



# **Final-Form Rulemaking: Additional RACT Requirements for Major Sources of NO<sub>x</sub> and VOCs for the 2015 Ozone NAAQS**

Environmental Quality Board Meeting  
August 9, 2022

Tom Wolf, Governor

Ramez Ziadeh, P.E., Acting Secretary

# Background

- The Clean Air Act (CAA) requires the United States Environmental Protection Agency (EPA) to set National Ambient Air Quality Standards (NAAQS) for criteria air pollutants, of which ground-level ozone is one, at levels that protect public health and welfare, including the environment.
- On October 26, 2015, the EPA lowered the primary and secondary NAAQS for ozone to 0.070 ppm.

# Purpose

- The CAA requires re-evaluation of Reasonably Available Control Technology (RACT) each time an ozone NAAQS is promulgated for nonattainment areas.
- Because the entire Commonwealth is in the Ozone Transport Region and is treated as a moderate nonattainment area, RACT applies to major sources of nitrogen oxides ( $\text{NO}_x$ ) and/or volatile organic compounds (VOC) statewide.

# Overview

- This final-form rulemaking (known as RACT III) establishes presumptive RACT requirements and emission limitations for specific source categories at major stationary facilities of NO<sub>x</sub> and VOC emissions.
- Owners and operators of sources without presumptive requirements or limitations, or those unable to meet the presumptive limitations, must submit a case-by-case RACT analysis.

# Overview

- The presumptive RACT requirements in the final-form rulemaking are the same or more stringent than those found in the RACT I and RACT II rules.

# Affected Parties

- RACT requirements are applicable to the owners and operators of all sources in Pennsylvania that emit or have a potential to emit greater than 100 tons per year (TPY) of NO<sub>x</sub> or 50 TPY of VOC.
- There are approximately 425 Title V facility owners and operators in Pennsylvania (excluding Philadelphia and Allegheny Counties) that may be subject to this final-form rulemaking.

# Proposed Rulemaking Public Comment

- On May 19, 2021, the Environmental Quality Board (EQB) adopted the proposed rulemaking by a vote of 17-2.
- The proposed rulemaking was published for public comment on August 7, 2021.
- Three public hearings were held on September 7, 8, and 9. No testimony was received.
- The public comment period closed on October 12, 2021.
- The Department received comments from 25 commentators, including the Independent Regulatory Review Commission (IRRC), EPA, environmental advocacy groups, consultants, and the regulated community.

# Key Comments

- EPA commented that case-by-case determinations issued under §§ 129.96—129.100 for RACT II cannot be deemed to satisfy the case-by-case requirements for RACT III without additional documented review.
- EPA also noted that the RACT III compliance date cannot be later than the regulatory RACT implementation date established in 40 CFR 51.1312(a)(3)(i), which for Pennsylvania is January 1, 2023.



## Key Comments

- Commentators recommended that the Department set a lower presumptive NO<sub>x</sub> limit than the proposed 150 parts per million by volume, dry basis (ppmvd) corrected at 7% oxygen for municipal waste combustors (MWCs). This limit should require the installation and operation of NO<sub>x</sub> emission control technology such as low NO<sub>x</sub> burners and selective non-catalytic reduction.

## Key Changes From Proposed

- The final-form rulemaking contains an option for an owner or operator to submit an analysis demonstrating that the applicable RACT II conditions remain RACT for RACT III, in place of a full case-by-case analysis.
- The Department will review these analyses and submit all the approved ones to EPA as a revision to the State Implementation Plan.

## Key Changes From Proposed

- The presumptive NO<sub>x</sub> RACT limit for MWC has been revised from 150 to 110 ppmvd at 7% oxygen.
- This presumptive NO<sub>x</sub> RACT limit is consistent with the recommendations made by the Ozone Transport Commission, is cost-effective, and is achievable with available add-on control technology.

# Economic Impacts

- Owners and operators undergoing case-by-case RACT evaluations must bear the costs of notifications and application fees, estimated to be \$4,000-\$6,000 per facility.
- Complying with applicable requirements by installing add-on control technology would have an annualized cost of less than \$3,750 per ton of NO<sub>x</sub> and \$7,500 per ton of VOC emission reduction.

# Environmental Impacts

- Implementation of the control measures in the final-form rulemaking could reduce NO<sub>x</sub> emissions by as much as 9,800 TPY from engines, turbines, and MWC and could reduce VOC emissions by as much as 825 TPY from engines and turbines.
- The measures in this final-form rulemaking are reasonably required to attain and maintain the health-and-welfare-based 2015 8-hour ozone NAAQS.

# Advisory Committee Review

The following advisory committees were presented this final-form rulemaking:

- Air Quality Technical Advisory Committee on April 7, 2022
- Citizens Advisory Council on April 19, 2022
- Small Business Compliance Advisory Committee on April 27, 2022

# Recommendation

The Department recommends the Board adopt this final rulemaking for publication in the *Pennsylvania Bulletin* as a final-form regulation.



**Krishnan Ramamurthy, Deputy Secretary**  
Office of Waste, Air, Radiation and Remediation

[kramamurth@pa.gov](mailto:kramamurth@pa.gov)

**Mark Hammond, Director**

Bureau of Air Quality

[mahammond@pa.gov](mailto:mahammond@pa.gov)

**Jesse Walker, Assistant Counsel**

Bureau of Regulatory Counsel

[jeswalker@pa.gov](mailto:jeswalker@pa.gov)