

## **Air Quality Standard Permit for Electric Generating Units**

*Effective Date May 16, 2007*

This standard permit authorizes electric generating units that generate electricity for use by the owner or operator and/or generate electricity to be sold to the electric grid, and that meet all of the conditions listed below.

### **(1) Applicability**

- (A) This standard permit may be used to authorize electric generating units installed or modified after the effective date of this standard permit and that meet the requirements of this standard permit.
- (B) This standard permit may not be used to authorize boilers. Boilers may be authorized under the Air Quality Standard Permit for Boilers; 30 TAC § 106.183, Boilers, Heaters, and Other Combustion Devices; or a permit issued under the requirements of 30 TAC Chapter 116.

### **(2) Definitions**

- (A) East Texas Region - All counties traversed by or east of Interstate Highway 35 or Interstate Highway 37, including Bosque, Coryell, Hood, Parker, Somervell and Wise Counties.
- (B) Installed - a generating unit is installed on the site when it begins generating electricity.
- (C) West Texas Region - Includes all of the state not contained in the East Texas Region.
- (D) Renewable fuel - fuel produced or derived from animal or plant products, byproducts or wastes, or other renewable biomass sources, excluding fossil fuels. Renewable fuels may include, but are not limited to, ethanol, biodiesel, and biogas fuels.

### **(3) Administrative Requirements**

- (A) Electric generating units shall be registered in accordance with 30 TAC § 116.611, Registration to Use a Standard Permit, using a current Form PI-1S. Units that meet the conditions of this standard permit do not have to meet 30 TAC § 116.610(a)(1), Applicability.
- (B) Registration applications shall comply with 30 TAC § 116.614, Standard Permit Fees, for any single unit or multiple units at a site with a total generating capacity of 1 megawatt (MW) or greater. The fee for units or multiple units with a total generating capacity of less than 1 MW at a site shall

be \$100.00. The fee shall be waived for units or multiple units with a total generating capacity of less than 1 MW at a site that have certified nitrogen oxides (NO<sub>x</sub>) emissions that are less than 10 percent of the standards required by this standard permit.

- (C) No owner or operator of an electric generating unit shall begin construction and/or operation without first obtaining written approval from the executive director.
- (D) Records shall be maintained and provided upon request to the Texas Commission on Environmental Quality (TCEQ) for the following:
  - (i) Hours of operation of the unit;
  - (ii) Maintenance records, maintenance schedules, and/or testing reports for the unit to document re-certification of emission rates as required by subsection (4)(G) below; and
  - (iii) Records to document compliance with the fuel sulfur limits in subsection (4)(C).
- (E) Electric generators powered by gas turbines must meet the applicable conditions, including testing and performance standards, of Title 40 Code of Federal Regulations (CFR) Part 60, Subpart GG, Standards of Performance for Stationary Gas Turbines, and applicable requirements of 40 CFR Part 60 Subpart KKKK, Standards of Performance for Stationary Combustion Turbines.
- (F) Compliance with this standard permit does not exempt the owner or operator from complying with any applicable requirements of 30 TAC Chapter 117, Control of Air Pollution from Nitrogen Compounds, or 30 TAC Chapter 114, Control of Air Pollution from Motor Vehicles.

#### (4) General Requirements

- (A) Emissions of NO<sub>x</sub> from the electric generating unit shall be certified by the manufacturer or by the owner or operator in pounds of pollutant per megawatt hour (lb/MWh). This certification must be displayed on the name plate of the unit or on a label attached to the unit. Test results from U.S. Environmental Protection Agency (EPA) reference methods, California Air Resources Board methods, or equivalent alternative testing methods approved by the executive director used to verify this certification shall be provided upon request to the TCEQ. The unit must operate on the same fuel(s) for which the unit was certified.
- (B) Electric generating units that use combined heat and power (CHP) may take

credit for the heat recovered from the exhaust of the combustion unit to meet the emission standards in subsections (4)(D), (4)(E), and (4)(F). Credit shall be at the rate of one MWh for each 3.4 million British Thermal Units of heat recovered. The following requirements must be met to take credit for CHP for units not sold and certified as an integrated package by the manufacturer:

- (i) The owner or operator must provide as part of the application documentation of the heat recovered, electric output, efficiency of the generator alone, efficiency of the generator including CHP, and the use for the non-electric output, and
  - (ii) The heat recovered must equal at least 20 percent of the total energy output of the CHP unit.
- (C) Fuels combusted in these electric generating units are limited to:
- (i) Natural gas containing no more than ten grains total sulfur per 100 dry standard cubic feet;
  - (ii) Landfill gas, digester gas, stranded oilfield gas, or gaseous renewable fuel containing no more than 30 grains total sulfur per 100 dry standard cubic feet; or
  - (iii) Liquid fuels (including liquid renewable fuel) not containing waste oils or solvents and containing less than 0.05 percent by weight sulfur.
- (D) Except as provided in subsections (4)(F) and (4)(H), NO<sub>x</sub> emissions for units 10 MW or less shall meet the following limitations based upon the date the unit is installed and the region in which it operates:

East Texas Region:

- (i) Units installed prior to January 1, 2005 and
  - (a) operating more than 300 hours per year - 0.47 lb/MWh;
  - (b) operating 300 hours or less per year - 1.65 lb/MWh;
- (ii) Units installed on or after January 1, 2005 and
  - (a) operating more than 300 hours per year, with a capacity greater than 250 kilowatts (kW) - 0.14 lb/MWh;
  - (b) operating 300 hours or less per year - 0.47 lb/MWh; or
  - (c) any unit with a capacity of 250 kW or less - 0.47 lb/MWh.

West Texas Region:

- (i) Units operating more than 300 hours per year - 3.11 lb/MWh;
  - (ii) Units operating 300 hours or less per year - 21 lb/MWh. Units certified to comply with applicable Tier 1, 2, or 3 emission standards in 40 CFR Part 89, Control of Emissions from New and In-Use Nonroad Compression-Ignition Engines, are deemed to satisfy this emission limit.
- (E) Except as provided in subsections (4)(F) and (4)(H), NO<sub>x</sub> emissions for units greater than 10 MW shall meet the following limitations:
  - (i) Units operating more than 300 hours per year - 0.14 lb/MWh;
  - (ii) Units operating 300 hours or less per year - 0.38 lb/MWh.
- (F) Electric generating units firing any gaseous or liquid fuel that is at least 75 percent landfill gas, digester gas, stranded oil field gas, or renewable fuel content by volume, shall meet a NO<sub>x</sub> emission limit of 1.90 lb/MWh. Units in West Texas with a capacity of 10 MW or less that fire at least 75 percent landfill gas, digester gas, stranded oilfield gases, or gaseous or liquid renewable fuel by volume, must comply with the applicable West Texas NO<sub>x</sub> limit in subsection (4)(D).
- (G) To ensure continuing compliance with the emissions limitations, the owner or operator shall re-certify a unit every 16,000 hours of operation, but no less frequently than every three years. Re-certification may be accomplished by following a maintenance schedule that the manufacturer certifies will ensure continued compliance with the required NO<sub>x</sub> standard or by third party testing of the unit using appropriate EPA reference methods, California Air Resources Board methods, or equivalent alternative testing methods approved by the executive director to demonstrate that the unit still meets the required emission standards. After re-certification, the unit must operate on the same fuel(s) for which the unit was re-certified.
- (H) The NO<sub>x</sub> emission limits in subsections (4)(D)-(4)(F) are subject to the following exceptions:
  - (i) The hourly NO<sub>x</sub> emission limits do not apply at times when the ambient air temperature at the location of the unit is less than 0 degrees Fahrenheit.
  - (ii) At times when a unit is operating at less than 80% of rated load, an alternative NO<sub>x</sub> emission standard for that unit may be determined by multiplying the applicable emission standard in subsections (4)(D)-(4)(F) by the rated load of the EGU (in MW), to produce an allowable hourly

mass NO<sub>x</sub> emission rate. In order to use this alternative standard, an owner or operator must maintain records that demonstrate compliance with the alternative emission standard, and make such records available to the TCEQ or any local air pollution control agency with jurisdiction upon request.