

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

Public Workshop
October 27, 2021



Join Zoom Webinar Meeting:

<https://scaqmd.zoom.us/j/94648515982>

Webinar ID: 946 4851 5982

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

***6 - Toggle mute/unmute**

***9 - Raise hand**

Agenda



Background

Proposed Amended Rule 1135 (PAR 1135)

Proposed Rule 429.2 (PR 429.2)

PAR 1135 and PR 429.2 Impact Assessment

Next Steps

Background



Rule 1135 – Background and Applicability

- Adopted in 1989
 - Establishes NO_x limits for electric power generating steam boiler systems, repowered units, and alternative electricity generating sources
- Last amended on November 2, 2018
 - Expanded applicability to all combustion equipment at RECLAIM, non-RECLAIM, and former RECLAIM electricity generating facilities (EGFs)
 - Implemented Best Available Retrofit Control Technology (BARCT) for NO_x emissions from boilers, gas turbines, and diesel internal combustion engines
- Applies to electric generating units at EGFs
 - Includes boilers, gas turbines, and Santa Catalina Island diesel internal combustion engines
 - Excludes units located at landfills, petroleum refineries, and publicly owned treatment works



Objective of Proposed Amendments

- Proposed Amended Rule 1135
 - Consistency with policy changes that have been implemented after 2018 Rule 1135 amendment
 - Address ammonia slip limits for selective catalytic reduction (SCR) and selective non-catalytic reduction (SNCR) systems during permitting instead of in command-and-control rule
 - Include startup and shutdown requirements in command-and-control rules per U.S. EPA recommendation
 - Align CEMS requirements with recently amended and adopted Rule 218-series rules for former RECLAIM and non-RECLAIM facilities
 - Address stakeholder requests for other updates to Rule 1135
- Proposed Rule 429.2
 - Companion rule to Rule 1135
 - Needed to provide exemptions from NO_x limits and additional requirements during startup and shutdown events to align with U.S. EPA policies

Overview of PAR 1135 and PR 429.2 Amendments

PAR 1135

Remove ammonia limits for SCR and SNCR systems

Move startup and shutdown provisions to PR 429.2

Reference Rules 218.2 and 218.3 for CEMS requirements

Revise NOx averaging time for diesel internal combustion engines

Provide additional clarifications

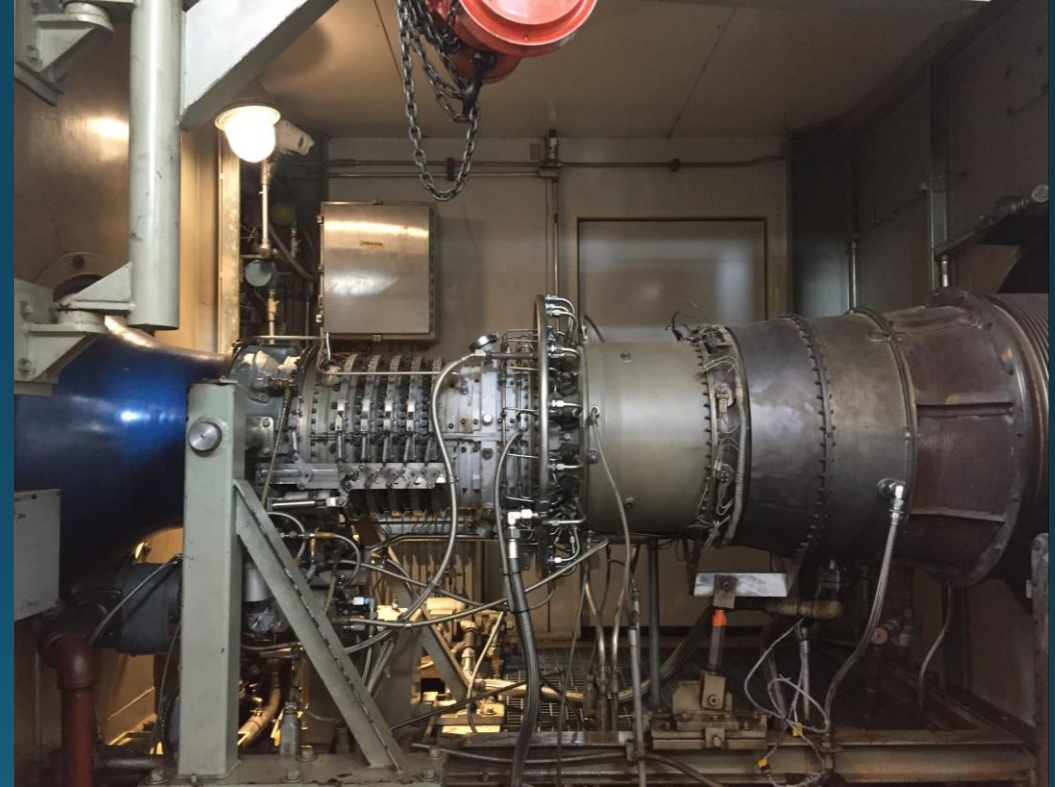
PR 429.2

Exempt units from Rule 1135 concentration limits during startup and shutdown

Establish startup and shutdown duration and frequency provisions

Include best management practices and recordkeeping requirements

Proposed Amended Rule 1135



Definitions

Subdivision (c)

Adding

- Backup Unit
- Fuel-Weighted Average

Modifying

- Emissions Cap
- Emissions Rate

Updating

- Electricity Generating Facility
- Former RECLAIM NOx Source
- Non-RECLAIM NOx Source
- RECLAIM NOx Source
- Shutdown
- Startup

Removing

- Landfill
- Petroleum Refinery
- Publicly Owned Treatment Works
- SCAQMD-Wide Daily Limits

Backup Unit Paragraph (c)(2)

- PAR 1135 allows RECLAIM NO_x process units to continue operating without CEMS until July 1, 2026
- “NO_x Process Unit” is a RECLAIM term, PAR 1135 term is “Backup Unit”
 - Definition is based on RECLAIM definitions for “NO_x Process Unit” and “Peaking Unit”

BACKUP UNIT means any NO_x emitting turbine which is used intermittently to produce energy on a demand basis, does not operate more than 1,300 hours per year, is not subject to 40 CFR Part 72, and was a NO_x process unit prior to the facility becoming a former RECLAIM NO_x facility.

Fuel-Weighted Average Paragraph (c)(12)

- PAR 1135 revises averaging time for diesel internal combustion engines on Santa Catalina Island
- New definition is needed as revised NO_x emission limits will be calculated as a fuel-weighted average

FUEL-WEIGHTED AVERAGE is calculated as the sum of the hourly fuel usage multiplied by the hourly average NO_x concentration in ppmv divided by the total fuel usage, expressed in ppmv.

$$\text{Fuel-Weighted Average} = \frac{\sum \text{NO}_x \text{ Concentration (ppmv)} \times \text{Fuel Use (gallons)}}{\text{Total Fuel Use (gallons)}}$$

Shutdown and Startup Paragraphs (c)(21) and (c)(23)

- Revise Shutdown and Startup to reference Proposed Rule 429.2

~~SHUTDOWN means the time period during which an electric generating unit begins reducing load and ending in a period of zero fuel flow or as otherwise defined in the SCAQMD permit~~ is as defined in South Coast AQMD Rule 429.2 – Startup and Shutdown Exemption Provisions for Oxides of Nitrogen from Electricity Generating Facilities.

~~START-UP STARTUP~~ means the time period that begins when an electric generating unit begins combusting fuel after a period of zero fuel flow and ends when the electric generating unit generates electricity for sale over the grid for power distribution, or as otherwise defined in the SCAQMD permit is as defined in South Coast AQMD Rule 429.2.

Removal of Ammonia Limits Subdivision (d) – Tables 1 and 2

- Remove provisions related to ammonia emission limits in subdivision (d), including in Tables 1 and 2
- Ammonia limits will be addressed during permitting

Table 1: Emissions Limits for Boilers and Gas Turbines

Equipment Type	NO _x (ppmv) ¹	Ammonia (ppmv)	Oxygen Correction (% ₂ , dry)
Boiler	5	5	3
Combined Cycle Gas Turbine and Associated Duct Burner	2	5	15
Simple Cycle Gas Turbine	2.5	5	15

¹ – The NO_x emission limits in Table 1 shall not apply during ~~start-up~~ startup, and shutdown, pursuant to Rule 429.2, and tuning.

Table 2: Emissions Limits for Diesel Internal Combustion Engines

NO _x (ppmv) ^{1,4}	Ammonia (ppmv)¹	Carbon Monoxide (ppmv) ^{2,4}	Volatile Organic Compounds (ppmv) ^{3,4}	Particulate Matter (lbs/mm ³ btu) ⁵
45	5	250	30	0.0076

¹ – Corrected to 15% oxygen on a dry basis and fuel-weighted averaged over a 60 minute-three-hour rolling average

² – Corrected to 15% oxygen on a dry basis and averaged over 15 minutes

³ – Measured as carbon, corrected to 15% oxygen on a dry basis, and averaged over sampling time required by the test method

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

⁵ – Applies to both filterable and condensable particulate matter

Santa Catalina Island Engine Replacement Project

- Current Rule 1135 requires diesel engines meet NOx concentration limit of 45 ppmv (at 15% O₂) by January 1, 2024 with an option of a 3-year extension
 - NOx limit derived from U.S. EPA Tier 4 Final emission standard (0.67 g/kWh or 0.50 g/bhp-hr for a generator set) with an assumed engine efficiency at 40%
 - Tier 4 Final certification tests measure NOx concentrations at different operating loads and averages the results
- Based on discussions with Southern California Edison (SCE), all six diesel internal combustion engines on Santa Catalina Island will be replaced with U.S. EPA Tier 4 Final-certified diesel engines to meet Rule 1135 emission limits
 - Replacement of all six engines expected to be completed before January 1, 2027

Revised Emissions Limits for Diesel Internal Combustion Engines

Paragraph (d)(2)

- Maintain NO_x concentration of 45 ppmv
- Change 60-minute rolling average to a fuel-weighted average over a 3-hour rolling average
 - Longer averaging period to address potential fluctuations and to avoid having to shutdown and restart the engine which would be more emissive
 - Fuel-weighted average allows for NO_x ppmv calculation to account for fuel usage over a certain NO_x concentration
- Clarifying that the emission limit for particulate matter includes both filterable and condensable particulate matter, consistent with 40 CFR Part 1065

Table 2: Emissions Limits for Diesel Internal Combustion Engines

NO _x (ppmv) ^{1,4}	Ammonia (ppmv)¹	Carbon Monoxide (ppmv) ^{2,4}	Volatile Organic Compounds (ppmv) ^{3,4}	Particulate Matter (lbs/mmbtu) ⁵
45	5	250	30	0.0076

¹ – Corrected to 15% oxygen on a dry basis and fuel-weighted averaged over a 60-minute-three-hour rolling average

² – Corrected to 15% oxygen on a dry basis and averaged over 15 minutes

³ – Measured as carbon, corrected to 15% oxygen on a dry basis, and averaged over sampling time required by the test method

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

⁵ – Applies to both filterable and condensable particulate matter

Removal of Provisions

Startup, Shutdown, and Tuning Requirements (Former Paragraph (d)(3))

Alternative Compliance Approach for Santa Catalina Island Engines (Former Paragraph (d)(4))

Former Paragraph (d)(3)

- Remove startup, shutdown, and tuning requirements from Rule 1135
- Address startup and shutdown requirements in PR 429.2

Former Paragraph (d)(4)

- SCE has informed staff of plan to replace Santa Catalina Island engines to meet Table 2 emission limits and not pursue alternative compliance approach
- Removing provision and all references to alternative compliance approach for Santa Catalina Island engines

Time Extensions for Santa Catalina Island Paragraph (d)(3)

Current Rule 1135 requires a minimum of two Santa Catalina Island units meet the Table 2 emissions limits by January 1, 2023 to receive a three-year extension

Based on discussions with SCE, first two replacement engines are likely to be installed after January 1, 2023

Revising time extension criteria to require that facility limit annual NOx emissions to 55 tons starting compliance year 2023 until Table 2 emissions limits are achieved

- Reduction in annual NOx emissions is the same amount as if two engines were replaced

Adding an additional one-time 12-month extension after the initial three-year extension if delay occurs due to unforeseen circumstances

- Facility must limit their emissions to 35 tons of NOx for compliance year 2027
- Emissions limit is the same amount as if all engines, except for engines near the 45 ppmv limit, were replaced

CEMS for Former RECLAIM and Non-RECLAIM NOx Facilities Paragraph (e)(2) and Former Paragraph (e)(3)

In March 2021, Rule 218-series rules were amended and adopted to align CEMS requirements for RECLAIM and non-RECLAIM facilities

- As facilities exit RECLAIM, facilities will be transitioned from Rule 2012 to Rules 218.2 and 218.
- Non-RECLAIM facilities will be transitioned from Rules 218 and 218.1 to Rules 218.2 and 218.3
- Transition to Rules 218.2 and 218.3 are based on the schedule provided in Rule 218.2

Monitoring for Backup Units Paragraph (e)(3)

- RECLAIM NOx peaking units are considered NOx process units and are not required to install CEMS per Rule 2012
 - Termed as “Backup Units” in PAR 1135
 - Only two units in South Coast AQMD are “Backup Units”
- To allow sufficient time for RECLAIM facilities with Backup Units to install CEMS, PAR 1135 will allow annual source testing and require other provisions until July 1, 2026
 - Within 6 months of becoming a former RECLAIM NOx facility, facility must submit permit applications to limit operating hours to 1,300 hr/year

Monitoring Requirements for Backup Units (paragraphs (e)(3)(A) through (e)(3)(H))

Measure quarterly fuel usage using a totalizing fuel meter or equivalent approved device

Conduct annual source testing

- Initial source test conducted within 6 months of becoming a former RECLAIM NOx facility, or within one year of last source test, whichever is later

Submit source test protocol at least 60 days before source test or use a previously approved source test protocol

Submit quarterly NOx mass emissions reports

Tune-up unit once a year to manufacturer’s specifications

Maintain records on-site for 5 years of: fuel usage, source test, NOx emission, and tune-up

Source Testing for Diesel Internal Combustion Engines Ammonia Emissions Testing or Monitoring

Subparagraphs (e)(5)(C) and (e)(5)(D)

- For consistency with paragraph (e)(3) - Backup Units, add source test protocol submittal requirements for diesel internal combustion engines

Paragraph (e)(6)

- Current Rule 1135 only refers to ammonia testing or monitoring for catalytic control devices
- Add non-catalytic control devices with ammonia injection to ensure source testing or continuous monitoring of ammonia emissions requirements apply to all electric generating units that emit ammonia

Exemption for Once-Through-Cooling Units To Be Retired

Paragraph (g)(2)

- Current exemption for Once-Through Cooling (OTC) units assumed all units would be retired
- Staff has been informed that some OTC units may no longer be retired and instead have OTC systems removed
- Clarify that exemption from Table 1 emission limits only applies to OTC units to be retired
- Add sunset date of December 31, 2029 to limit how long OTC units can operate above the Table 1 emission limits

Once-Through-Cooling Electric Generating Units to Be Retired

Until December 31, 2029, The the owner or operator of an electric generating unit subject to the Clean Water Act Section 316(b) shall not be subject to paragraph (d)(1) for that electric generating unit, provided that:

- (A) The owner or operator retires the electric generating unit on or before the compliance date set forth in Table 1 of Section 2(B) of the State Water Resources Control Board's Statewide Water Quality Control Policy on the Use of Coastal Estuarine Waters for Power Plant Cooling (Once-Through-Cooling Policy) implementing Section 316(b) of the Clean Water Act.
- (AB) The NO_x and ammonia limits, averaging times, and ~~start-up~~ startup, shutdown, and, if applicable, tuning requirements specified on the ~~SCAQMD~~ Permit to Operate as of November 2, 2018 are retained;
- (BC) On or before January 1, 2023, the owner or operator notifies South Coast AQMD of the compliance dates set forth in Table 1 of Section 2(B) of the ~~State Water Resources Control Board's Statewide Water Quality Control Policy on the Use of Coastal Estuarine Waters for Power Plant Cooling (Once-Through-Cooling Policy) implementing Section 316(b) of the Clean Water Act; and~~
- (CD) Within 3 months of approval of an extension of the compliance date set forth in Table 1 of Section 2(B) of the Once-Through-Cooling Policy, the owner or operator notifies South Coast AQMD of the extension. This extension is not applicable to facilities that have utilized the Modeling and Offset Exemptions in Rule 1304 ~~– Exemptions paragraph (a)(2) and the associated replacement electric generating unit is in operation; and~~
- (D) ~~The owner or operator complies with the compliance date set forth in Table 1 of Section 2(B) of the Once-Through-Cooling Policy.~~

Proposed Rule 429.2

**PROPOSED RULE 429.2 STARTUP AND SHUTDOWN EXEMPTION
PROVISIONS FOR OXIDES OF NITROGEN FROM
ELECTRICITY GENERATING FACILITIES**

[Rule index to be included after amendment]

(a) Purpose

The purpose of this rule is to provide an exemption from Rule 1135 emission limits during periods of when units regulated under Rule 1135 are starting up and shutting down and establish requirements during startup and shutdown events.

(b) Applicability

This rule shall apply to the owner or operator of electric generating units at electricity generating facilities.

(c) Definitions

- (1) BOILER COLD START means the condition of a boiler startup occurring after a boiler has been shut down for 120 hours or more.
- (2) BOILER NON-COLD START means the condition of a boiler startup occurring after a boiler has been shut down for less than 120 hours or put in hot standby.
- (3) ELECTRIC GENERATING UNIT is as defined in Rule 1135 – Emissions of Oxides of Nitrogen from Electricity Generating Facilities, which includes boilers, combined cycle gas turbines, duct burners, simple cycle gas turbines, and internal combustion engines, as defined in Rule 1135.
- (4) ELECTRICITY GENERATING FACILITY is as defined in Rule 1135.
- (5) MINIMUM OPERATING TEMPERATURE means the minimum operating temperature specified by the manufacturer, or as otherwise defined in the South Coast AQMD Permit to Construct or Permit to Operate.
- (6) NO_x POST-COMBUSTION CONTROL EQUIPMENT means air pollution control equipment which eliminates, reduces, or controls the issuance of NO_x downstream of combustion.

Purpose and Applicability

Subdivisions (a) and (b)

Purpose

The purpose of this rule is to provide an exemption from Rule 1135 emission limits during periods of when units regulated under Rule 1135 are starting up and shutting down and establish requirements during startup and shutdown events.

Applicability

This rule shall apply to the owner or operator of electric generating units at electricity generating facilities.

Definitions

Subdivision (c)

Definitions from Rule 1135

- Electric Generating Unit
- Electricity Generating Facility
- Oxides of Nitrogen (NO_x) Emissions

Definitions from Other Startup and Shutdown Rulemakings (Rule 429 and PR 429.1)*

- Minimum Operating Temperature
- NO_x Post-Combustion Control Equipment
- Stable Conditions

Definitions Specific to PR 429.2

- Boiler Cold Start
- Boiler Non-Cold Start
- Scheduled Startup
- Shutdown
- Startup

* Rule 429 – Start-up and Shutdown Exemption Provisions for Oxides of Nitrogen
PR 429.1 – Startup and Shutdown Provisions at Petroleum Refineries and Related Operations

Definitions from Rule 429 and PR 429.1

- Definitions required to explain necessary operating parameters of units with NO_x post-combustion controls
- Will help with compliance determination

Paragraph (c)(5)

MINIMUM OPERATING TEMPERATURE means the minimum operating temperature specified by the manufacturer, or as otherwise defined in the South Coast AQMD Permit to Construct or Permit to Operate.

Paragraph (c)(6)

NO_x POST-COMBUSTION CONTROL EQUIPMENT means air pollution control equipment which eliminates, reduces, or controls the issuance of NO_x downstream of combustion.

Paragraph (c)(10)

STABLE CONDITIONS means that the fuel flow to an electric generating unit is consistent and allows for normal operations.

Boiler Cold Start and Boiler Non-Cold Start Paragraphs (c)(1) and (c)(2)

- Proposing two startup duration limits for boiler cold start and non-cold start
 - Boiler startup durations differ based on length of time the unit has been shut down
- Definitions based on U.S. EPA definitions for cold, warm, and hot startups for boilers*
- Hot standby is when the igniters are on and fuel flow is minimal, but no electricity is being generated

BOILER COLD START means the condition of a boiler startup occurring after a boiler has been shut down for 120 hours or more.

BOILER NON-COLD START means the condition of a boiler startup occurring after a boiler has been shut down for less than 120 hours or put in hot standby.

* U.S. EPA 2015 Proposed Reconsideration of the NESHAP for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters (40 CFR Part 63)

Startup and Shutdown Paragraphs (c)(9) and (c)(11)

Startup and Shutdown definitions modified from Rule 1135

Startup

- Beginning of startup is specified in definition and occurs at initial combustion of fuel
- Ending of startup will be imposed as when the startup duration limit is reached or when post combustion control device reaches stable conditions and minimum operating temperature

Shutdown

- Begins when units starts to reduce load and ends when unit is no longer combusting fuel
- For units with NOx post-combustion control, shutdown begins when exhaust temperatures fall below the minimum operating temperature
- If exhaust temperatures are still high, beginning of shutdown is the time limit counted back from point of zero fuel flow

Scheduled Startup Paragraph (c)(8)

- Paragraph (d)(5) limits the frequency of scheduled startup events
- Only frequency of scheduled startups are regulated
 - Startups to meet energy demand, equipment failures, unplanned maintenance are not considered a scheduled startup
- Definition modified from Rule 429

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.

Exemption from Rule 1135 Emission Limits During Startup and Shutdown Paragraph (d)(1)

- Units are exempt from Rule 1135 NO_x emission limit provisions during startup and shutdown
- Provisions for duration of startup and shutdowns are referring to the time that an owner or operator is exempt from the Rule 1135 NO_x concentration limit during a startup or shutdown event
- Exemption necessary as add-on air pollution control equipment cannot be utilized until the electric generating unit is at specific conditions and is stable

An owner or operator an electricity generating unit is not subject to the NO_x emission limits and the applicable rolling average and oxygen correction provisions pursuant to Rule 1135 during startup and shutdown.

Approach for Establishing Startup and Shutdown Duration Limits

Startup and Shutdown Duration Limits refers to maximum duration that unit is exempt from Rule 1135 NO_x concentration limits during startup and shutdown

- Review all existing applicable equipment permits
- Obtain facility documentation of startup and shutdown events

Compile startup and shutdown duration limits

- Establish startup and shutdown duration limits based on:
- Most inclusive value for units installed before rule adoption
 - Most stringent value for units installed on or after rule adoption

Startup and Shutdown Duration Limits – Paragraphs (d)(2) and (d)(3)

- Effective January 1, 2024, units installed prior to rule adoption will be subject to Table 1
 - Units that have more stringent startup and shutdown limits in their permits will follow the permit conditions
 - Conditions for startups that are aborted due to an automatic equipment shutdown to prevent equipment damage or as a result of equipment malfunction, will be addressed in the permits
- Units installed on or after rule adoption will be subject to Table 2
 - More stringent startup and shutdown duration limits than for existing equipment since these units will have newer technology with faster startup and shutdown times

Table 1: Startup and Shutdown Duration Limits for Electric Generating Units Installed Prior to [DATE OF ADOPTION]

Equipment Type	Time Allowance	
	Startup	Shutdown
Boiler	Boiler Cold Start: 24 hours	12 hours
	Boiler Non-Cold Start: 12 hours	
Combined Cycle Gas Turbine and Associated Duct Burner	6 hours	2 hours
Simple Cycle Gas Turbine	1 hour	45 minutes
Diesel Internal Combustion Engines	1 hour	30 minutes

Table 2: Startup and Shutdown Duration Limits for Electric Generating Units Installed On or After [DATE OF ADOPTION]

Equipment Type	Time Allowance	
	Startup	Shutdown
Combined Cycle Gas Turbine and Associated Duct Burner	60 minutes	30 minutes
Simple Cycle Gas Turbine	15 minutes	10 minutes
Diesel Internal Combustion Engines	30 minutes	30 minutes

Additional Limitations to Startups

Startup Duration – Paragraph (d)(4)

Number of Scheduled Startups - Paragraph (d)(5)

Paragraph (d)(4)

- Requires that startup times cannot last longer than the time necessary to:
 - Reach stable conditions, and
 - Reach minimum operating temperature of the NOx post-combustion control
- If a unit reaches stable conditions and the minimum operating temperature of the control equipment is reached before reaching the startup duration limit, the startup period is over, and the unit is required to meet applicable Rule 1135 emission limits
- Provision further limits exceedances of the Rule 1135 emission limits

Paragraph (d)(5)

- Effective January 1, 2024, the number of scheduled startups is limited to two events per year
- Unscheduled startups are not limited because they may be driven by operational demand dependent on energy grid requirements, emergencies, or maintenance needs
- Scheduled startups will count toward the number of total startups
 - A scheduled startup includes:
 - Catalyst changeout
 - Planned maintenance
 - Source testing

General Duty Requirements Paragraph (d)(6)

- Effective upon rule adoption, during startup and shutdown, all reasonable and prudent steps must be taken to minimize emissions
 - Provision was modified from existing Rule 429 provision
 - Ensures best management practices
 - Includes maintenance, equipment repairs, and adjusting temperature of post-combustion controls

Requirements for Units with NOx Post-Combustion Control Equipment

Paragraph (d)(7)

- Required to have temperature measuring device that is calibrated annually at the inlet of the NOx post-combustion control equipment

Paragraph (d)(8)

- NOx post-combustion control equipment must be operated, including the injection of any associated chemical reagent, if the temperature of the gas to the inlet of the emission control system is greater than or equal to the minimum operating temperature

Recordkeeping Requirements Subdivision (e)

Record scheduled startups, including date, time, reason, and any changes

Log of each startup and shutdown, including date, time, duration, and reason

Maintain NO_x CEMS data during startup and shutdown

Documentation of manufacturer's minimum operating temperature for units with NO_x post-combustion control

Records to be maintained on-site for 5 years and made available to the South Coast AQMD upon request

Exemptions Subdivision (f)

- OTC units that will be retired by its OTC Policy deadline will be exempt from:
 - Startup and shutdown duration limits
 - Frequency of scheduled startups
 - Installation of a temperature measuring device
- These units are scheduled to retire in a few years and will not be cost-effective to alter the equipment
 - Also, older equipment may require additional scheduled startups to address maintenance issues
- Adding sunset December 31, 2029 to prevent indefinite extensions of the retirement date

PAR 1135 and PR 429.2 Impact Assessment



Costs, Emission Reductions, and Cost-Effectiveness and Incremental Cost-Effectiveness

Costs

- The provisions in PAR 1135 and PR 429.2 are not expected to impose any additional costs

Emission Reductions

- No additional emission reductions expected

Cost-Effectiveness and Incremental Cost-Effectiveness

- Cost-effectiveness and incremental cost-effectiveness analyses not applicable to PAR 1135 and PR 429.2 because no new BARCT requirements are included

Socioeconomic Assessment

- PAR 1135 and PR 429.2 do not impose additional costs to the affected facilities
- No adverse socioeconomic impacts

California Environmental Quality Act (CEQA)

- PAR 1135 and PR 429.2 comprise the proposed project and are subject to CEQA
- South Coast AQMD is reviewing the proposed project to determine if it will result in any environmental impacts
- Appropriate CEQA documentation will be prepared

Next Steps



Staff Contacts

Rule Development

Charlene Nguyen
cnguyen@aqmd.gov
(909) 396-2648

Uyen-Uyen Vo
uvo@aqmd.gov
(909) 396-2238

Michael Morris
mmorris@aqmd.gov
(909) 396-3282

RECLAIM

Isabelle Shine
ishine@aqmd.gov
(909) 396-3064

Rudy Chacon
rchacon@aqmd.gov
(909) 396-2726

General Questions

Susan Nakamura
snakamura@aqmd.gov
(909) 396-3105

For more information:
[PAR 1135 and PR 429.2
Proposed Rules Web Page](#)

To receive e-mail notifications, sign up at:

www.aqmd.gov/sign-up