

EAN 2020 Pitch Submission Form : The Vermont Clean Heat Standard

1. Pitch Submitted By [Name(s) and Organization(s)]:

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(and a group of willing prospects to be named later)

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4. Pitch Title: **Creating the Vermont Clean Heat Standard**

5. Pitch Summary:

Heat from fossil-fueled sources (“fossil heat”) accounts for 28% of Vermont’s total GHG emissions and those emissions must be reduced by at least 40% by 2030 and 80% by 2050 (compared to 1990) to meet our carbon reduction goals. The power sector, and to a lesser degree, the pipeline gas sector, have been paying for and delivering the overwhelming majority of the GHG reductions we have seen in Vermont to date, while the fossil fuel sector has delivered only a small share of the total savings we need to lower customer bills and carbon pollution in coming years. Our electric and gas companies have been required by regulators and by legislation to deliver renewable energy and energy savings on a firm schedule. These gains did not happen on their own – they resulted from government policies that required improved performance across energy businesses, ramping up over time.

Renewable portfolio standards (RPSs) have worked well to transform the electricity sector. It’s time to do for heating what we have done for electricity and natural gas – to serve Vermonters better by reducing carbon pollution and fossil energy bills. This has not happened, and won’t happen, just through wishful thinking or the actions of a few well-meaning early adopters – *it requires a clean heat performance standard, applied on a competitively neutral basis to all major suppliers of heating fuels in Vermont.*

We aim to create such a standard and create the conditions for its adoption.

6. How would you describe the status of this pitch:

A combination of level 1 and level 2. The idea is well-enough understood among energy professionals, but detailed options needed by decision-makers remain to be developed.

7. What Energy Sector(s) Does this Pitch Apply to? (Check all that apply):

X-Energy Efficiency

X-Electricity

Transportation

X-Thermal Heating and/or Cooling

None

8. Which Criteria Category(ies) Does It Address? (Check all that apply):

- X-Promoting energy equity
- X-Significant reductions in fossil fuel use and GHG pollution from energy
- X-A stronger and more just Vermont economy
- X-Clean energy jobs
- X-Energy security and resilience
- X-Sustainable energy landscape
- Committed leadership from multiple network members (likely but we have not yet asked)

9. Which Leverage Areas Would It Attempt to Shift? (Check all that apply):

- X-Policy & Regulatory Reform (the main focus)
- Public Engagement
- X-Workforce Development/Workforce Transition (a direct outcome)
- Technology Innovation
- X- Capital Mobilization (CHS will create a market “pull” for clean energy investments)

10. Scale of Impact on Vermont’s Energy and Emissions Goals: If this proposal came to fruition, how would it help meet Vermont’s energy and emissions goals by 2025 and/or 2050? Please outline assumptions and, if available, provide calculations-- especially for emissions reduction estimates.

As noted above, the thermal sector will need to reduce emissions by 80% to 90% by 2050, and a Clean Heat Standard can be designed to do that ($85\% \times 28\% =$ roughly one-third of Vermont’s total GHG emissions). Of course, a weaker standard can be designed too, but it’s essential to begin the process, as we have done with efficiency and renewable electricity, in order to create the platform for future improvements.

For terrific data underlying this idea, see independent analysis by Leigh Seddon. I do not attempt to restate his analysis here, but note that he and others (and EAN) have developed a deep reservoir of information to provide a foundation for any work we do on the CHS in the future.

11. Benefits and costs of this proposal for Vermont and Vermonters: Including, where possible, economic (local economic development and jobs), financial (consumer savings), social, public health, and environmental. Who will be better off? Who will *not* be able to benefit?

Many analyses have documented the benefits of thermal modernization (from better heating appliances, hot water heaters; from building weatherization; and from beneficial fuel-switching) in Vermont. A Clean Heat Standard applied to all major heating fuel suppliers would be among the “big ticket” reforms needed to transform this sector. One advantage of a Clean Heat Standard is that it can be designed to prioritize LMI customers, Vermont-based fuel supplies (e.g. advanced wood heat, distributed solar), and fuel-switches that are done in concert with efficiency upgrades. Because the costs of compliance with a Clean Heat Standard are spread widely and because the program inherently benefits cleaner fuels that are available to everyone, benefits can be broadly distributed among consumers who choose to make a switch or enroll in an efficiency program.

The CHS should be designed to cover residential, commercial, and public end uses, which will mostly be heat for buildings and hot water. Whether the CHS will apply to industrial and other process heat applications is a question for program design, but this extension is not essential to make progress on the large majority of customer sites and end uses.

12. Collaboration and Commitment: What partners/organizations are already working together and/or committed to work together on this issue?

RAP and VGS are working on this issue, recognizing it as an important parallel path to their initiative on the future business and regulatory models for VGS. Energy Futures Group has expressed interest, and Efficiency Vermont can provide technical support and demonstration evidence (but not direct advocacy). Other EAN members are likely to be interested, but have not yet been polled.

13. Key stakeholders and decision-makers: Who else needs to be involved to move this proposal forward? (e.g., Legislature, Governor, a regulatory agency, a business, organization, media outlet, or financing institution, people with lived experience, etc.)

- Support and leadership from elected officials and state energy agencies (PSD and PUC) will ultimately be needed to enact a Clean Heat Standard.
- Outreach to the fossil fuel industry will be required, and even if most fuel dealers remain opposed, some may join in program design discussions, if only to ensure that the design works better from their point of view.
- Electric utilities could provide a powerful set of voices on the importance of levelling the field for clean energy obligations across different energy suppliers.

14. If selected, EAN staff will support you in pulling together and facilitating a dedicated Action Team to work on this pitch over the next year, and possibly beyond. Describe what success would look like for this idea a year from now.

A cross-interest working group will have developed a realistic Clean Heat Standard proposal for the Vermont legislature to consider. It will contain at least two options: a well-to-burner tip carbon intensity standard, and a standard that measures success according to simpler metrics like the number of households converted to a low-emission primary heat source, or the number of households likely to reduce emissions by X% due to efficiency and fuel-switching changes.

It will also contain supports for existing fuel suppliers either to (a) move into new business lines in clean energy and efficiency, or (b) to sell their business to an entity that will meet the standard.

15. Is there anything else you would like us to know about this pitch?

It is important to view a Clean Heat Standard as a key driver of change, not alone, but in concert with other elements that ideally would work together to reduce emissions and deliver economic, jobs, and health benefits to Vermonters. The other elements are (a) continued support for end use efficiency and renewable electricity; (b) creating a large pool of funds to help building owners to invest in thermal upgrades; and (c) reforms in regulation and business models for VGS and other fuel suppliers. The availability of funding is crucial, but by itself does not drive change in the buildings sector; the inertia and barriers to change are just too high. A regulatory driver is needed in the fuels sector, as it has been needed in the power and transportation sectors, to reduce emissions and deliver clean energy benefits to Vermonters.

A short description of the essential elements of a Clean Heat Standard is attached.

Clean Heat Standard – Essential Elements

- **Target.** A statewide target for gradually lowering carbon emissions caused by heating and cooling buildings, providing hot water, and related domestic uses. This reductions pathway should be set to align with the state’s established climate goals.
- **Annual or multi-year compliance periods.** Based on that pathway, a formula would allocate the needed reductions each year proportionally across a wide set of fossil fuel energy providers, requiring each provider to deliver its fair share of carbon reductions. As with other energy obligations, multi-year compliance periods could be used.
- **Allocating responsibility.** The CHS should apply to the large majority of thermal fossil fuel sales in Vermont, including pipeline gas, oil, propane, and kerosene. The allocation could be keyed to the carbon content of each provider’s sales over a defined period, or to the dollar value of their sales, the size of their customer base, or a mixture of factors. Specific adjustments could be made for very small providers, or for providers with a very high fraction of low-income customers. Residential and commercial heat should be covered; whether industrial heat should be covered is an open question.
- **Creditable actions.** Emission reductions could come from a range of actions, including: reducing the carbon content of the provider’s heating fuels; improving customers’ heating systems, or switching them to a lower-emitting technology; or delivering improvements in the thermal efficiency of customers’ buildings. Extra credits could be given to services delivered to LMI households.
- **Pooled action agency.** Responsible fuel suppliers can deliver emission reductions on their own, or through third parties. To encourage efficiency in service delivery, the program could create, and fuel providers could enroll in, an organized Clean Heat delivery pool, similar to the pools Vermont has created to deliver power from small power producers and to deliver efficiency services on behalf of obligated electric utilities.
- **Transferable credits.** Fuel providers that do not participate in the pool and do not deliver their fair share of Clean Heat savings would have the option to purchase credits from other fuel providers who have delivered above their required savings, or from qualified third parties who have themselves delivered creditable savings.
- **Non-compliance payments.** As a final option, fuel providers that do not wish to deliver low-carbon heat options could be allowed to make alternative compliance payments to an established financial pool, which could then be used to deliver advanced renewable heating systems and energy efficiency services to high-priority customers (e.g., in low-income housing, rural communities, or in fuel-poor households).
- **Quality control, monitoring and verification.** The clean energy transition must work smoothly and fairly for end-use customers. Vermont has experience with these goals for distributed energy and energy efficiency, using independent reviews, regulatory oversight, pre-qualified contractors, and a commitment to public program reviews. Measures like these will be required to make the Clean Heat Standard a long-term success.

