



Addressing the Shortage of Emission Reduction Credits in Maricopa County

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Agenda

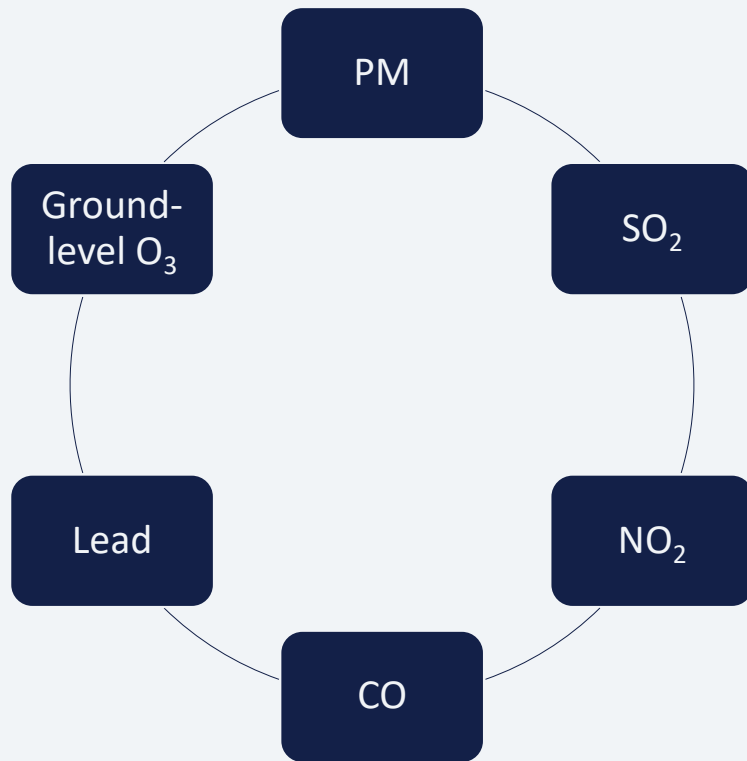
- Ozone National Ambient Air Quality Standards (NAAQS) Background
- Timeline of Emission Reduction Credits (ERCs)
- Maricopa County ERC Rules
- Questions

Mission

Working to improve the air of Maricopa County so customers, residents and visitors can live, work, and play in a healthy environment.



Criteria Air Pollutants



- §108 of the Clean Air Act (CAA) (42 U.S.C. §7408) required the EPA Administrator to:
 - Create a list of air pollutants which endanger public health or welfare.
 - **Issue air quality criteria for these air pollutants.**
 - **This list of six common air pollutants became known as the “Criteria Air Pollutants”.**

National Ambient Air Quality Standards (NAAQS)

Primary Standards

- Protection of public health

Secondary Standards

- Protection of public welfare (e.g., visibility, vegetation, animals, and buildings)

- §109 of the CAA (42 U.S.C. §7409) required the EPA Administrator to:
 - Promulgate national primary and secondary air quality standards for each criteria air pollutant

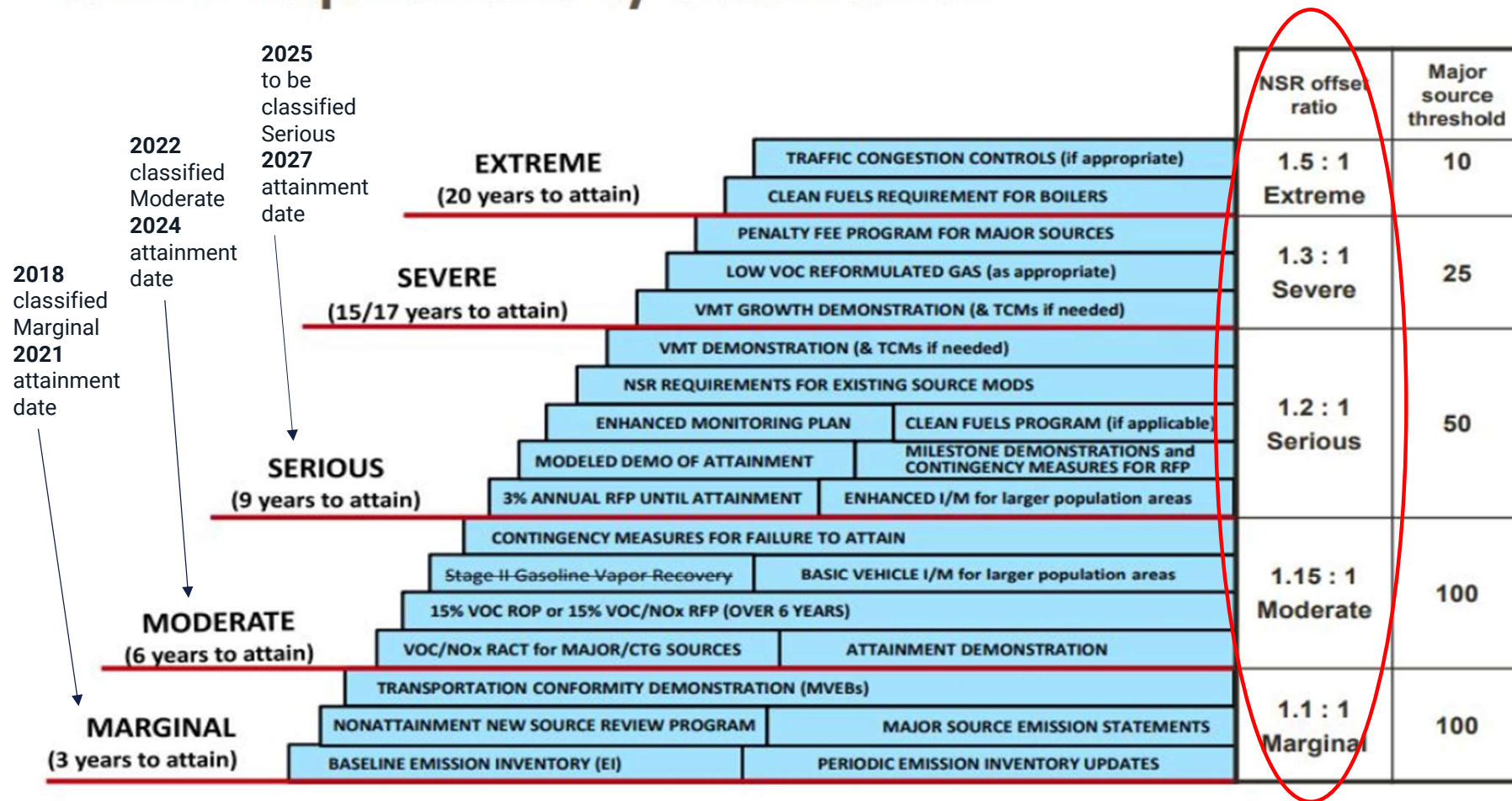
Maricopa County NAAQS Status

- Attainment
 - Nitrogen dioxide (NO₂)
 - Carbon monoxide (CO)
 - Particulate matter 2.5 micrometers or less (PM_{2.5})
 - Sulfur dioxide (SO₂)
 - Lead (Pb)
- **Nonattainment**
 - Ozone
 - **Moderate** – 2008 and 2015 ozone NAAQS
 - Particulate matter 10 micrometers or less (PM₁₀)
 - **Serious** – 1987 PM₁₀ NAAQS

Nonattainment Federal Requirements

- Nonattainment New Source Review (NNSR)
 - Nonattainment for ozone and PM₁₀ NAAQS requires MCAQD implement NNSR provisions.
- NNSR – Offsets
 - Any new major stationary source or major modification must obtain emission reductions to offset the resulting increased emissions. (Clean Air Act (CAA) section 173(c)(1))
 - **Offset ratio**
 - Offsets must be provided by the new or existing major source to offset the emissions increase in an amount greater than the actual emissions increase, as determined by the offset ratio, to facilitate attainment towards the applicable NAAQS. (CAA section 182)
 - **Offset integrity requirements**
 - Emission reductions used as offsets to satisfy NNSR must be surplus, permanent, quantifiable, and federally enforceable. (40 CFR 51.165(a)(3)(ii)(C)(1)(i))
 - Offsets must be **actual** emission reductions. (CAA section 173(a))

Overview of CAA Ozone Nonattainment Area Planning & Control Requirements by Classification - 2015 Ozone NAAQS



Generation of ERCs

Traditional ERCs

- Certify shutdown credits from existing sources.
- Control emissions more than is required by rule.
- Replace fuel-burning engines with newer, cleaner units
- Power equipment with electricity or solar panels.

Non-traditional ERCs (potential sources, upon EPA approval)

- Rule 204 – nonroad engines, transport refrigeration units (TRUs)
- Rule 205 – captive fleet on-road vehicles

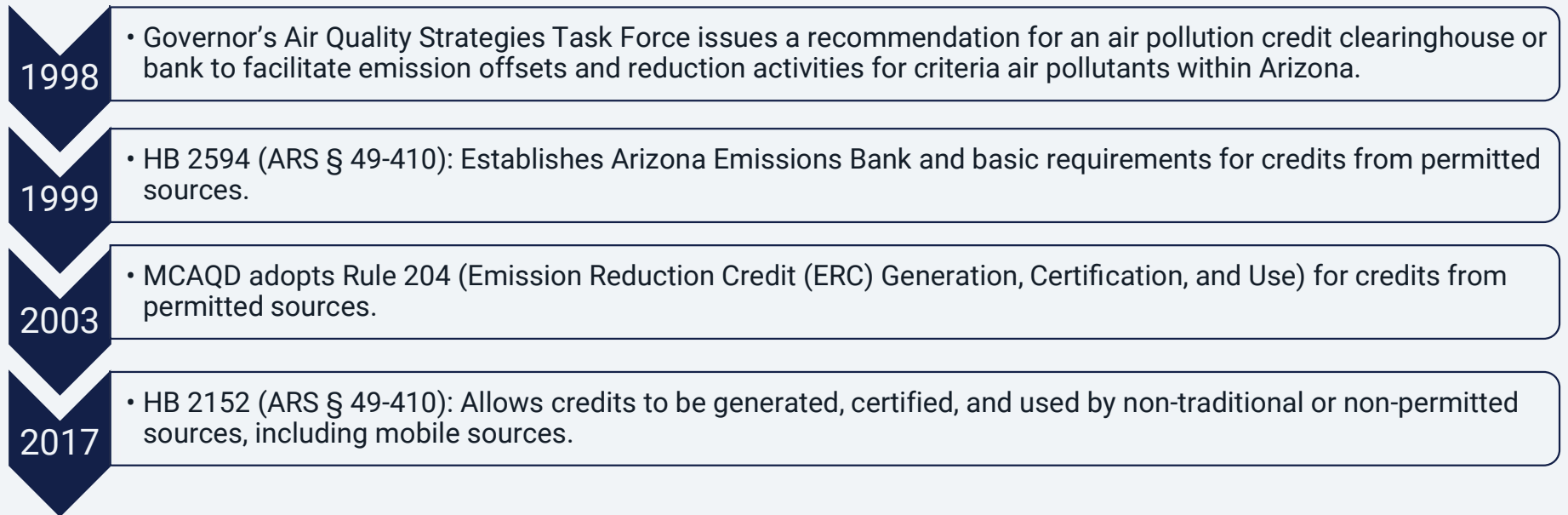
Note: Rules 204 and 205 do not yet have formal EPA approval into the AZ State Implementation Plan (SIP).



Timeline of ERCs

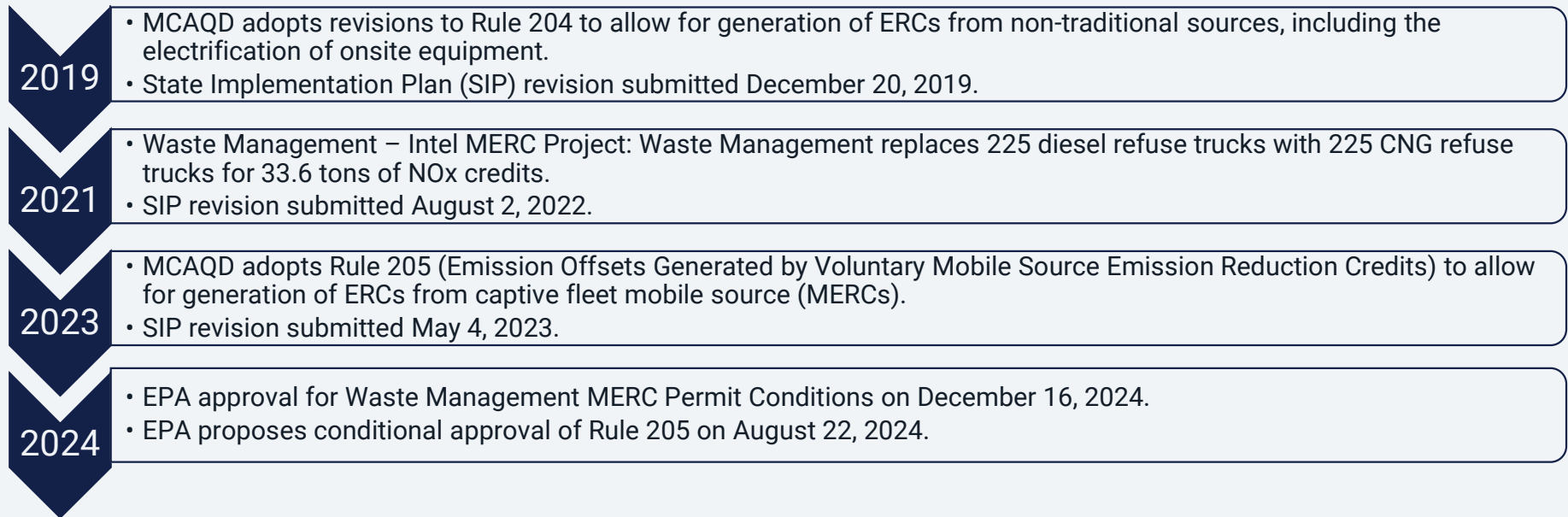
Timeline

ERCs in Maricopa County



Timeline

ERCs in Maricopa County





Maricopa County ERC Rules

Rule 203

ERC General Requirements

- Date Locally Adopted: December 11, 2024
- Describes procedures for general and traditional source emission reduction credit (ERC) requirements including generation, certification, use as offsets, and fees

Rule 204

ERC Generation, Certification, and Use

- Date Locally Adopted: December 11, 2019
- Describes procedures for the generation, certification, and utilization of emission reduction credits for use as offsets
 - Truck stop electrification, transport refrigeration units, onsite equipment

Rule 205

Emission Offsets Generated by Voluntary Mobile Source ERCs

- Date Locally Adopted: April 26, 2023
- Describes procedures for the voluntary generation, certification, and utilization of mobile source emission reduction credits (MERCs) from captive fleet vehicles for use as offsets

Economic Incentive Program (EIP)

Rules 204 and 205

- Rules 204 and 205 are considered **EIPs**:
 - A regulatory program that achieves an air quality objective by providing market-based incentives
- **Objective:**
 - Address the shortage in ERCs in Maricopa County.
 - Example: Rule 205 - Provide owners and operators of captive fleet vehicles with a market-based incentive to replace or retrofit older, high NO_x emitting vehicles with newer vehicles using a lower-emitting fuel.

Rule 203

ERC General Requirements

- Newly adopted rule: December 11, 2024
- Provides a process for:
 - Generating and certifying ERCs for reductions achieved by traditional generators
 - Registering certified credits in the Arizona Emissions Bank
 - Use of certified credits as offsets, either registered or not registered in the Arizona Emissions Bank

Rule 203

Rule 204

- General ERC requirements:
 - ERC use as offsets
 - Arizona Emissions Bank registration
- Traditional source requirements:
 - Application
 - Certification
- Nontraditional source requirements:
 - Application
 - Certification
 - Monitoring, Reporting, and Recordkeeping

Rule 205

- General ERC requirements:
 - ERC use as offsets
 - Fees
 - Arizona Emission Bank registration
- Nontraditional source requirements:
 - Application
 - Certification
 - Monitoring, Reporting, and Recordkeeping

Note: Items in green anticipated to be removed from Rules 204 and 205 and added to Rule 203. Items in black will remain in Rules 204 and 205.

Rule 203

Rule 203 Requirements

- General ERC requirements:
 - ERC use as offsets
 - Fees
 - Arizona Emissions Bank registration
- Traditional source requirements:
 - Application
 - Certification

Rule Creation Benefits

- Overall ERC Program improvement in efficiency and clarity
- General ERC requirements are not required to be approved by EPA and submitted for inclusion in the Arizona State Implementation Plan

Rule 204

ERC Generation, Certification, and Use

- Last revised: December 11, 2019
- Submitted to EPA December 20, 2019
 - EPA has yet to provide formal feedback or take any formal action.
- Provides a process for:
 - Generating and certifying ERCs for reductions achieved by traditional generators
 - Registering certified credits in the Arizona Emissions Bank
 - Use of certified credits as offsets, either registered or not registered in the Arizona Emissions Bank

Notes:

- Based on currently adopted rule.
- Rule 204 also provides the process for nontraditional sources but they cannot be used because EPA has not approved them.

Rule 204

Current Rulemaking with EPA

- **Note:** Working with EPA and stakeholders to develop revisions, including adding new nontraditional source categories.
- Potential revisions
 - Remove:
 - Truck stop electrification
 - General ERC and traditional source requirements (Rule 203)
 - Add:
 - New nonroad source categories
 - Construction equipment
 - Railyard switcher engines
 - Revise
 - Airport ground support equipment

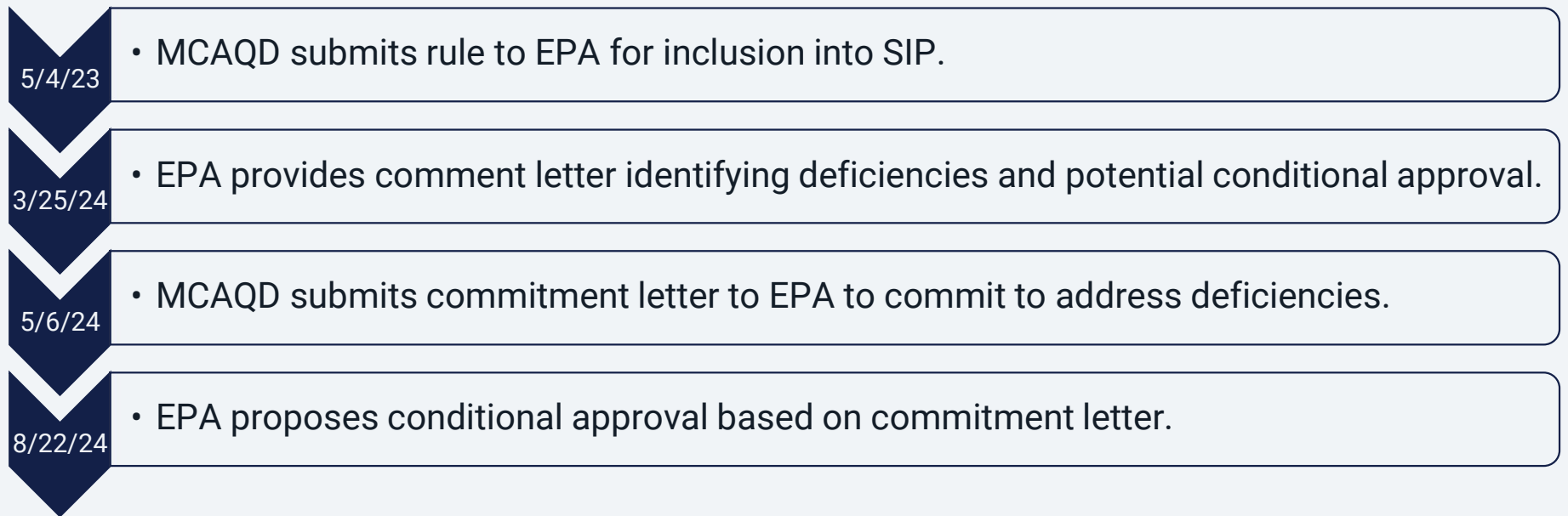
Rule 205

Emission Offsets Generated by Voluntary Mobile Source ERCs

- Newly adopted rule: April 26, 2023
- Provides a process for:
 - Generating and certifying MERCs through the replacement/retrofit of a captive fleet of vehicles
 - Use of certified credits as offsets by major stationary sources
- **According to MCAQD's 2020 Periodic Emissions Inventory, onroad emissions are approximately 43% of nitrogen oxide emissions.**

Rule 205

Current Rulemaking with EPA



Rule 205

Current Rulemaking with EPA

- 9/23/24 • Stakeholders submit comment on inadequacy of calculation methodology. (“new for new” credit)
- 9/23/24 • MCAQD submits comment requesting EPA approve revised calculation methodology. (full credit)
- 1/17/25 • EPA provides comment letter on MCAQD’s request to approve revised calculation methodology.
• EPA letter indicated not supportive but open to further discussion.
- 1/17/25 • Stakeholder provides updated comments to its September 23, 2024 comments, with an emphasis on the use of the full credit calculation methodology.

Calculation Methodology

Example: 2005 diesel truck replaced with 2021 CNG truck

“New for New” (Adopted version 4/26/23)

- Baseline Emissions
 - Original vehicle model year = **year of vehicle replacement (2021)**
- Post Project Emissions
 - Replacement vehicle model year = **year replacement occurred (2021)**

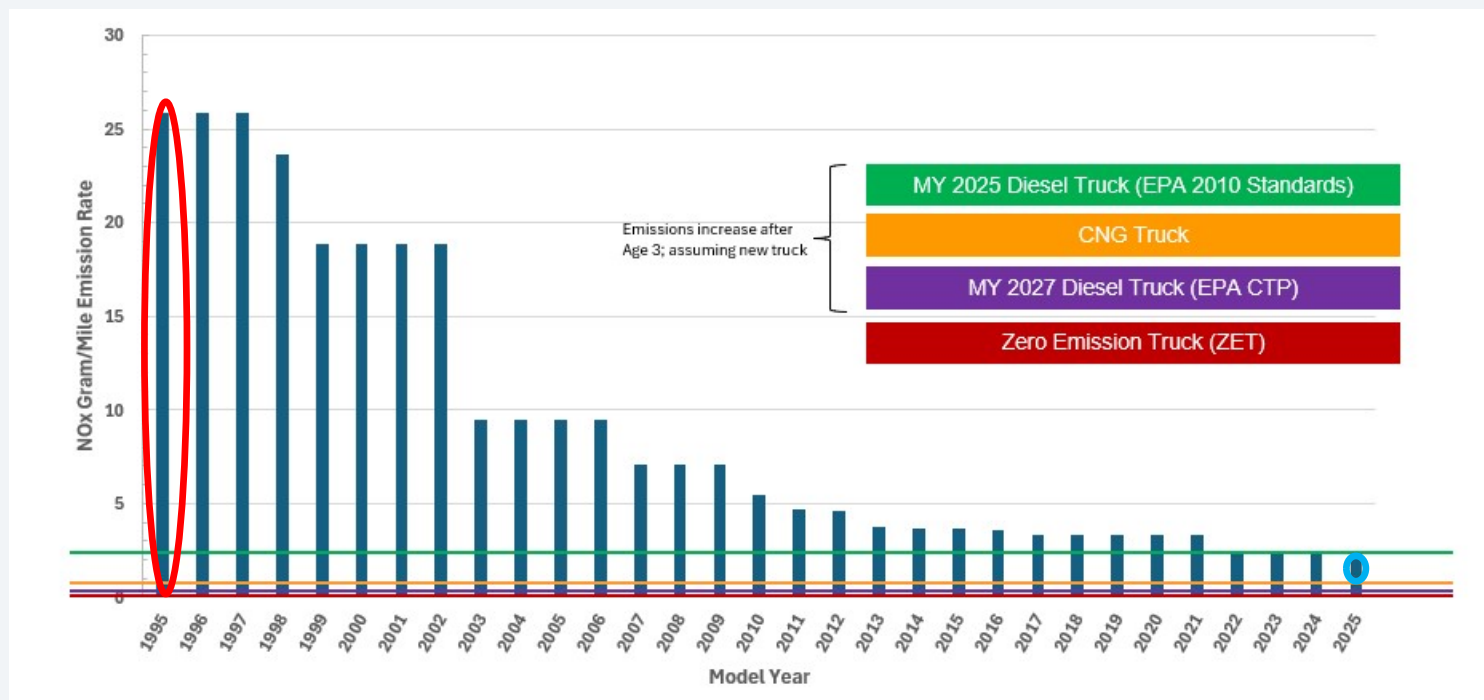
Full Credit (Current proposed version)

- Baseline Emissions
 - Original vehicle model year = **actual original vehicle model year (2005)**
- Post Project Emissions
 - Replacement vehicle model year = **year replacement occurred (2021)**

ERCs = Baseline Emissions – Post Project Emissions

Calculation Methodology

MOVES Class 8 Diesel NOx Emission Rates with Replacement Options Superimposed



Rule 205

Current Rulemaking with EPA

- Significant Proposed Revisions
 - Applicability of Rule 205 limited to ozone precursors
 - Elaborating on MERC certificate content
 - Relocation and disposal of baseline vehicles
 - Revised GPS requirements
 - Broadened to fleet management system
 - Fleet management system exemption
 - Credit user offset integrity requirements
 - Load shifting exemption
 - Full credit calculation methodology

Rule 205

Rulemaking Obstacles for Addition to AZ State Implementation Plan (EPA)

- Issues with EPA during rulemaking:
 - Staff turnover/replacement and inconsistent feedback
 - Interpretation of offset integrity criteria
 - Reliance on guidance documents over 20 years old
 - Failure to provide adequate incentive to encourage potential ERC generators
 - Calculation methodology

In Conclusion

- MCAQD wants to provide ERC rules that provide a real incentive so that stakeholders will utilize them to generate ERCs.
 - MCAQD wants to provide stakeholders with the maximum incentive, while complying with federal offset integrity criteria.
 - MCAQD is attempting to satisfy EPA concerns associated with providing maximum incentive, while adopting rules that are not excessively burdensome or stringent.
- MCAQD seeks to create useable and practical rules in collaboration with EPA, for the benefit of stakeholders, air quality, and everyone who resides in Maricopa County.

Get Involved

- Track active regulatory processes.
- View current and previous documents for active regulatory processes.
- Provide comments on proposed changes to air quality rules.



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Questions



Thank You



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