

Draft Model Rule

Control of Oil and Gas Fired Electric Generating Unit Boiler NOx Emissions

1.0 Purpose

The purpose of this regulation is to control the emissions of nitrogen oxides (NOx) from oil and gas fired boilers serving steam electric generating units and thereby reduce the impact on public health, safety, and welfare.

2.0 Applicability

This regulation is applicable to any existing oil fired and gas fired boiler serving an electric generating unit (EGU) with a nameplate capacity of 25 MW or greater.

3.0 Definitions

The following words and terms, when used in this regulation, shall have the following meanings:

Administrator means the Administrator of the United States Environmental Protection Agency or the Administrator's duly authorized representative.

Boiler means a device that combusts fuel to generate steam.

Coal fired means a boiler combusting any amount of coal or coal derived fuel, alone or in combination with any amount of other fuel.

Electric generating unit (EGU) means an electric generator driven by a steam turbine prime mover, and which delivers all or part of its electrical output to the power distribution grid for commercial sale.

Electric generator means a device that utilizes rotary motion from an input shaft to create electrical energy.

Existing means the EGU was synchronized to the grid on or before the effective date of this regulation.

Gas means any non-solid or non-liquid fuel, including natural gas, digester gas, landfill gas, process gas, or any gas stored as a liquid at high pressure such as liquefied petroleum gas.

Gas fired means a boiler capable of combusting only gas as a fuel.

Nameplate capacity means, starting from the initial installation of an electric generator, the maximum electrical generating output (in MWe) that the generator is capable of producing on a steady state basis and during continuous operation (when not restricted by seasonal or other de-ratings) as specified by the manufacturer of the generator or, starting from the completion of any physical change in the generator resulting in an increase in the maximum electrical generating output (in MWe) that the generator is capable of producing on a steady state basis and during continuous operation (when not restricted by seasonal or other de-ratings), such increased maximum amount as specified by the person conducting the physical change.

Oil means any petroleum product used as a fuel, and includes distillate oils (No. 1 and No. 2) and residual oils (No. 4, No. 5, and No. 6).

Oil fired means a boiler combusting any amount of oil as a main or secondary fuel, excluding coal fired boilers, during any previous or current year, and the boiler maintains the ability to fire oil as a main or secondary fuel.

Oil/gas fired means a boiler combusting oil and gas fuels, as primary or secondary fuels, in any fraction in a single boiler, excluding coal fired boilers.

Operator means any person who operates, controls, or supervises a boiler subject to this regulation and shall include, but not be limited to, any holding company, utility system, or plant manager of such boiler.

Owner means any holder of any portion of the legal or equitable title in a boiler subject to this regulation.

Reasonably available control technology (RACT) means the lowest emission limit for NO_x that a particular source is capable of meeting by the application of NO_x emissions control technology that is reasonably available considering technological and economic feasibility.

Shutdown means the period of time between when the EGU generator breaker is opened and the EGU electric generator is separated from the grid and the time when all fuel combustion in the related subject boiler is stopped.

Startup means the period of time between when any fuel combustion in the subject boiler is commenced and the related EGU generator breaker is closed connecting the EGU electric generator to the grid.

4.0 NO_x Emissions Limitations

4.1 Except as provided for in Section 5.0 of this regulation, after January 1, 2014, no owner or operator of an EGU boiler subject to this regulation shall cause to be emitted into the atmosphere any NO_x emissions in excess of the following presumptive RACT NO_x emission rate limits:

<u>Fuel Type</u>	<u>NOx Emission Rate Limit</u>
Gas Only	0.08 lb/MMBTU
Oil or Oil/ Gas	0.15 lb/MMBTU

4.2 Compliance with the emission rate requirements of paragraph 4.1 of this regulation shall be demonstrated on a rolling 24-hour average basis.

4.3 Compliance with the emission rate requirements of paragraph 4.1 of this regulation shall be demonstrated with a continuous emission monitoring system that is installed, calibrated, operated, and certified in accordance with the requirements of 40 CFR Part 75, or other method approved by <state regulatory body> and the Administrator.

4.4 The NOx emission rate limits of paragraph 4.1 of this regulation are applicable during all periods of fuel combustion, including startup and shutdown, unless otherwise specified in the subject unit's operating permit.

4.5 No later than July 1, 2011, the owner or operator of a boiler subject to this regulation shall submit to the <state regulatory agency> a compliance plan acceptable to the <state regulatory agency> documenting either existing compliance with the requirements of paragraph 4.1 through paragraph 4.4 of this regulation, or a NOx emission control plan detailing all actions, including a schedule of increments of progress, which will be taken to comply with the requirements of paragraph 4.1 through 4.4 of this regulation. The submittal shall contain, as a minimum, the following information:

4.5.1 Facility and boiler identification.

4.5.2 Notation of all fuel types, primary and secondary, and approximate historic annual heat input percentages.

4.5.3 Documentation of NOx emission rates at current control levels and operating practices.

4.5.4 Where applicable, technical description of proposed emission control technology, equipment design, or process changes to be implemented to achieve compliance with the requirements of paragraph 4.1 through 4.4 of this regulation.

4.5.5 A proposed compliance schedule.

4.5.6 Any other information requested by the <state regulatory agency>.

5.0 Alternative RACT Determination

5.1 If the owner or operator of a boiler subject to this regulation is unable to comply with the presumptive RACT NOx emissions rate limitations of paragraph 4.1 of this regulation, an alternative

NOx RACT determination shall be required to be submitted and approved by the <state regulatory agency> in accordance with Section 5.0 of this regulation.

5.2 Alternative RACT determinations made pursuant to paragraph 5.1 of this regulation shall be submitted to <state regulatory agency> no later than January 1, 2012 for review and approval.

5.3 The <state regulatory agency> will submit each approved alternative RACT determination made under Section 5.0 of this regulation to the Administrator for approval as a revision to the State Implementation Plan (SIP).

5.4 An alternative NOx RACT determination submitted in accordance with paragraph 5.1 of this regulation shall include, as a minimum, the following information:

5.4.1 Identification of equipment or process modifications that are proposed for implementation on the subject boiler.

5.4.2 Expected NOx emission rate for the range of normal operation.

5.4.3 Technical evaluation and economic evaluation to support the alternative RACT proposal, including technical and economic evaluation of any technically feasible alternatives other than the proposed alternative.

5.4.4 Baseline NOx emission rates for the subject boiler established with approved CEMS, stack test, or other method approved by the <state regulatory agency>.

5.4.5 Proposed implementation schedule.

5.4.6 Any other information requested by the <state regulatory agency>.

6.0 Recordkeeping

The owner or operator of a boiler subject to this regulation shall maintain, for a period of at least five years, copies of all measurements, tests, reports, logs, required to demonstrate compliance with this regulation. This information shall be provided to the <state regulatory agency> upon request at any time.