



October 13, 2022

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

Dear Deputy Administrator Pollack:

Re: Docket No. FHWA-2021-0004

RIN 2125-AF99

Agency: Federal Highway Administration

National Performance Management Measures; Assessing Performance of the National Highway System, Greenhouse Gas Emissions Measure

The Association of Metropolitan Planning Organizations (AMPO) is pleased to provide our comments on the July 15, 2022, Federal Highway Administration (FHWA) Notice of Proposed Rulemaking (NPRM) on a proposed Greenhouse Gas (GHG) Emissions Reduction Performance Measure. AMPO supports reducing greenhouse gases, including those emitted directly from on-road mobile sources and those emitted in the production and transport of fuel or electricity used by on-road mobile sources¹. AMPO also supports investments in surface transportation infrastructure and activities that will increase energy efficiency in transportation, increase travel options, and provide a more sustainable transportation infrastructure.

AMPO, the transportation advocate for metropolitan regions, is committed to enhancing metropolitan transportation systems by planning, programming, and coordinating Federal highway and transit

¹ In 2020, Transportation CO₂ emissions comprise about 27% of total CO₂ emissions in the United States. Of that, the on-road mobile sector accounted for 83.2 % of those emissions or 22.4% of total CO₂ emissions. Of these on-road emissions, light-duty passenger vehicles accounted for 69% and light and heavy-duty trucks accounted for 31% of on-road CO₂ emissions. <https://www.epa.gov/greenvehicles/fast-facts-transportation-greenhouse-gas-emissions>. The transition to electric vehicles will reduce total emissions from the transportation sector to the extent that power generation is carbon-neutral, as well as the share of those emissions that are emitted on-road (versus from a power plant).

investments. AMPO's mission is to help communities thrive by strengthening the Metropolitan Planning Organizations (MPOs) that plan for safe, reliable, and equitable multimodal transportation networks that are accessible to all. MPOs vary by size, region, and needs, and AMPO provides innovative approaches and context-sensitive solutions to help all MPOs. Our vision is a MPO community that fosters economic resilience, quality of life, and opportunity for all by creating thriving metropolitan regions.

Many Metropolitan Planning Organizations (MPOs) support a GHG performance measure that can be implemented along with the other FHWA performance measures with as little disruption as possible to established planning practices. AMPO encourages a final rule that is meaningful, practical, implementable, and that provides useful information to policy makers and to the general public.

Context

There are approximately 400 MPOs in the U.S. as reported in the most recent census. Each Metropolitan Planning Organization (MPO) includes a policy board composed of local and regional elected officials who collaborate to decide which transportation investments will be made within their MPO region. The MPO investment plans must: 1) extend for at least 20 years in the future, 2) be updated every four years, and 3) meet all federal planning requirements. In some states there are additional planning requirements for DOTs and MPOs.

AMPO applauds the recently enacted Infrastructure Investment and Jobs Act (IIJA)² and specifically the Carbon Reduction Program which can help MPOs, transit agencies, and states reduce GHG emissions by funding GHG reduction strategies and projects. Additionally, the Congestion Mitigation and Air Quality Improvement Program (CMAQ) is intended to help reduce criteria pollutant emissions and provide congestion relief; both will provide multi-pollutant benefits, including reducing GHG emissions from on-road transportation sources. AMPO hopes that these two programs, in addition to others in the IIJA, will help state DOTs and MPOs meet their respective targets as well as national goals of 50-52% reduction from 2005 levels in economy-wide GHG emissions by 2030 and zero net emissions economy-wide in 2050. These national goals are set forth in Executive Orders [13390](#) and [14008](#).

AMPO's comments on the NPRM are guided by the following two recommendations. These recommendations and our specific comments can help FHWA to finalize a GHG performance measure that, importantly, provides useful information to policy makers and the general public.

Recommendation #1: Integrate the GHG performance measure requirements into the existing performance-based planning process (PBPP).

The statewide and metropolitan transportation planning processes have been largely in place since the early 1990s. These include many Federal requirements designed to serve national priorities and to ensure continuing, cooperative, and comprehensive transportation planning. The Moving Ahead for Progress in the 21st Century Act (MAP-21) (P.L. 112-141) was enacted on July 6, 2012 and added specific performance-based planning requirements that have been under implementation for several years. These requirements impact performance of the highway system, transit systems,

² Public Law No: 117-58 (11/15/2021)

congestion relief, and emission reductions in some MPO regions. They also require close coordination between state DOTs, MPOs and transit agencies. See Table 1 below for existing Federal performance areas and measures.

Performance Area	Number of Performance Measures
Safety	5
Pavement Condition	4
Bridge Condition	2
System Performance	2 + GHG to be added
Freight Movement	1
Traffic Congestion	2
On-road mobile source emissions (CMAQ-projects)	1
Transit Safety	4
Transit Asset Management	4
9 Performance Areas	26 measures inc. GHG

Given MPOs work with state DOTs and transit agencies to put the PBPP in place, AMPO urges FHWA to adopt an approach to the GHG measure with similar target-setting processes and coordinated schedules for implementation and reporting.

Recommendation #2: Provide flexibility in Implementation that builds upon efforts underway to reduce on-road GHG emissions

Many actions have been taken by states and MPOs to reduce GHG emissions and improve the sustainability of the transportation infrastructure. Any GHG performance measure should account for state, regional, and local commitments and processes, and actions completed and underway; areas should not be penalized if they have been working on these issues ahead of the FHWA. FHWA should recognize these efforts and ensure that the new GHG measure requirements are flexible enough to accommodate and support them.

One example of a nation-wide effort is the U.S. Department Energy Clean Cities program that has been in place for over 25 years. As part of Clean Cities efforts, transportation stakeholders have achieved goals around alternative fuels, advanced vehicles, mobility solutions, and other fuel-saving strategies. In 2020, even during the COVID crisis, Clean Cities Coalitions averted *nearly 5 million tons of GHG emissions- the equivalent of removing over one million conventional cars from the roads.* According to U.S. DOE 2020 Activity Report on the Clean Cities Program³, “more than 75 coalitions leverage DOE resources and have created networks of over 20,000 local stakeholders to advance transportation projects. About 265 million people (80% of the total U.S. population) live inside the boundaries of Clean Cities coalitions.”

The Smart Cities and Electric Vehicle and Advanced technologies/ITS related programs also include recently approved funding that can help to reduce on-road GHG emissions.

There are also multi-state coalitions that have been working together for many years on air quality issues. For example, NESCAUM is a nonprofit association of air quality agencies in eight northeastern states including the six New England states (Connecticut, Maine, Massachusetts, New Hampshire,

³ https://afdc.energy.gov/files/u/publication/2020_coalition_activity_report.pdf.

Rhode Island, and Vermont), plus New Jersey and New York. NESCAUM provides scientific, technical, analytical, and policy support to the air quality programs of these states.

There are many statewide efforts underway and regional and local governments, coalitions and organizations working to reduce transportation related GHG emissions. California, Washington, New York, and other states and regions have been implementing various GHG reduction measures, in some cases for many years. Some programs are mandatory, some are voluntary, and many programs are incentive based.

Based upon the above two recommendations, below are our comments on the NPRM.

Targets

MPOs set Four-year Targets for their Metropolitan Planning Areas

NPRM Proposal

The proposed rule requires MPOs to set declining GHG reduction targets every four years with a goal of a 50-52% reduction in CO₂⁴ economy-wide by 2030 (from 2005 economy-wide CO₂ levels) and a net zero target economy-wide by 2050. These goals are included in Executive Order 13390: “Protecting Public Health and the Environment and Restoring Science to Tackle the Climate Crisis” and Executive Order 14008 “Tackling the Climate Crisis at Home and Abroad”.

State DOTs would set declining 2-and 4-year statewide targets for reducing tailpipe CO₂ emissions on the NHS. State DOTs and MPOs would have the flexibility to set targets *“that work for their respective climate change policies and other policy priorities, so long as they are in line with the net-zero goals by 2050”*⁵. The targets must be quantifiable and use a 2021 as the reference year.

AMPO Comments

Consistent with existing performance measure targets, a 4-year target setting process for MPOs fits within the overall transportation planning process timeframe and could be integrated into those efforts. AMPO opposes any mandatory targets other than the 4-year requirement. AMPO encourages the flexibility in setting targets as noted in the NPRM with the following questions and comments.

- Is the reference year 2005 for emissions (economy-wide) and the reference year (for fuel sales) per the NPRM 2021? If the reference year is 2005 economy-wide, what level of reductions have occurred since that time from on-road GHGs? (e.g., how close are we to the 50- 52% reduction by 2030?)
- AMPO recommends that flexibility be provided to establish the reference year if the MPO has already established one in its on-going efforts or if for data or other reasons the MPO decides a different year if preferable. For example, if a MPO or state DOT has already established and quality-checked 2019 GHG on-road emissions levels, they should be able to use the reference developed at the state and/or local level. This could be 2019, 2010, or other state or MPO

⁴ We use both GHGs and CO₂ in this document; about 97 percent of GHG are CO₂ emissions. <https://www.epa.gov/greenvehicles/fast-facts-transportation-greenhouse-gas-emissions>.

⁵ National Performance Management Measures; Assessing Performance of the National Highway System, Greenhouse Gas Emissions Measure, Federal Register, July 15, 2022. P. 42401.

established reference years since 2005. In any event, reference years of 2020 or 2021 are not supported due to the travel impacts related to COVID. It was also suggested that the reference year not be more than ten years in the past, excepting those areas that are already working with established reference years all the way back to 2005.

- Regardless of what reference year is used, we see many challenges to establishing reference year conditions with respect to available data and methodologies.

Two-year, Eight-year and Twenty-year Targets

NPRM Proposal

The NPRM requests comments on whether MPOs should set targets other than the four-year target noted above. The state DOTs will be reporting biennially on progress made toward statewide targets that necessarily will include MPO areas.

AMPO Comments

AMPO does not support a *requirement* that MPOs set other than four-year targets. Two-year, 8-year, and 20-year targets (or any other targets) could be encouraged and set at the discretion of the MPO and would not be binding or have standing with respect to compliance with FHWA's GHG rule. Some MPOs already have established long-term goals (e.g., 2040, 2050) and have been investing to achieve those goals for years. These efforts should not be disrupted. Other MPOs believe that the option to set other than four-year targets can be beneficial to their planning efforts, including their Long-Range Plan forecasts and updating financially constrained plans. Circumstances vary among MPOs, but 4-year targets are appropriate and all other target years should be at the discretion of the MPO.

With respect to all targets, the metropolitan planning process requires MPOs to update their Metropolitan Transportation Plans (MTPs) and Transportation Improvement Programs (TIPs) at a minimum every four years. The MTP must address transportation needs and priorities for at least twenty years in the future. The planning processes are well established, comprehensive reviews of travel within the region, and MPOs address the Federal (and in some cases, additional state) planning requirements including the PBPP process, a discussion of performance targets and progress, transportation conformity, consideration of required planning factors, impacts of climate change on the transportation system, financial constraint, etc.

For simplicity and efficiency, it does not make sense to establish a cycle beyond 4-years; the strategies and investments that would contribute to meeting any targets are incorporated into MPO planning documents and decisions made by elected officials in the respective MPO regions. Since MPOs must do a comprehensive review of their planning assumptions and update their planning documents every four years, and they would update GHG targets every four years, there is no value-added in requiring MPOs to establish other targets.

MPOs Serving Multiple UZAs to Establish Joint 4-year Quantifiable Targets

NPRM Proposal

The NPRM proposes that where the boundaries of two or more MPOs overlap any portion of an urbanized area with NHS mileage, those MPOs would establish joint 4-year quantifiable targets for the urbanized area. This target would be in addition to the MPO targets for their metropolitan areas.

AMPO Comments

AMPO recommends against reporting on the proposed GHG measure for the Urbanized Area (UZA), and strongly endorses using the metropolitan planning area as the area of measurement and target-setting. MPOs do not conduct transportation planning at the UZA geography and setting a target and tracking progress for the UZA would not be useful to policy makers or a useful expenditure of resources. AMPO has several additional concerns about this proposal and do not support a requirement for joint targets within a UZA. Our concerns include the following:

- State DOTs and MPOs are already required to coordinate targets. That ensures collaboration on a statewide level. AMPO members identified many complications with the NPRM proposal and note the significant burden on resources that MPOs would incur to meet the requirement. This is especially a concern where there are multiple MPOs in multiple states but one urbanized area. This requirement would not add any value to the target establishment or implementation strategies, in fact it may be counterproductive and result in the setting of the lowest targets that satisfy all impacted MPOs.
- Joint target setting adds unnecessary complication and detracts from planning process. States and MPOs have worked very hard over the past several years to implement FHWA performance measures. This multi-year PBPP process has focused state DOTs and MPOs on federally required performance-based transportation planning for the first time. The added requirement of joint MPO targets, especially in multi-state, and potentially relatively small UZAs is likely to unnecessarily complicate this process without concurrent benefits. Finally, if MPOs adopt state targets and states have different approaches to target setting it could be difficult for state targets and MPO targets to align.
- Requiring MPOs, often from different states, to set joint targets raises the question of whether the states should also have to set joint targets with other states. The transportation system is interconnected by design and only requiring MPOs to set joint targets with other MPOs is not likely to add any value; quite the opposite, it will be confusing to decision-makers and redundant to MPO and state planning efforts. The NPRM discusses the flexibility that states and MPOs have in setting declining CO₂ targets and establishing programs and strategies to meet these goals. The proposal to require establishment of joint MPO targets, oftentimes in different states, violates this principle.

MPOs and state DOTs have some experience in joint planning goals and associated complications as part of the transportation conformity process. An example follows: When a new National Ambient Air Quality Standards (NAAQS) is effective there are no motor vehicle emissions budgets in each state in a multi-state nonattainment area. Thus, multi-state nonattainment areas must coordinate their conformity determinations. This has added an enormous amount of work for MPOs given that planning assumptions, analysis years, non-attainment boundaries, timelines on TIPs and Plan updates, emissions and transportation modeling, and all other requirements must be coordinated between multiple states and MPOs. There has been no discernible difference in how quickly nonattainment areas attain the NAAQS or make progress toward that goal with this requirement. Conversely, the requirement has detracted from MPOs regional planning activities due to the enormous workload this requirement creates.

Target Establishment Date

NRPM Proposal

The NPRM proposes that states have adequate time to establish targets for the GHG measures for reporting in the State Biennial Performance Reports due October 1, 2022. This proposal is intended to ensure GHG targets are established at the start of the next Transportation Performance Measure (TPM) reporting period.

AMPO Comments

AMPO opposes the proposed target establishment date of October 1, 2022. Comments on the NPRM are not due until after this date, FHWA will not have considered the comments and questions submitted to the docket, and state DOTs and MPOs need time to properly assess and set targets. Specific issues with setting targets, reference year, GHG calculation metrics, data required, and other associated questions that are central to target setting are addressed elsewhere in these comments.

AMPO recommends that the target establishment date be October 1, 2024, for state DOTs with MPOs having 180-days after that to set targets. There could still be streamed as 4-year targets (for 2025) within the current performance period. This will give states time to assess their GHG emissions and to set targets that they believe are achievable. An October 1, 2024, target establishment date would allow coordination between state DOTs and MPOs and harmonize the GHG performance measure reporting schedule with the other performance measures in a reasonable timeframe.

Under this scenario, an *initial and abbreviated* performance period progress report for GHGs would be submitted in October 2026 along with the current 2nd full performance period progress reports for other performance measures, and the first full performance period progress report for GHGs would be October 2030 along with the 3rd full performance period progress report for the existing performance measures.

Reporting Frequency

NRPM Proposal

The NPRM proposes that state DOTs establish 2 and 4-year targets and report to FHWA biennially. The NPRM requires that MPOs report every four years and requests comments on a reporting requirement of every 2-years by MPOs.

AMPO Comments

After the initial schedule described above, AMPO recommends progress reports every four years under the GHG rule. The rule could encourage but not require a two-year review. The timeframe required to program projects for funding, get funding approvals and implement projects is usually far more than two years. It is not clear that there is any value-added with a two-year reporting requirement. The level of effort to calculate GHG emissions every two years for the past two calendar years would be excessive.

MPOs are required to update their plans and TIPs every four years; this is the time to fully assess strategies and progress in implementing them. It is also when MPOs adjust their investment programs based on regional goals and planning requirements, including updated financial, demographic, and other planning assumptions.

GHG Metric

NRPM Proposal

The NRPM proposes that the GHG metric used is annual total tailpipe CO₂ emissions on the National Highway System (NHS). It would apply to all mainline highways on the Interstate and non-Interstate NHS. The measure would compare the percent share of tailpipe CO₂ emission on the NHS to the reference year of 2021 with declining targets set to meet the goal of 50-52% fewer CO₂ emissions economy-wide in 2030 and net-zero CO₂ emissions economy-wide in 2050.

AMPO Comments

This metric will allow FHWA to get national information on tailpipe CO₂ emissions on the NHS over time. As noted earlier, the reference years of 2020 or 2021 are problematic due to continued travel impacts of COVID.

GHG Metric Calculation

NRPM Proposal

The NRPM requests comment on whether there should be one, uniform method for calculating the GHG metric or if a range of approaches to metric calculation should be allowed. FHWA also proposes that key data sources used would include the Fuels and Financial Analysis System-Highways (Fuels/FASH⁶) which provides annual fuel use data; the HMPS system which provides VMT data on the NHS; and FHWA-supplied emissions factors that would provide a CO₂ emissions factor for each on-road fuel type used to calculate the GHG metric.

AMPO Comments

There have been many comments on the proposed GHG metric calculation. Some MPOs want to use a per capita VMT and/or per capita GHG reduction metric. They suggest that a VMT-based quantification method can identify the primary factors influencing transportation-sector GHG emissions and allow states and MPOs to develop appropriate strategies. They argue that VMT is a better resolution and gives consistency between regions/states and that a VMT based approach will distinguish the emission reductions from technology vs. lower VMT-based solutions.

Some MPOs suggest that a per-capita GHG metric would allow for changes in population, metropolitan areas planning boundaries, and urbanized area boundaries over time and would effectively add a “rate” measure of performance consistent with many of the other federally required performance measures

⁶ Is the FUELS/FASH data readily available? Can MPOs get it just for the MPO planning areas. Access to this data needs to be clarified and available.

(e.g., highway safety, transit assets, etc.) This would improve comparability across states and MPOs and aid in the identification of more effective strategies for reducing GHG emissions.

Other MPOs want to use existing metrics they have established as part of ongoing GHG reduction efforts. Many MPOs note that a fuel-based metric is not representative of real-world fuel consumption and driving conditions (e.g., stop-and-go, acceleration, deceleration, etc.).

Finally, other metrics have been established by others using different data sets and modeling procedures. The U.S. DOE Clean Cities program⁷ uses reduced Gallon Gasoline Equivalent (GGE) to measure emissions reductions⁸. FHWA has encouraged the use of its EERPAT⁹ tool to analyze scenarios and strategies to reduce on-road GHG emissions. EPA's MOVES model can also produce estimates of GHG emissions and other tools and models may have been developed by MPOs.

In summary, MPOs need flexibility to calculate the GHG metric as appropriate in their regions. We have the following three recommendations on calculating the GHG metric:

- 1) FHWA provide an approved data-set and associated guidance on calculating the GHG metric, including examples, for use of MPOs at their discretion.
- 2) MPOs be allowed to adopt state DOT targets and metrics for GHG calculation in coordination with the state DOT and adjusted as applicable for the MPO area.
- 3) Flexibility be provided to MPOs to use a range of approaches to calculate the GHG metric. This would allow MPOs to calculate GHG emissions using current methods, data sets, and models. For example, a VMT-based approach is used throughout California with VMT and GHG per capita as metrics. The data sources used in the state are many including, but not limited to census data, emissions factors data, housing data, and different travel demand models and methods.

Each MPO has a travel demand model that is used for planning, forecasting future VMT, speeds, and travel conditions. These models vary in complexity and sophistication. MPOs recommend *using the existing travel network reflected in their respective travel demand models for the GHG performance measure*. This may or may not include all public roads depending on the individual MPO models.

By allowing MPOs to develop their own GHG calculation metric with alternative or additional data sets, it may allow them to account for limitations in data in one or more of the following areas:

- Pass through NHS traffic in the MPO region
- Place of fuel purchase that is not consistent with place of travel
- Real-world driving conditions
- Fleet Mix (EV, hybrid, fuel cells, transit use, etc.)
- Land Use and Accessibility¹⁰

⁷ <https://cleancities.energy.gov/>.

⁸ U.S. DOE calculates that nearly 12 billion gasoline gallon equivalents (gge) have resulted from reduced fuel use in increased fuel diversity due to its programs

⁹ <https://cleanenergysolutions.org/es/resources/energy-emissions-reduction-policy-analysis-tool>.

¹⁰ In the Metropolitan Planning Commission Ex Parte Communication with FHWA on August 3, 2022, MTC indicated that shifting their land use strategy (due to having a per capita GHG measure) due to greater density yields the lion's share (over 50 percent) of the MTC per capita GHG reductions compared to 4 percent from transit. See Docket for memo on this discussion.

- Demographic changes
- Efficiency of different travel modes
- Population changes
- Equity

Conclusion

Our comments reflect the underlying recommendations noted earlier. Any GHG rule requirements be integrated into the existing PBPP, and FHWA should provide flexibility in implementation that builds on efforts underway to reduce GHG emissions. Most importantly, any Federal GHG performance measure requirement should provide decision makers and the general public with better understanding of on-road GHG emissions and effective ways to reduce them.

We appreciate the opportunity to provide these comments. Please feel free to contact me if you have any questions.

Respectfully,



William Keyrouze
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Association of Metropolitan Planning Organizations