

Clean Heat Standard Equity Advisory Group  
Tuesday, November 19, 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 10/29/2024 and 11/12/24 meeting minutes</b>	Mia
12:40	<b>Updates from TAG liaisons</b>	Emily / Matt
12:45	<b>Updates from the PUC</b>	Dominic
12:50	<b>Review Report Responsibilities Sheet</b>	Ashira
1:10	<b>Review and Approve Memos to PUC Section</b> (with pause for public comment)	Ashira
1:50	<b>Review and Approve Remaining Sections</b>	Ashira
	<b>Working Groups</b> (if time allows)	Ashira
2:55	<b>Next Steps</b>	Ashira
3:00	<b>Close</b>	Mia

## Report Section Responsibilities

<b>Report Section</b>	<b>Initial Drafter</b>	<b>Due date for first reviewer</b>	<b>First Reviewer</b>	<b>Review due date</b>
<b>Executive summary</b>	Mia	11/26	Group vote	12/10
<b>Limitations of CHS Framework</b> Required vs Cost Framework	Mia	11/6	Matt	11/11
<b>Benefits, Costs, and Recommendations</b> Review all of the demographics pieces and pull out the common overarching benefits, harms, and recommendations.	Ben	11/15	Matt	11/18
<b>Equity Rubric</b> Write up of the equity rubric with framing	Pike	11/14	Srini	11/18
<b>EAG's Memos to the PUC</b> Summary of what the EAG told the PUC to do, memos - link to each, draft rule	Ben	11/6	Pike	11/11
<b>Public Engagement Process</b> Review of the public engagement process and its limitations Summary - people want to see us cut emissions but are worried about costs Public forum Summary of Public Comments from the EAG meetings — go through the minutes (must be prepared to watch recording of public rule meeting on 30th) WAP agencies session	Emily	11/6	Geoff	11/11
<b>What is being asked of us?</b> Clean up the Act 18 summary done by intern and add framing	Matt	11/12	Mia	11/15
<b>Finalize Renters</b>	Pike	11/6	Emily	11/11

<b>Finalize Manufactured Homes</b>	Chris	11/6	Geoff	11/11
<b>Finalize Households of Color</b>	Mia	11/6	Emily	11/11
<b>Finalize Moderate Income</b>	Emily	11/6	John	11/11
<b>Non-Household Impacts</b> Framing language - we spent a lot of our time on households, but there is also... Finalize "non-household" impacts - businesses and obligated parties, schools and municipalities	Srini	11/6	Matt	11/12
<b>Implementation Recommendations</b> Take notes during the 10/29 meeting and write up section	Ben	11/15	Emily	11/18
<b>Households not readily available to access CHS</b>	Ben	11/6	Chris	11/11
<b>Low-income households</b>	Geoff	11/6	Ben	11/13

# CHS EAG Final Report Outline

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#### Tasks (from Act 18)

- Assessing whether customers are equitably served by clean heat measures and how to increase equity;
- Providing feedback to the Commission on the impact of the Clean Heat Standard on the experience of Vermonters with low income and moderate income
- Providing recommendations to ensure that renters and residents of manufactured homes have equitable access to clean heat measures.
- Identifying actions needed to provide customers with low income and moderate income with better service and to mitigate the fuel price impacts calculated in section 8128 of this title;
- Recommending any additional programs, incentives, or funding needed to support customers with low income and moderate income and organizations that provide social services to Vermonters in affording heating fuel and other heating expenses

# Introduction

## Executive Summary

## Legislative Directive

- What Act 18 includes
- Other requests from PUC

## Design process

### Equity Framework

- Guiding principles
- Rubric

## Public Engagement Process

### Overview

#### *Statutory requirement of public engagement*

Section 6(c) of Act 18 requires “Before commencing rulemaking, the Commission shall use the forms of public engagement described in this subsection to inform the design and implementation of the Clean Heat Standard. Any failure by the Commission to meet the specific procedural requirements of this section shall not affect the validity of the Commission’s actions.

(1) The Commission shall allow any person to register at any time in the Commission’s online case management system, ePUC, as a participant in the Clean Heat Standard proceeding. All members of the Equity Advisory Group shall be made automatic participants to that proceeding. All registered participants in the proceeding, including all members of the Equity Advisory Group, shall receive all notices of public meetings and all notices of opportunities to comment in that proceeding.

(2) The Commission shall hold at least six public hearings or workshops that shall be recorded and publicly posted on the Commission’s website or on ePUC. These meetings shall be open to everyone, including all stakeholders, No. 18 Page 37 of 41 2023 VT LEG #370924 v.1 members of the public, and all other potentially affected parties, with translation services available to those attending.

(3) The Commission also shall provide at least three opportunities for the submission of written comments. Any person may submit written comments to the Commission” (P. 36).

Act 18 also necessitates the hiring of a public engagement consultant in Section 6 (b), where public engagement “...shall be conducted by the facilitator for the purposes of:

(1) supporting the Commission in assessing whether customers will be equitably served by clean heat measures and how to increase equity in the delivery of clean heat measures;

(2) identifying actions needed to provide customers withof low low income and moderate income with better service and to mitigate the fuel price impacts calculated in 30 V.S.A. § 8128;

(3) recommending any additional programs, incentives, or funding needed to support customers with low income and moderate income and organizations that provide social services to Vermonters in affording heating fuel and other heating expenses; and

(4) providing information to the Commission on the challenges renters face in equitably accessing clean heat measures and recommendations to ensure that renters have equitable access to clean heat measures” (P. 35).

Additionally, the statute describes the process for widespread public notice of work and meetings in section 6(d), “...The Commission shall use funding appropriated in this act on advertising the public meetings in order to provide notice to a wide variety of segments of the public. All advertisements of public meetings shall include a notice of language assistance services. The Commission shall arrange for language assistance to be provided to members of the public as requested using the services of professional language services companies” (P. 37).

### *Procedural context of Commission-led public engagement work*

On September 8, 2023, the PUC released a Request for Proposals for a public engagement facilitator in the case 23-2220-RULE where the Commission described the work of the public engagement facilitator as, “The primary responsibility of the public engagement facilitator will be to design and conduct public engagement related to the recently enacted Clean Heat Standard legislation, bringing expertise in equity, justice, and inclusion to this process. The Commission and the facilitator will incorporate the Guiding Principles for a Just Transition into the public engagement process” (P. 3). On November 20, 2023, The Commission released an Order announcing that the Vermont Public Utility Commission launched a website to boost accessibility of clean heat proceedings. On March 22, 2024 the Commission released an Notification of Information from the public engagement consultant about the first three public engagement meetings under Act 18. The hired public engagement consultant is from Vermont Partnership for Fairness & Diversity. The three virtual gatherings were scheduled for April 17, 2024, May 7, 2024, and June 6, 2024. The Commission, in its work with the public engagement facilitator, developed a Clean Heat Standard overview document to make Act 18 more accessible to the public. On October 1, 2024 the Commission released an Order Issuing Draft Rule and Setting Deadline for Comment, and a

Notice of 10/7/24 Workshop and 10/30/24 Public Hearing via videoconference. As statutorily required, the public had over 30 days of notice to respond to the draft rule.

## Public engagement subgroup of the EAG

In May of 2024, the Clean Heat Standard Equity Advisory Group determined that a subgroup should be formed to share with the Commission EAG member's best practices on public engagement. The subgroup first met on May 6, 2024, and continued to meet three more times until July 2024. Subgroup members consisted of Emily Roscoe from Efficiency Vermont, Jen Myers from Champlain Valley Office of Economic Opportunity, John Mandeville from Central Vermont Council on Aging, and Geoff Wilcox from the Department of Children and Families' Office of Economic Opportunity. The group produced a memo that was for PUC and EAG awareness, where the group shared member organization experiences and best practices in public engagement. The group also drafted potential questions for the Commission to ask the public in public outreach and engagement. This list was brought to the full EAG and further worked on there.

## Clean Heat Standard public comment

### *EAG public comment*

The Clean Heat Standard EAG and the TAG hold public comment during their meetings. During EAG meetings, public comment has been provided on the following topics: a request for added opportunity for public comment, concerns around the inclusion of biomass in the Clean Heat Standard, the price impact of the Clean Heat Standard and how it interacts with the LIHEAP and existing programs, market disruption potential related to frontloading LMI credits and the specific concerns about constraints related to serving LMI populations, support for the Clean Heat Standard, and using existing programs like EEU's as a model for effective energy conservation.

### *Facilitated PUC public engagement meetings*

In the public meetings held by the Commission and facilitated by public engagement contractor at Vermont Partnership for Fairness and Diversity held on April 17, 2024, May 7, 2024, and June 6, 2024 had comments on the topics of; {can someone who attended these meetings add what the main discussion topics were? I am finding it difficult to find the transcripts of these online}.

### *October 30, 2024 Public Hearing*

The Commission held a Public Hearing Oct 30, 2024 on the general topic of the Clean Heat Standard and the draft rule that was released on October 1, 2024. There was a large attendance in comparison to the previous public meetings hosted by the Commission and the public engagement facilitator. According to the transcript<sup>1</sup>, the meeting had 34 speakers from the public, with over 80 attendees. Some key themes

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<sup>1</sup>Public hearing transcript

[https://urldefense.com/v3/\\_http://epuc.vermont.gov/?q=downloadfile\\*738816\\*190907\\_;Ly8!!KKiTGA!jHA8meadPzTGYb-6MT-3TJmvdTQeztYw-1L05oIw5syIOOfDONotC9noQbnY6JKJXFalq2tESFH06VdKNw\\$](https://urldefense.com/v3/_http://epuc.vermont.gov/?q=downloadfile*738816*190907_;Ly8!!KKiTGA!jHA8meadPzTGYb-6MT-3TJmvdTQeztYw-1L05oIw5syIOOfDONotC9noQbnY6JKJXFalq2tESFH06VdKNw$)

identified from public participation include, but are not limited to; concerns around the inclusion of biofuel and biomass as clean heat measures due to health and environmental impacts, concerns and questions around funding this program, the need for more public engagement, concerns around what this program will cost Vermonters, support for a focus on weatherization and electrification measures, concerns around assumptions in CI scoring as it relates to biogenic emissions or land use changes, questions around the Commission's process for assessing the harmful consequences of the program, acknowledgment of workforce constraints in many of the sectors involved in the Clean Heat Standard, weighing of a Clean Heat Standard verse an alternative tax or fee, concerns around Vermonters being left behind in the Clean Heat Standard, not being able to afford heat, or unable to install or receive a clean heat measure due to various reasons.

#### *Filed public comment via ePUC*

Another method for the public to participate in the Clean Heat Standard proceeding, is through filing comments via ePUC on any topic at any time. There has been extensive public comment provided with the main themes being similar to those shared in the October 30, 2024 public hearing listed above.

*This summary does not capture the entirety of the public's comments and participation but highlights some of the key points that the group has heard.*

## Recommendations

The Clean Heat Standard Equity Advisory Group supports the Commission's efforts on public engagement in this process, with the limited time and resources available during the duration of this regulatory process. As mentioned above, the EAG subgroup on public engagement wrote a memo on best practices related to public engagement. Some of those best practices are described below for potential future Clean Heat Standard public engagement work, on the topics of community engagement sites and accessibility.

Community engagement sites that have worked best for member organizations of the subgroup are places where people will not need to take additional time out of their day to attend. The group also noted the importance of in person engagement. Some of the locations of public engagement mentioned include locations of aging communities (i.e. senior centers, meal sites for Meals on Wheels), food banks, community centers, libraries, and manufactured home sites. These locations are already places people go to, which can minimize the resources that many need to use to access these public engagement events.

The group discussed the importance of affinity spaces, and how they can help ensure safety and accessibility to varying groups of people and communities in Vermont. In these affinity spaces, we discussed leveraging and empowering existing community leaders to share information. Other recommendations related to accessibility in public engagement include focus groups and listening sessions. The group discussed interpretation of the Clean Heat Standard. This discussion included the

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best practice of taking steps back to ensure widespread public understanding of clean heat measures, such as heat pumps, and having skilled interpreters not only in language of the Clean Heat Standard, but in technical jargon. The group agreed that translation of materials to a third grade reading level is standard practice in equitable translation. CVOEO noted that they have proficient interpreters.

The EAG acknowledges that there are public engagement recommendations spread throughout this report, which highlights the importance of public engagement in working with the various demographics described in this report.

## **Summary of the Equity Advisory Group's Memos to the Public Utility Commission**

### **Memo on Credit Ownership 4/17/24**

**The EAG wrote and filed a memo to the Commission on April 17, 2024 on the topic of credit ownership.** In the memo, the EAG emphasized the importance of creating a straightforward, transparent, and equitable credit transfer process within the Clean Heat Standard (CHS). The EAG agrees with the PUC staff's recommendation that end-use customers should receive all clean heat credits for installed measures. However, the EAG urged clarification of the term "customer-s" to delineate who qualifies, particularly in complex ownership situations like financing arrangements and landlord-tenant dynamics. The EAG is concerned that customers may not have adequate knowledge of their credits' value to negotiate effectively with installers, highlighting a potential power imbalance between individual customers or small businesses and larger obligated parties. To enhance customer empowerment, the EAG proposed that the Commission require comprehensive disclosures from installers and deliverers, including estimated greenhouse gas reductions, the number of credits generated, approximate monetary value, energy cost savings, and any relevant health disclosures. Generally, the Commission should prioritize making as much data available as possible to assist customers in negotiations.

For delivered measures, the EAG advocated similar information disclosures and insists that at a minimum, important details about the CHS, alternative technologies, financial assistance options, greenhouse gas reductions, the number of credits, their potential value, and related health disclosures should be shared. The EAG views credit ownership as a crucial aspect of the Clean Heat Standard, carrying significant implications for equity and affordability.

### **Credit ownership Follow-up memo 5/17/24**

**On May follow up memo** on the topic of credit ownership. he EAG cautions against alternative systems where credit ownership could reside with entities providing

financing or rebates, fearing this would diminish equity and complicate ownership determinations, especially when multiple parties are involved in funding a single project. The EAG group suggests that any transfer of credit ownership should hinge on clear contract negotiations, and supported by comprehensive information to guide property owners' decision-making.

### **WAP Credit Ownership Addendum to 5/17/24 memo**

While a majority of EAG members favored keeping initial credit ownership with property owners, including in cases where the installed CHS measures were funded and installed by programs providing 100% of incentive costs such as those delivered through the Vermont Home Weatherization Assistance Program (WAP). Three members of the EAG disagreed with this ownership structure and submitted a dissenting opinion memo.

The dissenting memo recommends that programs that provide 100% of incentive costs (such as WAP) retain initial CHS credit ownership for CHS credits generated from WAP investments. The three members who signed this memo; Benjamin Bolaski, Geoff Wilcox and Chris Trombly representing VT Department of Public Service, State of Vermont Office of Economic Opportunity, and Vermont State Housing Authority respectively, noted in their dissenting memo that this ownership structure would minimize administrative burden and mesh well with existing policies. Administrative burden is currently a challenge for existing low income weatherization programs, and therefore, any additional requirements for these programs will create a barrier to completing incremental projects as efficiently as possible. They also noted that this credit ownership structure would be a source of new revenue to programs providing 100% incentive costs and more equitably serve Vermonters as a result of expanded services reaching a greater number of program participants annually.

The Commission ultimately agreed with this recommendation in the Draft Rule, stating that in pre-approved programs where projects are implemented at no cost to participants, the credit is initially owned by the organization paying for the project.

### **Memo on LMI Credit Frontloading 8/9/24**

On August 9, 2024, the Equity Advisory Group (EAG) submitted a memo regarding frontloading the credit requirements for Low-and Moderate Income (LMI) households during the initial years of CHS implementation. Act 18 states that the Commission should attempt to front-load credit obligations for LMI households to the extent reasonably possible.

The August 9, 2024 memo emphasizes frontloading obligated party credit requirements for Low-and Moderate Income (LMI) households, and the need for prioritizing LMI households, who experience the highest energy burdens in Vermont, in light of potential future heating fuel cost increases tied to CHS compliance by obligated parties.

However, the memo also acknowledges potential challenges to frontloading LMI requirements. Challenges identified include limited workforce capacity for contractors installing Clean Heat Measures and higher anticipated cost to acquire LMI credits. The EAG notes that these factors could make obligated party compliance more challenging and inadvertently raise heating costs for consumers.

The Commission's July 10, 2024, memorandum re: "Staff Straw Proposals on Credit Fulfillment Plans and Criteria, Non-Compliance and waiver process", asserted the creation of five separate CHS credit categories that a DDA could deliver on behalf of an obligated party. The EAG supports the Staff proposal of having five unique credit categories, as it would allow LMI credit market activity to be more closely tracked to help inform any future increase or decrease in obligated party LMI requirements.

To inform decisions about frontloading, the EAG highlights the necessity for further understanding of current levels of LMI market activity and costs associated with LMI credits versus market-rate credits. Based on existing data, the EAG found insufficient grounds to assert that frontloading LMI targets is "reasonably possible." However, it encouraged ongoing evaluation and suggested that any increase in obligations should be modest at first, allowing for adjustments without destabilizing the market.

The memo recommends revisiting the topic of frontloading during the second triennial Default Delivery Agent (DDA) budget and planning process but urges the Commission to consider moderate increases if emerging data shows feasibility.

### **Memo on DDA RFP Recommendations 9/6/24**

The EAG submitted recommendations regarding the Default Delivery Agent (DDA) for Vermont's Clean Heat Standard. The EAG emphasizes the DDA's role in supporting populations disproportionately affected by rising clean heat costs, such as renters, low- and moderate-income households, and those living in older homes. The memo encourages the Commission to assess applicants based on their experience addressing diverse needs, including financing plans for clean heat measures and outreach to limited English proficiency communities. Additionally, the EAG recommends that the Commission require DDA applicants to have a Diversity, Equity, and Inclusion (DEI) Plan for their organization to promote equitable service delivery, and to have a plan and capacity to effectively deliver measures statewide, especially in historically underserved rural areas of Vermont, ensuring comprehensive support for all impacted populations.

### **Memo on LMI Credit Characterization 9/17/24**

The EAG proposes expanding the definition of low- and moderate-income (LMI) credits to convey benefits to institutions serving LMI households. Current legislation requires that credits be derived from measures benefiting LMI households; however, many

essential service organizations, such as shelters and food shelves, are excluded. This exclusion places financial burdens on these institutions without providing relief from a potential increase in fuel costs. To enhance social equity under the CHS, the EAG recommends that the requirement of low and moderate CHS credits be expanded to allow for credits derived from organizations serving LMI individuals. However, to be eligible under the proposed expanded definition, the EAG recommends that the category must also be tailored narrowly to avoid the dilution of direct benefits to LMI Vermonters. To be eligible for the proposed expanded definition, the EAG suggests that organizations have the following parameters:

- a) Measures are installed in or delivered to a property owned or rented by a nonprofit organization.
- b) The property must be used to deliver essential services to low- or moderate-income individuals or households.
- c) The organization has a primary purpose to serve low- or moderate-income households or individuals and currently receives state or federal funding to provide services to low or moderate-income individuals or households.

The EAG notes that although adding a new definition to the facet of the CHS framework has the potential to increase complexity of the program overall, this would be another voluntary pathway for obligated parties to obtain LMI credits and **does not increase** their compliance burden under the CHS.

The Commission did not include a pathway for LMI credits to be conveyed to LMI-serving institutions in the Draft Rule.

### **EAG Comments on Draft CHS Rule 10/30/24**

EAG comments on the Clean Heat Standard draft rule addresses several topics. The EAG emphasizes the necessity for the Commission to adhere to its statutory obligations, as outlined in 30 V.S.A. § 8127 (h), regarding the assessment of potential harms and consequences tied to clean heat measures. The EAG notes that it is essential that the final CHS Rule incorporates a structured process for evaluating harmful consequences, implementing standards to mitigate them, and ensuring that any clean heat measures resulting in detrimental impacts do not qualify for clean heat credits.

The EAG notes that the current definition of LMI installed measures risks excluding newer technologies, such as portable heat pump units. Specifically, a portable heat pump cost and shorter expected life span could lead to difficulties in classifying them as LMI installed measures under the current definition. Thus, reevaluating the definition of LMI installed measures is crucial to promote equitable access to clean heat technologies for rentals, manufactured homes, and households with specific electrical or

layout challenges. The EAG also notes that if these portable technologies are sanctioned as eligible measures, the ownership of credits and related financial benefits should be allowed to be allocated to renters rather than property owners.

The EAG recommends aligning CHS rules with pre-existing Weatherization Assistance Program (WAP) policy by adopting a 25% threshold for income attestation/verification within multifamily dwellings, which would alleviate administrative burdens for Obligated Parties and help minimize the impacts of the split-incentive problem faced by low- and moderate-income renters. The draft CHS rule suggests income attestation is needed from every participating household to determine measure group. This could result in convoluted administrative demands if income verification is already being verified by existing programs such as the WAP. The EAG questions the necessity of duplicating income verification through additional income attestations, advocating instead for leveraging existing verification processes to reduce administrative burdens and mesh well with existing policy. In closing, the EAG also advocates for better coordination between the Commission, the Department , the Department of Children and Families, the Office of Economic Opportunity, and other relevant state agencies to create a process to streamline income verification.for streamlining verification of income for credits.

## Impacts

- **Potential benefits of CHS**
  - Addressing existing challenges/gaps in existing programs
- **Costs**
  - Existing challenges
  - Role of credit costs
  - Increased fuel costs
    - Comment on unknown factors
- **Households/homes that are not readily able to access clean heat measures**
  - Existing challenges/gaps in programs - **Ben Bolaski**
  - Potential benefits of CHS
  - Potential harms of CHS
  - Recommendations

- Suggestions to assist households with homes that need updates (electrical panels, etc) to access CHS measures
  - How will enabling upgrades be viewed as part of CHS measures?

## Vermonters of Color, Indigenous Vermonters, and New Americans

### Overview

Vermonters of Color, Indigenous Vermonters, and Vermont's New American, immigrant and first-generation population is an amorphous collection of Vermonters who come from many different backgrounds, language groups, and socioeconomic circumstances. It is also a comparatively small, although growing, group of Vermont residents. Non-white Vermonters account for 9% of the state's population, and foreign-born residents make up 3% of the population<sup>2</sup>.

It is essential that discussions on the topic of climate change consider these communities. Extensive national research demonstrates that communities and individuals of color face increased health risks related to environmental hazards such as air and water pollution.<sup>3</sup> These communities are vulnerable to climate-related impacts due to historic disinvestment in minority neighborhoods. Americans of Color have also faced decades of racist policies including lending discrimination, which have led to a significant racial wealth gap<sup>4</sup>. A lack of generational household wealth may add financial challenges and barriers for Vermonters of Color to invest in home projects that reduce greenhouse gasses.

### Challenges

The impacts of the Clean Heat Standard on Vermonters of Color require the understanding of other current challenges of this demographic.

#### *Income barriers*

Vermonters of Color are more likely to have lower incomes than white Vermonters. The median household income for white Vermont households is \$74,499, compared to \$52,736 for Black

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<sup>2</sup> [Vermont Housing Finance Agency](#), *2025 Vermont Housing Needs Assessment*. Prepared for the Vermont Department of Housing and Community Development, June 2024. The percentages of non-white and foreign-born Vermonters include overlapping groups.

<sup>3</sup> [Berberian, Gonzalez, and Cushing](#), "Racial Disparities in Climate Change-Related Health Effects in the United States". *Curr Environ Health Rep*. September 2022.

<sup>4</sup> [The Center for American Progress](#), *Systematic Inequality: How America's Structural Racism Helped Create the Black-White Wealth Gap*. February 21, 2018.

households and \$48,725<sup>5</sup>. 22% of Black and 21% of American Indian and Alaska Native Vermonters also experience poverty, twice the state's average rate<sup>6</sup>. Any issues that impact low-income and moderate-income Vermont households under the Clean Heat Standard, as discussed in the lower and moderate income sections of this report, will be disproportionately felt by households of color.

### *Housing*

Vermonters of Color are also more likely to rent than own their home. 72% of Black Vermont households rent their homes, compared to just 26% of white households<sup>7</sup>. Vermont's American Indian and Alaska Native, Asian, multiracial, and Hispanic populations also have lower rates of homeownership compared to white households. Any issues that impact renters, which is discussed in the Renters section of the report, will also disproportionately impact Vermont's non-white households.

Black, Hispanic, and Native American Vermont households face higher housing insecurity, demonstrated by a higher incidence of homelessness among these groups. Black Vermonters comprised nearly 8% of the people experiencing homelessness in Vermont in 2023, despite representing 1.2% of the state population<sup>8</sup>. If costs related to housing rise significantly under the Clean Heat Standard, many members of these groups may face increased challenges to remain housed.

### *Language barriers and cultural exclusion*

New Americans include recent arrivals to Vermont from other countries, as well as their children and family members. New Americans come from a variety of countries and regions, but slightly over half of Vermont's foreign-born population is non-white<sup>9</sup>. Overall, 45% of Vermont's Black population and 65% of Vermont's Asian population is foreign-born.

New Americans may face additional challenges under the Clean Heat Standard due to barriers of language or cultural exclusion. Cultural exclusion can limit opportunities to share experiences, ask questions, and access needed services. Residents without legal citizenship may be ineligible for or reluctant to engage with programs that offer clean heat services, but will still experience any fuel cost increases under the CHS. Vermonters with Limited English Proficiency (LEP) may not be able to receive information or education about the Clean Heat Standard if information or education is not presented in a language that is accessible to them. It may also be particularly difficult for LEP Vermonters to work with Vermont's contractor workforce to make emissions-reducing home improvements.

## Recommendations

It will be important to address the language and cultural exclusion barriers for LEP Vermonters. There are translation

<sup>5</sup> U.S. Census Bureau, American Community Survey, 5-Year Estimate

<sup>6</sup> [Public Assets Institute](#), *State of Working Vermont 2023*, February 20

<sup>7</sup> U.S. Census Bureau 2022 5-Year Estimates (Tables B25003A-G) via

<sup>8</sup> Vermont Housing Finance Agency, 2025 Vermont Housing Needs Assessment, Vermont Department of Housing and Community Development, June

<sup>9</sup> U.S. Census American Community Survey, 5-Year Estimates 2018-2

### **Recommendation**

**Make translation services and plain language descriptions readily available throughout public outreach processes during CHS implementation**

and interpretation services through both the US Committee on Refugees and Immigrants (USCRI) and the Office of Racial Equity and Community Inclusion at Champlain Valley Office of Economic Opportunity (CVOEO). These services can be obtained as a fee for service arrangement.

Efficiency Vermont, the statewide Energy Efficiency Utility in Vermont, uses an online video language services technology for in field translation, and an over the phone translation service in their call center to communicate with Vermonters with various language backgrounds. Efficiency Vermont has found that these services are critical in order to reach all Vermonters fairly. To address these barriers, it will be necessary to budget adequate funding to provide ample translation and interpretation services at all stages of the implementation of the Clean Heat Standard.

Creating and supporting existing safe spaces for cultural inclusion is important in outreach to all Vermonters. There should be multiple avenues for Vermonters to share their experiences and concerns, several of which should be in affinity spaces that are comfortable and easily accessible for the participants. For these reasons, affinity spaces allow for increased inclusion in program development and outreach. And for all Vermonters, it is important to provide information in a plain language format with well-explained concepts and clear vocabulary. Existing and additional programs under the Clean Heat Standard should continue to, and begin to, support affinity spaces to better reach Vermonters in program outreach.

<p style="text-align: center;"><b>Recommendation</b></p> <p>Select Default Delivery Agents(s) with experience and capacity for reaching New American and LEP households.</p>	<p>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. In comments submitted on September 6, 2024<sup>10</sup>, the EAG asked the Commission to require that proposals for potential DDAs include a description of the entity's experience with, and plan for serving, disadvantaged groups, including households with Limited English Proficiency (LEP).</p>
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Services offered by the DDA(s) to households under the Clean Heat Standard should be accompanied by targeted outreach to Vermont's New American communities, with translated resources available or translation services available at all stages of the program, from initial advertising to application.

To support these groups, the EAG also encouraged the Commission to require organizations seeking to become a DDA to have a diversity, equity, and inclusion (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.

## Low-income households

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<sup>10</sup> [Equity Advisory Group](#), EAG DDA RFP Recommendations, September 6, 2024.

## Overview

As Vermont implements the Clean Heat Standard to reduce carbon emissions, low-income households, which often struggle with higher energy burdens and less ability to afford additional household expenses, face unique challenges in pursuing emission reductions and heating fuel transitions. Low-income households often do not have the financial means to adopt cleaner technologies and, without adequate support to pay for heat, may experience housing instability, creating further social and economic problems.

One of the core challenges Vermont will face under the Clean Heat Standard is balancing the need to decarbonize home heating systems with the immediate need to provide heating support to those who cannot afford it.

It is estimated that there are 77,843 Vermont households earning at or below 60% of the Area Median Income (AMI), which is nearly one-third of all Vermonters[1]. At the state level, 60% of area median income is \$49,200 for a two-person household[2]. Due to its high homeownership rate, Vermont has a larger number of low-income homeowner households than low-income renter households, but a higher percentage of renter households have lower incomes. Low-income households are also more likely to have older members, to be non-white, and to live in manufactured homes[3].

## Challenges

### Energy burdens

Many of Vermont's low-income households face very high energy burdens, the percentage of a household's income that is spent on energy costs, including electricity, heating, and transportation. An energy burden of 6% or above is considered high by the U.S. Department of Energy, however, Vermont households earning 30-60% of the state AMI have an average energy burden of 11%. For households earning 30% or below the AMI, the average energy burden is 24%[4]. Vermont households with lower incomes tend to use higher cost heating sources, including fuel oil and inefficient electrical resistance heat[5].

Having a high energy burden makes it very difficult for households to afford other essential expenses. Energy burdens for households experiencing poverty in Vermont are particularly high, with households earning less than 100% of the Federal Poverty Line (FPL), facing an energy burden of 31%<sup>6</sup>. An estimated 60,413 Vermonters, or nearly 10% of the state's population, live in poverty[6]. It is estimated that high energy burdens can increase a household's risk of falling into poverty or experiencing prolonged poverty by 150-200%[7]. A substantial body of research links lack of access to affordable heating to eviction, food insecurity, health risks, and poorer educational and career outcomes[8].

In addition to the data, the Equity Advisory Group has heard public comments from many Vermonters struggling to afford basic living expenses, including heat. While any higher heating costs under the Clean Heat Standard will be experienced by all Vermonters heating with fossil fuels, the impact will be felt the most by the state’s low-income households.

## Financial

Low-income households tend to have less access to credit to finance home improvements and tend to be unable or very reluctant to take on any additional household debt<sup>[9]</sup>. These households may require deep financial assistance for heating costs, weatherization services, or heating system upgrades.

## LIHEAP

LIHEAP is a federally funded program designed to support low-income households with heating costs. This program is administered by the Economic Services Division (ESD) of Vermont’s Department for Children and Families. The financial assistance provided by this program helps lower the energy burden for eligible households by reducing the cost of their primary heating source. This assistance is especially critical for households that use expensive sources of heat including oil and kerosene<sup>[GW1]</sup> <sup>[GW2]</sup> - these sources are also carbon intensive and produce higher emissions than some alternatives. Of all LIHEAP recipients, 53% heat with oil and kerosene, 19% with propane, 11% with natural gas, 12% with wood and pellet stoves, and 5% with electric.<sup>[10]</sup> Kerosene tends to be most expensive (Geoff<sup>[GW3]</sup>). Eligibility for LIHEAP is based on household income (185% of the FPL) and size, with priority given to those with the lowest incomes and highest energy burdens. The program is available for homeowners and renters – 20.7% of recipients own, 49.8% rent and pay for all utilities, and 27.2% rent and pay for some utilities. Households that are approved for heating assistance are also eligible for free weatherization services to improve home energy efficiency, helping to lower heating costs over time. In addition to heating assistance and Weatherization<sup>[GW4]</sup>, the program offers crisis support for households facing immediate heating emergencies. This program is available to households that are receiving seasonal heating fuel assistance as well as households that earn up to 200% of the FPL. The ESD receives approximately 36,000 applications per year. It is projected that approximately 18,500 households will receive a benefit in FFY2024. The full-season benefit for each household for FFY2024 is projected to be around \$897, a reduction from the prior year of about \$600. This award only covers a portion of a household’s home heating needs and can depend on a household’s primary fuel type. In the 2023-2024 heating season, on average it LIHEAP only covered 28% of household heating costs. <sup>[11]</sup>

*Average Annual Fuel Costs for Households at 200% FPL or Below*

*Sorted by Heating Fuel Type<sup>[12]</sup>*

Fuel Type	Average Annual Energy Cost
Utility Gas	\$2250
Bottled Gas	\$4226
Fuel Oil	\$4097
Wood	\$4037

*The harm of a CHS on LIHEAP Recipients (Section from Matt Cota – highlighted line was added from discussion notes)*

Anyone receiving free heating fuel in Vermont through the federal Low Income Home Energy Assistance Program (LIHEAP) also qualifies for free weatherization. Administered by the Vermont Office of Economic Opportunity through its community action agency partners (one of which is not a community action program), these weatherization services are paid for by a 2-cent per gallon fuel tax on oil heat, kerosene, and propane, as well as a gross receipts charge on utility gas and electricity sold in Vermont. [IGWS](#). This depends on the action taken by the owner of the building, who does not have the same financial incentive to make efficient investments and is not impacted by the clean heat compliance fee. Half of the families receiving fuel assistance rent their homes and pay their heating fuel bills.

Under [30 V.S.A. § 8124 \(i\)](#), the clean heat fee will be added to the price per gallon paid for by the state of Vermont when administering the Fuel Assistance Program. The law states that the Margin Over Rack (MOR) “shall reflect the default delivery agent credit cost established by the Commission.” The MOR is the fixed price fuel dealers can charge a customer receiving fuel assistance funds. It changes daily and is based on the average of the average rack price in four different terminal locations (Albany, Burlington, Portsmouth and Springfield, MA). Oil heat, kerosene, and propane dealers can choose whether to participate in the fuel program under the terms and conditions established by the state of Vermont. Dozens of fuel dealers have chosen not to participate (there are only [162 certified suppliers](#) as of 12/6/2023). This is a good thing. If the clean heat compliance fee is [70 cents per gallon](#), as the Secretary of the Agency of Natural Resources predicted, this vital program would be in jeopardy without this provision. However, there is no denying that it will reduce the purchasing power of the state of Vermont in providing heating fuel to low-income Vermonters. **As fuel prices increase, LIHEAP dollars will not go as far for consumers, therefore increasing their out-of-pocket costs (John McCormick public comment).**

It will also reduce the purchasing power of low-income Vermonters. It should be noted that fuel assistance funds only pay for about half the gallons needed during a typical Vermont winter (in 2023-2024, the average benefit was \$963). The consumer pays the rest of the heating bill. The higher the compliance fee, the more regressive this policy is on low-income Vermonters who rent or own homes that cannot easily adopt clean heat measures. This is true in kerosene-heated homes. While kerosene (required in outdoor tanks typically found on modular homes that lack basements) represents less than 8% of the overall market, it accounts for 16% of LIHEAP homes. Compared to heating oil, kerosene cannot be blended as easily or inexpensively with renewable biofuels. An amendment was offered during the legislative process to allow homeowners who heat with kerosene to receive credit for switching to a lower-carbon fuel, such as propane, but that provision did not make it into the final draft. Another equity concern is that many modular homes that rely on kerosene for heat and hot water lack 200 amp service and can not easily or affordably install electric heat. These modular homes often have exposed water pipes and require combustion heat.

The benefit to low-income Vermonters from a CHS is that the state-run Low Income Weatherization Assistance Program's sale of credits to obligated parties will increase their funding beyond the existing fuel tax. This could allow for more homes to be weatherized.

## **Weatherization Assistance Program**

In Vermont, many low-income households face significant challenges when it comes to heating, cooling, and maintaining their homes in a safe and dry condition. Existing assistance programs, such as the Weatherization Assistance Program (WAP), aim to provide support, but they serve only a fraction of the population in need. WAP helps low-income households pursue energy efficiency improvements as well as related health and safety work such as installation of ASHRAE compliant indoor ventilation. With one time funds (3 years) the program has been able to install heat pump water heaters and mini split heat pumps if it would reduce a clients utility bills and was a good fit for the home. (and heating electrification [\[GW8\]](#) projects). Eligibility for this program is determined by county, household size, and varying income requirements. The scope of services for the core Weatherization funding is the same, with addition of independent one time funds as they exist such as ARPA funds for Home Repairs, Vermiculite remediation, heat pump installation and EPA certified wood and pellet stove installation. creating a complex but holistic program. Funding sources for programs include the Department of Energy (DOE) grant, the American Rescue Plan Act State Fiscal Recovery (ARPA-SFR) Fund, and the Home Weatherization Assistance Program (HWAP). [\[GW9\]](#) Different income guidelines between state and federal Wx funds can cause complexity but those receiving Fuel Assistance are auto qualified for all funding sources, and are the priority for the program to serve.

DOE funded project income eligibility is 200% of the FPL or below. For HWAP and ARPA-SFR WAP projects, income eligibility is the greater of the 80% AMI or the 80% State Median Income (SMI). Though households that earn between 61% and 80% of the AMI as determined by the Department of Housing and Urban Development are eligible, priority is given to those at 60% or below. [\[13\]](#) People just above the income cutoff for WAP are still struggling to participate in

weatherizing and system upgrades. Though there are a variety of programs, they are very difficult to navigate (BB). According the 2024 Vermont Housing Needs Assessment, in FY 2023, WAP assisted 1,139 households, including 176 manufactured homes and 23 shelter units. The average investment was \$11,869 per household.[14] [PLACEHOLDER FOR DATA ON HOW MANY PEOPLE APPLY FOR WAP/ARE ON WAITLIST]. It is estimated that there are 105,724 households that earn 80% or less of the state AMI[15], with 77,843 below 60% or below.[16]

Weatherization programs struggle to meet the demands of households that require not only energy efficiency improvements but also critical structural repairs such as leaky roofs, wet basements, vermiculite insulation or other asbestos issues in a home, etc. that enable weatherization (Geoff). Structural repairs, abatement of hazardous materials, [GW10] are often prerequisites to any weatherization efforts funded through WAP programs. Currently, the program does have more Home Repair and Vermiculite funding than ever before, however these one time funds (through ARPA) are coming to an end in the next year.. “The largest barrier to low-income home weatherization continues to be the presence of vermiculite insulation, a material known for containing asbestos. There are also many other structural issues present in Vermont's older housing stock that can prohibit weatherization, such as leaky roofs, wet basements, knob and tube wiring, and other structural issues.”[17] 10% of homes in Vermont contain vermiculite insulation - the cost of removing vermiculite alone can range from \$10,000 to \$20,000, making it an insurmountable barrier for low-income families (From Discussion notes – no citation).[18] In Vermont, 25.5% of homes were built in 1939 or earlier.[19] The additional costs associated with these barriers to weatherization can prevent many homeowners from pursuing weatherization and heating system transitions. While efforts are made to connect clients with resources for repairs, the conversion rate is low, as many cannot afford even minimal repairs (Geoff[GW11]). For many households, the only feasible way to complete these necessary improvements is if they are entirely funded by the Weatherization Program. For example, even when weatherization services are provided at no cost, the additional costs associated with these preliminary repairs and safety measures prevent many households from being able to receive Weatherization. This can be especially true in case where the LIHEAP recipients are renters, as there are challenges with incentivizing landlords to pursue weatherization. This is due to a variety of factors, including their obligations to ensure that their property is fully code compliant[GW12] before WAP provides weatherization services. Additionally, if a landlord utilizes the WAP services, they are required to sign a rent stabilization agreement that places a limit on rent increases over a certain period (MC).

Existing programs are insufficient to address the full scope of need[GW13] – as fuel prices increase so will the need for consumer assistance. The challenges go beyond the financial strain of paying for heat; they also involve the complexity of decarbonizing homes efficiently. For low-income Vermonters, there is currently no cost-effective or rapid method to decarbonize home heating systems, which will leave low-income households subject to rising fuel prices as the CHS is implemented. The investments required to transition homes to lower emitting fuel sources could not have the necessary returns to meet Vermont's reduction targets. Studies have shown that it is typically higher income households that generate more carbon emissions[20].

## Eligibility gaps

Eligibility for energy-related assistance targeted at low-income households depends on location, program guidelines, and household size. The CHS definition of a low-income household for the purpose of low-income credit requirements is 60% or below of the AMI<sup>[21]</sup>.

Program	Eligibility Threshold	Annual 2024 income limit (for two-person household)
Clean Heat Standard	60% AMI	\$49,200
Low-Income Home Energy Assistance Program (LIHEAP)	185% of FPL	\$37,814
Energy Assistance Program (EAP) – GMP and VGS	185% of FPL	\$37,814
Weatherization Assistance Program (WAP)	80% of AMI	\$65,500

Eligibility for other programs, including the Low-Income Home Energy Assistance Program (LIHEAP) and ratepayer assistance offered through Green Mountain Power and Vermont Gas, is limited to household earning 185% or less of the Federal Poverty Line (FPL). For 2024, 185% of the FPL is \$37,814.00 for a household of two.<sup>[22]</sup> Meanwhile, the Weatherization Assistance Program (WAP), limits assistance to households at or below 80% AMI<sup>[23]</sup>, with additional priority targeting for lower-income households.

This highlights the challenges related to varying income eligibility requirements. Vermont households typically categorized as low-income for the purposes of state programs may not be eligible for fuel assistance, while other households eligible for WAP would not be eligible for credit-generation for low-income requirements under the CHS.

Confusion over eligibility

## Inequitable distribution of investments

Vermont's low-income households use less energy and contribute less to the state's emissions than higher-income households, yet the costs of the energy they do use represent a much higher proportion of their income[24]. A report from Efficiency Vermont also suggests that the towns with the highest energy burdens, which tend to have lower average incomes, have had significantly less adoption of cold-climate heat pumps and other efficient technologies than higher income towns with lower

## Recommendations

As Vermont moves toward implementing the CHS, it is crucial to ensure that it does not disproportionately burden low-income households, while still addressing broader climate and energy goals. The PUC must consider several key factors in balancing the economic needs of residents with the emissions reduction goals of the state.

### *Program Alignment*

To address long-term funding challenges, Vermont needs to consider a comprehensive approach to merging and coordinating state and federal programs that serve low-income households. When temporary federal funds, such as those from the American Rescue Plan Act (ARPA), run out, the state will still have access to DOE Weatherization Assistance Program funds and other resources. However, Vermont will face a funding cliff, and the PUC will need to "braid" different funding sources together to maintain an adequate level of support for weatherization and heating assistance. Additionally, the PUC should work to ensure that new programs, such as those from the Department of Public Service's HOMES and HEAR[GW21] programs, are integrated with weatherization efforts to maximize their impact. Weekly coordination with DPS staff is already underway, and this collaborative approach will be essential in ensuring that Vermont residents benefit from these funds.

### *Increase Program Funding*

Supporting and expanding existing program, rather than creating new programs (taking advantage of compliance and oversight systems in place)

Reliable and consistent resources - important for workforce

Increase WAP workers salaries

Weatherization is a vital strategy to reduce energy consumption and costs for low-income households and should be a key priority (Johanna Miller-public comment). Many of these

homes, especially those already receiving LIHEAP funds, would benefit from weatherization improvements (SS). Allocating compliance fees from the CHS to weatherization programs like WAP will help stretch LIHEAP dollars and reduce fuel consumption while making homes more energy-efficient (CT). Additionally, the PUC should consider allowing 15% of federal LIHEAP funding to be spent on weatherization, as this would offer long-term relief to low-income households by reducing their energy demands (MC). Increasing state supplemental LIHEAP funds would also soften the impact that the compliance fees would have on heating costs for low-income homes (Ben). There should be a strategic focus on benchmarking homes that receive LIHEAP and determine the cost and how long it would take to weatherize those homes (SS). It would also be beneficial to have data on the houses with the highest consumption to prioritize WAP projects (MW).

Weatherization

Workforce/market transition

Fuel Assistance

Protect low-income customers

*Increase flexibility for LIHEAP recipients*

When a home can add a secondary heating system, such as an electric heat pump, state advocacy at the federal level should push for LIHEAP funding to cover both heat sources. Currently, households receiving assistance for fossil fuel heating systems may be discouraged from using electric heat pumps to avoid higher out-of-pocket costs, as LIHEAP benefits are generally lower for electric heat systems.

Expanding LIHEAP coverage to include two primary heating sources would help ensure that households can maximize energy<sup>[GW20]</sup> efficiency and reduce reliance on fossil fuels without facing additional financial hardship.

Also more support for cooling from LIHEAP/fuel and electric flexibility - details

State needs to work at the federal level - electric assistance at state level?

*Consumer Navigation*

A recommendation is to expand and sustain support for energy efficiency coaches who can guide Vermonters, particularly low-income residents, through the available programs and incentives. This work is currently being done at the Community Action Agencies with funding

from Efficiency Vermont. This hands-on support is vital to guide low-income households through the complicated process of home weatherization and other projects.

Navigators could act as both financial coaches and energy experts, helping residents take full advantage of incentives such as those available through the Inflation Reduction Act.

The work of energy efficiency coaches also speaks to the importance of reducing overlap for programs that offer energy and efficiency assistance, which will reduce confusion and increase uptake.

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[1] U.S. Census Bureau: American Community Survey 5-year estimates, 2018-2022 (Table B25118, B25119) housingdata.org. The Census surveyed state area median income (AMI) is \$74,014. This amount will be adjusted by household size for most programs.

[2] [Vermont Housing Finance Agency](#), Maximum rent and purchase price affordability thresholds by income and household size, April 2024

[3] [Vermont Housing Finance Agency](#), *2025 Vermont Housing Needs Assessment*. Prepared for the Vermont Department of Housing and Community Development, June 2024.

[4] [U.S. Department of Energy](#), Low-income Energy Affordability (LEAD) tool, 2024

[5] [Energy Action Network](#), Annual Progress Report for Vermont, 2023.

[6] U.S. Census Bureau: American Community Survey 1-year estimates, 2023 (Table S1701)

[7] Jeremiah Bohr and Anna C McCreery, "Do Energy Burdens Contribute to Economic Poverty in the United States? A Panel Analysis." *Social Forces*, 2019.

[8] Jeremiah Bohr and Anna C McCreery, "Do Energy Burdens Contribute to Economic Poverty in the United States? A Panel Analysis." *Social Forces*, 2019.

[9] [Federal Reserve Bank of New York](#), The State of Low-Income America: Credit Access & Housing, January 2024.

[10] Richard Giddings, ESD Dept for Children and Families, Presentation to the EAG, 7/09/2024

[11] Richard Giddings, ESD Dept for Children and Families, Presentation to the EAG, 7/09/2024

[12] U.S. Department of Energy, [Low-income Energy Affordability \(LEAD\) tool](#), 2024

[13] 3E Thermal, [VT Weatherization Assistance Program Income Eligibility Guidelines](#)

[14] Department of Housing and Community Development (DHCD), Vermont 2025-2029 Statewide Housing Needs Assessment, page 35, <https://accd.vermont.gov/housing/plans-data-rules/needs-assessment>

[15] Census Bureau: American Community Survey 5-year estimates, 2018-2022 (Table B25118, B25119) [housingdata.org](https://housingdata.org)

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

[17] Chris Winters and Geoff Wilcox, Vermont Agency of Human Services, Performance Indicators for the Vermont Weatherization Assistance Program, January 30, 2024

[18]

[19] American Community Survey 5-year estimates, 2018-2022 (Table B25036) [housingdata.org](https://housingdata.org)

[20] [Income-based U.S. household carbon footprints \(1990–2019\) offer new insights on emissions inequality and climate finance | PLOS Climate](#)

[21] [Vermont Housing Finance Agency](#), Maximum rent and purchase price affordability thresholds by income and household size, April 2024

[22] [Vermont Legal Aid](#), 185% Federal Poverty Level (FPL), 2024

[23] [Vermont Weatherization Assistance Program](#), Income Eligibility Guidelines, July 01, 2024 – June 30, 2025

[24] [Vermont Energy Action Network](#), Annual Progress Report for Vermont 2023

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[GW1] Propane is typically the most expensive fuel type to heat with in Vermont, after electric heat.

[GW2] Using the VT DPS Retail priced of heating fuels for Oct 24, propane is the most expensive fuel to heat with at 3,229 \$ per 100M BTU, followed by Kero at \$2,992 per 100M BTU, then oil at \$2,429 per MBTU. Those numbers are figured at 100% efficiency, so well slight vary based on actual efficiency.

[GW3] Electric heat is the most expensive followed by propane, then Kero, then oil

[GW4] The National Weatherization Program typically uses upper case W, to differentiate from all other “weatherization”. I suggest that would help in this document

[GW5] Not true

Renters can apply for Wx and be served. And they can receive fuel assistance. Having a landlord can cause obstacles in some instances (mostly if the landlord is not a good landlord).

[CS6] But how is this inequitable to LIHEAP recipients? Renters are eligible for weatherization if landlord agrees. But no one is turned away from LIHEAP for lack of weatherization...

[GW7] Agree to a point, however if liheap renter has a landlord that doesn't want to take care of any issues they could prohibit the tenants from receiving Wx. Its out of the renters control whether they can access Wx.

[GW8] This is not correct. We install heat pumps with some one time funds, but it does not remove the existing fuel source thus I'd argue not electrification. Definitely not our mission.

[GW9] This makes it sound worse than it is. We overcome these obstacles

The amount of people on the wait list is mostly a factor of how much outreach individual agencies do, not necessarily the need of Weatherization by Vermonters. Another metric would be better or suffice it to say we can only serve so many households year limited by the budget for the year.

[GW10] We aren't code compliance, but any safety issues will be fixed and any new work is done up to code.

[GW11] Totally true

[GW12] We don't require full code compliance. We require certain things like a safe and operational heating system, and any obvious obvious life safety issues addressed prior to receiving Wx.

[GW13] Not sure what this is saying. The money we have is sufficient to properly cost effectively Wx an individual building. We are limited or will be soon on Home Repair and vermiculite funds for owner occupied homes.

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[1] U.S. Census Bureau: American Community Survey 5-year estimates, 2018-2022 (Table B25118, B25119) housingdata.org

[2] Vermont's Legal Help Website, [185% Federal Poverty Level \(FPL\)](#), 2024

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

[4] Vermont Energy Action Network, Annual Progress Report for Vermont 2023, <https://eanvt.org/annual-report/>

[5] Jeremiah Bohr and Anna C McCreery, “Do Energy Burdens Contribute to Economic Poverty in the United States? A Panel Analysis.” Social Forces, 2019.

[6] U.S. Department of Energy, [Low-income Energy Affordability \(LEAD\) tool](#), 2024

[7] Richard Giddings, ESD Dept for Children and Families, Presentation to the EAG, 7/09/2024

[8] Richard Giddings, ESD Dept for Children and Families, Presentation to the EAG, 7/09/2024

[9] U.S. Department of Energy, [Low-income Energy Affordability \(LEAD\) tool](#), 2024

[10] 3E Thermal, [VT Weatherization Assistance Program Income Eligibility Guidelines](#)

[11] Department of Housing and Community Development (DHCD), Vermont 2025-2029 Statewide Housing Needs Assessment, page 35,  
<https://accd.vermont.gov/housing/plans-data-rules/needs-assessment>

[12] Census Bureau: American Community Survey 5-year estimates, 2018-2022 (Table B25118, B25119) housingdata.org

[13] U.S. Census Bureau: American Community Survey 5-year estimates, 2018-2022 (Table B25118, B25119) housingdata.org

[14] Chris Winters and Geoff Wilcox, Vermont Agency of Human Services, Performance Indicators for the Vermont Weatherization Assistance Program, January 30, 2024

[15]

[16] American Community Survey 5-year estimates, 2018-2022 (Table B25036) housingdata.org

[17] [Income-based U.S. household carbon footprints \(1990–2019\) offer new insights on emissions inequality and climate finance | PLOS Climate](#)

[18] [Public Service Dept Briefing on Vermont’s Home Energy Rebate Programs](#)

[19] U.S. Census Bureau: American Community Survey 5-year estimates, 2018-2022 (Table B25032) housingdata.org

[20] Vermont Energy Action Network, Statewide GHG Emissions Dashboard,  
<https://eanvt.org/emissions-dashboard/>

[21] U.S. Census Bureau: American Community Survey 5-year estimates, 2018-2022 (Table B25032) housingdata.org

# Moderate Income Vermonters

## Overview

### *Definition of moderate income and existing challenges for moderate income Vermonters*

Act 18 describes a customer with moderate income as “...a customer with a household income between 60 percent and 120 percent of the area or statewide median income, whichever is greater, as published annually by the U.S. Department of Housing and Urban Development” (§8123(6)). Similar to other demographics covered in this report, moderate income Vermonters overlap with other demographics, including renters. Renters are often locked out of clean heat benefits, as they do not hold the decision of installing a clean heat measure where they reside. If an owner of a rental unit does install a clean heat measure, the renter may be financially impacted by an increase of rent to help the owner pay for a clean heat measure. Vermont additionally has a severe housing shortage that affects moderate income customers. In the scenario that a moderate-income Vermonter does become a homeowner, it’s possible that the customer is unable to provide matching funds of any amount, even if they have the appreciating asset of a home. A customer converting from a fossil heating source might face a severe cash-on-hand problem, not dissimilar to renters who are stuck with outdated and inefficient heating systems.

There are assumptions that programs should require moderate income households to hold some financial burden of an energy transition when receiving an incentive due to their financial status and ability to do so. This assumption is a gap in existing programs as some moderate-income households are not financially able to bridge that gap of investment to receive an incentive for their clean heat measure or energy transition. Low-income is defined by statute as less than 60% AMI, while moderate income is defined by statute as 60 to 120% AMI. 60 to 80% AMI is eligible for the State’s low-income Weatherization Assistance Program (“WAP”). Therefore, 80-120% AMI won’t be eligible for WAP and will have to resort to other methods of financing their clean heat measure, when existing programs in the state tend to require some sort of matching funds for this group, as explained above. A moderate-income household has a wide definition and captures a suite of customers. A moderate-income customer may fall below the moderate-income threshold multiple times in a few years, which makes income brackets complex and sometimes can add barriers to what resources that lower AMI group in the moderate-income sector has access to. Market rate customers will likely transition faster and might not face the cost barriers that the lower percentages of AMI in that moderate income bracket will.

### *Some existing programs in the State for moderate income Vermonters*

On September 20, 2023, the Commission released an order requesting information “...regarding existing programs, incentives, and funding that currently support customers with low income and moderate income to afford heating expenses, transition to beneficial electrification for heating, reduce fossil fuel consumption for heating, and install weatherization measures” (P.2). In response to the information

request, existing low- and moderate-income programs in Vermont were integrated into one document that can be found in the April 30, 2024 EAG meeting materials<sup>11</sup>.

An existing state initiative that was created in 2022 to address the financing gap for moderate income Vermonters is the Weatherization Repayment Assistance Program (WRAP). WRAP is an on-bill program targeted at households below 120% AMI. The program combines financing with utility rebates to reduce or eliminate the upfront cost of weatherization projects. Participants repay the costs over time on their natural gas or electric bill.

Vermont Housing and Finance Authority (VHFA) works with Efficiency Vermont, other EEU's, and distribution utilities to manage the financing program. This program has been extended through 2025 but has had a slow uptake from customers to date. The program has experienced challenges related to lack of clean payment history used for underwriting, lack of funds for enabling home repairs, complex projects, and contractor shortage.

When working with moderate income customers, program administrators of this program have found it difficult to get commitment to weatherize even when long term savings are clear. All the other challenges in the weatherization space exist for these customers, that are not dissimilar to the barriers that low-income Vermonters' experience in their energy transition.

## Potential challenges

One potential challenge of the Clean Heat Standard for moderate income Vermonters is increased frustration with navigating complex programs. If there are too many programs and competing opportunities that are not strategically aligned and communicated to the public, there is increased potential for negative experiences in navigating these opportunities and programs. Communication around different programs, territories served, varying incentive rates for low income versus moderate income households, is critical to lowering customer confusion and increasing customer participation. Strategically aligning programs to ensure consistent statewide long-term experience is important to customer participation of all programs. With the existing programs currently, this is a topic top of mind for Efficiency Vermont. To support customer navigation of existing programs, Efficiency Vermont has an incentive calculator that you can use to determine which incentives you qualify for<sup>12</sup>, as an example of the type of work that is needed to prevent customer confusion.

## Recommendations

There are real barriers for moderate income Vermonters in their transition to energy efficiency, fuel switching, or electrification in the assumptions that all moderate-income Vermonters have the resources

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<sup>11</sup> [Equity Advisory Group 4.30.24 Meeting Materials | Public Utility Commission \(vermont.gov\)](#).

<sup>12</sup>

<https://www.encyvermont.com/blog/how-to/how-much-money-can-you-actually-get-in-clean-energy-incentives>

to provide matching funds for services. A beneficial scenario under the Clean Heat Standard that would support moderate income Vermonters would be an increase of funding that could be directed toward incentives for installed clean heat measures such as weatherization and heat pumps. This increase of funding could lead to an increase in installed clean heat measures in moderate income households as clean heat measures become more affordable. At Efficiency Vermont, programs today that require a 10% income match for moderate income households require increased incentives to increase program numbers, increasing supply and demand. Increased incentives will reduce the upfront purchasing cost of a clean heat measure, making them more accessible.

The EAG recommends support in existing programs' work and additional efforts on ensuring that customers have support in navigating the Clean Heat Standard. Support can include assistance in choosing which clean heat measure to implement, ensuring a customer is not missing an important efficiency upgrade, and support in choosing trusted contractors and equipment with safety and quality control. ~~has concerns related to moderate income Vermonters, and all customers, having support in choosing which clean heat measure to implement, how to avoid missing important efficiency upgrades, and choosing contractors and equipment with quality and safety control.~~ Market transformation activities funded through the Clean Heat Standard would provide support for low- and moderate-income Vermonters to ensure quality, safety, and prevent customer confusion in the market. These types of activities are important to provide a statewide consistent experience of low- and moderate-income Vermonters navigating clean heat projects that will reduce customer confusion.

Workforce development is a barrier in reaching more households with installed clean heat measures. Workforce development funding and support in the Clean Heat Standard could support moderate income Vermonters ~~that work in workforce development~~ by creating a stable working environment versus an instable burst of funding for these clean heat projects that will allow for more households and customers to be reached.

## Renters and Landlords

### Overview

Approximately 27% (or 72,636) of households in Vermont are renters.<sup>1</sup> Vermont renters live in a variety of housing types, not limited to multi-family structures. An estimated 17,029 renter households, 23% of renters, live in single-family homes, and 3,215 (4%) live in manufactured homes.<sup>2</sup>

Vermont renters tend to have disproportionately lower incomes, 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>

A significant majority of renter households, 77%, rely on fossil fuels for heating.<sup>4</sup> Data on which Vermont renters pay for what utilities are limited, but Census data indicates that only about 23% of renters (16,447 households) have all utilities included in their rent.<sup>5</sup> The remaining three quarters of renters may have any combination of water, heat, and electricity included or not included in their rent.

According to the Department of Energy’s Low-Income Energy Affordability Data (LEAD) tool<sup>6</sup>, Vermont renters at 30% or below the AMI face an energy cost burden of up to 15%. The energy burden is defined as the percentage of gross household income spent on energy costs. 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.

Seventy-seven percent of the households receiving fuel assistance from the Low-Income Home Energy Assistance Program (LIHEAP) are renters<sup>7</sup>. LIHEAP, which is discussed in detail in the Low-Income Households section of this report, is disproportionately used by renters. In the

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

<sup>2</sup> U.S. Census Bureau: American Community Survey 5-year estimates, 2018-2022 (Table B25024) housingdata.org

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

<sup>4</sup> U.S. Census Bureau: American Community Survey 5-year estimates, 2018-2022 (Table B25040) housingdata.org

<sup>5</sup> U.S. Census Bureau: American Community Survey 1-year estimates, 2022 (Table B25069). It is likely that a significant portion of these households with utilities included in rent reside in subsidized housing, particularly senior housing, where this practice is more common.

<sup>6</sup> U.S. Department of Energy, *Low-income Energy Affordability (LEAD) Tool*, 2024

<sup>7</sup> Presentation from Richard Giddings, Director of Heating and Utility Assistance Programs, DCF-Economic Services to the Equity Advisory Group, July 9, 2024.

2023-2024 heating season, 50% of all LIHEAP households rented and paid for all utilities, and 27% were renters with another utility arrangement.

## Existing challenges / gaps in existing programs

### *Technical Challenges*

A separate section of this report discusses the technical challenges of weatherizing and electrifying Vermont’s existing housing stock, and many of these challenges are also found in rental homes. Over 33% of rental housing in Vermont was built before 1939.<sup>8</sup>

There is a wide range of technical expertise among property owners. Moreover, some rental property companies own hundreds of units, and some landlords only own a single unit. Implementing clean heating systems in rental housing is challenging in large part due to the diversity and complexity of the rental housing stock. Different housing types require different programs and approaches to implementing new technologies. For example, many of Vermont’s renters live in older single-family homes that have been converted to multi-family structures with floor plans that can make it difficult to install mini-split heat pumps.<sup>9</sup>

To minimize greenhouse gasses, new construction can and should be designed around electrified systems. However, these systems are more complex and can require greater long-term costs due to skilled maintenance needs. These increased developer's project costs reduce the incentive to install clean heating systems.

### *Financial Challenges*

Rental property owners and tenants face similar challenges to homeowners when it comes to adopting clean heat measures: large upfront costs, the complexity of retrofitting, and the need for specialized systems. However, landlords and renters face additional impediments that homeowners don't. The split-incentive problem, which recognizes that landlords may not see the societal or economic benefits of upgrading heating systems when the tenant pays the heating bills, is one such impediment. Another is that some efficiency programs are not available for rental properties, such as the [Efficiency Vermont Heat Pump Water Heaters rebate program](https://www.encyvermont.com/rebates/list/heat-pump-water-heaters#:~:text=Income%2De) (<https://www.encyvermont.com/rebates/list/heat-pump-water-heaters#:~:text=Income%2De>)

<sup>8</sup> U.S. Census Bureau: American Community Survey 5-year estimates, 2018-2022 (Table B25036) housingdata.org

<sup>9</sup> U.S. Census Bureau: American Community Survey 5-year estimates, 2018-2022 (Table B25032). Determining the physical character of buildings from survey data is difficult, however there are 25,627 renter households or 35% of all renters that live in smaller multi-family buildings with between two and four apartments.

[ligible](#)). 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.

Just as there is a wide range of technical expertise among landlords, so too is there a wide range of financial capacity. Those with only a few rental units may not have the borrowing capacity or cash on hand to finance expensive heating system upgrades or replacements that rental property owners with dozens or hundreds of units might have. Some landlords have made significant efficiency investments in their properties, while others are unable or unwilling financially to make these investments.

Renters responsible for paying their heating expenses separately from rent often face challenges in reducing their fossil fuel use due to what is commonly called the *split incentive*: the benefits of energy efficiency upgrades like reduced utility costs and greater comfort are enjoyed by tenants, but the costs of making these investments are incurred by landlords, who do not directly benefit from savings.<sup>10</sup> This misalignment of financial costs and benefits can discourage landlords and tenants from investing in efficiency improvements that would reduce overall carbon emissions and utility costs in rental properties.

### *Special Considerations for Subsidized Affordable Housing*

Approximately 14,670 renter households, or 18% of all Vermont renters, live in multi-family subsidized affordable housing.<sup>11</sup> Subsidized housing serves Vermont's lowest-income households, with half of residents earning less than \$17,000.<sup>12</sup>

While these subsidized rentals and their associated utilities cannot exceed established federal limits designed to keep housing affordable, many of the households living in subsidized housing still face significant financial burdens. Affordable housing property owners face their own split incentive challenges: they cannot raise limits on rent beyond modest annual approved increases, and they rely heavily on scarce housing funding subsidies to make energy investments for which they may see little or no return.

The energy-related investments needed to construct new affordable apartments in line with Efficiency Vermont's High-Performance track (required for projects funded by Vermont Housing Finance Agency and Vermont Housing & Conservation Board) is estimated to cost over

<sup>10</sup> Hynek, Levy and Smith, "Follow the Money": Overcoming the Split Incentive for Effective Energy Efficiency Program Design in Multi-family Buildings. American Council for and Energy-Efficient Economy, 2012.

<sup>11</sup> Vermont Directory of Affordable Rental Housing, September 2024 via [housingdata.org](https://housingdata.org). These include buildings developed with public funding subsidies, such as Public Housing, HUD's HOME Program, HUD Community Development Block Grants, USDA Rural Development, the Low-Income Housing Tax Credit (LIHTC), and other programs with rental affordability long-term or permanent affordable rent restrictions attached to the apartment unit.

<sup>12</sup> Vermont Housing Finance Agency analysis of HUD Low Income Housing Tax Credit (LIHTC) data, 2021.

\$62,000 per unit.<sup>13</sup> However, Efficiency Vermont is restricted to offering rebates based on savings achieved beyond minimum code requirements, so that with each code update, it becomes more difficult to demonstrate the savings and recover costs. Affordable housing developers receive no more than \$3,700 per unit from Efficiency Vermont to cover additional costs beyond basic code requirements, leading to an estimated gap of \$58,000 per unit or an average \$1.8 million per project in upfront energy-related costs for an average affordable housing project.

### *Other Policy and Funding Programs and Gaps*

Vermont's Residential Rental Housing Health & Safety Code (VRRHHSC) requires landlords to provide properly functioning heating systems and ensure the dwelling is constructed so that "the structure resists weather and excludes rain and snow and prevents the infiltration of air."<sup>14</sup> The VRRHHSC provides no minimum efficiency standards that help limit tenant fuel consumption and energy costs.

The most effective program for assisting renters and overcoming the split incentive in

Vermont is the Weatherization Assistance Program (WAP).<sup>15</sup> It is estimated that 30% to 40% of homes weatherized each year by WAP are renter-occupied.<sup>16</sup> There are an estimated 50,833 renter households under 80% AMI, equal to about 70% of all renters.<sup>17</sup>

Buildings with low-income tenants are eligible for WAP to fully cover cost-effective weatherization measures and heat pumps after any required health and safety upgrades and repairs are paid for by the landlord.<sup>18</sup> These landlord required costs can be prohibitively expensive. In 2023, the estimated average energy savings for households that utilized WAP was 30%.

However, WAP only serves renters or properties with tenants at or below 80% AMI. An estimated 21,803 Vermonters or 30% of renters are above this threshold and would not qualify for WAP services. Moreover, households that otherwise are income eligible may live in buildings that also include higher income households, which excludes these buildings from multi-family WAP eligibility.<sup>19</sup> WAP also only has the capacity and funding to weatherize a small number of the eligible households.

<sup>13</sup> Vermont Housing Finance Agency, [Assessing energy rebates in Vermont affordable housing](#), September 2024.

<sup>14</sup> Vermont Department of Public Safety, Vermont Residential Rental Housing Health & Safety Code, 2022.

<sup>15</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>16</sup> 2024 Report on Performance Indicators for the Vermont Weatherization Assistance Program <sup>17</sup> U.S. Census Bureau: American Community Survey 5-year estimates, 2018-2022 (Table B25118, B25119) housingdata.org

<sup>18</sup> This is a temporary program offered using federal ARPA funds.

<sup>19</sup> Ben to cite technical manual – 2/3 of units must be 80% AMI or lower

Existing weatherization incentives outside of WAP are inadequate to cover the costs of additional upgrades to buildings that would allow weatherization and electrification projects to be implemented. Emily to find data on non-WAP renter projects completed. If a landlord incurs costs that are not covered by existing funding programs, those costs might be passed onto tenants through increased rents.

Vermont Housing Finance Agency (VHFA)<sup>20</sup> offers a state-funded pilot on-bill financing program called the Weatherization Repayment Assistance Program (WRAP), which landlords can participate in with renter consent.<sup>21</sup> The program targets households between 80-120% AMI. The renter pays the program charge on the utility bill until they move and receives the benefits of lower heating costs, at which time the next tenant takes over the charges on the utility bills. Though the program is designed to save renters money, few renters have availed themselves of the program. Complicating the split-incentive problem, it may be difficult to make the case for renters to invest in a property they do not own, even if they can save on costs.

In Burlington, the recently passed 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>22</sup>It should be noted that Burlington’s net zero energy goals are to reduce and eventually eliminate fossil fuel use in the thermal and ground transportation sectors, not to reduce greenhouse gasses. 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, and has reached only a handful of the several hundred rental units identified. The Burlington weatherization ordinance website notes that, “[t]he city recognizes that long waiting lists currently exist for both qualified weatherization contractors and utility incentive programs. Temporary waivers can be granted if the owner can document that they are formally on a waiting list with a BPI contractor or a utility program.”

<sup>20</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.

<sup>21</sup> Additionally, WRAP is only available in properties with 4 or fewer units. Vermont Housing Finance Agency, WRAP: Frequently Asked Questions. Retrieved Retrieved October 24, 2024.

<sup>22</sup> Burlington Minimum Housing Code Weatherization Ordinance

## Recommendations

### *Expand weatherization opportunities targeted to rental properties*

In addition to investing in the state’s Weatherization Assistance Program (WAP), as discussed previously, the State should explore investments in weatherization and home repair programs that can benefit renters that are not income-eligible for WAP.

An initial cost-effective step with a high return on investment would be to ensure that homes sheltering LIHEAP recipients are properly weatherized.

The Vermont Housing Improvement Program (VHIP)<sup>23</sup> has been a successful program to bring new housing units online quickly and cost-efficiently. VHIP offers grants or forgivable loans to rehabilitate existing vacant units, bring existing units into code compliance,

#### **Recommendation**

Expand weatherization programs targeted to moderate income renters, using existing programs where possible.

or create small new multi-family units. The State could explore expanding VHIP or creating a similar program to include projects that primarily include weatherization or incorporate other clean heat technology like heat pumps. Rehabilitation projects could include weatherization improvements, though it is not the primary purpose of the program.

In any program, combining assistance for home repairs and weatherization may help encourage landlords to address the comprehensive needs of a unit.

Any state weatherization program that pays for most or all of a landlord’s project costs should also be

paired with restrictions to prevent tenant displacement as

a result of the improved property. Receiving a 10-year

forgivable VHIP loan requires the landlord to rent the unit at or below HUD Fair Market Rent for the area for at least 10 years. Similar investments in weatherization outside of WAP could be tied to a similar compliance agreement.

**Recommendation**  
Pair substantial state investments in rental properties with protections to limit displacement of low and moderate income tenants.

Beyond grants, overcoming the upfront costs of extensive building upgrades may require additional financing options, incentives, and financial support for home repairs, code compliance requirements, and electric service upgrades. These options could include requirements to ensure that only landlords who demonstrate financial need or lower-income or moderate income tenants receive favorable rates, though such restrictions will limit adoption. Low- and zero-interest loans could ease the financial burden of repairs ancillary to weatherization such as removing vermiculite and electric wire and panel upgrades, and these incentivized rate programs could require that landlords rent to tenants meeting low- and moderate-income definitions.

<sup>23</sup> Vermont Agency of Commerce and Community Development. *Vermont Housing Improvement Program 2.0*. Retrieved October 23, 2024. *Investments in window heat pumps*

New window-based heat pump units are just becoming available to consumers. The units can be self-installed in a standard single or double-hung window, plug into a standard outlet, include cold-climate heating capacity, and currently retail for \$3,800.<sup>24</sup> These products are currently being tested in pilot projects by the New York City Housing Authority and Efficiency Vermont.<sup>25, 26</sup>

Portable heat pump technology has the potential to reach households that cannot easily install traditional heat pumps, especially renters. A renter could use a window unit heat pump to reduce their fossil fuel use and

**Recommendation**  
Incentivize window unit heat pumps and draft regulations to allow renters to access this technology while limiting landlord liability.

save money while living in a rented home and take the equipment with them when they move. State incentives for portable heat pumps could help overcome the split incentive and encourage more equitable adoption of clean heat measures.

In its feedback to the Commission on the Clean Heat Standard Draft Rule, the EAG recommended that a Clean Heat Standard framework accommodate window heat pumps as an eligible installed measure for low and moderate income households. The EAG also recommended that credit ownership rules be revisited if window heat pumps are considered eligible clean heat measures. Section 8.113(a)(1) of the Draft Rule states that for installed measures “the individual or entity that owns the building in which the measure is being implemented is the initial owner of the measure attributes created by the implementation of that measure.” The EAG recommends that if a renter purchases a portable window heat pump, the ownership of the credit and any potential related financial benefit from transferring it to an obligated entity, should belong to the renter, not the property owner.

Currently, portable heat pump technology is still largely untested, and the energy savings and long-term reliability of the equipment must be verified. However, if it proves to deliver long-term benefits to customers, the EAG recommends that the Legislature incentivize this technology, and especially for rental households.

If window heat pumps are effective and become common, additional action may be needed to ensure renters have access to window unit heat pumps. Landlords often prohibit renters from using window unit air conditioners in lease agreements. Banning window units often result from landlords’ valid concerns about property damage and safety. However, these restrictions could be a serious roadblock to widespread adoption of heat pumps in Vermont’s

<sup>24</sup> [Gradient All-Weather 120V™ Window Heat Pump](#). Retrieved October 21, 2024.<sup>25</sup> [Grist](#), “How NYC’s public housing authority plans to transform the market for clean heat”, January 24, 2022.

<sup>26</sup> [Efficiency Vermont](#), “Take control over your heating and cooling—for free: Enroll in a pilot program to test an exciting new technology for renters”. Retrieved October 24, 2024.

existing, varied housing stock. Requiring landlords to allow heat-pumps, while also requiring professional installation and limiting landlord liability could resolve this potential complication.

Finally, as extreme heat events become more common, access to cool spaces is essential to reducing heat-related illness and death.<sup>27</sup> Vermont’s Residential Rental Housing Health & Safety Code requires habitable temperatures but does not have detailed rules about permitting or providing air conditioning.<sup>28</sup> Access to cooling equipment, from either a traditional air conditioner or a heat pump, is increasingly necessary for equitable climate adaptation.

### *Rental safety code enforcement*

If the State wishes to reduce greenhouse gasses from rental properties and overcome the split incentives, it may need to go beyond its current practice of offering financial incentives to landlords and consider creating clear requirements. At a minimum, the State could explore ways to update building codes for heating, cooling and weatherization systems to better align with our greenhouse gas reduction goals.

<p style="text-align: center;"><b>Recommendation</b></p> <p style="text-align: center;">Add basic weatherization requirements to Vermont Residential Rental Housing Health &amp; Safety Code.</p>
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This may well be difficult to enforce within the State's current complaint-based system and lack of rental registry, which leaves most rental homes in the state uninspected and the current code often unenforced. The City of Burlington's weatherization ordinance has faced significant challenges, and workforce shortages are being felt statewide. The State could consider phasing in weatherization requirements over time to give landlords ample opportunity to secure contractors.

However, despite these significant challenges, the status quo is all but guaranteed to leave renters behind as Vermont transitions away from fossil fuels. A significant realignment of state policy will be necessary to ensure that renters can receive the benefits of a Clean Heat Standard.

### *Recommendations*

- Expand weatherization programs targeted to moderate income renters, using existing programs where possible.
- Pair substantial state investments in rental properties with protections to limit displacement of low and moderate income tenants.
- Incentivize window unit heat pumps and draft regulations to allow renters to access this technology while limiting landlord liability.
- Add basic efficiency standards and weatherization requirements to building codes and the Vermont Residential Rental Housing Health & Safety Code.

<sup>27</sup> [World Health Organization](#), *Heatwaves*. Retrieved October 23, 2024.

<sup>28</sup> [Vermont Legal Aid](#), *Summer Heat, Air Conditioning and Rental Units*. May 22, 2024. Retrieved October 23, 2024.

## Manufactured/Mobile Home Residents

There are an estimated 20,041 manufactured/mobile homes (MHs) statewide, which represents 6% of all the State's housing stock. Of Vermont homes occupied year-round, 8% are MHs. An estimated 13,373 are owner-occupied (67%), 3,215 are renter-occupied (16%), and 3,453 are vacant or seasonal (17%).<sup>13</sup> Approximately one third of MHs are in mobile home communities (MHCs) and of those, 90.2% of them are owned by the residents.<sup>14</sup>

In an income survey on 1,269 lots across 15 MHCs it was found that 60% of the residents earned at or below 50% of AMI and 84% were below 80% of AMI.<sup>15</sup>

Vermonters who live in MHs are disproportionately dependent on kerosene for heating which is one of the most expensive and carbon intensive fuels.<sup>16</sup> The overall emissions contribution of this population is likely small relative to statewide emissions sources. According to the Energy Action Network's (EAN) 2023 Annual Progress Report for Vermont on emissions reductions progress, "households with lower incomes typically use less energy than those with higher incomes."<sup>17</sup>

There is significant complexity in decarbonization of MHs in the state, particularly older MHs. There are 4,000 to 5,000 MHs in Vermont built prior to 1979.<sup>18</sup> There are four possible pathways that can be taken when working towards MH decarbonization. The first pathway is weatherization, where the MH can be made more efficient to reduce fossil fuel use. Another pathway is conversion paired with weatherization. If technically feasible, an MH can be converted to a clean heating measure in addition to weatherization efforts. A more comprehensive pathway is complete replacement of the MH. This option is best when weatherization and/or heating system replacement are not technically feasible or where the cost to do so would warrant replacement as an alternative. The final pathway is no action towards decarbonization in cases where a resident is unable or unwilling to convert, weatherize, or replace the home. In addition to high energy burdens and barriers to transitioning to clean heat systems, many MHCs are in flood prone areas, leaving these residents vulnerable to home destruction and displacement. Currently, there are 809 lots situated within a flood hazard zone, making

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<sup>13</sup> Department of Housing and Community Development (DHCD), Vermont 2025-2029 Statewide Housing Needs Assessment, page 26, <https://accd.vermont.gov/housing/plans-data-rules/needs-assessment>

<sup>14</sup> Vermont Department of Housing and Community Development, [2022 Vermont Mobile Home Parks Report](#)

<sup>15</sup> [Report of the Mobile Home Task Force](#) to VT Legislature, 2024

<sup>16</sup> Vermont Energy Action Network, [Annual Progress Report](#), 2024

<sup>17</sup> Vermont Energy Action Network, Annual Progress Report for Vermont 2023, <https://eanvt.org/annual-report/>

<sup>18</sup> U.S. Census Bureau, [Public Use Microdata Sample \(PUMS\) 5-year estimates](#), 2018-2022

up 11% of all homes in parks.<sup>19</sup> This environmental threat underscores the need for energy and structural resiliency in MHCs.

## **PLACEHOLDER Table: Snapshot of HFI Manufactured Homes Communities (April 2024)**

### Existing challenges / gaps in existing programs

#### **Financial Barriers and Ownership Structure**

The upfront costs associated with weatherization or upgrading to a clean heat system can be cost-prohibitive to MH residents, many of whom are low- or moderate- income (LMI). Existing programs, while helpful, may not fully cover these costs, leaving a financial burden on homeowners. Mobile homes are often located within manufactured home communities (MHCs), which are predominantly privately owned. The Mobile Home Task Force found that aging park infrastructure is the greatest risk to long term mobile home park sustainability.<sup>20</sup> To upgrade individual units, oftentimes the park itself may require community level upgrades – such as upgraded electrical service. This leads to a split incentive, where the park owner may not invest in upgrades that would primarily benefit individual lot renters. In cases where park-wide upgrades are pursued, costs are substantial, often reaching approximately \$1 million, making coordination with multiple stakeholders—utility companies, park owners, and individual units—complex. It can also be difficult to access the funding required for these projects. For individual MH owners on rented land, it can be challenging to access financing for upgrades or MH replacement. A central debate in the mobile home task force has been whether mobile homes are considered personal property or real estate. This distinction impacts financing availability and terms, as many financial institutions require land ownership for mortgage eligibility.<sup>21</sup> Interest rates for new mobile homes are high, and without property ownership, residents face challenges accessing affordable financing options. Additionally, older MHs on rented land may in some cases depreciate whereas mobile homes on owned land would allow residents to build equity.<sup>22</sup> Many of the older homes in a park examined by the Mobile Home Task Force were valued at around \$15,000 to \$20,000 – these low values would discourage large financial investments in the home.

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<sup>19</sup> Department of Housing and Community Development (DHCD), Vermont 2025-2029 Statewide Housing Needs Assessment, page 29, <https://accd.vermont.gov/housing/plans-data-rules/needs-assessment>

<sup>20</sup> [Report of the Mobile Home Task Force](#) to VT Legislature, 2024

<sup>21</sup> Gayle Pezzo and Mary Houghton, members of the Mobile Home Task Force

<sup>22</sup> [Report of the Mobile Home Task Force](#) to VT Legislature, 2024

Additionally, even if improvements or replacements are low-cost or free, increases in the value of the MH could lead to increased tax burden for residents.

### **Technical Limitations**

Many mobile homes face structural and technical limitations that make clean heat technologies, such as heat pumps, challenging or impractical to install. Common issues include outdated electrical systems, dependence on propane or kerosene, and specific heating needs to prevent frozen pipes. MHs typically lack basements and often have exposed water pipes running underneath. This configuration requires heat from below, whereas electric heat pumps distribute warm air from above, potentially leading to frozen pipes and severe structural damage. For these households, combustion-based heating may remain essential, as a shift to electric heat alone could pose substantial risks (Matt Cota).

Where fuel switching is feasible, it is crucial to pair it with weatherization efforts to safeguard against pipe freezing. Technical guidelines for upgrading heating in mobile homes are distinct from those for traditional homes, and existing systems are often incompatible with a switch to new fuels (BB). While dual-fuel heat pumps, which can supplement propane, offer a solution, their installation costs—including necessary electrical upgrades—can reach \$15,000, a price out of reach for many residents. Beyond financial and technical constraints, space limitations within MHCs can further hinder the installation of heat pump systems (BB).

### **Limitations to Existing Assistance Programs**

Existing programs, such as WAP, LIHEAP, and Efficiency Vermont resources are often cited as the solution for low- and moderate-income households. In their current state these programs are not delivering the desired outcomes to meet climate goals at a fast enough pace. This could be the result of limited awareness and access to information regarding these programs, as well as technical barriers to navigating programs. According the 2024 Vermont Housing Needs Assessment, in FY 2023, WAP assisted only 176 manufactured homes.<sup>23</sup> Even in cases where residents could receive WAP funding, there is a limited workforce and long wait times for services. For installation of new modular homes, the workforce is even more limited. Though some residents in a park referenced by Gayle Pezzo of the Mobile Home Task Force have utilized WAP, it was indicated by Mary Houghton that some residents that are aware of WAP assume that they are not eligible. This emphasizes the need for more targeted outreach and education around program offerings and technical assistance to navigate the programs.

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<sup>23</sup> Department of Housing and Community Development (DHCD), Vermont 2025-2029 Statewide Housing Needs Assessment, page 35, <https://accd.vermont.gov/housing/plans-data-rules/needs-assessment>

Though there are MH residents who receive LIHEAP funding, the seasonal award may not cover their entire annual heating fuel costs. The full-season benefit for each household for FFY2024 is projected to be around \$897, a reduction from the prior year of about \$600. This award only covers a portion of a household's home heating needs and can depend on a household's primary fuel type. In the 2023-2024 heating season, on average LIHEAP only covered 28% of household heating costs.<sup>24</sup>

Efficiency Vermont has been participating in the US DOE Zero Energy Ready Home program to develop energy efficient and affordable MHs.<sup>25</sup> Their program can replace eligible mobile homes with Zero Energy MHs, though financing and supply is currently limited (MW). Though there are incentives available for households below 80% AMI, and possible support for downpayment assistance, through Champlain Housing Trust, applicants will generally need to secure mortgages through the USDA's Rural Development program for the replacement home. Depending on a resident's financial standing, securing funds could be difficult. Additionally, these homes need to be installed on a concrete foundation to comply with HUD requirements, which could increase cost of installation by \$10,000 or more.<sup>26</sup>

## Potential benefits of CHS for manufactured home residents

With the implementation of the CHS, obligated parties will be able to earn clean heat credits through projects targeted at low- and moderate- income households. This would include weatherization, clean heat system installation, and MH replacement. This element of the CHS could benefit MH residents if they are able to access these services. Due to their smaller size and factory production methods, new MHs can be efficiently upgraded to net-zero standards, often at a lower cost compared to traditional buildings. In cases where weatherization and clean heat measures can be implemented, they can significantly reduce energy bills over time, providing long-term financial benefits. Maintenance of upgraded clean heat systems is also less expensive over time than traditional combustion systems. These upgrades can also lead to a more comfortable living environment with consistent temperatures and better air quality, including air conditioning in the warmer months.

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<sup>24</sup> Richard Giddings, ESD Dept for Children and Families, Presentation to the EAG, 7/09/2024

<sup>25</sup> [Report of the Mobile Home Task Force](#) to VT Legislature, 2024

<sup>26</sup> Department of Housing and Community Development (DHCD), Vermont 2025-2029 Statewide Housing Needs Assessment, page 27, <https://accd.vermont.gov/housing/plans-data-rules/needs-assessment>

## Potential harms of CHS for manufactured home residents

Since MHs are typically occupied by low-income households, with less financial capacity, this population will be more impacted by rising fuel costs and their energy burden could increase. For residents where there is no funding for upgrades, or in cases where their MH is not technically suitable for conversion, they will be subject to the rising fuel costs that are the result of the CHS. For MH residents who are recipients of LIHEAP, their seasonal award would not stretch as far in the face of higher fuel costs. In MHs that are suitable for conversion or the installation of a secondary system, LIHEAP currently limits selection of one primary heating source. This would possibly create an incentive to rely on the primary source of heat to ensure the costs are able to be offset by LIHEAP funds.

## Recommendations

To ensure equitable outcomes for MH residents, the CHS should take a comprehensive approach that integrates social, economic, and environmental priorities. All Vermonters, regardless of income, location, or housing type, should have the opportunity to participate in the CHS. This requires addressing common barriers, including high upfront costs, limited technical knowledge, and gaps in information about available resources. The CHS should be designed to prevent undue burdens on low- and moderate-income residents, with careful monitoring to identify and address potential unintended consequences, such as increased fuel costs or displacement risks tied to energy retrofits. Transparency and accountability are essential, with mechanisms in place for tracking and reporting equity outcomes, allowing for continuous assessment to keep equity goals on course. Proactive strategies—such as exemption policies for low-income households and protections against rent increases in mobile home parks—can provide essential safeguards for residents during this energy transition.

### **Ensuring Fair Access, Participation, and Support for Mobile Home Residents**

To ensure the Clean Heat Standard (CHS) is inclusive and beneficial for mobile home residents, it is essential to create pathways for fair access, equitable benefit distribution, and community-specific support. A comprehensive strategy that addresses financial, informational, and technical barriers will enable MH residents to benefit from the CHS.

Expanding Outreach, Education, and Support Programs: Effective outreach is key to raising awareness of clean heat benefits, especially among MH residents who may face unique challenges in understanding or accessing these programs. Tailored educational

initiatives that clearly communicate the cost savings and environmental benefits of clean heat technologies can empower residents to make informed choices. Additionally, MHCs can enhance residents' readiness to apply for project funding through WAP or other programs.

Providing Technical Assistance and Building Community Partnerships: Many mobile home residents may need expert guidance to navigate the complexities of clean heat installations. Providing dedicated technical assistance and support services will help these communities overcome technical challenges and ensure successful adoption of clean heat solutions. By partnering with local organizations and community groups, outreach and assistance efforts can be made culturally relevant, linguistically accessible, and more effective in reaching mobile home residents. Leveraging existing community networks can maximize engagement and make the CHS transition smoother and more inclusive.

Leverage Existing Programs: Build upon existing statewide programs and resources to support the implementation of the CHS for mobile home communities. This includes leveraging the infrastructure and expertise of organizations involved in energy efficiency, weatherization, and affordable housing initiatives.

## **Overcoming Financial Barriers**

Targeted Investments: Public funds and incentives should prioritize projects and programs that directly benefit LMI communities, renters, and MH residents. Resources such as grants, low-interest loans, technical assistance, and other targeted support can help these groups access and participate in the CHS. Financial incentives and subsidies specifically aimed at LMI households can alleviate the financial burdens associated with clean heat upgrades, enabling mobile home residents to afford these improvements and take part in the Clean Heat Credit market.

Dedicated WAP Funding: Allocate dedicated or supplemental funding to bolster the Weatherization Assistance Program (WAP), specifically targeting resources to support MH residents in accessing and implementing clean heat measures. This funding will facilitate the retrofitting and upgrading of mobile homes to improve energy efficiency and reduce heating costs.

Community Ownership and Control: Wherever possible, communities and individuals should have ownership and control over clean heat projects and the associated CHCs. This can empower local communities, promote self-sufficiency, and ensure that the benefits of the CHS are reinvested locally.

Exemption for Low-Income Households/MH Residents: Implement an exemption policy that relieves low-income households from bearing the financial burden of heating fuel expenses related to clean heat measures during the transition period. This exemption will provide crucial relief for vulnerable households while ensuring equitable access to clean heat technologies. Additionally, consider allowing the switch from kerosene to propane as a more practical solution to reducing emissions in MHs (MC). Currently, this option is not counted as a credit under Act 18, but allowing this change would lead to immediate cost savings and emissions reductions (MC).

Designate Credits for MH Programs: Designate all clean heat credits generated through the CHS to support conversion, weatherization, and replacement programs tailored specifically for mobile home residents. While acknowledging potential funding gaps, this approach ensures that credits are directly channeled into initiatives that benefit mobile home communities.

## **Overcoming Technical Limitations**

Assessment of Electrical Infrastructure: Conduct a thorough assessment of electrical infrastructure in MHCs to identify and address any deficiencies that may hinder the adoption of clean heat technologies. Upgrading infrastructure will ensure that mobile home communities can support the increased demand for electricity associated with clean heating systems.

RFP for Weatherization Providers: Issue Requests for Proposals (RFPs) to engage weatherization providers in delivering large-scale clean heat projects, with a specific focus on addressing the unique energy needs of MHCs. Through competitive bidding, qualified providers will be enlisted to execute comprehensive weatherization projects tailored to mobile homes.

Establish a Statewide Action Team: Create a dedicated team composed of experts and stakeholders to operationalize and implement the Clean Heat Standard (CHS) across Vermont. This team will ensure that the unique needs and challenges faced by MH residents are central to the planning and execution of clean heat initiatives.

These actions would ensure fair access to clean heat for mobile home residents in Vermont. They involve creating dedicated teams, leveraging existing resources, and providing targeted financial incentives and technical assistance. Through partnerships

and investments, Vermont can advance clean heat while prioritizing vulnerable residents.

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- Small businesses - Sriram Srinivasan
  - Existing challenges/gaps in existing programs
  - Potential benefits of CHS
  - Potential harms of CHS
  - Recommendations
- Obligated entities - Matt Cota
  - Existing challenges/gaps in existing programs
  - Potential benefits of CHS
  - Potential harms of CHS
  - Recommendations

## Implementation recommendations

- Mechanism for PUC to ensure equity in its processes
  - Continued consumer education
    - Providing information to public on credit value
  - Continued public engagement
  - Transparency
- Consumer protection
  - Omsbudperson role at PUC
  - Consumer protection role for another agency (VT Attorney General's Office?)
- Additional research needs recommended for implementation
- Metrics for success
  - How will PUC assess whether this has been implemented equitably?

- On-going equity review
  - Recommendation to continue EAG work in some capacity after January?
  - Should another group/body be created/tasked with equity review?
- Notes 10/29
  - BB - DPS is the ombudsperson in their function as the ratepayer advocate.
    - MW - For the situation where a homeowner feels cheated out of a credit, would it be clear to that homeowner that DPS is their advocate?
    - BB- good point, maybe point this out more explicitly for this newly regulated market.
    - MW - want to make it v clear to consumers how the registration process would work, and what to do if you have a complaint
  - BB - wonder if should formally recommend that PUC incorporate equity review into a triennial process since EAG will cease to exist. list out areas of concern for equity in entire program. equity needs to be built into the process and a good place would be in the triennial process
    - MW - there is the idea of extending EAG into the program. not sure if that would work but we should opine on who should be assessing equity throughout program
    - MW - Commission needs some way to continue to monitor equity in CHS processes. some sort of equity review process
    - BB - interagency enviro justice committee, should guide and coordinate Act 154 of 2022 implementation. they could be appropriate to monitor this.  
<https://anr.vermont.gov/about-us/civil-rights-and-environmental-justice/vermont-ej-law/interagency-environmental-justice>
    - ER - can also ask around to see if there are other thoughts of who should do this.
    - MW - idea was to have some sort of research or metrics to evaluate outcomes. check if we've created negative unintended consequences, check if CHS is successful or not through this lens
    - BB - we'll have data on if OPs are hitting their LMI targets. can foresee a report to the Commission on if targets are being hit - will happen as a part of the compliance report to the Commission

- SS - orgs like EAN already play a role in assessing path towards GHG reductions. Could suggest PUC or DPS request org like EAN to analyze the impacts and see what is actually getting done
- GW - evaluating equity is not EAN's cup of tea
- SS - EAN can access any type of data and be crisp about reporting on it. they have the intellectual capacity and data to answer these questions from complex data into concise reports
- GW - just concerned equity not is not their focus
- SS - is it not just analyzing progress towards a goal?
- GW - concerned that they don't have the interest or expertise for assessing equity in the scope being discussed here
- MW - should be someone in state govt, they could coordinate with EAN. but can't direct EAN
- BB - within Act 154, talks about community engagement plan, how to evaluate new and existing programs. As covered agency, PUC will have to evaluate existing programs (including CHS). will have to assess how plans comply with civil rights plan and include evaluation of CHS. maybe lean on Act 154 work. That office is leading state coordination around that law. if implementation date of that law is pushed back, then there would be a gap if CHS goes into effect earlier
- AP - should the EAG continue to exist? is there another body that should take this place?
  - PP - if dept that BB mentioned is able to take this work over, that would be ideal. it's important that some organization is doing this
  - BB - seems like that committee would be appropriate
  - PP - could be putting fox in hen house
  - SS - in towns, it's not entrusted to one dept. it's a cross functional team that also has reps from affected communities. important to have representatives from affected communities. EAG has tried to get input from affected communities but has not been a lot of participation

- MW - Committee may be involved but PUC could also put this review into their triennial plan

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## Additional comments from individual EAG members

Other (not sure how to group)

- carbon emission factors, life cycle analysis methodology

We may need flexibility, but start working on them now and we may

needs to be done by the 12th at the latest (double reviewed) - renters on 12th

If there is a recommendation on one of these sections, please reach out to the person  
CC Ashira and Mia

Report Section	Initial Drafter	Due date to first reviewer	First Reviewer	Review due date
Executive summary	Mia		Group vote	
Limitations of CHS Framework - required vs cost framework	Mia		Matt	
Read everything as a whole, pull out the common overarching benefits, harms, and recommendations	Jen		Matt	

Write up of the equity rubric	Pike		Srini	
Summary of what we've told the PUC to do <ul style="list-style-type: none"> <li>- memos - link to each</li> <li>- draft rule</li> </ul>	Ben		Pike	
Review of the public engagement process? <ul style="list-style-type: none"> <li>- people want to see us cut emissions but are worried about costs</li> <li>- public forum</li> <li>- public comments? from the EAG meetings — go through the minutes (must be prepared to watch recording of public rule meeting on 30th)</li> <li>- WAP agencies session</li> </ul>	Emily		Jen	
What is being asked of us? Clean up Act 18 done by intern	Matt		Mia	
Finalize Renters	Pike		Emily	
Finalize Manufactured Homes? (if done)	Chris		Geoff	
Finalize households of color	Jen		Emily	
Moderate Income	Emily		John	
<b>Non-Household Impacts</b> Framing language - we spent a lot of our time on households, but there is also... Finalize “non-household” impacts - businesses and obligated parties, schools and municipalities	Srini		Matt	
Recommendations	John		Ben	

Assign someone to write the notes - talk about next week				
<b>Households not readily available to access CHS</b>	Ben		Chris	
<b>Low-income households</b>	Geoff		Ben	