



Proposed Amended Rule 1135

Emissions of Oxides of Nitrogen from Electricity Generating Facilities

Working Group Meeting #6
June 13, 2024

Join Zoom Webinar Meeting: <https://scaqmd.zoom.us/j/94648515982>

Webinar ID: 946 4851 5982

Teleconference Dial-In: 1-669-900-6833

Agenda

Summary of Last Working Group Meeting

Proposed Amended Rule 1135 (PAR 1135) Updates

Revised Proposed Rule Language

Next Steps

Summary of March 27, 2024 Working Group Meeting

- Staff provided responses to SCE's Grid Stability Study and SCE's propane availability analysis comment letter
- Presented SCE's March 21, 2024 proposed rule language
- SCE's Grid Stability Study, comment letter, and proposed rule language are posted on the PAR 1135 proposed rules webpage*
- Provided updates to the PAR 1135 Best Available Retrofit Control Technology (BARCT) assessment
 - Included updated cost information
 - Technology assessment update to include tidal and current energy harvesting systems



* <https://www.aqmd.gov/home/rules-compliance/rules/scaqmd-rule-book/proposed-rules/rule-1135/comment-letters>

PAR 1135 Updates

- SCE commented that some emission factors used by staff to calculate the proposed final BARCT emission limit should be updated to:
 - 1.48 lbs/MWhr to reflect the U.S. EPA standard for Tier 4 Final engines used in generator sets > 1200 hp*
 - 0.01 lbs/MWhr for Santa Catalina Island Zero-Emission Electric Generating Units as defined in PAR 1135
- Staff incorporated the updated emission factors into emission calculations, which resulted in a final BARCT limit of 1.8 tpy NOx
- SCE did not agree that the proposed final BARCT NOx emission limit was technologically feasible
- PAR 1135 will incorporate a final NOx limit of 6 tpy with a technology assessment

*Converted from 0.50 g/bhp-hr standard listed in the Federal Register; <https://www.govinfo.gov/content/pkg/FR-2004-06-29/pdf/04-11293.pdf>



Revised Proposed Rule Language

Emission Limits for Boilers and Gas Turbines Paragraph(d)(1)

Current rule language

- Table 1 NOx emission limits for boilers and turbines apply on and after January 1, 2024

Proposed rule language

- Staff previously proposed extending the deadline to comply with Table 1 emission limits to April 1, 2024
- Compliance deadline of January 1, 2024 has already passed
- No changes to existing rule language for boilers and gas turbines is being proposed at this time



Prohibitions on Santa Catalina Island Subparagraphs (d)(2)(A), (d)(2)(B), and (d)(2)(C)

Current rule language

- Prohibition deadline of January 1, 2024 to install new diesel internal combustion engines

Proposed rule language

- Staff previously proposed to extend the prohibition deadline to install new diesel internal combustion engines to July 1, 2025
- Staff updated the prohibition deadline to January 1, 2028 in current draft rule language
 - Aligns with compliance deadline for 30 tons per year (tpy) NOx limit
- Prohibition to install more than three new diesel internal combustion engines
- Prohibition to install equipment that does not meet the definition of a Santa Catalina Island NZE electric generating unit (NZE) or a Santa Catalina Island ZE electric generating unit (ZE) after January 1, 2028



Requirement to Install NZE and/or ZE Units on Santa Catalina Island

Subparagraph (d)(2)(D)

Background



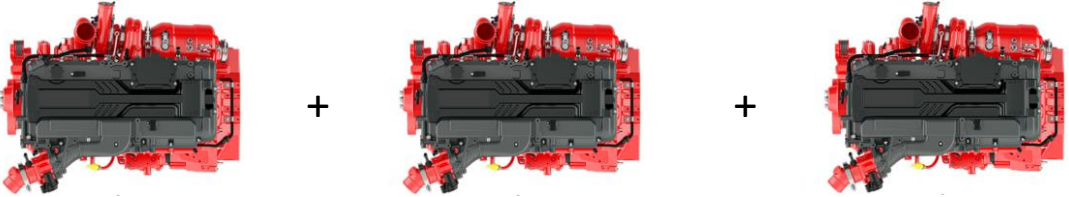

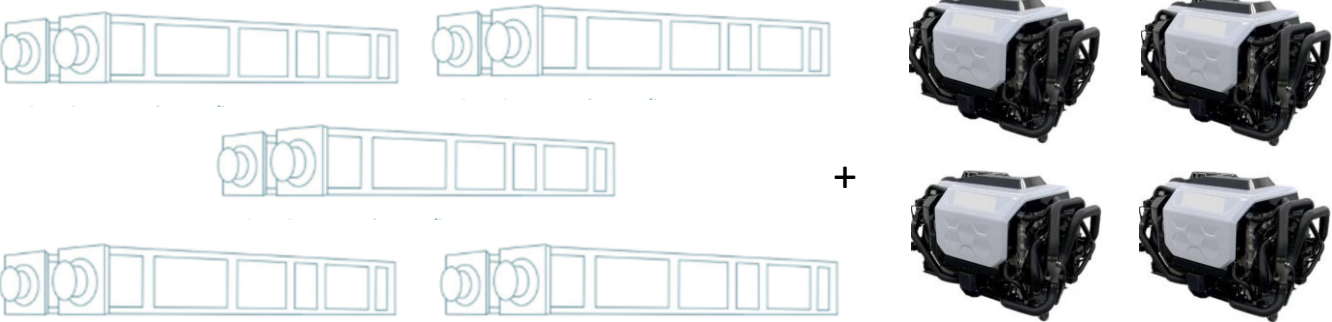

- NZE and/or ZE units will need to provide approximately 75% of the power at Pebbly Beach Generating Station to meet the final proposed NOx limit of 6 tpy
- SCE expressed that three Tier 4 final diesel engines are necessary to provide redundancy during maintenance and unplanned outages
- Similarly, backup unit(s) for NZE and/or ZE technology are necessary to provide sufficient power during maintenance and unplanned outages to meet the final proposed NOx limit and minimize the use of diesel engines

Proposed rule language

- Staff is proposing a requirement to install NZE and/or ZE electric generating units by January 1, 2030 with a cumulative rating of 2 MW or higher
- Minimum cumulative rating does not include the highest rated NZE and/or ZE unit, solar photovoltaic cells, or batteries



Minimum Cumulative Rating Examples for Compliance with Subparagraph (d)(2)(D)

 <p>Two Propane Engines* rated at 1.8 MW each</p> <p>= 3.6 MW</p>	<p>3.6 MW – 1.8 MW (highest rated NZE/ZE unit) = 1.8 MW</p> 
 <p>Three Propane Engines* rated at 1.8 MW each</p> <p>= 5.4 MW</p>	<p>5.4 MW – 1.8 MW (highest rated NZE/ZE unit) = 3.6 MW</p> 
 <p>Five Propane Linear Generators rated at 0.25 MW each</p> <p>Four Propane Fuel Cells rated at 0.46 MW each</p> <p>= 3.09 MW</p>	<p>3.09 MW – 0.46 MW (highest rated NZE/ZE unit) = 2.63 MW</p> 

*Examples assume that propane engines can meet the proposed Santa Catalina Island NZE Electric Generating Unit standard of 0.07 lb/MW-hr NOx

Emission Limits on Santa Catalina Island

Subparagraph (d)(2)(E)

Current rule language

- Interim limits:
 - 50 tons NOx by January 1, 2024
 - 45 tons NOx by January 1, 2025
- NOx mass emission limit 13 tons per year on and after January 1, 2026

Proposed rule language

- Updated emission limits and compliance dates based on new direction

Table 2: Emission Limits for Electric Generating Units Located on Santa Catalina Island

Compliance Date	NOx (tons per year)
January 1, 2027	45
January 1, 2028	30
January 1, 2030	13
January 1, 2035	6

Remove Legacy Diesel Engines from Service Subparagraph (d)(2)(F) and Technology Assessment Paragraph (d)(3)

Remove Legacy Diesel Engines from Service

- Remove all prime power diesel internal combustion engines with a construction date earlier than Date of Adoption from service by January 1, 2030
- Compliance deadline aligns with the implementation date of the 13 tpy NOx limit

Technology Assessment

- Technology assessment will be conducted by January 1, 2028 for the 13 tpy and 6 tpy NOx limits
- If the NOx limits represent BARCT, then the NOx limits will be required to be met by the compliance dates specified in PAR 1135
- If the technology assessment demonstrates that more stringent BARCT requirements are applicable, then rule development will be initiated within 6 months
- Rule 1135 would likely be amended if the technology assessment determines that either the 13 tpy or 6 tpy NOx limit is infeasible

Time Extension for Electricity Generating Facility on Santa Catalina Island: Paragraph (d)(5)

Current rule language

- Allows a request for a time extension of up to three years to meet the final BARCT emission limit for the electricity generating facility on Santa Catalina Island
- Specifies the information needed in the time extension request and the criteria for approval or disapproval

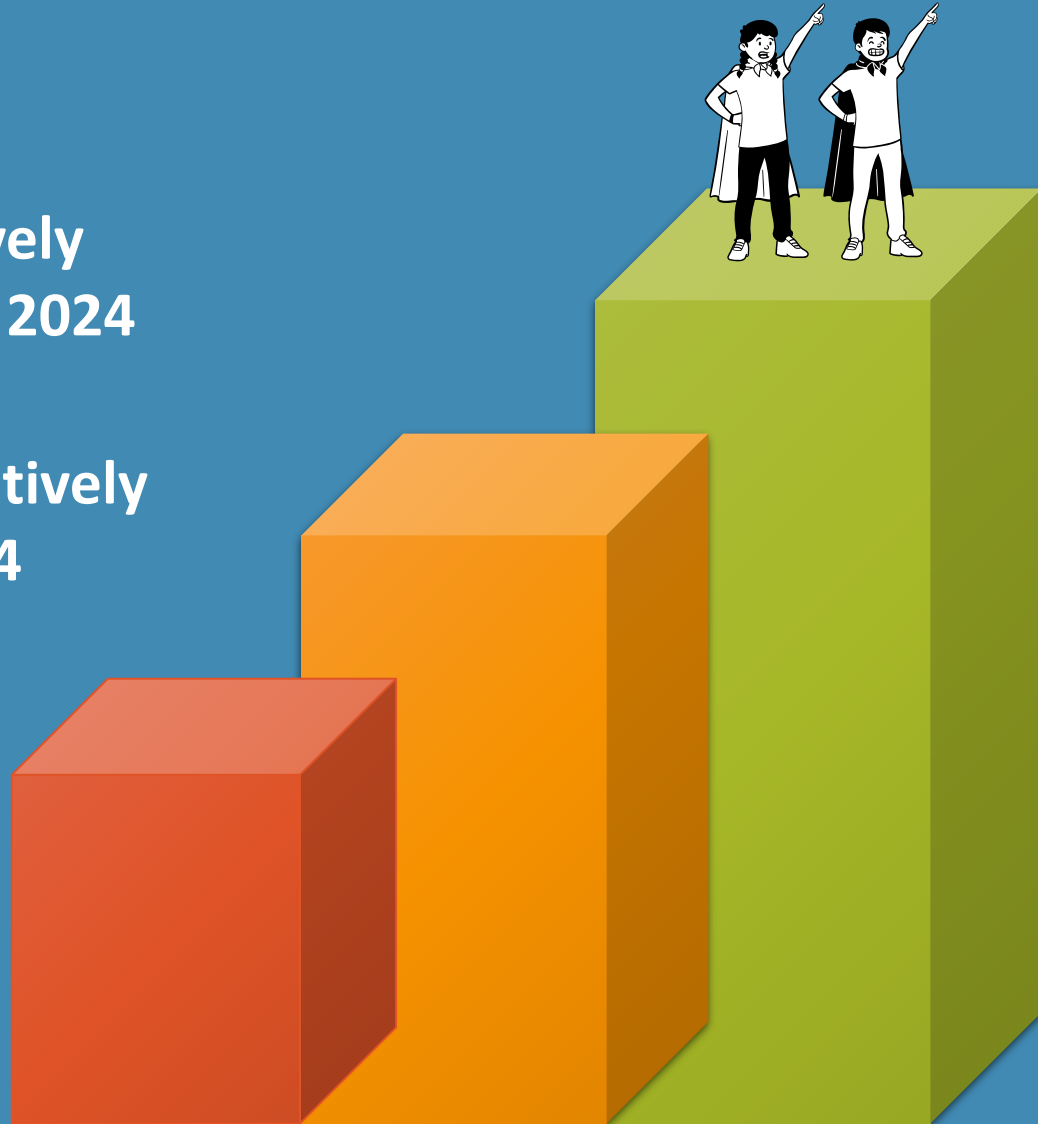
Proposed rule language

- Time extension can be requested to meet the 13 tpy and 6 tpy NO_x limits
 - Extension for each NO_x limit can be up to two years
- Criteria for approval limited to supply chain disruptions and/or construction interruptions



Next Steps

- 3** Public Hearing tentatively scheduled for October 2024
- 2** Public Workshop tentatively scheduled for July 2024
- 1** Ongoing meetings with stakeholders



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For more information:

[PAR 1135 Proposed Rules
Web Page](#)

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