

Sierra Club Testimony on the Clean Heat Standard  
House Energy and Technology Committee  
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Thank you for the opportunity to share our views on the Clean Heat Standard.

I want to start by expressing appreciation for all your work in the last session on the Global Warming Solutions Act. That was a lift of historic proportions, but to no one's surprise, it was just a beginning.

The first things to say about this Clean Heat Standard are that it is ambitious and innovative. With the scale of the climate challenge and its social dimension, those are qualities much in demand. That said, here are a few of the benefits and a few concerns we want to call to attention.

Benefits:

1. It establishes a system of reporting and accountability for this sector, which includes previously unregulated fuels.
2. There is language calling for life cycle accounting of thermal energy sources.
3. Establishes a third party, independent thermal energy efficiency utility (the default provider), to facilitate clean heat measures.

Concerns:

1. Equity. It may take us all a while to absorb the lessons learned by the Climate Council about equity and engagement. Where is the prior engagement now? Where is it called for in the subsequent work of the PUC?
2. Equity. With the increasing requirement for clean heat credits, and a decreasing total output of greenhouse gas, there will be costs for the obligated parties. These costs will get passed along to consumers. Where are the controls, where is the management of these costs? How will low or moderate income individuals, who already carry a substantial energy burden, be protected from these costs? What about the businesses, industries, and government, whose fuel prices will be increasing?
3. Equity. There is a requirement that 30% of clean heat investments be directed toward low and moderate income households. We recommend increasing the

upper income limit, with a declining level of support (an income spectrum), and also increasing the percent of investment from 30% to 60%. It could make sense to target communities that have a higher energy burden.

4. **Biogenic Energy Sources.** “Energy from Life” should not be considered a universally good thing. It always involves trade-offs, which increase with scale. When one household heats with wood, it’s one thing, when everyone in the neighborhood does, it can be an air pollution problem. The scale issue pertains also to energy crops grown for biodiesel or ethanol, it’s true for using anaerobic digesters to process manure into methane. Massive use of woody biomass brings massive forest clearing. Increased use of those energy crops starts to take land away from food crops, and food away from people; it also often means intensive use of water resources, fertilizers, and pesticides. Natural gas from agricultural operations requires large scale, which means concentrating very large numbers of animals, with significant impacts on waterways, air pollution, and nearby human communities. If we employ any of these, we must do so with great caution.
5. **Local Impacts of Source Projects.** Some RNG or biofuel sources have significant local impacts, such as toxic rivers, air pollution, or habitat loss. Some create true hardship and health problems in local communities. Projects from which VT imports these fuels must have a sufficiently low impact on people and the natural community that we could see them being acceptable in our own backyard. Otherwise, we are simply off-shoring our footprint, not reducing it.
6. **Availability.** Some of the alternative fuels are expected to have limited availability. Renewable Natural Gas, for example, is expected to meet only 5% of the nation’s NG demand. Some biofuels will demand room to grow. How will this play out against the need for food crops versus energy crops? How will a demand for wood-based fuels meet our Vermont values for natural forests, or the high value of mature forest in sequestering and storing carbon?
7. **Life Cycle Analysis.** Estimating greenhouse gas emissions from the life cycle of biofuels or renewable natural gas is very slippery, but it is a crucial aspect of getting this right. What is the degree of oversight, what are the guiding parameters, for LCA? Will this assessment, and the sources of these fuels, operate with the kind of transparency that provides confidence? Will it be clear that fuel sources and processes from which we get these fuels represent additionality, that is a new decarbonized supply chain, or just a repurposing of an old one, that makes no difference in our planet's carbon balance? Will there be real time measurement that would spot leakage from upstream facilities?

8. Life Cycle Analysis. It is critical that LCA avoids bias in the shifting of emissions from one sector to another... a thumb on the scale. With fuels derived in association with agricultural activities, there is a real danger of assigning climate benefits to the product fuels rather than to reductions in the agricultural sector where they should be. This is especially problematic when the activities are taking place in jurisdictions that do not yet regulate agricultural emission reduction. Ensuring that “system boundaries” are not set in ways that bias assessment. Source projects must be evaluated on a case by case basis.
9. Life Cycle Analysis. LCA should be applied to all fuels in the CHS context should line up with the LCA being developed under the Vermont Climate Council.
10. Technical Advisory Group (TAG). The Clean Heat Standard as proposed relies heavily on a Technical Advisory group to advise the PUC, specifically in the area of clean heat measures, and in the area of life cycle analysis for energy sources. We are encouraged by the example we already have, with the TAG that reviews compliance and implementation of Tier 3 of the Renewable Energy Standard. (RES). This group has done a commendable job of reviewing the complex and technically demanding world of heat pumps, and other Tier 3 elements. We make recommendations here:
  - a. Better balance than listed in the current draft of the CHS bill. Add voices that are not tied to the regulated parties. Make sure the regulated parties are in the room, but they should not be voting members. In the room but not at the table.
  - b. Use the positive experience from Tier 3. Analysis from these two efforts should line up well; there shouldn't be one set of results under the CHS, and another under Tier 3. In fact, Tier 3 projects in the thermal sector are going to help fulfill CHS requirements.
  - c. Part of the job of the TAG will include looking at the benefits in using electricity as a source of energy. That makes it important to be getting the right numbers for electricity, and applying the best Life Cycle Analysis. VT statute already calls for electricity assessment to include emissions in Vermont, and emissions outside of Vermont that are caused by energy use in state. This is the standard that should be employed in determining effectiveness of a clean energy project that shifts from fossil fuel to electricity.
11. Parity among players. It is hard to see how this will play out as new companies seek to join the list of importers, when they have zero history to draw down from. Or if an existing obligated party loses customers, what happens to their credit

requirement? What about VGS, which currently takes a fee from its users to fund its efficiency operations. Will they continue to get that funding, and use that to generate credits, while all other obligated parties must make other arrangements to fund their requirements? What happens to credits generated by investments from Efficiency Vermont and other mandated efficiency fee programs?

12. The importance of parallel programs. The CHS may be a strong and useful framework, but it won't work if there is a lot of reliance on this program and its clean heat credits. The costs passed along to residential and commercial users would be too great. Other programs, especially those funded by the general fund, federal spending, or revolving loans, should be counted on for the great majority of implementation. Weatherization, building codes, enforcement, Net Zero by 2030. It will remain critical to build and fund these programs. As they remain strong, they will hold down potentially regressive costs associated with the credit structure.
13. Outside the CHS. Our current assessment of electric sector greenhouse gas emissions is deeply flawed. It does serve a legitimate purpose of reporting to a global scale system of overall assessment. But it fails at the state level to provide a valid analysis of what greenhouse gas impacts we are responsible for and what we can do to improve that. There is work being done within the Climate Council structure that begins to address this. But until we do get this accounting right, and to make the clean energy investments to clean up that sector, things like installing heat pumps and shifting to electric vehicles are not going to have the impact we hope for.
14. Outside the CHS. One concern about a shift to biofuels or to Renewable Natural Gas is that these may appear to give life to a fuel source that simply needs to phase out, even if that is a matter of a few decades. Our state and communities on their own will still need to enact other measures to ensure the transition moves constantly in the right direction. We recommend two measures.
  - a. Limit or eliminate further expansion of major fossil fuel infrastructure.
  - b. Enable communities all over Vermont to adopt measures, through ordinance or charter change, that limit the use of fossil fuel in new construction or substantial renovation.