



## Testimony Regarding S. 202:

### Vermont House Natural Resource Energy Committee

April 23, 2014

REV supports the concept of allowing our efficiency utilities the opportunity to provide cost-effective heating solutions to Vermonters through strategic electrification.

Many Vermonters and elected officials have repeatedly raised concerns regarding the cost of heating their homes and other buildings. The Thermal Efficiency Task Force, for which I sat on three subcommittees, identified multiple opportunities for assisting Vermonters in heating needs. Some of these have been picked up, and some not.

S. 202 would allow our efficiency utilities to provide Vermont homes and businesses to switch to an efficient form of heating technology that has shown significant success in other locations and also in the initial pilot round of heat pump incentives as provided through Green Mountain Power last year. The language in the bill still requires that our utilities meet cost-effectiveness criteria while monitoring the impact to demand.

Enabling our efficiency utilities to provide incentives for cost-effective heat pump technologies to customers, as long as the electricity is ultimately coming from a renewable resource, will help Vermont in reaching our Comprehensive Energy Goal of 90% renewable energy across all technologies by 2050.

An example of how important this legislative change would be is the following:

The owners of a 2000 square foot Cape with an older oil furnace (74% AFUE<sup>1</sup>) are looking at two heating upgrade options. They currently burn 700 gallons of oil per year for space heat at a cost of \$2,625 per year<sup>2</sup>.

Options:

- 1: Install new oil furnace (87% AFUE). Net savings/yr: \$392; 14.5 MMBtu, 2327 lbs. CO<sub>2</sub>
- 2: Keep old furnace & add an air source heat pump. Net savings/yr: \$946; 43.7 MMBtu; 4701 lbs. CO<sub>2</sub>

Option 2 results in more than a doubling of savings both financially and regarding carbon.

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<sup>1</sup> AFUE means Annual Fuel Utilization Efficiency. A furnace with 85% AFUE means that it is 85% efficient, with 15% of the fuel being lost and not used for heating.

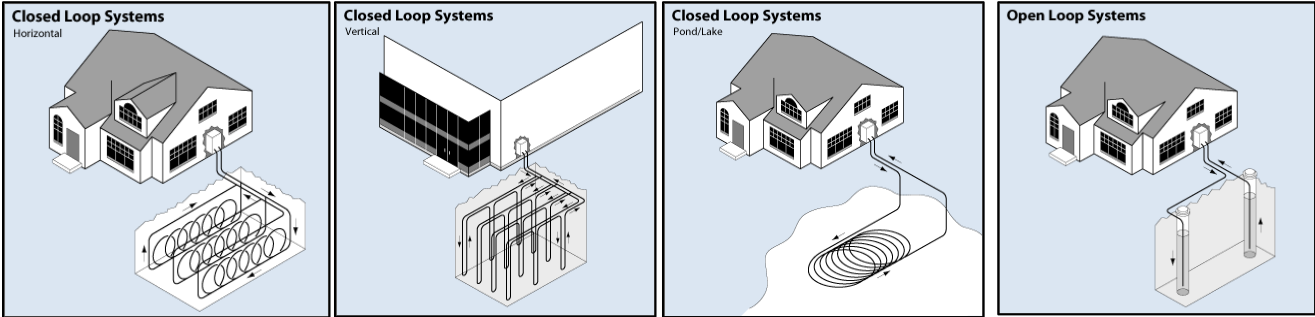
<sup>2</sup> This assumes fuel prices of: \$3.75/gal oil, \$0.15/kWh.

From a REV perspective, allowing for this type of strategic, cost-effective electrification would be aligned with the REV Board vision that we will see more of our heating and transportation needs coming from electricity rather than traditional fuels. Also, it provides an opportunity for the renewable community to work more closely with Efficiency Vermont, for example, by potentially coordinating businesses that provide heat pumps with rooftop solar installations, developing greater coordination between geothermal systems and Efficiency Vermont, etc.

The one change REV would suggest is that on page 10 (C) on the bill as passed the Senate, that in the 4<sup>th</sup> line, one could provide further clarification that this is available to both geothermal as well as air source heat pumps. I have had some REV geothermal members request that this change be made to provide greater clarification that both ground source as well as air source heat pumps are possible technologies for incentives – as long as they clear the cost-effectiveness screening criteria that is required for all incentives through the PSB regulations to our efficiency utilities.

Thank you for the opportunity to testify.

**Sample Ground Source Heat Pump:**



**Sample Air Source Heat Pump:**

