**State DOT:**

**Name:**

**Contact Information:**

**Part I: Overarching State DOT Comments**

Please provide any overarching comments you/your state has regarding the FHWA GHG NPRM.

**Part II: FHWA General Comments from the NRPM**

**Establishing Targets That Lead to Improved Environmental Performance**

1. FHWA encourages comments that address whether the proposed measure would support those national policies [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.], 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. (p66)
2. 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. F (67)
3. 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? (p68)
4. What changes to the proposed measure or its implementation in TPM could better the impact of transportation decisions on CO2 emissions, and enable States to achieve tailpipe CO2 emissions reductions necessary to achieve national targets? (p68)
5. 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? (p68)
6. Should MPOs that establish a joint urbanized area target be exempt from establishing individual MPO-level targets, and instead only be required to adopt and support the joint urbanized area target? (p68)
7. 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? (p68)
8. Are there other approaches to target setting in urbanized areas served by multiple MPOs that would better help MPOs reach net-zero emissions? (p69)

**Summary of and Request for Comments on the Regulatory Impact Analysis**

1. The RIA includes assumptions regarding the applicability, level of effort and frequency of activities under proposed Sections 490.105, 490.107, 490.109, 490.511, and 490.513. Are these assumptions reasonable? Are there circumstances that may result in greater or lesser burden relative to the RIA assumptions?
2. Would the staff time spent implementing this measure reduce the burden of carrying out other aspects of State DOT and MPO missions, such as forecasting fuel tax revenues? If so, please describe and provide any information on programs that would benefit from this measure and estimate any costs that would be reduced by implementing this measure.
3. Would the proposed rule result in economies of scale or other efficiencies, such as the development of consulting services or specialized tools that would lower the cost of implementation? If so, please describe such efficiencies and provide any information on potential cost savings.
4. Would the proposed rule result in the qualitative benefits identified in the RIA, including more informed decision-making, greater accountability, and progress on National Transportation Goals identified in MAP-21? Would the proposed rule result in other benefits or costs? 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).

**Part III: Proposed Regulatory Language**

**490.101 Definitions**

*Fuels and Financial Analysis System-Highways (FUELS/FASH) as used in this part means the FHWA’s system of record for motor fuel, highway program funding, licensed drivers, and registered vehicles data.*

*Net-zero as used in this part means that human activities produce no more greenhouse gases than they remove from the atmosphere.*

**490.105 Establishment of performance targets**

*(d) Target scope. Targets established by State DOTs and MPOs shall, regardless of ownership, represent the transportation network or geographic area, including bridges that cross State borders, that are applicable to the measures as specified in paragraphs (d)(1), (2), and (4) of this section.*

 *(4) MPOs shall establish targets for the GHG measure specified in § 490.507(b) that represent performance of the transportation network specified in § 490.503(a)(2), for urbanized areas meeting the criteria specified in paragraph (f)(10) of this section.*

 *(1) Schedule. State DOTs shall establish targets not later than the due dates provided in paragraphs (e)(1)(i) and (e)(1)(ii) of this section, and for each performance period thereafter, in a manner that allows for the time needed to meet the requirements* *specified in this section and so that the final targets are submitted to FHWA by the due date provided in § 490.107(b).*

*(i) State DOTs shall establish initial targets not later than May 20, 2018, except as provided in paragraph (e)(1)(ii) of this section.*

*(ii) State DOTs shall establish initial targets for the GHG measure identified in § 490.507(b) not later than October 1, 2022.*

 *(10) Targets for the GHG measure. Targets established for the GHG measure in paragraph (c)(5) of this section shall be declining targets for reducing tailpipe CO2 emissions on the NHS, that demonstrate reductions toward net-zero targets.*

*(i) The MPOs shall establish 4-year targets, described in paragraph (e)(4)(iv) of this section, for all applicable measures, described in paragraphs (c) and (d) of this section. For the GHG measure described in (c)(5) of this section, the targets established shall be declining targets for reducing tailpipe CO2 emissions on the NHS.*

*(3) Target establishment options. For each performance measure identified in paragraph (c) of this section, except the CMAQ Traffic Congestion measures in paragraph (f)(5) of this section, MPOs meeting the criteria under paragraph (f)(6)(iii) of this section for Total Emissions Reduction measure, the MPOs shall establish targets for the metropolitan planning area by either:*

*(i) Agreeing to plan and program projects so that they contribute toward the accomplishment of the relevant State DOT target for that performance measure; or*

*(ii) Committing to a quantifiable target for that performance measure for their metropolitan planning area.*

*(10) Joint Targets for the GHG Measure. Where an urbanized area contains mainline highways on the NHS, and any portion of that urbanized area is overlapped by the metropolitan planning area boundaries of two or more MPOs, those MPOs shall collectively establish a single joint 4-year target for that urbanized area, described in paragraph (e)(4)(iv) of this section. This joint target is in addition to the targets for the metropolitan planning area required in paragraph (f)(1)(i) of this section.*

*(i) NHS designations and urbanized areas shall be determined from the data, contained in HPMS, 1 year before the State DOT Baseline Performance Period Report is due to FHWA.*

*(ii) Only one target shall be established for the entire urbanized area regardless of roadway ownership. In accordance with paragraph (f)(9) of this section, each MPO shall report the joint target for the urbanized area.*

*(iii) The target established for each urbanized area shall represent a quantifiable target for that urbanized area.*

1. FHWA requests comment on what the due date should be in the event a final rule is not effective in advance of the October 1, 2022, reporting date. As stated elsewhere in this proposal, FHWA also will consider public comments to establisha GHG measure for States and MPOs in a final rule based on this proposed rule. (p48)
2. FHWA encourages submission of comments on the type of target setting requirements that would best help MPOs improve the environmental performance of their transportation systems with respect to GHG emissions. (p50)
3. FHWA encourages submission of comments on the important issue of how targets established by State DOTs and MPOs for reduced emissions might be implemented in order to lead to improved environmental performance. (p53)

**490.107 Reporting on performance targets.**

*(1) Baseline Performance Period Report—(i) \* \* \* State DOTs shall submit their first Baseline Performance Period Report to FHWA by October 1, 2018, and subsequent Baseline Performance Period Reports to FHWA by October 1st every 4 years thereafter, except for the GHG measure specified in § 490.105(c)(5), State DOTs shall submit their first Baseline Performance Period Report to FHWA by October 1, 2022, and subsequent Baseline Performance Period Reports to FHWA by October 1st every 4 years thereafter.*

*(H) GHG metric for the GHG measure. Tailpipe CO2 emissions on the NHS, as described in § 490.511(f), for the reference year and the 2 calendar years preceding the Baseline Performance Period Report, and tailpipe CO2 emissions on all public roads for the reference year and the 2 calendar years preceding the Baseline Performance Period Report.*

 *(2) Mid Performance Period Progress Report—(i) \* \* \* State DOTs shall submit their first Mid Performance Period Progress Report to FHWA by October 1, 2020, and subsequent Mid Performance Period Progress Reports to FHWA by October 1st every 4 years thereafter, except for the GHG measure specified in § 490.105(c)(5), State DOTs shall submit their first Mid Performance Period Progress Report to FHWA by October 1, 2024, and subsequent Mid Performance Period Progress Reports to FHWA by October 1st every 4 years thereafter.*

 *(J) GHG metric for the GHG measure. Tailpipe CO2 emissions for the NHS and all public roads, as described in § 490.511(f), for the 2 calendar years preceding the Mid Performance Period Progress Report for the GHG measure in § 490.105(c)(5).*

 *(b)(3) Full Performance Period Progress Report—(i) \* \* \* State DOTs shall submit their first Full Performance Period Progress Report to FHWA by October 1, 2022, and subsequent Full Performance Period Progress Reports to FHWA by October 1st every 4 years thereafter, except for the GHG measure specified in § 490.105(c)(5), State DOTs shall submit their first Full Performance Period Progress Report to FHWA by October 1, 2026, and subsequent Full Performance Period Progress Reports to FHWA by October 1st every 4 years thereafter.*

*(ii) \* \* \* (I) GHG metric for the GHG measure. Tailpipe CO2 emissions for the NHS and all public roads, as described in § 490.511(f), for the 2 calendar years preceding the Full Performance Period Progress Report for the GHG measure in § 490.105(c)(5).*

*(2) \* \* \* For the GHG measure in § 490.105(c)(5), the MPO shall report a description of its metric calculation method, as described in § 490.511(d), and the calculation of tailpipe CO2 emissions for the NHS and all public roads.*

1. FHWA requests comment on whether MPOs should be required to provide the metric calculation method and their tailpipe CO2 emissions to the State DOT outside of the system performance report to provide for more frequent information sharing. (p57)
2. FHWA also requests comment on whether to specify a uniform metric calculation method for MPOs, as opposed to allowing a range of approaches that are referenced in the description of **§** 490.511. (p57)

**490.109** **Assessing significant progress toward achieving the performance targets for the National Highway Performance Program and the National Highway Freight Program.**

*(v) Data contained within FUELS/FASH on August 15th of the year in which the significant progress determination is made that represents performance from the prior year and for the reference year for targets established for the GHG measure in § 490.105(c)(5);*

*(vi) Baseline condition/performance data contained in FUELS/FASH, HPMS, and NBI of the year in which the Baseline Period Performance Report is due to FHWA that represents baseline conditions/performances for the performance period for the measures in §§ 490.105(c)(1) through (5).*

*(vii) Data contained within the HPMS on August 15th of the year in which the significant progress determination is made that represents performance from the prior year and for the reference year for targets established for the GHG measure specified in § 490.105(c)(5).*

*(f) Performance achievement. (1) \* \* \**

*(v) If significant progress is not made for the target established for the GHG measure in § 490. 105(c)(5), then the State DOT shall document the actions it will take to achieve the target for the GHG measure.*

**490.503 Applicability**

*(2) The Greenhouse Gas (GHG) measure in § 490.507(b) is applicable to all mainline highways on the Interstate and non-Interstate NHS.*

**490.505 Definitions**

*Greenhouse gas (GHG) is any gas that absorbs infrared radiation (traps heat) in the atmosphere. Ninety-seven percent of on-road GHG emissions are carbon dioxide (CO2) from burning fossil fuel. Other transportation GHGs are methane (CH4), nitrous oxide (N2O), and hydrofluorocarbons (HFCs).*

*Reference year is calendar year 2021 for the purpose of the GHG measure.*

**490.507 National performance management measures for system performance**

*There are three performance measures to assess the performance of the Interstate System and the performance of the non-Interstate NHS for the purpose of carrying out the National Highway Performance Program (referred to collectively as the NHS Performance measures).*

*(b) One measure is used to assess GHG emissions, which is the percent change in tailpipe CO2 emissions on the NHS compared to the reference year (referred to as the GHG measure).*

**490.509 Data requirements.**

*(f) The FHWA will post on the FHWA Website, no later than August 15th each year, the CO2 factor for each on-road fuel type that will be used to calculate the GHG metric for the GHG measure in § 490.105(c)(5).*

*(g) Fuel sales information needed to calculate the fuel consumed for the GHG measure in § 490.507(b) shall:*

*(1) Represent the total number of gallons of fuel consumed by fuel type; and*

*(2) Be based on fuels sales data for the previous calendar year, and reported to FUELS/FASH.*

*(h) Annual total vehicle-miles traveled (VMT) needed to calculate the GHG measure in § 490.507(b) shall come from HPMS data as of August 15, for the prior calendar year.*

1. FHWA requests comments on any U.S. Government emissions factors or calculation methods that may be useful. (p63)

**490.511 Calculation of National Highway System performance metrics.**

*(2) Annual Total Tailpipe CO2 Emissions on the NHS for the GHG measure in § 490.507(b) (referred to as the GHG metric).*

 *(c) Tailpipe CO2 emissions on the NHS for a given year shall be computed in million metric tons (mmt) and rounded to the nearest hundredth as follows:*

**

*Where:*

*(Tailpipe CO2 Emissions on NHS)CY= Total tailpipe CO2 emissions on the NHS in a calendar year (expressed in mmt, and rounded to the nearest hundredth);*

*T= the total number of on-road fuel types;*

*t= an on-road fuel type;*

*(Fuel Consumed)t = the quantity of total annual fuel consumed for on-road fuel type ”t” (to the nearest thousand gallons);*

*(CO2 Factor)t= is the amount of CO2 released per unit of fuel consumed for on-road fuel type “t”;*

*NHS VMT = annual total vehicle-miles traveled on NHS (to the nearest one million vehicle-miles); and*

*Total VMT= annual total vehicle-miles traveled on all public roads (to the nearest one million vehicle-miles).*

*(d) For the GHG measure specified in § 490.507(b), MPOs are granted additional flexibility in how they calculate the GHG metric, described in § 490.511(a)(2). MPOs may use the MPO share of the State’s VMT as a proxy for the MPO share of CO2 emissions in the State, VMT estimates along with MOVES45 emissions factors, FHWA’s Energy and Emissions Reduction Policy Analysis Tool (EERPAT) model, or other method the MPO can demonstrate has valid and useful results for CO2 measurement. The metric calculation method shall be mutually agreed upon by both the State DOT and the MPO.*

 *(f) Tailpipe CO2 emissions generated by on-road sources travelling on the NHS (the GHG metric), and generated by on-road sources travelling on all roadways (the step in the calculation prior to computing the GHG metric) shall be calculated as specified in paragraph (c) of this section. The calculations shall be reported in the State Biennial Performance Reports, as required in § 490.107, and shall address the following time periods.*

*(1) The reference year, as required in § 490.107(b)(1)(ii)(H); and*

*(2) The 2 years preceding the reporting years, as required in § 490.107(b)(1)(ii)(H), (b)(2)(ii)(J) and (b)(3)(ii)(I).*

**490.513 Calculation of National Highway System performance measures.**

*(d) The GHG measure specified in § 490.507(b) shall be computed to the nearest tenth of a percent as follows:*

**

*Where:*

*(Tailpipe CO2 Emissions on NHS) CY = total tailpipe CO2 emissions on the NHS in a calendar year (expressed in million metric tons (mmt), and rounded to the nearest hundredth); and*

*(Tailpipe CO2 Emissions on NHS) reference year = total tailpipe CO2 emissions on the NHS in calendar year 2021 (expressed in million metric tons (mmt), and rounded to the nearest hundredth).*