



The State of New Hampshire
DEPARTMENT OF ENVIRONMENTAL SERVICES



Thomas S. Burack, Commissioner

January 31, 2014

Debra A. Howland
Executive Director and Secretary
New Hampshire Public Utilities Commission
21 South Fruit Street, Suite 10
Concord, NH 03301-2429

**Re: Conditional Certification as a Class III Renewable Energy Source
Ryegate Power Station
East Ryegate, VT
Docket DE 14-007; GIS Unit ID #: MSS 2433**

Dear Ms. Howland:

The New Hampshire Department of Environmental Services (DES) has reviewed the application from GDF SUEZ Energy North America, Inc. for the Ryegate Power Station (Ryegate), a wood-fired power plant located in East Ryegate, VT, to be certified as a Class III renewable energy source. DES recommends that the Public Utilities Commission (PUC) grant conditional approval to Ryegate as a Class III renewable energy source eligible to generate renewable energy certificates. A summary of the facility description, DES's review of particulate and NOx emission rates and monitoring requirements, and recommended conditions of the approval are presented below.

Facility Description

Facility Name: Ryegate Power Station
Facility Location: 247 Weesner Drive
East Ryegate, VT 05042
Gross Nameplate Capacity: 20 MW
Primary Fuel: Whole-tree wood chips and other low-grade clean wood fuels

Particulate Matter (PM) Emissions

New Hampshire Code of Administrative Rules Puc 2502.16, "*Eligible biomass technologies*", requires that the facility meet an average PM emission rate limit of 0.02 pounds/million British thermal units (lb/MMBtu).

A PM emission test was performed for Ryegate on June 18, 2013. The emission test was performed for PM in accordance with 40 Code of Federal Regulations Part 60, Appendix A, Reference Method 5. The results of the test indicate the actual PM emission rate in

lb/MMBtu was 0.0012 lb/MMBtu, which meets the Renewable Portfolio Standard (RPS) PM standard of 0.02 lb/MMBtu pursuant to RSA 362-F:2 VIII(a). DES recommends conditional approval of Ryegate based on its capability to meet the RPS PM standard, provided that Ryegate continues to perform annual stack testing, reports the results to DES, and the results continue to show the actual PM emission rate is at or below 0.02 lb/MMBtu in accordance with Puc 2505.04, *Certification of Biomass Facilities*.

Nitrogen Oxides (NOx) Emissions

New Hampshire Code of Administrative Rules Puc 2502.16 requires that the facility meet a quarterly average NOx emission rate limit of 0.075 lb/MMBtu. Ryegate has installed a continuous emissions monitoring system (CEMS) to record NOx emissions in accordance with Vermont DEC Title V Operating Permit AOP-01-037. Ryegate proposes to install an SCR system, the purpose of which is to further reduce NOx emissions from .15 lbs/mmBTU to emissions no greater than 0.075 lbs/mmBTU. Ryegate currently anticipates initial operation of the new SCR in the third quarter of 2014 and will have NOx emissions data shortly thereafter. DES anticipates that NOx emissions from the facility will meet the RPS NOx standard of 0.075 lb/MMBtu or less.

At the end of each quarter of operation and electricity generation, DES will review Ryegate's operational and testing data, including Relative Accuracy Test Audits (RATA) data in consultation with VT DEC, which will indicate if Ryegate operates the NOx CEMS in accordance with all applicable requirements, and the CEMS data is suitable for determining compliance with NOx emission limitations. Please note that daily averages of zero emissions due to non-operation and days with insufficient or invalid data shall not be counted in the calculation of the quarterly average NOx emission rate.

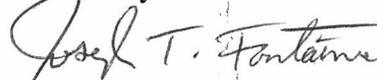
Conclusion and Recommended Conditions of Approval

DES believes that Ryegate will meet the requirements to be certified as a Class III - Existing Biomass renewable energy source upon operation of the new SCR in the third quarter of 2014. DES recommends that, with the following conditions, the PUC certify Ryegate as a Class III renewable energy source eligible to generate renewable energy certificates:

- 1) Ryegate shall emit NOx at a quarterly average rate less than or equal to 0.075 lb/MMBtu.
- 2) Ryegate shall emit PM at an average rate less than or equal to 0.02 lb/MMBtu, as determined by annual stack testing.

If you have any questions, please contact me at joseph.fontaine@des.nh.gov or (603) 271-6794.

Sincerely



Joseph T. Fontaine
Trading Programs Manager
Air Resources Division