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November 10, 2021

Charlene Nguyen
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South Coast Air Quality Management District
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SUBJECT: Proposed Amended Rule 1135 - Emissions of Oxides of Nitrogen from Electricity Generating Facilities and Proposed Rule 429.2 - Startup and Shutdown Exemption Provisions for Oxides of Nitrogen from Electricity Generating Facilities

Dear Ms. Nguyen:

Southern California Edison (SCE) appreciates the opportunity to comment on the South Coast Air Quality Management District's (SCAQMD) Proposed Amended Rule (PAR) 1135 and Proposed Rule (PR) 429.2. SCE remains committed to working with the SCAQMD to comply with the rules.

SCE supports the provisions of PAR 1135 and PR 429.2 relating to our combined-cycle gas turbine facility (Mountainview Generating Station) and four simple-cycle gas turbine facilities (Barre, Center, Grapeland, and Mira Loma Peakers). SCE also supports many proposed requirements regarding non-emergency diesel internal combustion engines and appreciates SCAQMD for recognizing the unique operation and challenges at our Pebbly Beach Generating Station ("PBGS") on Santa Catalina Island ("Catalina" or "the Island"). Nevertheless, SCE has a few remaining concerns about the effect of the proposed rules on our Catalina facility. Our suggested rule revisions presented below will take the form of additions shown in **bold underline** and deletions in ~~strike through~~.

PAR 1135

A. The definition of "Electricity Generating Facility" is ambiguous and could be misinterpreted to include all facilities owned and operated by an investor-owned utility such as SCE or a public utility.

The current and proposed amended definitions could subject our office buildings, service centers, garages, and substations to Rule 1135, which we believe is not the SCAQMD's intent. SCE requests the following revisions to the definition in subparagraph (c)(9):

November 10, 2021

Page 2 of 5

ELECTRICITY GENERATING FACILITY means a facility that is owned or operated by an investor-owned electric utility or a publicly owned electric utility and includes one or more electric generating units; ~~is owned or operated by a publicly owned electric utility~~; or has electric generating units with a combined generation capacity of 50 megawatts or more of electrical power for distribution in the state or local electrical grid system.

and the related definition of “Electric Generating Unit” in subparagraph (c)(8):

ELECTRIC GENERATING UNIT means a boiler that generates electric power, gas turbine that generates electric power with the exception of cogeneration turbines, or a diesel internal combustion engine that generates electric power and is located on Santa Catalina Island with the exception of emergency internal combustion engines and portable engines registered under the Statewide Portable Equipment Registration Program (PERP).

SCE constructs and maintains power distribution lines throughout the island and uses portable equipment and generators as allowed under the state’s Portable Equipment Registration Program (PERP) in the field, staging areas, laydown yards, and other locations throughout the island. By adding these clarifications, all six SCE electricity generating facilities will remain subject to Rule 1135, but other non-power producing facilities such as offices, substations, warehouses, laydown yards, and service centers would be excluded.

B. Emissions data averaging methodology should align with Rule 218.3 requirements.

SCE appreciates SCAQMD’s consideration in proposing an oxides of nitrogen (NOx) emissions limit that both meets Best Available Control Technology (BACT) requirements and addresses SCE’s operational challenges at our Catalina facility. SCE supports the proposed limits with a few minor modifications to the Table 2 footnotes under subparagraph (d)(2) that would ensure emissions monitoring, recordkeeping, and reporting requirements are consistent with Rules 218, 218.1, 218.2, and 218.3.

When the existing diesel engines have been replaced, PBGS will become a Former RECLAIM NOx Facility¹ and will be subject to Rule 1135 (e)(2), which requires the facility to meet emissions monitoring, recordkeeping, and reporting requirements in accordance with Rules 218, 218.1, 218.2, and 218.3. As a Former RECLAIM NOx Facility, PBGS will continue to monitor NOx emissions from its non-emergency engines with a Continuous Emissions Monitoring System (CEMS). While Rule

¹ PAR Rule 1135 (C)(14) defines “Former RECLAIM NOx Facility” as “a facility or any of its successors that was in the NOx Regional Clean Air Incentives Market (RECLAIM) as of January 5, 2018, as established in Regulation XX – Regional Clean Air Incentive Market (RECLAIM), that has received a final determination notification, and is no longer in the NOx RECLAIM program.

November 10, 2021

Page 3 of 5

1135 (e)(2) generally provides appropriate cross-references to the Rule 218 series, SCE believes the Table 2 footnotes under subparagraph (d)(2) must be revised to ensure consistency.

As previously communicated to SCAQMD, SCE plans to replace the existing engines with United States Environmental Protection Agency (US EPA) Tier 4 Final certified diesel generator sets. The Tier 4 Final generator sets will achieve significant NO_x emissions reductions and are considered BACT. As discussed in SCAQMD's PAR 1135 and PR 429.2 Preliminary Draft Staff Report, the NO_x concentration limit in Table 2 under subparagraph (d)(2) was derived from the Tier 4 Final emission standard of 0.67 g/kWh (gram per kilowatt-hour) or 0.50 g/bhp-hr (gram per brake horsepower hour) with an assumed engine efficiency of 40 percent. SCE supports SCAQMD's approach to demonstrate compliance in terms of concentration limits. While the emissions rates in g/kWh or g/bhp-hr cannot be directly converted to an equivalent NO_x concentration in ppmv (part per million volume), SCE believes that the concentration limit must reflect the emissions performance capacity of the Tier 4 Final certification level. SCE's suggested changes to the Table 2 footnotes are discussed below.

Fuel-Weighted Average

SCE appreciates SCAQMD including the three-hour rolling average at 45 ppmv at 15% O₂ for the diesel engines to address temporary NO_x emission spikes. However, we believe that a fuel-weighted average is neither necessary nor appropriate to monitor and demonstrate compliance. In a particular three-hour period, depending on load levels and fuel use, the fuel-weighted average approach could result in an emissions concentration limit more stringent than the Tier 4 Final certification level. It is more appropriate to express the 45 ppmv NO_x limit as a "straight" average concentration, i.e., as measured and correct to 15% O₂, in accordance with Rule 218.3.

Additionally, to maintain compliance and low emissions, SCE operators continuously monitor CEMS average emissions data in real time, compare that data to our permit limits, and proactively adjust various operating parameters as needed (e.g., operating loads, fuel/air ratio, and urea injection rates). Due to the nature of a fuel-weighted average calculation, the current CEMS would not allow the operators to monitor three-hour average emissions in real time to compare against the 45 ppmv permit limit. Thus, the operators would not be able to quickly address emissions fluctuations and avoid deviations from permitted limits.

To maintain accuracy and compliance and consistency with Rule 218.3 and the Tier 4 Final emissions performance standards, the NO_x emissions limit should be expressed as a straight average concentration instead of as a fuel-weighted average.

November 10, 2021

Page 4 of 5

Rolling Average

The term “Rolling Average” in Footnote 1 needs a cross-reference to Rule 218.3(i)(4)(C), which specifically addresses averaging times greater than one hour and refers to subsection (i)(4)(A) for individual hour requirements, as follows:

For continuous monitoring systems used to demonstrate compliance for an interval greater than one-hour, emission data may be averaged for the required interval utilizing hourly averages computed in accordance with subparagraph (i)(4)(A).

To maintain consistency with Rule 218.3 and reduce ambiguity regarding to the NO_x concentration limit under subparagraph (d)(2)(B), SCE requests that SCAQMD revise Footnote 1 as follows:

¹ – Corrected to 15% oxygen on a dry basis ~~and fuel-weighted averaged~~ over a three-hour rolling average utilizing hourly averages computed in accordance with Rule 218.3 (i)(4)(A) and (C).

Additionally, SCE requests that Footnote 4 be revised to include “tuning” to be consistent with the compliance requirements for gas turbines and boilers in Footnote 1, as follows:

⁴ – The NO_x, carbon monoxide, and volatile organic compounds emissions limits in Table 2 shall not apply during startup and shutdown, pursuant to Rule 429.2, and tuning.

C. Clarification of the time extension request administrative procedure is needed.

SCE appreciates the proposed revisions to the time extension criteria for our Catalina facility. We recognize the urgency in reducing NO_x emissions as early as January 1, 2023. Should a time extension be needed due to challenges or delays outside of the facility’s control, SCE requests further clarification on the timeline and procedure to implement the time extensions in subparagraph (d)(3)(C) and mitigation fee in subparagraph (d)(3)(F).

PR 429.2

A. The number of scheduled startups should be increased to allow scheduled startups during quarterly source tests and additional planned outages.

PR 429.2 defines the term “scheduled startup” in subparagraph (c)(8) as follows:

SCHEDULED STARTUP means a planned startup that is specified by January 1 of each year. A scheduled startup does not include a startup to meet energy demand, perform unplanned maintenance, or correct equipment failure, breakdown, or malfunction

November 10, 2021

Page 5 of 5

SCE recommends that ten (10) scheduled startups be allowed for each calendar year to ensure consistency in compliance requirements between Rules 429.2 and 1135 and to address operational needs for planned outages.

PR 429.2 (d)(5) states that on and after January 1, 2024, an owner or operator of an electric generating unit shall not exceed two scheduled startups per calendar year for each generating unit.

However, PAR 1135 (e)(6) requires quarterly (i.e., four) source tests during the first 12 months of operation to demonstrate compliance with a unit's ammonia emissions limit. Each source test is considered a "scheduled startup" because it requires shutting down the unit, setting up testing equipment, and restarting the unit to complete the test as currently performed at the Catalina facility on a quarterly basis.

SCE therefore requests an increase in the number of scheduled startups allowed in PR 429.2(d)(5) from two (2) to four (4) at a minimum. SCE also urges the District to consider more than four (4) startups to account for any additional planned outages that might be needed in a calendar year. SCE believes ten (10) scheduled startups would be reasonable.

Conclusion

Thank you for your consideration of SCE's comments on the proposed rules. We share SCAQMD's goals to reduce NOx emissions expeditiously. SCE appreciates the time and effort the District staff has invested in addressing many complex energy and air quality challenges on Santa Catalina Island. We look forward to continuing to work with you and your staff on this process. If you have any questions or would like to discuss these issues, please contact Joy Brooks, Senior Air Quality Manager at (626) 302-8850 or joy.s.brooks@sce.com.

Sincerely,

DocuSigned by:

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