



Vermont Energy & Climate Summit
"Meeting Vermont's 2025 Energy & Climate Goals"

*****Pitch Submission Form*****

Let your ideas be heard!

*This is your chance to get your energy or climate pitch
in front of 200 of Vermont's energy leaders and the Governor's Climate Action Commission*

Vermont has a bold goal: to meet 90% of our energy needs through increased efficiency and renewables by 2050. We have also joined leading states across the country in a bi-partisan commitment to adhere to the Paris Climate Accord goals. Where are we now on achieving those goals and what can we do to bend the curve toward 2025 milestones along that path?

- **Energy:** The first milestone of Vermont's Comprehensive Energy Plan is to meet 25% of Vermont's total energy needs from renewable sources by 2025. The most recent status estimates put us at around 16% across heat, electricity and transportation (2016).
- **Climate:** The Paris Accord goal seeks a reduction in greenhouse gas (GHG) emissions of 26-28% from 2005 levels by 2025. Vermont's own statutes are even more ambitious: 50% reduction from 1990 levels by 2028. As of 2013, Vermont's GHG emissions decreased 11% from 2005 levels and actually *increased* 4% from 1990 levels.

Pitch Invitation

We have a lot of work to do over the next 8-10 years. That is why we want to ***hear your pitch*** for promising opportunities to help Vermont meet its 2025 goals. What will help bend the curve?

Selected proposals will be invited to present at the Vermont Energy and Climate Summit co-hosted by [Energy Action Network](#) (EAN) and the [VT Climate Pledge Coalition](#) (VCPC) on November 8th at Champlain College in Burlington. Please submit your pitch by using the form below and emailing completed proposals to jduval@eanvt.org by **Friday October 20th**.

(NOTE: Regardless of whether you are invited to present on Nov.8th -- notification will come by Wed. Oct. 25 -- *all submitted and complete proposals will be included in a full compilation to be submitted to the Governor's Climate Action Commission and the Vermont Legislature.*)

Vermont Energy & Climate Summit **Pitch Submission Form**

Guiding Criteria: EAN's mission is to end Vermont's reliance on fossil fuels *and* to create efficient, clean, affordable, and secure electric, heating, and transportation systems for the 21st Century. The VT Climate Pledge Coalition is seeking pledges to reduce GHG reductions that will help Vermont meet Paris climate commitments. Together, we support the criteria outlined in Gov. Scott's Executive Order creating the **Vermont Climate Action Commission**, specifically that solutions must:

- Spur economic activity, inspire and grow Vermont businesses, and put Vermonters on a path to affordability;
- Engage all Vermonters, so no individual or group of Vermonters is unduly burdened; and
- Collectively provide solutions for all Vermonters to reduce their carbon impact and save money.

With these goals and criteria in mind, please answer the questions below. Questions 8-12 can be answered individually or in one comprehensive narrative. (Total pitch submission **no more than 3 pages**).

1. **Pitch Submitted By (Your Name or Organization):** Anne Watson
2. **Contact Email Address:** anneofvermont@gmail.com
3. **Contact Phone Number:** 802-595-1734
4. **Pitch Title:** (one line) Create Energy Efficiency Utilities for Heating and Transportation
5. **Pitch Summary:** (one paragraph)

Just like Efficiency Vermont helps Vermonters reduce their electricity consumption, parallel organizations (or an expansion of Efficiency Vermont's mission), could do functionally the same thing for both the heating and transportation sectors. I know such a utility has been discussed in the past for heating oil and liquified petroleum, and that would be a good starting place, but the same sort of structure could be applied to fossil-fuel based transportation as well. These utilities could offer incentives, education, and services just like Efficiency Vermont does, but for these other sectors. There is no one-size-fits-all solution for heating nor transportation, but it needs to be someone's job to work on reducing the demand and helping people switch to renewables. A fee could be added to everyone's heating oil and propane bills, gasoline or diesel costs, that could go towards funding the utility and helping the most vulnerable in our community with weatherization, bus passes, electric vehicle incentives, etc.

6. **What energy sector(s) does this Pitch apply to? (Check all that apply):**
 - Energy Efficiency <-Yes

- Electricity
- Transportation <-Yes
- Thermal Heating &/or Cooling <-Yes
- All (Total Energy)
- None: Non-energy related carbon reduction proposal

7. Which criteria category(ies) does it address? (Check all that apply):

- Economic Activity <-yes
- Affordability <-yes
- Vulnerable Vermonters <-yes
- Other

8. Scale of impact on Vermont's energy and climate goals: If this proposal came to fruition, how might it move the needle in helping to meet Vermont's energy and climate goals by 2025 and/or 2050? Please outline assumptions and, if available, provide calculations.

Heating Oil Utility

[60% of Vermonters heat with heating oil or LP gases](#). There are about 330,000 homes in Vermont, so almost 200,000 homes heat with oil. The average Vermont home requires about 90 MMBTU/year. So that's about 18,000,000 MMBTU/year of diesel or LP heating for Vermont homes. Assuming all of that is the #2 Fuel Oil, the cheaper of the two to make it a conservative estimate, that's about 130 million gallons of heating oil per year used in Vermont homes. At [\\$2.3/a gallon](#) for fuel oil, that means that Vermont is spending at least \$300 million dollars on heating oil and LP per year.

Based on [Efficiency Vermont's 2015 Report](#) (page 72), their natural gas regulation department costs about \$5 million/year, so the equivalent department dedicated to oil would require a 1.7% fee per gallon of heating oil. One might argue that because more Vermonters use oil, the cost per year of such a department would go up, it could also be argued that many of the same programs available to natural gas-burning homeowners would be applicable for fuel oil. So there may be some efficiencies with the department as it already exists. So I'm leaving the assumption that the department would cost about \$5 million/year.

The same report showed that Efficiency Vermont was able to reduce the natural gas demand by 47,000 MMBTU. If 12% of Vermont's heating comes from natural gas, and Efficiency Vermont's efforts in heating oil were proportionally successful, that would save 235,000 MMBTU, or roughly 1.7 million gallons of diesel. That's the equivalent of \$4 million saved annually by Vermonters.

Unlike a natural gas utility, a heating oil utility would have lots of opportunities to help homeowners or businesses transition heating source to renewable sources. As furnaces need to be replaced, there could be incentives to switch to pellet technology, heat pumps, etc. LIHEAP offers money for low-income Vermonters to purchase a new heating system, but it doesn't

necessarily incentivize replacing old furnaces with renewable energy heating systems or electrified heating systems.

Assuming that heating oil furnaces or kerosene heaters must be replaced every 12 years, if each of these was replaced with a renewable source, 60% of Vermont's thermal load would be converted to renewable energy or reduced through efficiencies by 2030. That represents almost 20% of Vermont's total energy load. Even if such a program were only 50% successful, that would still be 10% of Vermont's goal.

A heating oil and LP gases utility would be the responsible agent for that sector of the state's climate and energy goals. Right now there is no one who's directly responsible for this.

Transportation Utility

According to [the Burlington Free Press](#), Vermonters drove 7.2 billion miles in 2015. Assuming [the average gas mileage is 25 mpg](#), that's 288 million gallons of gasoline. At [\\$2.35/gallon](#), that's \$677 million dollars worth of gasoline. This represents nearly one third of Vermont's total energy load. If a gasoline utility existed as an extension of Efficiency Vermont, and was comparable to the natural gas department, running an operation budget of \$5 million, that would require a 0.74% fee on the price of gasoline, or 1.7 cents per gallon. With better figures, it would probably be less than that, because, that just assumes that only Vermonters are paying for this utility.

The types of programs this department would offer, would likely be very different from the electricity or heating programs, but it could look like incentivizing bus passes through employers, increasing electric vehicle charging stations, or increasing biodiesel production and consumption. Again, assuming that it's as modestly (and proportionately) successful as the natural gas side of Efficiency Vermont, that would produce a reduction of 3.8 million gallons used per year, or savings of \$8.8 million dollars annually. This is a very conservative estimate, though, because, again, it does not include the revenue from out-of-state drivers.

9. Benefits/costs of this proposal for Vermont and Vermonters: Including, where possible, economic, financial, social, and environmental.

The same costs and benefits of such utilities are already born out by Efficiency Vermont. Politically speaking, it's easier to defend than a tax, because it's just an expansion of something that already exists and has a proven, successful track record.

Of course the downside is the question of how it will impact low-income Vermonters, but one could point at programs that Efficiency Vermont runs specifically for low-income Vermonters. Or you could make exceptions for those Vermonters who receive LIHEAP funds.

As shown above, my back of the envelope calculations suggest that Vermonters could save \$4 million/year or more with a heating oil and LP gas utility.

As for a transportation efficiency utility, all the same arguments apply, with the exception that you have the added benefit of capturing out-of-state funds to contribute towards the work. As stated above, this program has the potential to save Vermonters almost 9 million dollars annually.

10. Decision-makers necessary for this proposal to be adopted or move forward (e.g.,
Legislature, Governor, a regulatory agency, a business, organization, media outlet, or financing institution, etc.)

This would probably take an act of the legislature, approval of the Governor, and Efficiency Vermont and Burlington Electric Department would obviously need to be involved.

Commented [1]: why would they need to be involved?

11. Strategy and key considerations: Outline the overall strategy, including gaps, barriers and opportunities for moving this proposal forward.

This change may not be as big a lift as a carbon tax, because it's an efficiency fee, not a tax. But it could be a nice compliment to a carbon tax, growing Vermonters' capacity to reduce the amount of carbon tax they would need to pay. Even if a carbon tax does not happen, this proposal would still be worthwhile to help save carbon and consumer dollars.

I would have someone with better qualifications do a more proper study of the economics of it. Then I would get Efficiency Vermont and Burlington Electric Department on board and have them help pitch it to the Governor.

12. Timeline: To meet our 2025 goals, we need some proposals that can be implemented in the next couple of years as well as some "game changers" that will bend the curve even further out. What timeline do you foresee for your proposal to be developed and implemented?

These two efficiency utilities could be approved over the next legislative session, by May of 2018. It could be put out for an RFP in the summer of 2018, awarded in the fall, and then implemented beginning July 2019. We might begin to see the first results by July of 2020.

Suggested Reference Documents:

[Vermont's Comprehensive Energy Plan, 2016](#)

[Vermont's Total Energy Study, 2014](#)

[Vermont Agency of Natural Resources Climate Dashboard](#)

[EAN Annual Report, 2016](#)

[90% Renewable by 2050: Exploring Vermont's Efficiency & Renewable Energy Pathways, 2013](#)