

Maryland Department of Transportation
State Highway Administration

**Maryland Transportation
Performance Management
(TPM)**

**GHG Target Setting
Initial Reporting**

February 2024

Discussion Points

- 01 Federal GHG Measure Requirements
- 02 Maryland's Performance & Target Setting Approach
- 03 MPO Next Steps

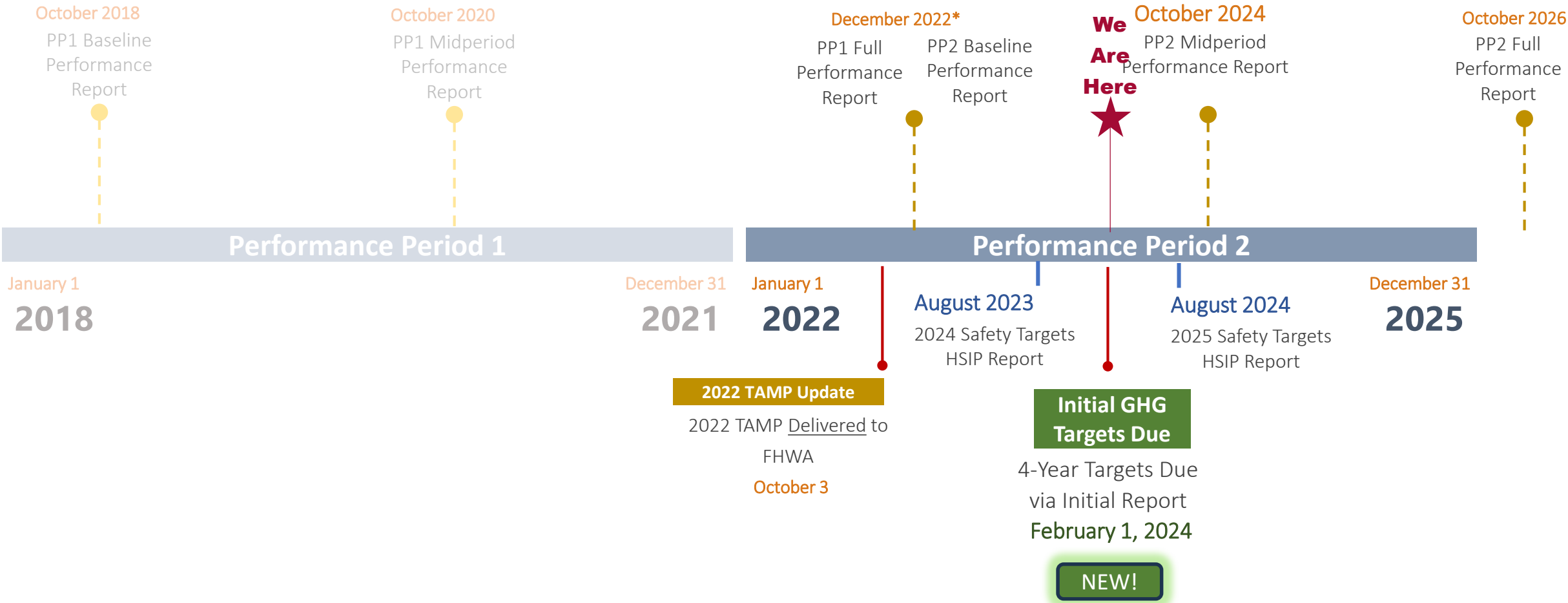
GHG Requirements Overview

Transportation Performance Management (TPM)

	Program Area	Performance Measures
TPM 1	Safety	<ol style="list-style-type: none"> 1.Number of Fatalities 2.Rate of Fatalities 3.Number of Serious Injuries 4.Rate of Serious Injuries 5.Number of Non-Motorized Fatalities and Non-Motorized Serious Injuries
	TPM 2 Infrastructure Condition (Bridge and Pavement)	<ol style="list-style-type: none"> 1. % Interstate Pavement in Good Condition 2. % Interstate Pavement in Poor Condition 3. % Non-Interstate NHS Pavement in Good Condition 4. % Non-Interstate NHS Pavement in Poor Condition 5. % NHS Bridges in Good Condition 6. % NHS Bridges in Poor Condition
TPM 3	Highway & Freight Reliability	<ol style="list-style-type: none"> 1.Interstate Travel Time Reliability 2.Non-Interstate Travel Time Reliability 3.Freight Reliability
	Traffic Congestion	<ol style="list-style-type: none"> 1.Annual Hours of Peak Hour Excessive Delay (PHED) Per Capita 2.Percent of Non-Single Occupancy Vehicle Travel
	CMAQ Emissions	<ol style="list-style-type: none"> 1.Total Emissions Reduction
NEW!	GHG Emissions	1.% change in tailpipe CO2emissions on the NHS compared to the reference year

**TPM1 Safety targets are reported annually; TPM 2 and 3 targets are reported every 2 years.*

State TPM Timeline



* 2022 biennial reporting was delayed to December due to technical problems with the HPMS system.

Note: The performance period for CMAQ runs from October 1-September 30 in advance of the primary performance period

Federal GHG Measure

State Requirements

- Initial report due 02/01/2024 (one-time report)
- Set 4-year performance target only for initial report
 - Beginning 2026, set 2- and 4-year targets
- Measure applies only to the NHS
- Targets must be declining from reference year 2022
 - There are no penalties for failing to achieve targets...
 - But states who do not make significant progress must document steps towards progress in biennial reports

GHG Metric & Measure

Metric

*Annual Total Tailpipe CO₂ Emissions
on the NHS*

Measure

*Change in tailpipe CO₂ emissions on
the NHS compared to the reference
year (2022)*

GHG Metric Data & Calculation

Highway Motor Fuel Use

Table MF-21, based on state-reported fuel sales



CO2 Emissions Factor

Provided by FHWA



Share of VMT on the NHS

Table VM-3, based on state-reported VMT

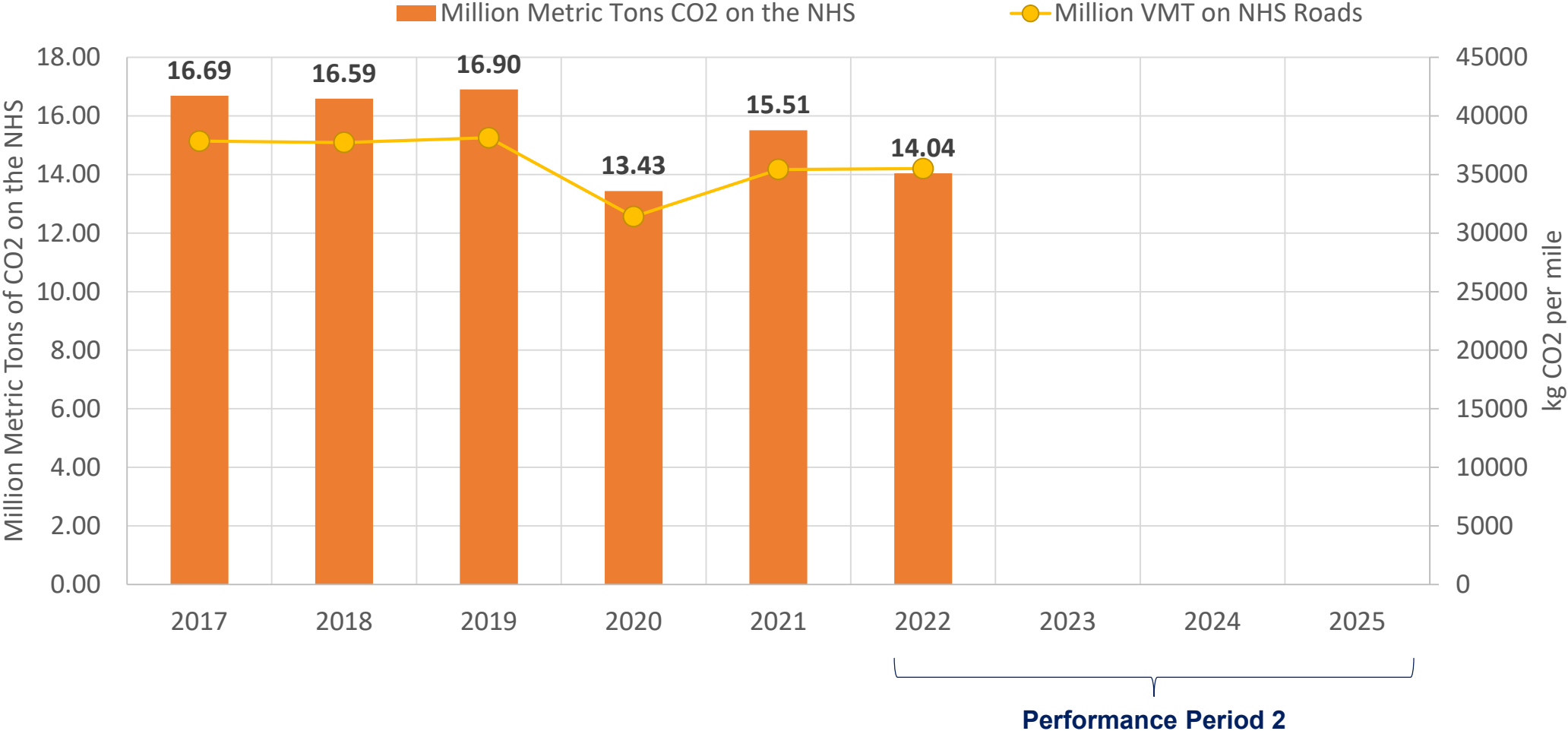
NHS VMT

Total VMT




Maryland GHG Performance & Approach

Maryland GHG Emissions

Based on FHWA-reported values



GHG Target Setting Approach

-  One of the goals in Maryland's *Climate Solutions Now Act of 2022* is a 60% reduction from 2006 levels by 2031.
-  Subsequent analysis established a specific goal for the transportation sector to reduce its GHG emissions by 49%.
-  Maryland's *2023 Climate Pollution Reduction Plan* estimated that implementation of all current initiatives would deliver a 41.9% reduction in transportation sector GHG emissions by 2031.

GHG Target Setting Approach

4

A straight-line path to this 41.9% reduction is not realistic given the timeline to implement planned initiatives.

- E.g., one of the most impactful initiatives will be Maryland's Advanced Clean Cars II Initiative, which will take effect in 2027.

5

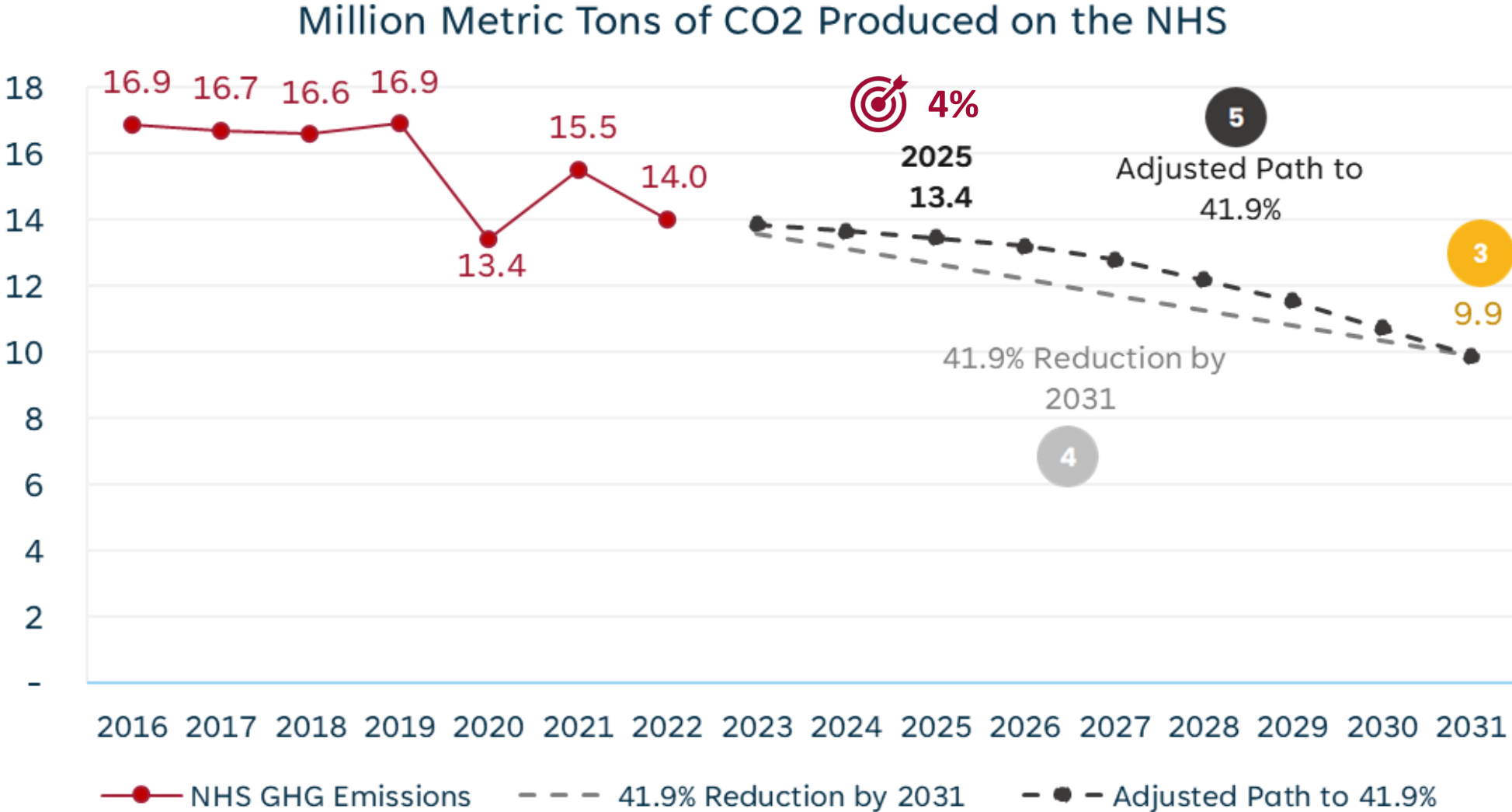
MDOT estimated that 80% of the improvement will take place after 2027 while 20% will take place between 2024 and 2027.

→ This resulted in an approximate 4% reduction from 2022 levels by 2025.



2025 Target: 4%

GHG Target Setting Approach



MPO Requirements & Next Steps

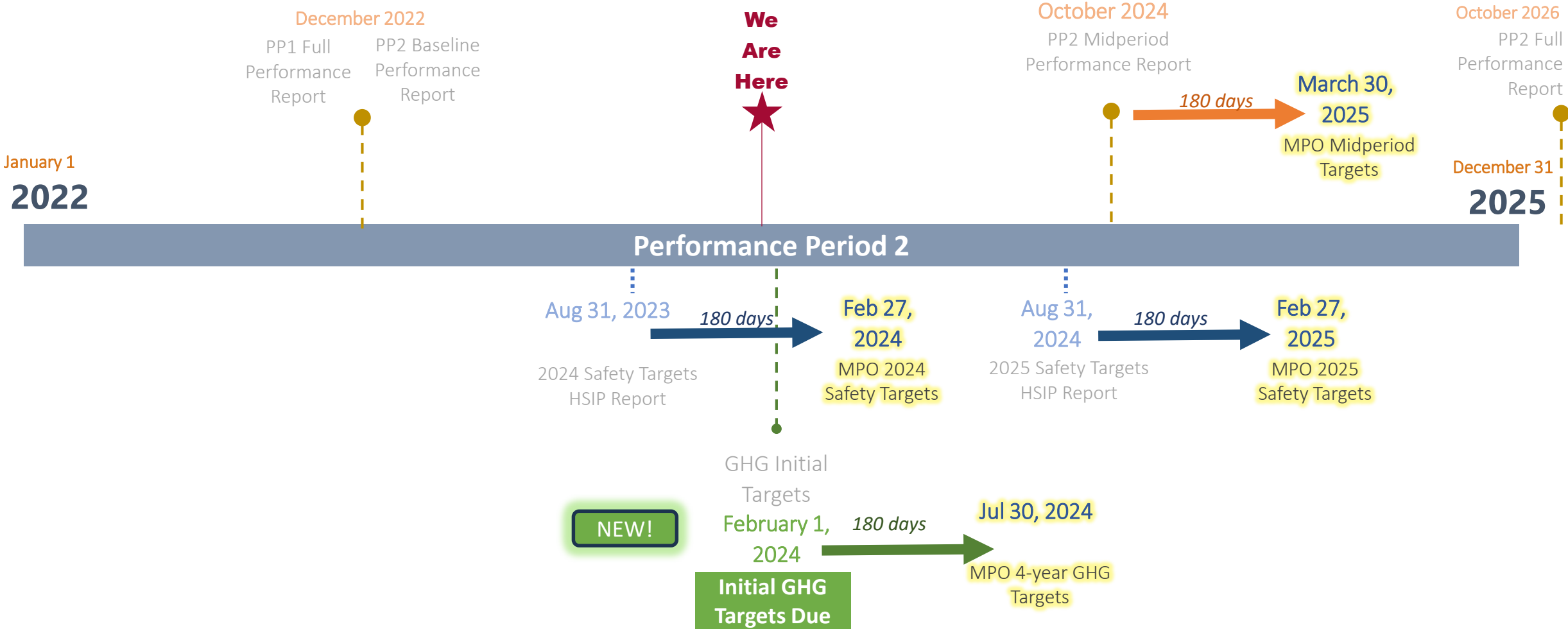
Federal GHG Measure

MPO Requirements

- Initial MPO targets due 07/30/2024
- Set 4-year performance target only for initial report
 - Beginning 2026, set 2- and 4-year targets
- Targets must be declining from reference year 2022
- MPOs that overlap the same UZA* are responsible for two sets of targets:
 - MPO boundary targets set by the MPO individually
 - UZA targets set in coordination with other MPOs in the UZA

**UZAs over 50k containing NHS mileage*

MPO PP2 Timeline



**Note: The performance period for CMAQ runs from October 1-September 30 in advance of the primary performance period*

MDOT SHA TPM CONTACT

Toria Lassiter, Division Chief

Innovative Planning and Performance Division
Office of Planning and Preliminary Engineering
MDOT State Highway Administration
(O) 410-545-5731
tlassiter@mdot.maryland.gov