

Newington Energy, LLC]	FINAL RACT ORDER
Newington Power Facility]	ARD-04-001
200 Shattuck Way, Newington, NH]	June 20, 2007

A. Introduction

This NOx RACT Order is issued by the New Hampshire Department of Environmental Services, Air Resources Division, to Newington Energy, LLC pursuant to RSA 125-C.

B. Parties

1. The New Hampshire Department of Environmental Services, Air Resources Division ("DES"), is a duly constituted administrative agency of the State of New Hampshire having its principal offices at 29 Hazen Drive, Concord, NH 03302-0095, telephone number (603) 271-1370.
2. Newington Energy, LLC (NEL) is a Delaware Limited Liability Corporation, having a mailing address of 15 Agawam Avenue, West Springfield, MA.

C. Statements of Fact and Law

1. NEL operates the Newington Power Facility located at 200 Shattuck Way in Newington, NH.
2. NEL is a 525 megawatt combined cycle electric generation facility, which is fully permitted to operate as such by DES.
3. On December 4, 2001, NEL was issued a Temporary Air Permit for One Natural Gas-Fired Auxiliary Boiler, Eight Natural Gas-Fired Fuel Gas Heaters, One Diesel-Fired Emergency Generator, and One Diesel-Fired Firewater Pump, State Permit No. TP-B-0483.
4. Effective May 20, 1994, DES adopted PART Env-A 1211 NITROGEN OXIDES (NOx). Effective October 31, 2002, DES revised and adopted Env-A 1211.
5. In compliance with Condition V.B of Temporary Permit No. TP-B-0483, a NOx Reasonably Available Control Technology Plan ("NOx RACT Plan") was required for the eight fuel gas heaters, rated at 2.0 MMBtu/hr each. NEL, through its consultant TRC Environmental Corporation, filed a "NOx RACT Plan for Fuel Gas Heaters," dated April 23, 2002. The NOx RACT Plan was filed in compliance with the requirements of Env-A 1211.14, *Emission Standards and Control Options for Miscellaneous Stationary Sources*.
6. On September 9, 2002, DES issued RACT Order # ARD-02-003 to NEL for the eight fuel gas heaters. The RACT Order required NEL to install and operate low NOx burners and comply with NOx emission limits of 12 ppm and 0.018 lb/MMBtu for each of the eight fuel gas heaters.
7. On September 9, 2002, DES submitted to United States Environmental Protection Agency (USEPA) NOx RACT Order # ARD-02-003 as a revision to the New Hampshire State Implementation plan

(SIP).

8. NEL's current NOx emitting sources include two combustion turbines and their associated heat recovery steam generators with duct burners, an auxiliary boiler, a firewater pump, an emergency generator, and eight fuel gas heaters.
9. On July 26, 2004, NEL, through its consultant Earth Tech Corporation, submitted a revised NOx RACT Plan for new fuel gas heaters. The revised plan proposes replacing the eight fuel gas heaters (rated at 2.0 MMBtu/hr each) with six fuel gas heaters, rated at 2.4 MMBtu/hr each. This reduces the total heat input rate of the fuel gas heaters from 16 MMBtu/hr to 14.4 MMBtu/hr. The vendor NOx emission guarantee on the Low NOx burners is 9.9 ppm at 3% O₂. NEL estimates that the emission factor will be approximately 0.0120 lb NOx/MMBtu or 0.0289 lb NOx/hr for each fuel gas heater. This equates to a potential reduction of 0.51 tons NOx per year when compared to NOx emissions from the current fuel gas heaters.
10. NEL analyzed alternative methods for lowering NOx emissions including the following: 1) the use of low sulfur distillate fuel oil; 2) NOx emission reduction credits (ERCs) or discrete emission reductions (DERs); and low NOx burners. The use of low sulfur distillate fuel oil would increase the NOx emissions by approximately a factor of eight over the use of the vendor supplied NOx emissions for natural gas firing; therefore, NEL did not choose this option. As the NOx emissions from all eight burners are 0.76 tons per year, NEL dismissed the use of DERs or ERCs because of the high administrative costs of a low quantity of credits. NEL chose to use low NOx burners to meet the NOx RACT requirements.
11. NEL also reviewed the US EPA RACT/Best Available Control Technology/Lowest Achievable Emission Rate (BACT/LAER) Information System clearinghouse to search for other for natural gas-fired combustion devices with low NOx emissions. NEL searched the database for comparably sized units (up to ten times larger in heat input) that were installed since the original RACT Order was issued on September 9, 2002. No permits of comparably-sized units were found with lower NOx emissions.
12. When DES submits RACT Order # ARD-04-001 to EPA as a SIP revision, the new RACT Order will supersede the NOx RACT Order ARD-02-003 and DES will request for the withdrawal of the September 9, 2002 submittal.

D. Order

Based upon the above findings and determinations, DES hereby orders NEL as follows:

1. Install and operate low NOx burners on each of the six new fuel gas heaters.
2. Comply with a NOx emission concentration of 9.9 ppm @3%O₂ and a 0.012 lb/MMBtu emission rate for each of the six new fuel gas heaters.
3. Perform annual efficiency tests to determine the combustion efficiency (percent), the NOx emission concentration (ppmvd), CO concentration (ppmvd), oxygen levels (percent), and carbon dioxide levels (percent).

4. Maintain records of the combined monthly fuel consumption of the six fuel gas heaters.
5. Maintain records of the hours of operation, based on the fuel flow data, when any of the six fuel gas heaters are operating.
6. Comply with the record keeping and reporting requirements of the New Hampshire Code of Administrative Rules, Chapter Env-A 900.

Please address any correspondence and communication in reference to this Order to the following:

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Robert R. Scott, Director
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cc: Timothy Drew, PIP Office
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RRS/pb