



San Diego County Air Pollution Control District
Proposed Amendments to Existing Rules:
Rule 69.3.1 - Stationary Gas Turbine Engines &
Rule 69.4.1 - Stationary Reciprocating Internal Combustion Engines
Public Workshop – October 22, 2025

2025



Today's Agenda

Background

- Local and federal standards
- SSM events
- RACT requirements

Proposed Amendments

- Rule 69.3.1 (turbine engines)
- Rule 69.4.1 (IC Engines)

Impacts of Rule Amendments

Next Steps

Questions & Comments



Background

San Diego Air Pollution Control District (District)

- District's mission to protect public health and air quality.
- Existing Rules 69.3.1 and 69.4.1 control NOx and CO emissions from stationary combustion turbine engines and IC engines.

Clean Air Act (CAA)

- Emissions from these stationary engines during startup, shutdown, and malfunction (SSM) events are not exempt from federal emission standards.

Environmental Protection Agency (EPA)

- Requires limitations to be applied continuously, including during SSM events.
- Removed historical exemptions for SSM events from federal regulations.

Reason for Proposed District's Rule Amendments

- Existing emissions standards in Rules 69.3.1 and 69.4.1 are not consistent with federal requirements (currently specified as requirements under "Exemptions").
- Proposed amendments will specify and clarify emission limitations and alternatives during SSM events.



Background

Startup, Shutdown, Malfunction (SSM) Events

- SSM events/periods occur when a stationary turbine engine or IC engine begins operation, ceases operation, or if malfunction occurs.

EPA's 2015 SSM Policy Guidelines

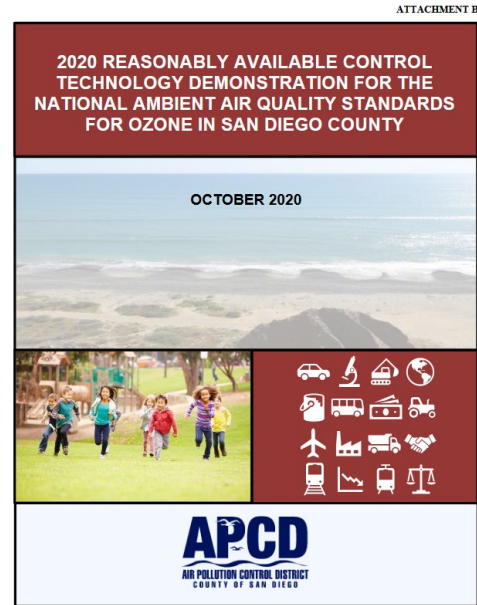
- Consistent with CAA requirements that emission limitations be applied continuously during SSM periods.
- Includes alternative emission limitations per CAA requirements.
 - Alternative limitations can include numerical limits, specific technology, or work practice requirements to control emissions during these periods.



Background

Rule Amendments required to fulfill Reasonably Available Control Technology (RACT) requirements

- 2020 RACT Demonstration
 - Submitted to EPA (through CARB) in 2020; forced to withdraw on 10/31/2024
- EPA “Finding of Failure to Submit” RACT Demonstration on 12/12/2024 (89 FR 100377, effective January 13, 2025)
 - Sanction clock started; actions needed by July 13, 2026.
- Spring 2026
 - Tentative Governing Board consideration of Rule 69.3.1 and Rule 69.4.1 amendments and updated RACT SIP elements, to stop Offset Sanction clock no later than July 13, 2026.



Summary of Proposed Amendments

Rule 69.3.1 (Turbine Engines)

(b) Exemptions and (d) Standards

- Relocated existing SSM exemptions in **Subsections (b)(3) and (b)(4)** to new **Subsections (d)(3) and (d)(4)** as Standards.
- Added new **Subsections (d)(5) and (d)(6)**.

(c) Definitions

- Minor revision to **Subsection (c)(15)** “Period of Operation at Low Load”.

(e) Monitoring and Recordkeeping Requirements

- Added language to **Subsection (e)(4)** Monitoring and Recordkeeping Requirements to be consistent with the new Subsection (d)(5).



R69.3.1- Subsections (b)(3)-(4) & Subsections (d)(3)-(4)

(3) ~~The provisions of Subsections (d)(1) and (d)(2) shall not apply to the following:~~

~~(i) Any unit during startup, shutdown or a fuel change for a period not to exceed 120 consecutive minutes except as provided for in Subsection (b)(4). Nothing in this rule shall be construed to limit the actual time needed to conduct a startup, shutdown or fuel change.~~

~~(ii) For turbines equipped with lean premix combustors, periods of operation at low load provided that:~~

~~(A) The aggregate time of such periods does not exceed 130 minutes in any calendar day;~~

~~(B) The aggregate of all such periods does not exceed 780 minutes in any calendar year; and~~

~~(C) The turbine is equipped with a continuous emission monitoring system (CEMS) or other monitoring system that monitors and records turbine fuel flow and gross electrical output in increments of one minute or less.~~

~~(4) The provisions of Subsection (d)(1) shall not apply to any combined cycle gas turbine engine during an extended startup for a period not to exceed 360 consecutive minutes.~~

(3) The emission limits in Subsections (d)(1) and (d)(2) shall not apply to:

(i) Any unit during startup, shutdown, or fuel change provided that such a period does not exceed 120 consecutive minutes, except as provided for in Subsection (d)(4) during an extended startup.

(ii) Any unit equipped with a lean premix combustor, periods of operation at low load provided that:

(A) The aggregate time of such periods does not exceed 130 minutes in any calendar day;

(B) The aggregate of all such periods does not exceed 780 minutes in any calendar year; and

(C) The unit is equipped with a continuous emission monitoring system (CEMS) or other monitoring system that monitors and records turbine fuel flow and gross electrical output in increments of one minute or less.

(4) The emission limits in Subsections (d)(1) shall not apply to any combined-cycle gas turbine engine during an extended startup for a period not to exceed 360 consecutive minutes.

Subsections (b)(3)-(4), page 1 & 2

New Subsections (d)(3)-(4), page 7



R69.3.1- New Subsections (d)(5) and (d)(6)

(5) During periods of startup and shutdown, an owner or operator of any gas turbine engine shall:

(i) Operate each unit in accordance with the manufacturer's recommended procedures.

(ii) Maintain proper air to fuel ratios.

(iii) If applicable, begin water injection, urea/ammonia injection, or engage lean-premix combustion mode as soon as possible during startup.

(6) The frequency and duration of startup and shutdown periods and their associated emissions from any unit subject to this rule shall be minimized to the greatest extent practicable.

New Subsections (d)(6) & (d)(6), page 7 & 8



R69.3.1- Subsections (d)(1) and (d)(2)

(d) STANDARDS

(1) Except as provided for in Section (b) Exemptions and Subsections (d)(2);-
(d)(6), the emissions concentration in parts per million by volume (ppmv) of NOx from any unit subject to this rule, calculated as nitrogen dioxide at 15% oxygen on a dry basis, shall not exceed the following:

Subsection (d)(1), page 6

(2) Except as provided for in Section (b) Exemptions and notwithstanding Subsection (d)(1), the emissions concentration in parts per million by volume (ppmv) of NOx from any unit-combined-cycle gas turbine engine subject to this rule, calculated as nitrogen dioxide at 15% oxygen on a dry basis, shall not exceed the following during an extended startup as defined in Subsection (c)(4):

Subsection (d)(2), page 6



R69.3.1 – Subsection (c)(15) & Subsection (e)(4)

(15) “**Period of Operation at Low Load**” means a period of time that begins when the gas turbine power level is reduced from a higher level to a lower level such that the gas turbine is unable to comply with the standards of Section (d) Standards, and ends 10 minutes after the turbine power level next exceeds the level where the gas turbine is capable of complying with the standards of Section (d) Standards, provided that fuel is continuously combusted during the entire period. No period of operation at low load shall begin during a period ~~when the provisions of Section (d) do not apply pursuant to Subsection (b)(3)(i), or Subsection (b)(4) of startup, extended startup, shutdown, or fuel~~ change operations.

Subsection (c)(15), page 4

(4) An owner or operator of any unit subject to this rule shall maintain, as applicable for the type of unit, records of dates and times of operation, times of all startups, shutdowns, periods of operation at low load, fuel changes and records of the type, ~~and~~ quantity of each fuel used during each calendar day and calendar year, and actions taken to comply with Subsections (d)(5) and (d)(6).

Subsection (e)(4), page 9



Rule 69.3.1: Stationary Gas Turbine Engines

Existing Rule Summary		Proposed Rule Amendments
(a) Applicability	Stationary gas turbine engines with a power rating of ≥ 0.3 megawatts (MW).	None
(b) Exemptions	Emissions exempt during startup, shutdown, and fuel changes.	• Relocated SSM related exemptions to (d) Standards.
(c) Definitions	Specific to turbine engines, including SSM events.	• Minor revision to definition of “<i>Period of Operation at Low Load</i>” to specify type of event/operation.
(d) Standards	Emission standards for nitrogen oxides (NO _x).	• Added existing SSM related exemptions from (b) Exemptions. • Added new subsections (d)(5)(i)-(iv) for consistency with EPA’s SSM Policy guidelines.
(e) Monitoring & Record Keeping	Records of dates, times during normal operation, startups, shutdowns, fuel changes, and fuel use.	• Minor revision for consistency with new subsection (d)(5) Standards.
(f) Test Methods	Approved test methods to determine NO _x and fuel heating values.	None
(g) Source Test & Compliance Determination	Source tests at specific operating loads and frequencies.	None



Summary of Proposed Amendments

Rule 69.4.1 (IC Engines)

- Reformatted the requirements during commission periods in **Subsection (b)(2)**.
- Relocated SSM related exemptions for non-emergency engines to **new Subsection (d)(3)**.
- Added **new Subsections (d)(4) and (d)(5)** for consistency with EPA's SSM Policy guidelines (best management practices).
- Revised frequency of annual maintenance requirements from once each calendar year to **1 year plus 30 days from the previous maintenance event** (for consistency with NESHAP 4Z) in **Subsection (f)(2)**.
- Minor **revision to Subsection (g)(5)** to reference the SSM requirements in Subsection (d)(3).



R69.4.1 – Subsections (b)(2)(i) – (iii)

(i) Prior to the commencement of a commissioning period, the owner or operator shall provide written notification to the Air Pollution Control Officer when the commissioning period will commence and its expected duration;

(ii) The maximum allowable duration of a commissioning period, not to exceed 100 hours, shall be determined and approved by the Air Pollution Control Officer; and

(iii) The air quality and public health risk impacts of emissions from the project, including emissions during the commissioning period, shall comply with the applicable requirements of Rules 20.2 and 20.3 (New Source Review Rules), and Rule 1200 – Toxic Air Contaminants-New Source Review.

Subsections (b)(2)(i) – (iii), page 2



R69.4.1 – Subsection (d)(3)

(3) An owner or operator of any non-emergency engine shall not be subject to the emission standards specified in Subsection (d)(1) during startup and shutdown for the following duration limits:

(i) 60 continuous minutes each for engines with a selective catalytic reduction (SCR) system installed, or

(ii) 30 continuous minutes each for engines without SCR installed.

Subsection (d)(3), page 12



R69.4.1 – Subsections (d)(4) and (5)

(4) During periods of startup and shutdown, an owner or operator of any engine shall:

(i) Minimize the engine's time spent at idle and minimize the engine's startup time at startup to a period needed for appropriate and safe loading of the engine, and/or

(ii) Operate in accordance with the engine manufacturer's recommended procedures.

(5) The frequency and duration of startup and shutdown periods and their associated emissions shall be minimized to the greatest extent practicable.

Subsections (d)(4) and (5), **page 12**



R69.4.1 – Subsection (f)(2)

(2) An owner or operator of an engine subject to this rule shall conduct, at a minimum, annual maintenance of the engine and any add-on control equipment, as applicable, as recommended by the engine and control equipment manufacturers or as specified by any other maintenance procedure approved in writing by the Air Pollution Control Officer. Notwithstanding the frequencies recommended by the engine and control equipment manufacturers, the annual maintenance shall be conducted ~~at least once each calendar year~~ within 1 year plus 30 days of the previous maintenance event. Engine maintenance shall include, but is not limited to, the following:

Subsection (f)(2), page 14



R69.4.1 – Subsection (g)(5)

(5) An owner or operator of any non-emergency engine ~~claiming an exemption pursuant to~~ subject to the requirements of Subsection (b)(2)(i)(d)(3) shall maintain an operating log and record dates, times and duration of all startups and shutdowns.

Subsection (g)(5), page 16



Rule 69.4.1: Stationary Reciprocating IC Engines

Existing Rule Summary		Proposed Rule Amendments
(a) Applicability	Stationary reciprocating internal combustion (IC) engines of ≥ 50 bhp.	None
(b) Exemptions	Exemptions for emissions during SSM periods.	• Relocated SSM related exemptions for non-emergency engines to Subsection (d)(3). • Reformatted exemption requirements for commissioning periods.
(c) Definitions	Specific to IC engines, including SSM events.	None
(d) Standards	Emission standards for NO _x , CO, and VOCs.	• Added existing SSM related exemptions from Section (b) Exemptions. • Added new Subsections (d)(4) and (d)(5) (for consistency with EPA's SSM Policy guidelines).
(e) Monitoring	Proper operation & maintenance per manufacturer's recommendations and/or as required by District.	None
(f) Inspection and Maintenance	Periodic inspections and annual maintenance required for engines and add-on controls.	• Revised frequency of annual maintenance from once each calendar year to 1 year plus 30 days from previous maintenance event (for consistency with NESHAP 4Z requirements).
(g) Record Keeping	Maintain records of IC engine specifications, certifications, operating parameters, and inspection and maintenance events.	• Minor revision to Subsection (g)(5) to reference new Subsection (d)(3).
(h) Test Methods	Specific testing methods to IC engines to verify compliance with applicable emission standards and rule requirements.	None
(i) Source Test	Source testing frequency and operating conditions.	None



Impacts of Rule Amendments

Rule 69.3.1 (turbine engines)

- Approximately 40 permitted gas turbine engines.
- No anticipated changes to emissions.
- Anticipated revisions to existing permits.

Rule 69.4.1 (IC engines)

- Approximately 4,500 permitted engines.
- No anticipated changes to emissions.
- Anticipated revisions to existing permits.



Next Steps

- Workshop notice, draft amended rules, & other related documents on District's website.
- Submit written comments no later than Friday, November 7, 2025.
- E-mail questions & comments to the Rule Development team at apcdrules@sdapcd.org.
- Governing Board Meeting tentatively during 1st Quarter 2026.



Rule Development
Webpage



Questions or comments?

