



The State of New Hampshire
DEPARTMENT OF ENVIRONMENTAL SERVICES



Thomas S. Burack, Commissioner

NHPUC 11FEB'16AM11:33

December 30, 2015

Mr. Mark Froling
 Froling Energy
 590 Hancock Road
 Peterborough, NH 03458

**Re: Recommended Certification as a Class I Thermal Renewable Energy Source
 Xylogen – High Mowing School
 Wilton, NH**

Dear Mr. Froling:

In response to your request on behalf of Xylogen, LLC for certification of two biomass (wood pellet or precision dry wood chips) boilers located at the High Mowing School in Wilton, NH as a Class I thermal renewable energy source, the New Hampshire Department of Environmental Services (DES) recommends that the Public Utilities Commission (PUC) grant approval to Xylogen as a Class I thermal renewable energy source eligible to generate renewable energy certificates. A summary of the facility description, DES's review of best management practices (BMP) requirements, and a recommendation for approval are presented below.

Facility Description

Facility Name: Xylogen
Location: High Mowing School in Wilton, NH
Primary Fuel: wood pellets or precision dry wood chips
Net Maximum Output: 500,000 BTU/hr per boiler

Emissions

By definition, "*Thermal biomass renewable energy technologies*", requires units rated less than 3 MMBtu/hr gross heat input to meet best management practices (BMP) as established by DES for control of particulate matter (PM) and nitrogen oxides (NOx) emissions. DES herein establishes BMP as conducting boiler tune-ups annually and conducting combustion efficiency testing initially and annually demonstrating results equal to or greater than 99%.

BMP Confirmation

Test data for carbon monoxide (CO) and carbon dioxide (CO₂) concentrations in the exhaust gas were used to determine combustion efficiency using the following equation:

$$CE(\%) = 100 \times CO_2 / (CO_2 + CO)$$

Where:

CE = combustion efficiency

CO₂ = % by volume of carbon dioxide in the flue gas, and

CO = % by volume of carbon monoxide in the flue gas.

The results of the initial tests indicate that the combustion efficiency meets the required 99%. DES anticipates that Xylogen will be able to meet ongoing BMP annually.

Conclusion and Recommendation for Approval

DES believes that Xylogen currently meets, and annually will meet, the requirements to be certified as a Class I - New Biomass thermal renewable energy source. DES recommends that the PUC certify Xylogen as a Class I thermal renewable energy source eligible to generate thermal renewable energy certificates, on the condition that Xylogen annually demonstrates that BMP continue to be met.

Please submit a copy of this letter with your completed application for renewable energy source eligibility to the PUC. If you have any questions, please contact me at joseph.fontaine@des.nh.gov or (603) 271-6794.

Sincerely



Joseph T. Fontaine
Program Manager
Air Resources Division