 10 years apart, which is similar to an 8-year and 20-year target. A target of 2050 (or the LRTP horizon year) would also be appropriate for target-setting, and it would align with the Administration's goal of net-zero by 2050. Targets set beyond the 4-year period, however, should be established by the MPO and not required as part of this NPRM, as is the case with all other performance measures.

NPRM Prompt: Besides requiring targets that reduce GHGs over time, are there any specific ways the proposed GHG measure could be implemented within the framework of TPM to better support emissions reductions to achieve national policies for reductions in total U.S. GHG emissions?

Capturing GHGs from Electric Vehicles:

Under the current proposed rule, EVs would be represented as zero emissions, which would not accurately represent their impact on the regional power pool and associated greenhouse gas emissions. It is important to acknowledge the challenge of addressing all emissions from on-road travel (for both fossil fuel vehicles and electric vehicles), including upstream emissions, which are technically challenging to measure and often outside the influence of MPOs and states.

While measuring tailpipe emissions is the most straightforward approach for this measure, emissions from EV use should be accurately tracked and accounted for in regional greenhouse



gas inventories, and those emissions should be addressed with appropriate reduction strategies that target the energy sector.

NPRM Prompt: Finally, this NPRM proposes that when there are two or more MPOs with metropolitan planning area boundaries that overlap any portion of an urbanized area, and the urbanized area contains NHS mileage, the MPOs would be required to establish a joint urbanized area target in addition to metropolitan planning area targets. FHWA invites comments on the following questions:

- a. **In instances that MPOs are establishing a joint urbanized area target, should FHWA require that the individual MPO-wide targets be the same as the jointly established urbanized area target?**

Outputs from our travel model that are used for MOVES emissions rates are calibrated to reflect travel in our MPO boundaries. Splitting the urbanized and non-urbanized modeling results apart lowers the confidence and makes them more difficult to communicate the results. Strategies to reduce emissions could be quite different in urbanized and non-urbanized parts of the MPO area. Requiring that different geographies have the same target could double the amount of work and result in a less comprehensive approach.

- b. **In cases where there are multiple MPOs with boundaries that overlap any portion of an urbanized area, and that urbanized area contains NHS mileage, should each of those MPOs establish their own targets, with no requirement for a joint urbanized area target?**

Requiring that MPOs set “additional” joint targets for urbanized areas is unnecessary since MPOs will have already set targets for the MPO area. While urbanized areas may include more than one MPO, MPO boundaries do not overlap, thus targeting setting at the MPO-level is appropriate, whereas additional target-setting for the urbanized areas is duplicative, burdensome, and unnecessary to achieve the goals of reducing GHGs, and would not be used in the decision-making process at the MPO level. It appears that MPOs would need to set targets for 2030 and 2050 to correspond with the Administration's climate goals, to then set 4-year targets to reach those longer-term goals. Urbanized areas and MPO boundaries change and have likely changed since 2005. How would this be treated in terms of establishing a reduction from 2005 levels on the NHS system?

In addition, the rule currently allows flexibility in estimating emissions for MPOs. If two MPOs are to set joint targets, but use different methods of estimating GHG, the resulting target will be meaningless to both.



- c. **Are there other approaches to target setting in urbanized areas served by multiple MPOs that would better help MPOs reach net-zero emissions?**

Urbanized area is not a useful geography for setting targets and should not be used. It is unclear if fuel sales data is available at the geography needed to calculate the emissions for urbanized area. Other methods, such as MOVES are calibrated to MPO boundaries, not urbanized areas. Combining data gathered using different methods from across MPOs will result in targets that are not meaningful.

B. Summary of and Request for Comments on the Regulatory Impact Analysis

NPRM Prompt: Would the proposed measure change transportation investment decisions and if so, in what ways? For State DOTs and MPOs that have already implemented their own GHG measure(s), FHWA welcomes information on the impact and effectiveness of their GHG emissions measure(s).

Performance-Based Programming: CMAP has been a leader in performance- and data-driven decision making, as the agency continues to implement performance-measurement requirements established by MAP-21 (Moving Ahead for Progress in the 21st Century). CMAP's adopted performance targets are tied directly to ON TO 2050's policy priorities, and they are linked to several of the plan's longer-term indicators, whose targets are set for 2050. Additionally, although it is not required, CMAP tracks greenhouse gas emissions projections as part of the air quality conformity process, for informational purposes.

A federally required Greenhouse Gas Emissions Measure would help to further incorporate greenhouse gas emissions reductions into CMAP's performance-based programming, including for funding sources not directly tied to air quality. This will ensure an agency-wide approach to greenhouse gas emissions reductions, extending beyond air quality funding and conformity analysis.

Finally, it should be noted that the Carbon Reduction Program directs states DOTs to develop Carbon Reduction Strategies. CMAP will develop a similar strategy for the region which will incorporate GHG reduction targets and outline the agency's programmatic priorities to address GHG emissions, based on the Metropolitan Chicago's unique context. CMAP intends to use its Carbon Reduction Program sub-allocations to assist in implementing that plan.



Performance Target Reporting and Penalties: Requiring states and MPOs to calculate greenhouse gas emissions and set reduction targets is an important step to encourage action to address the growing climate crisis. However, without any enforcement mechanism associated with failing to comply with this performance measure, it is hard to expect any significant progress on emissions reductions towards the 2030 and 2050 goals. The NPRM notes [the following](#) on the National Highway Performance Program (NHPP):

...the Infrastructure Investment and Jobs Act (IIJA) ([Pub. L. 117-58](#), also known as the “Bipartisan Infrastructure Law”), amended [23 U.S.C. 119](#) to indicate that one of the purposes of the NHPP is “to provide support for activities to increase the resiliency of the National Highway System to mitigate the cost of damages from sea level rise, extreme weather events, flooding, wildfires, or other natural disasters.” IIJA Section 11105.

As such, this proposed Greenhouse Gas Emissions Measure would be directly implementing one of the purposes of the NHPP, by reducing transportation emissions to slow the worst impacts of the climate crisis, therefore increasing the resiliency of the NHS.

Accordingly, if a state or MPO is not making progress towards its emissions reduction targets, they should be required to include as part of their performance target report a description of the actions they will take to achieve those targets, as outlined in 23 U.S.C. 150(e).

Additionally, 23 U.S.C. 119(f)(1)(A) says that if a state reports that the condition of the Interstate System has fallen below the minimum condition level, they are required to both obligate a percentage of funds and transfer additional funds towards the purposes of the NHPP. The same penalty should be established for states and MPOs under the Greenhouse Gas Emissions Measure; if established reduction targets are not met, they should be required to obligate a percentage of NHPP funds towards NHPP-eligible projects that are proven to reduce emissions towards targets.

