



November 23, 2015

Donna Jerry, Health Care Administrator
Green Mountain Care Board
89 Main Street, Third Floor, City Center
Montpelier, VT 05620

RE: Docket No. GMBC-017-15con: Certificate of Need for replacement boiler plant at Southwestern Vermont Medical Center

Dear Ms. Jerry,

Thank you for allowing us the opportunity to provide comments on the Certificate of Need (CON) application submitted by Southwestern Vermont Medical Center (SVMC).

Renewable Energy Vermont (REV) asks to be considered as an Interested Party with regards to this docket and proceedings. We feel that if REV is not at the table, the wood energy industry will not be adequately represented.

Additionally, we ask that you consider the following when making your final considerations for SVMC:

- 1) **Economic Impact of an Advanced Woodchip Heating Plant:** There would be a significant economic impact if SVMC were to consider woodchip fuel in lieu of Compressed Natural Gas (CNG). The utilization of locally grown wood as the source of fuel is economically viable for Vermont: increasing jobs in every stage of the wood energy value chain and keeping each of those jobs in state. Vermont has a vast forest full of harvestable wood, and utilizing it for heat is not only good for jobs and our economy, but good for forest management too.
- 2) **Advanced Wood Heating Supports The Local Economy:** Unlike fossil fuels, biomass is sourced from the forest resource within 50 miles of the user facility. Money spent on biomass stays in the local and regional economy, unlike natural gas use which exports Vermont dollars out of the state and regional economy.
- 3) **State Energy Goals:** The State of Vermont has very aggressive energy goals: "The CEP (Comprehensive Energy Plan) recommends that Vermont set a path to obtain 90% of our total energy from renewable sources by 2050."¹ Specifically, "meeting this goal will require us to virtually eliminate Vermont's reliance on fossil fuels". And while a switch to CNG from #6 heating oil is an improvement, it does not satisfy our state renewable energy goals. Biomass heating systems are consistent with state energy policy that seeks to move the

¹:http://publicservice.vermont.gov/sites/psd/files/Pubs_Plans_Reports/State_Plans/Comp_Energy_Plan/2011/CEP%20Overview%20Page_Final%5B1%5D.pdf

state to lower greenhouse gas emissions and decreased fossil fuel use. As long as the woodchips come from sustainable forest practices, as is the norm in Vermont, biomass systems are low carbon and add no new carbon to the atmosphere in the long term <http://www.biomasscenter.org/policy-statements/FSE-BERC-carbonpolicy.pdf>². Combustion of fossil fuels, by contrast, increases accumulation of greenhouse gases in the atmosphere and contributes to global climate change.

- 4) **Cost Effectiveness of Advanced Woodchip Heating Plant:** The price of biomass fuel has remained very stable and is very predictable. With an Advanced Woodchip Heating Plant instead of CNG, significant fuel savings would be recognized in the very first year. And though the initial capital investment might be slightly higher, it is likely to be the most cost effective option over the life of the project³. The initial capital cost and annual fuel consumption compared to CNG would yield millions in savings over the lifespan of the heating system. Cost should certainly be one of the key considerations when making this decision.
- 5) **Environmental Impact:** Natural gas available today comes largely from “fracking” – a drilling process that has very significant risks of environmental damage. By contrast, the only negative environmental effect from wood harvesting is the use of gasoline and diesel fuel by chippers and logging equipment. Like CNG, woodchips are shipped to the ultimate user by trucks fueled with diesel. Haul distances are generally less for woodchips, compared to CNG.

On page 17 is a table that shows a comparison of fuel sources over 10 dimensions. We did not have access to the appendices that purportedly support this evaluation, but we strongly disagree with the conclusions in this table. Specifically, we would like to offer alternative perspectives on the following points:

- **Advanced wood heating for institutions has low emissions.** The National Life woodchip plant in Montpelier was emissions tested for particulate emissions (PM), as part of compliance with the facility’s state air permit. In one of the test runs the PM emissions were very close to those of natural gas combustion. Goddard College had detailed emissions analysis and ambient air modelling carried out as part of its biomass conversion project. Looking at emissions across the board, the college found that the small biomass plant would have lower net emissions than the oil system it replaced. Biomass emissions control technology is available and affordable to meet any state or federal regulatory requirement.
- **Advanced wood heating is highly reliable.** In Vermont’s school and college biomass market, design engineers and facilities directors have learned that wood systems are just as reliable as oil systems. Many school business managers and school boards have concluded that, in the long term, sourcing fuels from local forest sources is going to be

² Biomass Energy Resource Center on Forest Carbon Management Policy: <http://www.biomasscenter.org/policy-statements/FSE-BERC-carbonpolicy.pdf>

³ Biomass Feasibility Study for the Southwestern Vermont Medical Center, February 5, 2009

more reliable compared to oil and natural gas from foreign sources. In addition, some large-scale CNG users in northern New England found that, in their first year of operation, CNG supplies ran low, forcing them to revert back to burning oil and eroding the promised savings.

- **Advanced wood heating in institutions does not require large site requirements for fuel.** Vermont's largest commercially sited woodchip heating plant, the National Life building in Montpelier, was able to fit its woodchip heating plant almost entirely within the basement of the building. Additional footprint area for fuel delivery and storage is less than 1,000 square feet. With the fuel delivery located immediately next to National Life's main door, no additional driveway for delivery was needed and no parking spaces were lost. The Goddard College woodchip plant, heating 23 buildings, will be housed in a 2,750 square foot building which includes both the boiler room and the fuel storage bin. Norwich University's woodchip plant was built as an addition to its central steam plant on a very space-constrained site, with modest increase in building footprint and very little new driveway, since chip delivery trucks use an existing campus roadway.
- **Advanced wood heating does not require high staffing levels for boiler operations.** Staffing for institutional woodchip hot water plants, regardless of size, is about an hour a day, based on thirty years of experience by facilities staff at public schools and colleges in Vermont. For a steam system, staffing for the woodchip system is one additional hour daily for staff who are already involved in monitoring steam boilers and steam equipment.
- **Advanced wood heating does not require high maintenance costs.** Maintenance costs for woodchip boiler systems depend entirely on the quality of the equipment selected, the service capability of the system manufacturer and the design of the overall biomass system. In most successful school woodchip systems, maintenance tasks, parts replacements and O&M costs are generally similar to those for oil boiler plants of the same size, and often less because the modern, high-efficiency oil and gas systems often require expensive, highly qualified technicians to carry out repairs. Woodchip systems, however are generally less technically complex, and are serviced by the manufacturers, generally at lower cost, often using simple components readily available from the Granger catalog.
- **Advanced wood heating is safe.** There have been no reported safety problems from the more than 50 institutional woodchip heating plants in Vermont over the last 35 years. Green woodchips will not burn outside the carefully controlled conditions of the combustion chamber itself. In enclosed storage, the green chips are almost impossible to set on fire (unlike the huge piles of uncovered woodchips that composted and smoldered when the McNeil Generating Plant was first operational in the early 1980s). Compressed natural gas is stored in trailers at 4,000 psi, posing a safety risk at the compression plant, in the trucks and at customer sites. A compressed natural gas company in Swanton, Vermont, had two leak episodes in its first year of operation, one of which led to an evacuation order by the town fire chief of nearby businesses.

Thank you for allowing us to comment. The information in this letter was provided by energy consultants and project managers – members of Renewable Energy Vermont – who have been active in biomass energy project analysis and implementation since the 1980s. We hope that you find this helpful in making your decision. Please do not hesitate to reach out to me if you have any questions or would like more information.

Regards,

A handwritten signature in black ink, appearing to read "Jeff Forward". The signature is written in a cursive style with a large, sweeping initial "J".

Jeff Forward, Chair of the Board
Renewable Energy Vermont

REV is a nonprofit, nonpartisan trade association representing nearly 300 businesses, individuals, colleges and others committed to reducing our reliance on fossil fuels and expanding the availability of renewable sources of power in Vermont.