

NYS TARGET SETTING METHODS FOR ON-ROAD MOBILE SOURCE EMISSIONS

NYS Department of Transportation (NYSDOT)

Revised November 2020

Overview

Measures to assess the Congestion Mitigation and Air Quality (CMAQ) program are found in 23 CFR Part 490, Subpart H. This section defines one measure, Total Emissions Reduction, for monitoring On-Road Mobile Source Emissions.

The Total Emissions Reduction measure is applicable to all States and MPOs with projects financed with funds from the 23 U.S.C. 149 (CMAQ program) apportioned to State DOTs for areas designated as nonattainment or maintenance for the National Ambient Air Quality Standard (NAAQS).

Emission reduction targets are required to be established for the ozone precursors nitrogen oxides (NO_x) and volatile organic compounds (VOC). Targets are also required for carbon monoxide (CO) and particulate matter (PM₁₀ and PM_{2.5}).

The measure uses data from the CMAQ Public Access System to measure the amounts of criteria pollutants that are reduced statewide for states with nonattainment areas that have funded projects with CMAQ funds.

Date Sources

CMAQ Public Access Database

Timeline

- State DOTs establish targets by May 20, 2018.
- MPOs must agree to support state targets or establish their own within 180 days of the State establishing and reporting targets.
- 2022 targets may be adjusted in 2020.
- In 2020, NYSDOT changed the units used to express the CMAQ emissions reductions targets from total kilograms to kilograms per day. The target emissions reductions did not change.**

NYSDOT's Target Setting Process

- Establish trend:
 1. Applied linear regression to the cumulative annual emission reductions for each criteria pollutant for the 2014 through 2017 period. (2014 is the first full year of the MOVES model, which would include the current calculations for estimating reductions.)
 2. Removed outlier projects to ensure a more representative trend line.
- Baseline was set as the 2017 actual data.
- 3. Establish Targets:
 1. Adjust (reduce) the established trend to account for fleet efficiency improvements resulting from EPA emissions and fuel economy standards during the performance period, as reflected in the MOVES model.
 2. Calculate the 2-year cumulative reduction by multiplying the 2018 baseline by 365 days, and the 2019 estimate by 365 days and summing the two products.
 3. Calculate the 4-year cumulative reduction by multiplying the 2020 estimated reductions by 366 days and the 2021 estimated reductions by 365 days, summing the two products and adding the 2-year cumulative reductions.

Targets and Supporting Data**Estimated Daily Average Reduction
(kg/day)**

Federal Fiscal Year	VOC	CO	NOX	PM10	PM2.5
2018*	32.452	611.939	83.606	12.885	5.480
2019	30.505	587.462	76.917	12.627	5.260
2020	27.759	558.088	69.995	12.249	4.997
2021	26.371	541.346	64.395	11.881	4.748

*Baseline is 2017 actual data.

**2018 Targets
(kg)**

Target Year	VOC	CO	NOX	PM10	PM2.5
2020	22,979	437,781	58,591	9,312	3,920
2022	42,765	839,633	107,713	18,132	7,482

**2020 Targets
(revised to kg/day)**

Target Year	VOC	CO	NOX	PM10	PM2.5
2020 (2-Year)	62.957	1,199.401	160.523	25.512	10.740
2022 (4-Year)	117.088	2,298.835	294.914	49.642	20.485