

Clean Heat Standard Equity Advisory Group  
 Tuesday, September 3, 12:30-3:00 PM ET  
 Agenda

Meeting Link: <https://cbi-org.zoom.us/j/87383177532>

Participant Agenda

12:30	<b>Welcome &amp; Review of agenda</b> <ul style="list-style-type: none"> <li>● Initiate recording</li> </ul>	Mia
12:35	<b>Review and approval of 7/23/24 and 8/06/24 meeting minutes</b>	Mia
12:40	<b>Updates from TAG liaison</b>	Emily/Matt
12:45	<b>Updates from the PUC</b>	Dominic
12:50	<b>Guest Speaker - Environmental Justice:</b> Claire McIlvennie, Data and Equity Policy Manager, VT Public Service Department (Capture comments and questions of EAG after presentation)	Catherine
1:20	<b>Public Comment</b>	Catherine
1:30	<b>Continued EAG Conversation: Moderate Income</b>	Mia
2:00	<b>Public Comment</b>	Catherine
2:10	<b>Bringing the Report Together</b> <ul style="list-style-type: none"> <li>● Each section owner rewrite their section as if it were to be submitted to the PUC next week.</li> <li>● Find volunteers for gaps</li> </ul>	Mia
2:20	<b>Credit Issues Subgroup Update</b> <ul style="list-style-type: none"> <li>● VOTE: Decision on Discuss DDA memo</li> <li>● VOTE: Decision on Opening LMI credits to NGOs</li> </ul>	Ben/Mia
2:45	<b>Public Engagement Subgroup Update</b>	Catherine
2:55	<b>Next Steps</b>	Catherine
3:00	<b>Close</b>	Mia

August 20, 2024

Ms. Holly Anderson, Clerk  
Vermont Public Utility Commission  
112 State Street  
Post Office Drawer 20  
Montpelier, Vermont 05620-2701

Re: 23-2220-RULE, Proceeding to Design the Potential Clean Heat Standard, EAG  
Memo on LMI Credit Characterization

Dear Clerk Anderson,

The Equity Advisory Group (EAG) for the Clean Heat Standard (CHS) submits the following memo on the topic of defining Low-and Moderate Income CHS credits to convey benefits to institutions serving low and moderate income (LMI) households. While Public Utility Commission Staff did not formally request comments on this topic, the EAG wishes to provide feedback on the matter to consider as the Commission continues its rulemaking.

Background:

Act 18 of 2023 requires that “Of their annual requirement, each obligated party shall retire at least 16 percent from customers with low income and an additional 16 percent from customers with low or moderate income. For each of these groups, at least one-half of these credits shall be from installed clean heat measures that require capital investments in homes, have measure lives of 10 years or more, and are estimated by the Technical Advisory Group to lower annual energy bills.”

However, there are many households that do not purchase their own fuel but nevertheless could ultimately feel the impacts of higher fuel costs expected under the Clean Heat Standard. One primary example of this is shelters for individuals or families experiencing homelessness. There are also institutions that directly serve but do not house low-income households, such as community food shelves.

These institutions provide essential services to low- and moderate-income households, but, in the interpretation of the EAG, would not be eligible for generating LMI-specific CHS credits under the current language of Act 18. This would require these organizations to shoulder the financial burdens from expected fuel cost increases under the CHS, reducing their ability to provide services, without a clear pathway to receive

additional benefits beyond what any business could potentially expect to experience from the transfer of their credits to obligated entities under the CHS.

Recommendation:

The EAG feels that in order to enhance social equity under the CHS, the definition of low and moderate CHS credits should be expanded to allow credits derived from the types of organizations described above. However, this category must also be tailored narrowly. Allowing too wide a definition of an LMI-serving institution could ultimately divert resources from benefiting LMI households.

The EAG proposes the following components of a definition of these eligible institutions:

*LMI credits may be derived from:*

- a) Measures installed in, or delivered to, property owned by a nonprofit organization*
- b) The organization's primary purpose must be to provide essential services to low- or moderate-income individuals or households.*
- c) The organization currently receives state and federal funding to provide services to low and moderate-income individuals or households.*

The EAG acknowledges that part b) of the above framework may be difficult to define or verify. Part c) allows for confirmation that the entity is legitimately offering services and is not merely self-proclaimed to serve LMI households. However, removing part b) could conceivably expand the definition of LMI-serving institutions to include schools and hospitals. While those institutions do often receive targeted funds to provide services to low- and moderate-income individuals, this is not the primary purpose for these institutions, and expanding the definition to such a large extent would likely dilute the intended benefits to low and moderate-income households.

The Public Utility Commission, or the Legislature, as appropriate, should review this language and adjust as necessary to preserve the intent. The Legislature may choose to provide a list of acceptable state or federal funding sources to help narrow down a list of appropriate services.

Although adding a new facet of the CHS framework has the potential to increase complexity of the program overall, this is a voluntary pathway for obligated parties to obtain LMI credits and should not increase their compliance burden under the CHS.

# Clean Heat Standard demographic impacts

## – Renters

### Overview

In Vermont about 27% (approximately 72,636) of households are renters.<sup>1</sup> A significant majority of these households, 77.4%, rely on fossil fuels for heating.<sup>2</sup> Vermont renters tend to be disproportionately lower income, with 51% of them (approximately 36,711 households) earning at or below 60% of the Area Median Income (AMI), and 80% earning below 120% of AMI.<sup>3</sup>

Approximately 14,670 renter households, or 18% of all renters, live in multifamily subsidized affordable housing ([citation needed](#)).<sup>4</sup> While these households benefit from cost protections due to housing funding restrictions that cap housing and utility expenses, many still face significant financial burdens. Some receive assistance through the Low-Income Home Energy Assistance Program (LIHEAP)<sup>5</sup>, though the benefit is often modest due to their relatively lower energy costs.

Despite rent stabilization protections, the development of affordable housing faces increasing challenges due to rising costs. Building all-electric, high-performance units in line with Efficiency Vermont's High-Performance track is estimated to cost over \$62,000 more per multifamily unit compared to the Residential Building Energy Code standards ([citation needed for cost estimate](#)).<sup>6,7</sup> However, developers receive only up to \$3,700 per unit from Efficiency Vermont to cover these additional costs, leading to a gap of over \$1 million in upfront costs for an average affordable housing project ([citation needed for cost estimates](#)).<sup>8</sup> This financial strain limits the resources available for constructing new

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<sup>1</sup> U.S. Census Bureau: American Community Survey 5-year estimates, 2018-2022 (Table B25032) [housingdata.org](https://www.housingdata.org)

<sup>2</sup> U.S. Census Bureau: American Community Survey 5-year estimates, 2018-2022 (Table B25040) [housingdata.org](https://www.housingdata.org)

<sup>3</sup> U.S. Census Bureau: American Community Survey 5-year estimates, 2018-2022 (Table B25118, B25119) [housingdata.org](https://www.housingdata.org)

<sup>4</sup> [Low Income Home Energy Assistance Program \(LIHEAP\)](#) – Federal program intended to assist low-income households with paying for home energy needs.

<sup>6</sup> [Residential Building Energy Standards \(RBES\)](#) – Vermont building standards that are applied to all new homes, additions, alterations, and renovations to residential buildings that are three stories or higher.

<sup>7</sup>

<sup>8</sup>

affordable homes and necessitates a reevaluation of approaches to building electrification and reducing tenant energy burdens.

Renters in market-rate housing face additional challenges due to the issue of a "split incentive", where tenants are responsible for paying utility bills, providing little motivation for landlords to invest in energy efficiency improvements that would lower energy costs.<sup>9</sup> Data on what Vermont renters pay for utilities is limited, but Census data indicates that only about 23% of renters (16,447 households) have all utilities included in their rent (citation needed).<sup>10</sup> It is likely that a significant portion of these households reside in subsidized housing, particularly senior housing. For the remaining 77% of renters, the available data does not clarify which utilities, if any, are included in their rent, complicating efforts to measure and address energy burdens for this group. According to the Department of Energy's Low-Income Energy Affordability Data (LEAD) tool, Vermont renters at 30% or below the AMI face an energy cost burden of up to 15%. For those earning between 30% and 60% of AMI, the energy burden can reach up to 7%. An energy burden of 6% or above is considered high.<sup>11</sup>

## Existing challenges / gaps in existing programs

### *Technical Challenges*

Implementing clean heating systems in rental housing is challenging due to the diversity and complexity of the housing stock. Larger multifamily buildings are especially challenging to use heat pumps for hot water. These systems are more complex and require more costs due to skilled maintenance needs (MW). Some apartment layouts are not conducive to mini-splits (rationale/citation needed?). Additionally, a substantial amount of existing housing stock is old which presents conversion challenges - 33.4% of rental housing in Vermont was built in 1939 or earlier.<sup>12</sup> Different housing types will require different programs and approaches to implementing clean heat technology.

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<sup>9</sup> Split incentive - When the benefits of energy efficiency upgrades such as reduced utility costs and lower carbon emissions are enjoyed by tenants, while the costs of making these upgrades are covered by landlords. This misalignment of financial incentives often discourages landlords from investing in energy system improvements, as they do not directly benefit from the savings, leading to challenges in reducing overall carbon emissions and utility costs in rental properties.

<sup>10</sup>

<sup>11</sup> U.S. Department of Energy, [Low-income Energy Affordability \(LEAD\) tool](#), 2024

<sup>12</sup> U.S. Census Bureau: American Community Survey 5-year estimates, 2018-2022 (Table B25036) [housingdata.org](#)

Even in cases where heating system upgrades are feasible and funding is available, there are other barriers to consider. In some cases, the electric service would not be adequate for the increased electrical load required for electrified heating and cooling. In older buildings, there are likely upgrades needed to the wiring and hazardous materials would require remediation such as vermiculite (asbestos) insulation (GW). These additional upgrades increase the landlord's cost of the project, further reducing the incentive to decarbonize the heating system. Due to limited availability of contractors and workforce limitations, wait times for weatherization projects can be long depending on the housing type or location. Projects can be further delayed by additional improvements that are required.

### *Financial Challenges*

Rental property owners and tenants face similar challenges to homeowners when it comes to adopting clean heat measures, such as upfront costs, complexity of retrofitting, and the need for specialized systems. However, additional impediments arise due the split financial incentives between property owners and tenants. For example, while a renter may meet income eligibility requirements for CHS programs aimed at lowering greenhouse gas emissions (GHGs), the property owner might not. Unless crafted correctly, low- and moderate-income renters may not realize any benefits of the CHS, though they may still be burdened with higher fuel costs.

The split incentive is going to be major challenge this program runs into. There are currently weatherization programs for landlords such as the Weatherization Assistance Program (WAP).<sup>13</sup> Buildings with low-income tenants are eligible for WAP to cover cost-effective weatherization once required upgrades and repairs are complete (GW). In 2023, the estimated average energy savings for households that utilized WAP was 30%. It is estimated that 30% to 40% of homes weatherized each year are renter occupied.<sup>14</sup> Conventional wisdom is that the entire weatherization project must be subsidized to convince more private landlords to convert the heating systems. Existing weatherization programs are inadequate to cover the costs of additional upgrades to buildings that would allow weatherization and electrification projects to be implemented. If a private landlord incurs costs that are not covered by existing funding programs, it is likely that those additional costs will be passed onto tenants through increased rents. It is important for rent stabilization measures to be implemented in tandem with new programs for clean

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<sup>13</sup> [Weatherization Assistance Program \(WAP\)](#) – Program that provides funding for home energy efficiency upgrades to low-income households, helping to reduce energy costs, improve comfort, and lower carbon emissions.

<sup>14</sup> [2024 Report on Performance Indicators for the Vermont Weatherization Assistance Program](#)

heat measures. In non-profit/affordable housing units keeping rent low is the priority, but this becomes challenging when project design in new construction includes high performance electrified heating systems. A study estimated \$35k in costs per unit in multifamily housing to go from min RBES standard to high performance standard (citation needed).<sup>15</sup> Current incentives are much lower at about \$3,700 per unit in affordable housing (citation needed).<sup>16</sup> There are long term benefits to highly efficient building, but is not estimated to cover the whole cost, which is borne by public funding intended for building affordable housing (MW). Housing funders are now estimating this at over \$60,000 per unit to do higher development costs (citation needed).<sup>17</sup>

### *Policy and Funding Program Gaps*

Though there are existing weatherization programs that are targeted at rental properties, there are eligibility complexities and funding shortfalls. In some cases, tenants are not income eligible for existing programs. For a property to qualify for certain programs or grants, landlords must restrict tenancy to income eligible renters. The programs or grants wouldn't cover full expenses associated with additional building upgrades required for electrification, so raising rent would be likely, therefore creating issues for low-income tenants.

Vermont Housing Finance Agency (VHFA)<sup>18</sup> offers a pilot on-bill financing program called the Weatherization Repayment Assistance Program (WRAP), which landlords can participate in with renter consent. This program is targeted at landlords beyond the low-income range. The renter pays the program charge on the utility bill until they move, at which time the next tenant takes over the charges on the utility bills. There has been a slow uptake overall, especially among renters. It is difficult to encourage middle income landlords to implement weatherization projects due to cost constraints, although WRAP reduces/eliminates upfront costs and can be paid back over time. (MW)

**Commented [CS1]:** Lead paint remediation = landlord - funding from HUD, vermiculite/asbestos may be covered by some programs. Code - health and safety issues need to be updated if discovered.

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<sup>18</sup> [Vermont Housing Finance Agency \(VHFA\)](#) – Non-profit organization that provides financing, grants, and support to promote affordable homeownership and rental housing opportunities for low- and moderate-income residents in Vermont.

Vermont Housing and Conservation Board (VHCB)<sup>19</sup> offers a program to address split incentive which also has renters pay towards weatherization projects. (GW) This program is funded through funds designated to build new housing. Weatherization in affordable housing needs a separate bucket of funding. Who is accountable for weatherization statewide? (CT)

In Burlington, the Minimum Housing Code Weatherization Ordinance “is designed to ensure that rental properties are also properly weatherized to keep tenants warm in the winter, cool in summer, and reduce costs, while helping the city achieve its net zero energy goals.”<sup>20</sup> This municipal ordinance applies to high energy use rental buildings and is enforced by the Department of Permitting & Inspections (DPI) to ensure compliance. Currently, no statewide ordinance or enforcement mechanism exists to ensure adequate weatherization in rental properties. Though Burlington has a strong policy and enforcement process in place, project implementation has proved difficult due to workforce constraints.

## Potential benefits of CHS for renters

In order to comply with Vermont’s Global Warming Solutions Act of 2020, greenhouse gas emissions must be lowered to 80% below 1990 levels by 2050.<sup>21</sup> In the Vermont Climate Action Plan, a primary pathway to these reductions is through decarbonization of the thermal sector.<sup>22</sup> The Clean Heat Standard will help the state to reach these emissions reductions goals and work to mitigate the impacts of climate change – benefiting all Vermonters. If implemented with equity and affordability in mind, the CHS could lower costs to heat and cool homes in the long run, particularly when switching from sources such as oil and propane. According the US Department of Energy, paired with weatherization upgrades homes that switch from propane to an electric heat pump can generate up to \$2,811 annually in savings, or up to \$2,822 when switching from fuel oil.<sup>23</sup> In cases where buildings are weatherized and mini-splits are installed, residents will enjoy less drafts in the winter and the comfortability of air conditioning in the hotter months.

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<sup>19</sup> [Vermont Housing and Conservation Board \(VHCB\)](#) – State agency that provides funding and support to protect natural resources and develop affordable housing, balancing community development with land conservation in Vermont.

<sup>20</sup> [Burlington Minimum Housing Code Weatherization Ordinance](#)

<sup>21</sup> Vermont Global Warming Solutions Act of 2020.

<sup>22</sup> Initial Vermont Climate Action Plan December 2021.

<sup>23</sup> U.S. Department of Energy, [For Most Americans, A Heat Pump Can Lower Bills Right Now](#)



## Potential harms of CHS for renters

The implementation of the CHS could create financial burden that is shifted onto tenants because of the increased costs associated with CHS compliance. These increased costs could result from landlords recouping investments in property upgrades, increased electricity costs, or the increase in heating costs compared to natural gas per BTU.

While some programs, such as the WAP and Vermont's Housing Improvement Program (VHIP)<sup>24</sup>, already include rent stabilization provisions, there is a need for more comprehensive protections to ensure that CHS implementation does not disproportionately impact low-income tenants. If private landlords utilize incentives to improve their properties, there may be temptation to displace low-income tenants in favor of higher-income tenants that can pay higher rents. (MW)

Due to the size and complexity of some multi-family housing, heat pumps may not be as effective as the system it replaces, causing cold spots in the building such as in the basement which could lead to frozen pipes in the winter. The need for unanticipated maintenance could also impose further costs on landlords, who might again pass these expenses on to tenants.

## Recommendations

### *Engaging and Incentivizing Landlords/ Financing Solutions for non-profit housing*

One of the primary challenges in implementing CHS in rental properties is ensuring landlord participation and engagement, particularly private for-profit landlords. A possible solution would be to create a **centralized call center or clearinghouse** where renters can reach out to engage their landlords in the program. Additionally, the development of a targeted information campaign would be useful. (Jen M) This would facilitate communication and help bring more landlords into the fold.

It is also important to engage non-profit, institutional landlords in discussions around program development, as they often have a mission to maintain affordable housing (PP). For non-profit landlords who own multifamily properties, capital improvements are heavily reliant on grants, and any increase in operating costs often gets passed on to tenants who cannot afford it. Therefore, the state should provide grants for these landlords to cover the costs of converting to clean heat systems. (CT)

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<sup>24</sup> Vermont Housing Improvement Program (VHIP) – State program offering grants for repairs needed to bring vacant rental units up to code, add new units, or create accessory dwelling units to increase availability of fair market housing in Vermont. <https://accd.vermont.gov/vhip/vhip-2021-2024WAP>

Beyond grants, overcoming the upfront costs of extensive building upgrades will require additional financing options such as further incentives and financial support for home repairs, code upgrades, and electric service upgrades. This could include **companion legislation** to ensure that only landlords who demonstrate financial need—such as those with low-income tenants—receive assistance. It could also require that landlords provide proof that they could not otherwise self-fund the required upgrades (BB). While landlords should be financially responsible for home repairs, such as removing vermiculite or upgrading wiring, **low-interest loans** could be offered to ease the financial burden, especially when low-income residents are involved (GW). Once these required upgrades are complete, existing programs such as WAP and VHIP can provide weatherization funding for eligible properties.

#### *Addressing Regulatory Barriers*

Enforcing building codes is crucial to ensuring energy efficiency and safety in rental properties. While local initiatives, such as Burlington's weatherization ordinance, demonstrate potential, they face workforce challenges and cannot meet all needs on their own. To address these gaps, the state should advocate for standardized rental building codes and their enforcement, which would establish the necessary infrastructure to enhance the quality of rental properties and support decarbonization efforts (MW). These upgraded building codes should require energy efficient heating systems in existing buildings and clean heating systems in new buildings. In tandem, there should be financial incentives for builders to comply with these new building codes.

#### *Systematic Infrastructure Upgrades*

Develop a state system to perform a needs assessment (CT) in order assess weatherization opportunities in rental properties (SS). For all population segments, state should focus on replacement costs to turn over HVAC systems. Identify existing programs that are going into homes already where HVAC systems could be flagged as high priority (BB). Use state generated needs assessment to create an inventory of HVAC systems and have capital on hand to target conversion opportunities with a strategic replacement schedule (SS). A quality system for upgrades that includes enforcement could create the infrastructure for higher quality rentals with safety and emissions reductions in mind.

#### *Provide different approaches for different housing types*

Due to the complexity of the rental housing stock, different solutions need to be implemented for a variety of situations. Different financing options will need to be made available for non-profit housing organizations than for private for-profit landlords. Affordable housing units are protected by rent stabilization requirements, however there will be gaps in funding to implement the most efficient clean heat options. For private landlords are more likely to pass costs of upgrades onto tenants, so financing options will require rent stabilization measures. Older housing will require more robust funding options for weatherization.

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## Resources:

- [DOE energy burden data](#)
  - [CHS data workbook](#)
  - *MW – can share info on VHFA produced resources*
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## Notes

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## Parking lot

GW - happy to help, HUD lists that are auto-qualified

Hydronic heating systems hard to replace

Electric resistance coil heating systems are cheap to install and maintain but expensive to run.

CT - fluctuating fuel costs will be issue no matter if CHS is implemented. HPs do lower costs and variability in home heating, how do we find money to get there

Renters have no say in type of heating system

Tenants crank heat and leave windows open when heat is included in rent

Adoption of programs to help landlords and tenants move away from fossil fuels

- BB - landlords with hydronic heating systems have some options for decarb. There seems there would be an incentive to rent to LI tenets so that the property gets WAP upgrades.

Some programs may not be available for rental properties such as:

<https://www.encyvermont.com/rebates/list/heat-pump-water-heaters#:~:text=Income%2Deligible,%20Vermonters%20can%20get,to%20help%20offset%20the%20cost.>

WAP will become more desirable for these credit avenues

PP - CHCs shouldn't be distributed until LMI credits are fulfilled. Changes in building codes would be helpful.

The Default Delivery Agent (DDA) will be an important resource for serving many of the populations that are expected to be disproportionately impacted by increased costs related to the Clean Heat Standard. The EAG encourages the Commission to ask that proposals for the DDA include a description of the entity's experience with, and plan for serving, the following groups:

- Renters
- Low-income households
- Moderate-income households
  - Does the organization plan to offer financing or connect households to financing opportunities to encourage increased installation of clean heat measures?
- Manufactured homes
- Households living in older homes
  - Does the organization have experience working with contractors on installed measures?
  - Does the organization have a plan for serving homes in need of significant repair, and connecting those households with available resources supporting enabling upgrades?
- Households with Limited English Proficiency (LEP)
  - Does the organization have a Language Access Plan (LAP) or other plan to provide translated materials and/or translated materials to serve individuals with LEP?
  - Does the organization have experience in community outreach, particularly among First Generation or immigrant communities?

Since the Commission is permitted under Act 18 to select more than one DDA, it may be possible that the DDAs will be sector-specific and not all applicants would have a plan to serve all these demographic groups. However, in this case, the Commission should carefully review applicants to ensure that the selected DDAs jointly have the capacity and experience to serve all the impacted populations described above.

To support these groups and an equitable implementation of the CHS overall, EAG encourages the Commission to require that DDA(s) have a DEI Plan or equivalent organizational framework. Such a plan should include clearly defined goals and actions that increase diversity, equity, and inclusion in all areas of the organization and its work.

Finally, although Act 18 requires that the DDA offer statewide services, the Commission should review applicants to ensure that the entity has sufficient experience and capacity to effectively serve the entire state of Vermont, including rural areas that have historically experienced underinvestment.