

DE 08-133

University System of New Hampshire, Durham
UNH CHP Plant
Application for New Hampshire State Certification as
"Class I" Resource



Puc 2505.02 Application Requirements.

- (a) To qualify as a facility eligible to acquire certificates under this Chapter, a source shall demonstrate its eligibility under Class I, II, III or IV by filing a completed application. Customer-sited sources of 100 kilowatt-hours or less, or equivalent thermal output, shall apply pursuant to Puc 2505.08.
- (b) For all other sources, the application shall include:

- (1) The name and address of the applicant;

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Matt O'Keefe
Energy Office
17 Leavitt Lane
Durham, NH 03824

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Email: mattokeefe@unh.edu

Alternative Contact:

Andrew Kolchins
10 Bank Street, Ste. 410
White Plains, NY 10606

- (2) The name and location of the facility;

UNH CHP Plant
22 Colovos Road
Durham, NH 03284-3515

- (3) The ISO-New England asset identification number, if available;

Resource ID: 12696
Project ID: 1117

- (4) The GIS facility code, if available;

Still pending.



- (5) A description of the facility, including fuel type, gross nameplate generation capacity, the initial commercial operation date, and the date it began operation, if different;

UNH Power Plant

Fuel Type: Landfill Methane Gas

Capacity: 7.9 MW

Initial Commercial Operation Date: 09/12/2006

- (6) If a biomass source, NOx and particulate matter emission rates and a description of pollution control equipment or proposed practices for compliance with such requirements;

Air permit attached

- (7) All other necessary regulatory approvals, including any reviews, approvals or permits required by the department;

Air permit attached.

- (8) Proof that the applicant either has an approved interconnection study on file with the commission, is a party to a currently effective interconnection agreement, or is otherwise not required to undertake an interconnection study;

Facility is behind the meter – permit attached.

- (9) If a biomass facility, proof that a copy of the completed application has been filed with the department;

N/A

- (10) A description of how the generation facility is connected to the distribution utility;

Facility is Behind the meter – Please see attached documentation.

- (11) A statement as to whether the facility has been certified under another non-federal jurisdiction's renewable portfolio standard and proof thereof;

Application has been submitted to MA, CT, RI and ME

- (12) A statement as to whether the facility's output had been verified by ISO-New England; Adopted Rule - 05-30-2008 1 3

Facility is located behind the meter – description attached.

UNH CHP Plant
Application towards the MA RPS

Appendix B.2

- (a) List of each and every fuel likely to be co-fired or used in a fuel blend

Landfill gas, natural gas, diesel oil

- (b) The likely proportion of each fuel in the mix or in the fuel blend

89% Landfill Gas, 11% Natural Gas (for both blending and backup fuel)

- (c) The likely net heat content of each, including any expected seasonal variations, such as those due to moisture content or wood species.

Natural Gas heat content = 1,030 BTU/CF High Heat Value (HHV)

LFG = 847 BTU/CF HHV

Diesel Oil = 140,000 BTU per gallon HHV

- (d) The seasonal variation of the fuel mix or blend, if any,

No seasonal variation expected. Turbine has 1 week planned shutdown every May after graduation.

Appendix B.3

- (a) Data and calculations documenting the ratio of the net heat content of the Eligible Renewable Fuel consumed to the net heat content of all fuel consumed during an average month. If you anticipate substantial seasonal differences, then show this data for an average month in different seasons.

Flow meters on fuel inlet to turbine for total CF of fuel, broken out by which fuel is serving the turbine (totalizing hours per fuel). Average Heat content per fuel (Natural Gas supplied by utility, LFG by Wobbe index meter (COSA 9600)). Total volume of LFG to be calculated by subtracting Natural Gas to the blending station from the total flow to turbine. Total kwh generated can be determined by either plant SCADA system or utility generation meter.

- (b) A description of the procedures that are (or will be) used by Owner to obtain the data listed in subsection B.#(a) above. Please also include a description of all quality control measures used to verify the uniformity of the heat content of the Eligible New Renewable Fuel or to account for variations in the heat content of the Eligible New Renewable Fuel used in the Generation Unit.

A program will be developed by the controls subcontractor to use above metering points to calculate total BTUs consumed by fuel and the total kwh generated during calendar month. Allocation percentage will determine total kwh generated by renewable LFG, which will determine total REC generated. BTU content will be tracked over time and all variability will be noted in a SCADA system report that identifies average, high, and low BTU contents for each calendar month.

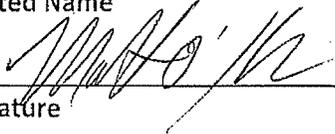
Example of Monthly Blended Fuel Report		
*PLG = Processed Landfill Gas		
Wobbe Index Values:		
Max	38.2	
Min	32.1	
Avg	34.5	
Total Fuel to Turbine:		
55,000	MMBTU	
Total NG through Blending Skid Bypass:		
1,000	MMBTU	
Total NG to Blending Skid:		
2,000	MMBTU	
Total PLG to Blending Skid:		
52,000	MMBTU	
Total kWh Produced:		
5,000,000	kWh	
% PLG	94.545%	
% NG	5.455%	
Total-PLG (%PLG*Total kWh Produced)	4,727,273	kWh
Total-NG (%NG*Total kWh Produced)	272,727	kWh

UNH CHP Power Plant (7.9MW)
Application for New Hampshire State Certification
"Class I"

I hereby submit this New Hampshire renewable portfolio application and supporting documents and attest to the authenticity and accuracy of the application and all information contained herein.

Matthew O'Keefe

Printed Name



Signature

10/24/08

Date