SUBPART 227-3

OZONE SEASON OXIDES OF NITROGEN (NO_X) EMISSION LIMITS FOR SIMPLE CYCLE AND REGENERATIVE COMBUSTION TURBINES

(Statutory authority: Environmental Conservation Law, §§ 1-0101, 3-0301, 3-0303, 19-0103, 19-0105, 19-0301, 19-0303, 19-0305, 19-0311, 71-2103, 71-2105)

Sec.

Historical Note

Subpart (227-3.1—227-3.19) filed Feb. 3, 1999; Subpart (*Pre-2003 Nitrogen Oxides Emissions Budget and Allowance Program*, §§ 227-3.1—227-3.19) repealed, filed Sept. 5, 2014; new (§§ 227-3.1—227-3.8) filed Dec. 17, 2019 eff. Jan. 16, 2020.

§ 227-3.1 Applicability.

(a) The provisions of this Subpart apply to owners or operators of simple cycle and regenerative combustion turbines (SCCTs) that are electric generating units with a nameplate capacity of 15 megawatts (MW) or greater and that inject power into the transmission or distribution systems.

(b) The provisions of this Subpart only apply during the ozone season.

(c) The provisions of this Subpart do not apply to black start resources.

Historical Note

Subpart previously repealed, new sec. filed Dec. 17, 2019 eff. Jan. 16, 2020.

§ 227-3.2 Definitions.

(a) To the extent that they are not inconsistent with the specific definitions in subdivision (b) of this section, the general definitions of Parts 200, 201, and Subpart 227-2 of this Title apply.

(b) For the purposes of this Subpart, the following specific definitions apply:

(1) *Black start resource.* An electric generating unit used to bring a facility from shutdown to operational without reliance on external supplies or the electrical system.

(2) *Common control.* Refers to two or more emission sources and/or electric storage and/or renewable generation resources that are under the control of a single corporate entity. The corporate entity must:

(i) have the right to decide when to operate the plant; or

(ii) have the right to enter into a power purchase agreement or other agreement with the entity that owns the emission source and/or electric storage and/or renewable generation resources and provides the necessary paperwork required under section 227-3.3(b) of this Subpart.

(3) *Electric storage resource.* A resource capable of receiving electric energy from the grid and storing it for later injection of electric energy back to the grid.

(4) *Hydroelectric energy.* The conversion of potential and kinetic energy in the form of falling or fast-flowing water into mechanical energy which drives turbines producing electricity.

(5) *MWh.* Megawatt hour of electricity.

(6) *NYISO.* New York independent system operator.

(7) *ORISPL.* Office of regulatory information systems plant code assigned by the energy information administration to electric generating units.

(8) *Ozone season.* May 1st through September 30th of each calendar year.

(9) *Power purchase agreement.* A contract between two entities pursuant to which one entity agrees to produce electricity, or some other power source, for the other entity over a defined period of time.

(10) *Renewable generation resources.* Solar photovoltaic energy, wind energy, tidal energy or hydroelectric energy electricity generating systems.

(11) *Solar photovoltaic energy.* Technology that directly converts the energy radiated by the sun as electromagnetic waves into electricity by means of solar panels.

(12) *Substation.* An area or group of equipment to transform power from one voltage to another or from one system to another.

(13) *Tidal energy.* The conversion of kinetic energy in the form of tide movement into mechanical energy which drives turbines connected to a generator to produce electricity.

(14) *Wind energy.* The conversion of kinetic energy in the form of wind or air flows into mechanical energy which drives turbines connected to a generator to produce electricity.

Historical Note

Subpart previously repealed, new sec. filed Dec. 17, 2019 eff. Jan. 16, 2020.

§ 227-3.3 Permitting requirements and compliance plan submittal.

(a) Each facility containing an SCCT subject to this Subpart must have or obtain a permit pursuant to Parts 201 and 621 of this Title that reflects the implementation of the compliance plan required in subdivision (b) of this section prior to the May 1, 2023 compliance date of this Subpart in order to operate on and after the applicable compliance date.

(b) Each facility containing an SCCT subject to this Subpart must submit a compliance plan to the department by March 2, 2020. Each compliance plan must, at minimum, contain:

(1) A list of each SCCT subject to the requirements of this Subpart that includes any identifying numbers such as ORISPL number, emission source number and nameplate capacity.

(2) A schedule outlining how the owner or operator will comply with the requirements set forth in this Subpart including which SCCTs will install controls, controls to be installed, the expected NO_x emission rates, SCCTs to be replaced or repowered, and/or SCCTs to be shut down.

(3) A list of renewable resources to be installed under common control of the permittee to be used in the compliance option described in section 227-3.5(b) of this Subpart. This list shall include, for each renewable resource:

(i) location;

(ii) nameplate capacity or equivalent; and

(iii) documentation demonstrating common control.

(4) A list of electric storage resources to be installed under common control of the permittee to be used in the compliance option described in section 227-3.5(b) of this Subpart. This list shall include, for each electric storage resource:

(i) location;

(ii) nameplate capacity or equivalent;

(iii) duration of discharge; and

(iv) documentation demonstrating common control.

(5) Pursuant to section 227-3.2(b)(2)(ii) of this Subpart the entity that owns the emission source asserting control over an electric storage and/or renewable generation resource must

provide a letter, as part of a compliance plan or permit modification application, that the bidding and/or dispatch rights have been provided to the entity asserting common control.

Historical Note
Subpart previously repealed, new sec. filed Dec. 17, 2019 eff. Jan. 16, 2020.

§ 227-3.4 Control requirements.

(a) The following NO_x emission limits on a parts per million dry volume basis (ppmvd), corrected to 15 percent oxygen must be met as a facility-level weighted average of all applicable SCCTs at a facility:

(1) By May 1, 2023:

	NO_x Emission Limit (ppmvd)
All SCCTs	100

(2) By May 1, 2025:

Fuel Type	NO_x Emission Limit (ppmvd)
Gaseous fuels	25
Distillate oil or other liquid fuel	42

(3) Compliance with these emission limits must be determined by conducting stack tests, as set forth in section 227-2.6(c) of this Title, at a minimum of once per permit term. Alternatively, the owner or operator may choose to use a continuous emissions monitoring system (CEMS) consistent with the provisions of section 227-2.6(b) of this Title.

Historical Note
Subpart previously repealed, new sec. filed Dec. 17, 2019 eff. Jan. 16, 2020.

§ 227-3.5 Compliance options.

(a) *Ozone season stop.* An owner or operator of an existing SCCT may opt to comply with this Subpart by not operating the SCCT during the ozone season. The ozone season stop provision must be included as an enforceable permit condition in a final permit or permit modification issued prior to the applicable compliance deadline of this Subpart.

(b) *Electric storage and renewable energy resources.* An owner or operator of an SCCT may opt to comply with this Subpart by meeting the following weighted average output-based emission limits on a daily basis pursuant to the following:

(1) Owners and operators must meet the following facility-level daily weighted average emission limits on a pounds of NO_x per megawatt hour (lb/MWh) basis for all applicable SCCTs, electric storage resources and/or renewable generation resources at a facility.

(i) By May 1, 2023:

	Emission Limit (lb NO_x/MWh)
All SCCTs	3.0

(ii) By May 1, 2025:

Fuel Type	Effective Daily Emission Limit (lb NO_x/MWh)
Gaseous fuels	1.5
Distillate oil or other liquid fuel	2.0

(2) The owner or operator of an SCCT that uses electric storage or renewable energy resources to inject electricity to the transmission and distribution system may demonstrate compliance with the applicable effective daily NO_x emission limits by including the electrical

energy, in MWh, injected to the transmission and distribution system from electric storage and/or renewable generation resources in the emission rate calculation provided that:

(i) the renewable generation resource and/or the electric storage resource must be directly connected to the same physical substation as the SCCT with which it is being averaged; or

(ii) within one-half mile radius of the SCCT with which it is being averaged;

(iii) all sources that are averaged under this compliance option must be under common control.

(3) The effective emission rate may be calculated by:

(i) Effective Rate =

$$\frac{MassNO_X}{MWh_{CT}+MWh_{ST}+MWh_{RE}}, \text{ where}$$

(*a*) $MassNO_x$ = NO_x emissions (pounds) each day from all applicable SCCTs at the permitted facility.

(*b*) MWh_{CT} = electrical energy delivered to the transmission and distribution system (in MWh) from applicable SCCTs at the permitted facility each day.

(*c*) MWh_{ST} = electrical energy delivered to the transmission and distribution system (in MWh) from storage resources over each day.

(*d*) MWh_{RE} = electrical energy delivered to the transmission and distribution system (in MWh) from renewable generation each day.

(4) If the owner or operator burns both gaseous fuel and liquid fuel during the same day, a facility electrical energy (MWh) weighted average must be calculated to determine a resultant mix fuel emission rate. The mix fuel rate must first be calculated to determine the allowable emission rate and then calculated again to determine the actual mix fuel emission rate.

(i) Allowable Mix Fuel Rate = $\frac{\text{RateGxGenG+Rate0xGen0}}{\text{GenG+Gen0}}$ where:

(*a*) RateG = Effective daily emission limit (lb NO_x/MWh) burning gas as defined in subdivision (b) of this section.

(*b*) RateO = Effective daily emission limit (lb NO_x/MWh) burning oil as defined in subdivision (b) of this section.

(*c*) GenG = electrical energy (MWh) generated burning gas each day.

(*d*) GenO = electrical energy (MWh) generated burning oil each day.

(ii) Actual Mix Fuel Rate = $\frac{\text{RateGxGenG+Rate0xGen0}}{\text{GenG+Gen0+GenR+GenS}}$ where:

(*a*) RateG = lb NO_x/MWh burning gas.

(*b*) RateO = lb NO_x/MWh burning oil.

(*c*) GenG = electrical energy (MWh) generated burning gas each day.

(*d*) GenO = electrical energy (MWh) generated burning oil each day.

(*e*) GenR = electrical energy (MWh) injected to the transmission and distribution system from renewable energy resources each day.

(*f*) GenS = electrical energy (MWh) injected to the transmission and distribution system from electric storage resources each day.

Historical Note

Subpart previously repealed, new sec. filed Dec. 17, 2019 eff. Jan. 16, 2020.

§ 227-3.6 Electric system reliability.

(a) An SCCT may be designated as a reliability source by the NYISO or by the local transmission/distribution owner to temporarily resolve a reliability need.

This is a separator page: Please discard!