

Clean Heat Standard Equity Advisory Group
Tuesday, September 17, 12:30-3:00 PM ET
Agenda

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

Participant Agenda

| | | |
|-------|--|----------------|
| 12:30 | Welcome & Review of agenda <ul style="list-style-type: none">• Initiate recording | Mia |
| 12:35 | Review and approval of 09/03/2024 meeting minutes | Mia |
| 12:40 | Updates from TAG liaison | Emily / Matt |
| 12:45 | Updates from the PUC | Dominic |
| 12:50 | Guest Speaker - Efficiency Vermont on Moderate Income Households | Ashira / Emily |
| 1:20 | Public Comment | Ashira |
| 1:30 | Continued Discussion Small businesses and Obligated Entities | Ashira / Srini |
| 1:50 | Public Comment | Ashira |
| 2:10 | Potential Study Discussion | Ashira |
| 2:25 | Workgroup on editing | Ashira |
| 2:30 | Credit Issues Subgroup Update | Ben / Mia |
| 2:45 | Public Engagement Subgroup Update | Ashira |
| 2:55 | Next Steps | Ashira |
| 3:00 | Close | Mia |

Demographics Collection Worksheet

Households/homes that are not readily able to access clean heat measures - **Ben Bolaski**

Households/Homes not readily able to access CHS Measures

For many, paying for the energy that powers our homes and businesses is not an optional portion of the financial budget. For low-income households paying for energy can represent a significant burden.

Low Income households – unable to afford financing.

- “However, assistance programs generally do not have sufficient funds to serve all applicants, while energy efficiency programs often require partial payments from customers that present a barrier to low-income households (Evens 2015).”

[Chris] Out of pocket costs not covered by programs, such as electrical upgrades

Energy Burdened Households – Different from low-income households in that several factors can influence a households’ energy burden. Including home characteristics.

Low Quality Homes/ Older Homes – Older homes and lower quality homes tend to have high energy use intensity and need home repairs.

Challenge/GAP: Funding for home repair currently not thought of as a CHS measure. An incentive for the replacement of B100 burners or upgrading electrical panels to access heat pumps would improve access.

Older homes may have serious health/safety hazards such as vermiculite/asbestos that are costly to remediate (Mia)

Older homes may have unusual/non-standard layouts or building materials that make weatherization/heat pump install complicated and expensive (Mia)

Mobile Homes/Manufactured Housing

Residents of mobile homes could face difficulty accessing CHS measures because of the style of the home itself. In many older mobile homes, there may be multiple modifications and repairs needed to modernize the electrical system to allow compatibility with modern heating systems or heat pumps. Additionally, the construction style of many mobile homes may make the homes more difficult to weatherize.

[Chris] Age and condition of property

Rental Populations who pay their own utility bills –

- most households within 150% of the federal poverty level reside in rental housing and about 75% of renters pay their own utility bills (*U.S EIA, 2015*)

• The Split Incentive

- From an ownership standpoint, landlords have minimal incentive to improve the energy efficiency of the units they oversee. This falls under a “split incentive problem,” where landlords do not accrue direct benefits from their investments in energy efficiency, while occupants responsible for paying energy bills do not have the opportunity to make structural changes to their dwelling.
- Across all income ranges, respondents living in rented homes were billed 28 cents more across all energy sources than respondents living in homes they owned. *U.S. Energy Information Administration, 2020 Residential Energy Consumption Survey (RECS)*

Existing Programs to Serve Multifamily Properties:

- Several programs designed to reduce GHGs are not available for rental units
- Building Performance Program
- New Construction and Renovation

Have been focusing a lot on mobile home and rental populations. TAG probably could provide recommendations in mobile home space, although this group likely has more mobile home expertise. This section overlaps with almost all other sections.

Discussion Notes

- Ben: Comes down to style of home and existing conditions on site. Need for home repair. Heat pumps can be hard to put into mobile homes. Renters split incentive. Comes down to low quality and older homes needing extensive repairs before can take advantage of clean heat measure.
- Chris: Access - also including Geoff's program (weatherization) ...TA needed to access solutions
- Geoff: For people above LI weatherization program – moderate and up, if hiring a contractor could be \$20k or more for weatherization project... for these 1 in 10 homes, expensive abatement to prepare conditions for insulation – a lot added expense, shortage of contractors – affordability going to be important to think of for MI folks
- Mia: Metanarratives in our report – a lot of housing stock going to be challenging to transition...like vermiculite(?) – little funding at state level for home repairs. A big problem with standard is panel upgrades or vermiculite remediation has not emissions reductions, but going to be crucial for LI household to access improvements – want to emphasize need to think holistically about improving housing stock rather than just emissions reductions
- Sriram: Defining all of the challenges and gaps we have today in a way that gets PUC and

legislature's attention. Suggest: anyone below \$81k characterized as LI, how many households fit in this category? These are older and smaller houses? Infrastructure limitations - structural, insulation – how much of that problem do you see? In what percentage of households? Specifics can help define how challenging it will be.

- Ben: 80% AMI or less, for the record, not \$80k or lower.
- Chris: Statute defines LI as 60% AMI for 2 person household
- Mia: Would be interested in data to see how much of housing stock...stat of 1/3 or homes can't be electrified? Not aware of house much of housing stock is easier vs more difficult to decarbonize – haven't seen that data.
- Geoff: Can get the data Sriram asked for.
- Sriram: VGS has a report that identifies number of customers for natural gas service who don't have a centralized HVAC. Those homes harder to convert. Have to use multiple heat pumps.
- Matt: VGS data is good... would love if can extrapolate to get an estimate
- Jen: Sometimes weatherization can be incremental, every time you add a measure and reducing fossil fuel use will reduce money spent on fossil fuel...people can take steps
- Pike: Lots of information out there about what's a furnace and what's a boiler – might be a database where that information is available
- Matt: Challenging to aggregate it in one spreadsheet
- Mia: There is Grand List data available but don;t think it goes into that much detail...census data that says what kinds of fuels households use...high level building survey data...not a full picture of what are the biggest red flags a home is going to have to be weatherized or electrified. Happy to share with this group what is readily known. Could see if from that we could guess what homes are going to be most problematic. Could help get at scale of the problem to define that landscape.
- Chris: Not one definition of equitable. Important to define for this section - needs to be development of mitigation and adaptation strategies for this population. Would be good to have a strong statement from this group of what you're going to do for this population. Not clear a mitigation strategy was presented in the draft that was proposed.

Public Comment

- John: Every three years could be an increase in cost of credit...these families will be increasingly energy burdened...is it equitable to charge these families a higher heating bill if they cannot retrofit

EAG Reflections

- Mia: Something we do need to grapple with, need as much data as possible. If CHS doesn't pass, what happens? There are costs on other side of the balance. Need to holistically consider the benefits and the costs.
- Chris: Expect to have estimate of impact to fuel cost before we wrap up work plan?
- Ben: Will be projecting that – due sept 1.
- Chris: Hard if we don't know the numbers

Ashira: Looks like we need a lot more data and hard touchpoints. Invitation to send in data – not a whole report, but what's relevant.

Next Steps

- Identify experts, let Ashira and Mia know

- Mia will send readily available data on houses most difficulty accessing CHS
- Temporal effect

Vermonters of Color / Minorities / Indigenous - **Jen Myers**

Outline for EAG Final Report

Demographics

Vermonters of Color/Indigenous/New Americans

People and Organizations to Gather Information From:

Office of Racial Equity and Inclusion at CVOEO

Virginie Diambou, Director

Vermont Commission on Native American Affairs

Data

Population

Percentage of population

Specific locations in Vermont with greater population

Good demographic data will be essential for identifying benefits and barriers for this population - Ben B.

What percentage of this population qualifies for weatherization services? - Ben B.

Benefits

Ability to reduce energy burden through weatherization and energy conservation

Ability to transition to a clean heat source

Source of cooler home temperatures in the summer

Multi-family building weatherization and transition to clean heat

Barriers

Intersection with Low Income Vermonters and Renters

Past discrimination preventing home ownership and wealth accumulation

Low wages

Current discrimination in housing and rental markets

Limited access to financial institutions and credit

Credit invisible

[Chris] Lack of technical assistance

New American specific

- Need for translation and interpretation services for outreach, information, and channels for advocacy
- Lack of community resources

- Exclusion from discussions of climate change

What Type of housing does this population usually inhabit? What resources are available for this population to gain access to housing programs? Ben B

Recommendations

Address barriers for low income Vermonters

Address barriers for Vermonters who rent

Utilize statewide translation and interpretation services for accessible outreach, education, and advocacy

Work with community partners to create spaces of trust and inclusion

Don't have much contact with indigenous groups, if anyone knows anyone to talk to about effects of this on indigenous or other marginalized groups.

PP - Judy Dow is on subcommittee on climate council, could be a source

Initial Discussion 7.23

- Jen M - CVOEO has office on racial equity that looks at ways POC are included. One of the most dynamic programs is the community ambassador program (20 who speak 12 languages), would host "house parties" that would share information in multiple languages. Founder and director of that will be at 8.6 mtg. Want to generate questions here
- Jen M - thinking about general barriers that BIPOC and new americans face. They face similar issues to other populations like renters, but they have special needs. Esp related to language and cultural resources. These new americans are familiar with climate change and more a matter of providing a space for the inclusion of their thoughts
- PP - suggests Judy Dow as a speaker
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- MW - two places to go with this, acknowledging need for new and better outreach to communicate benefits of CHS. may be useful to know what EVT is already doing in this space. Other is recognizing that POC are not all living in one type of home or one area. Think about how to connect those homes with CHMs
- GW - language and translation services have been barrier. WAP has translated 10 applications for CVOEO
- ER - EVT has shared some public engagement best practice, happy to share notes again.
- SS- looking at data on BIPOC households, 20,000. Whether there is a way to provide education specially for diverse communities through existing diversity programs
 - BB - VPFD efforts in Brattleboro
 - John M - VT Office of Racial Equity
 - AP - if using census data, know that it often undercounts indigenous population
- QUESTIONS
 - MW - historically POC populations have been excluded from lending. Not a lot of energy lending products, generally more protections, but curious how this could intersect with racial characteristics and ability to borrow monies

9/3/24 Convo During Full Meeting with Claire McIlvennie

- Jen M - where and how do you get data about the populations you're talking about?
 - Still figure this out, going to community spaces and interacting with target populations. Good to understand the national tools like ACS, when understanding limitations. Also residential consumption survey from DOE, and other govt sources
- SS - what is an example of policy development where these tools were applied, how were gaps in equity addressed.

- In VT, still working on how to implement this in agencies. EJ law got off to a slow start and deadlines got pushed back, but agencies are already working to incorporate these goals into regular work. Trying to incorporate these into the climate action plan, DPS made an effort to provide more context and education when asking last round of technical questions but area still assessing the lessons learned
- SS - asked Claire McIlvennie to review equity benchmarks
 - Have seen it but haven't taken deep dive, can do if it would be helpful
- PP - familiar with EPA enviro mapping tool? Yes. when/is enviro justice committee meeting? EJ coordinators meet a few weeks ago, will be meeting again at end of sept. ANR has calendars for both interagency committee and EJ committee. Can share link. EPA enviro tool shows Winooski as EJ area, due to wood particulate and F35s. does Admin have plan to react to that? Can't answer for Admin or DPS, generally that tool was created to reach Justice40 Initiative and it is being used for that purpose by relevant agencies.
- MW - Act18 directs to avoid unnecessary burden on populations. EAG has identified populations who will be harmed in early years. How do you think about balancing short and long term harms and benefits?
 - Important to think about historical impacts and cumulative burden. This is a very difficult questions. Can be important to be clear about what assumptions you're making and over what timescale. Lots of EJ work asks us to be more granular about how we're quantifying costs and benefits and thinking explicitly about those trade offs and engaging the communities who will be impacted.
- BB - how might the CHS law coming out of the upcoming session be covered by the EJ law?
 - There are specifics in the EJ law that could be argued to intersect with elements of the CHS law, there are requirements on the agency to do a lookback on distructional effects, cumulative burden. There is a period where covered agencies have to do a broad review. There are provisions that require extra review with new rules going forward, but still a lot left to be determined.

Low income households - **Geoff Wilcox**

- Consider discussing nonprofits (shelters/food shelf) that might serve low income households but may not be considered for LMI credit benefit (Mia)

Existing Challenges / Gaps on programs: currently there are more low-income Vermonters who struggle with heating and cooling their homes, as well as ensuring a safe and dry home, than there are programs and funds to assist them. I do not know the numbers but would say that the existing programs (including ours (Wx)), provide service to a very small percentage of eligible households who need those services. Their households not only need energy efficiency improvements, they need structural repairs of varying magnitudes. We are not anywhere meeting the needs now. LI Households have little to no potential to pay for energy efficiency work (clean heat measures) on their own or take out a loan to do so. We see this every day when clients aren't able to fix their roofs that have been leaking for years. There is a significant existing need for grant funds to provide Home Repairs for low-income Vermonters so they have a sound, dry home to live in. This also applies to 10% of existing Vermont homes that have Vermiculite insulation in their home that is considered an asbestos containing material and which needs to be abated to improve the energy efficiency of that home. This can cost from \$10k to \$20k per home just to remove the material.

Potential benefits: If the CHS creates funds that can serve more LI Vermonters that is a potential benefit. Due to workforce and contractor shortage, I see an issue of more funds available than that that can be properly used to provide services for LI Vermonters however.

Potential harms: Increased cost of clients to heat their homes. This will be significant and very harmful to LI Vermonters.

LI Vermonters will not be able pay for any CHS measures and will be stuck with higher fuel bills. Those that our Wx program will serve will be in a better position, but it remains to be seen if they will be in any better shape than they are currently.

More funds available to serve LI clients with CHS measures but not enough contractors to serve them, and as a result clients waiting many years to receive those measures and in the meantime seeing the increased costs.

Clients who can't be served by our Program or any other programs that may come along(?) will not be able to pay for heat, or pay for any CHS while they wait. IF some can, it would be a very small percentage.

Recommendations: Create a low income exemption whereas LI clients would not have to pay the increase in the fuel costs that the CHS would create. This would be a huge reprieve for them and could save some lives.

Discussion Notes:

- Geoff section on LI households
 - Based on experience in homes as energy auditor and as a state admin
 - Clients struggle to pay for structural repairs necessary to enable weatherization; try to connect them with other resources, but very low conversion rate
 - To actually do things, it has to be totally free
 - Lots of homes have vermiculite, by law have to abate before doing weatherization, adds a ton of costs
 - Lots of costs associated with weatherization even if the weatherization work itself is totally free
 - Concern about being able to serve people quickly enough to help people avoid increasing fuel costs
 - No cheap way to quickly decarb a lot of their clients
- Jen Myers
 - Has been fin coach for years, support the fact that any money needed to prep for weatherization becomes prohibitive
 - Things have to be totally free for LI homes, they can't take on more debt
 - LI and other marginalized demographics have a lot of overlap, there are many reasons why people who are LI can face other barriers too
 - Big Q is about how anything done for LI here need to merge with other programs such as LIHEAP
 - Moderate income people also face econ constraints that need to be addressed
- Mia Watson
 - Would be helpful to have recent data on who WAP serves, looking for income levels and number assisted and type of housing - whatever is readily available
 - Annual weatherization report to leg that has a lot of this. Will email to Ashira
 - Hear difficulty to fully transition away from fossil fuels, interested in knowing how much WAP is able to electrify homes

- Owner of the property needs to agree to owner responsibilities (safe heating, structural issues need to be taken care of, bathroom ventilation, no flagrant code violations) once they do that, WAP comes in and does efficiency work
 - Do have to sign rent stabilization agreement, LI units can't be raised more than 2 or 3% a year for 3 or 5 years.
 - There was a conversation in leg about exempting kerosene mobile homes, would need to be change in leg or decision by PUC to treat ZEMHs differently.
- MW
 - There is convo in housing space rending toward ZEMHs, but financing and supply of ZEMHs is limited
 - 16% of credits need to go to LI households, thinking virtually all LI work will have to come out of WAP program because of inability of most LI households to financially contribute
- BB
 - Separate from WAP, inability for folks to obtain financing, there is the tariff-based financing (on-bill), could terms of that be tweaked to make it more manageable (30 year payback, societal cost effectiveness) to make it friendlier to LI folks in order to broaden list of options for payback for LMI folks
- Geoff
 - Thinking of 16% LI requirement, assumed credits could be bought from work done to LI homes. Why is that so low? There are far more LI vermonters.
 - BB- first way of thinking is correct. There is convo on if LMI credits should be frontloaded
- MW
 - When this was being crafted, was more tied to idea of what was possible rather than reflecting population. MC can correct.
 - Based on how LI weatherization and HP installment is going, it's mostly just WAP doing this work. EVT might support but unless landscape in VT changes, most credits are going to come from WAP
- BB
 - If we want to broaden ability for LMI households to take part of change, we do need to make significant changes to how work is done in VT. People just above the income cutoff for WAP are still struggling to participate. There are lots of programs but they are very difficult to navigate, hard to figure out what is right for you. A unifying effort would be useful, maybe thats something EAG can lead on. Maybe a phone number to guide people through programs and get applications started
 - Some kind of alignment between different programs in this space
- JM
 - That's the theory between green savings smart, be energy navigators in addition to financial coaches. Have some training on what programs are. Having navigators is very important. ANR's new EPA funds might be used for that. Having 5 people in Jen's program has been useful but not enough. VCAN had webinar on [rewiring america](#) calculator. It will bring up vermont-specific incentives, similar to drive electric VT.
 - Having access to something that will help you navigate all incentives is important
- MC
 - Been a part of leg since it's infancy, not getting into police of it, but
 - 2/3 of credits can go to people of any income, why isn't it other way around? Answer is that the point of the policy is not necessarily for LI vermonters, thats what WAP is for, the point of this policy is to reduce GHG emissions.

Making sure $\frac{2}{3}$ of credits go to vermonters like MC, policy makers thought that would achieve GHG reductions. Thought is that if policy targeted at LI, it would be too expensive and not meet mandates of 2020 law

- GW - Fully agree with MC, that's why EAG is here. Can we put that point on future agenda, push back on that idea?

- MW

- Can talk about it, would like to know what action is wanted to come out of it. There is some convo on this being had in Credit Issues subgroup

- BB

- Also support that line of questioning, think that frontloading question could work towards doing maximum possible LMI work, could get close to filling the percentages of that requirement

- Emily: More information regarding the calculator and it being VT specific:

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

- PUBlic comment - John McCormick

- Second MC said, should have been said in first meeting of EAG, if not looking to eliminate (not allieve) suffering caused by this program. Has bill that was sent that would put more money into WAP and allow them to serve higher income individuals. Should put more money into WAP, it's a good program that just needs more money. Not going to make GWSA goals, judge could say you're trying you've got a good WAP
 - BB - more money to WAP is good idea, but CHS is law, we should work to reduce harm on LI communities. Need to stay focused on task at hand, focus on producing best equity outcome you can now
 - PP - totally agree with what John McCormick is saying, think the whole CHS thing from before it became law is a boondogle that supports entrenched interest instead of doing a simpler, cheaper, approach.
 - CT - focused on if implemented, duty to call out gaps so leg can make informed decision. Should be focused on helping PUC design best program. have struggled with question of how does CHS help LI households. Become apparent when talking about just transition, tools don't reside within CHS, its bolstering things like WAP, coordinating statewide systems. LI isn't one bucket, it's a bunch of different buckets. Its frustrating that equity can be delegated to third party. Idea that you can take a policy and make it equitable is incorrect. Should be a way to stave off price increases until other programs are actually accessible. There are existing gaps that CHS isn't going to solve. Best recommendations EAG can make are outside of WAP
 - GW - our job to advocate for those who are going to be harmed by this
 - BB - need to assume this is going to be implemented, we are charged with figuring out how tot make this as equitable as possible
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LIHEAP recipients - **Matt Cota**

1) LIHEAP AND THE CHS

The harm of a CHS on LIHEAP Recipients

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, 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. But these services are only available to a LIHEAP customer if the recipient of free fuel owns their own home. And only 21% of LIHEAP recipients do, according to data from Richard Giddings, Fuel Program Administrator. That means more than 10,000 Vermont families that qualify for fuel assistance may be unable to access an installed clean heat measure such as new heating equipment or weatherization. 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 \(j\)](#), 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.

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 can not 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 can not 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 of a CHS on LIHEAP Recipients

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. However, as stated above, this is inequitable because only 21% of LIHEAP recipients own a home that could be weatherized.

Discussion Notes

Matt Cota

- 20k VT families receive assistance
- Concern: whatever compliance fee is for people who cant reduce consumption, fee borne by st of VT
- What to do to increase buying capacity
- How do you set the regulated price to consumers given the differences in how fuel companies buy their fuel?
- Voluntary program for consumers and dealers - concern that 20k families depending on delivered liquid fuels might be harmed by clean heat standard – how do we mitigate that?

Jen: Is there a way the state could be exempt from compliance fee?

- Matt: asked for that and legislature did not adopt
- Jen: Could we advocate for that? Do you see any movement at a federal level to change LIHEAP rules as the country is trying to electrify? Way to influence that?
- Matt: Low income energy assistance program – lots of federal dollars go to AC, a subsidy to electric utilities. If someone used heat pump as primary source, could check that box and get it paid for. In existing homes, electric or wood alone not supplying 100% of heat, rest would come from their own pocket
- Jen: No movement to encompass more than one primary?
- Matt: A good question for Richard, could see if that could be done by rule as long as it complies with federal law.

Mia: As more people get heat pumps, there are going to be homes where it's difficult to get off fossil fuels – if only have LIHEAP assistance for fossil fuels, an incentive to not run their heat pump. Some of this is an education thing, but also could put people in a tough position. Would be a federal rule, but do think a good place for EAG to intervene to say state should work with federal government to change. Potentially a problem to only be able to select one type of fuel assistance...as we get more homes on heat pumps, there will be the option to use electricity, but may still rely on FF – LIHEAP program could allow people to select more than one type of fuel – ask Richard if it would be a federal rulemaking... might ask state to do something with federal government if Richard thinks warranted.

- Geoff: Only 60% of avg client's fuel paid through fuel assistance award...have to make sure we do good education to let people know to use heat pump at a certain time when less expensive than oil award...getting full use of fuel assistance and heat pump which is less expensive than anything else at certain times. VT has one of the most complicated fuel assistance programs...have to make sure not adding administrative burden that doesn't add benefit to clients. Richard a good person to get on this call.
- Sriram: This demographic group doesn't seem like low-hanging fruit to me...kerosine consumption has been coming down, only half a percent of thermal related GHG emissions...a challenging technical problem to solve for a small group of residents...may not be the area to devote resources. Maybe this should be an exception in the policy...make sure whatever we do is not punitive to this particular group...maybe a federal program that can help transition this small percentage of kerosine users.
- Matt: This program is often confused by people who think it's an electrification program – it's fuel neutral, used to reduce GHG emissions in thermal sector, many ways to achieve that. It was discussed, why not just say it can't be used for fossil fuels – everyone recognized that would be a failure to provide critical heat for LI communities.
- Geoff: EAG, not a rarity to see our clients heat their homes with kerosine, it's common, those are the folks we need to protect...they pay highest fuel price now, add cost, could displace people
- Pike: Clean heat standard favors wood, no drawdown or emission requirements.
- Sriram: Reiterating - don't want to be punitive to this specific group. Would rather see punitive measures towards bigger GHG contributors.
- Matt: Kerosine represents 8% of sales(?). Represents 16% of LIHEAP homes – not an insignificant amount of homes impacted. Why there was a discussion about whether or not to exempt them from the fee.

Chris: Haven't discussed augmenting the LIHEAP fund so there's a neutral impact. Can recommend as an action.

Ashira: Any more thoughts on implementation?

- Ben: Echo Chris. Ask Richard: state supplemental funds for LIHEAP. How to mitigate impact – seems like additional funds. More context about how more funds allocated during COVID.
- Mia: Should ask people we invite – what do you think we should ask PUC to do? What would you ask legislature or state government to do? What do you think would make the biggest change? Uplift those voices.
- Geoff: LIHEAP has a way to get a reduced rate for clients, why couldn't that formula be changed to exempt people from fee – need to keep pushing it and not give up on it, a good way to protect LI.
- Matt: We asked for that in legislative process (to accept gallons given to the LIHEAP customers), in lieu asked to build compliance cost into fixed delivery cost – they agreed to take that. Will include compliance cost. Pricing program established in the rule requires ... [Matt will provide notes]

- Ben: Effectively compliance cost is built into what's being paid out of LIHEAP fund. Flip side would be to bolster funds to cover additional compliance cost – one way to solve it.

Public Comment

- John: Clean heat standard going to increase costs of fuels over time to induce shift...relationship between LIHEAP and weather assistance program – can't separate the two under federal rules. With change in federal administration, don't know what will happen to LIHEAP. If you have subsidies, people who may not be LIHEAP clients may want access. LIHEAP does not provide 12 months of assistance...people may not be able to retrofit their homes.
- Ben: Was involved in legislative process...wanted to thank this group. Legislature worked hard to design an equitable program. A complicated task, thanks for your work.

EAG Responses

- Jen: Believe it's true that renters can get LIHEAP? Do you need to weatherize first?
 - Geoff: LIHEAP clients when they get award are told they're eligible for weatherization...not prohibited from receiving LIHEAP if they don't weatherize. Renters are eligible for LIHEAP.
- Mia: 30% of homes can't be retrofitted – would be a useful stat to find for our report.
 - John: Has been said by EAG members
- Matt: No one is denied fuel assistance if homes haven't been weatherized...funds for renters harder to access because have to get landlord to enter contract when they're not paying electric or fuel bill – a challenge

7/9/24 Meeting with Richard Giddings

- Powerpoint
 - Background on seasonal fuel assistance
 - 36k participants /year
 - Also qualified for WAP
 - Crisis Fuel Assistance
 - Last mon in nov -> last businesses day in april (or until funds run out)
 - Utility assistance program
 - 185% poverty , percentage off of monthly bil, 25% discount on bill

LIHEAP Funding & Benefit Stats Compilation

PROPOSED 11/1/23

| SFY | LIHEAP Total (1) | LIHEAP Carry-Over (2) | State Funds | TOTAL FUNDS | Fuel Liability Households | Full Season Fuel Liability Avg. Benefit O/P/K | Nov-Apr Avg cost petro/gal (3) | Purchase Power Gallons / %age (4) | SFY |
|------|--|-----------------------|-------------|------------------|---------------------------|---|--------------------------------|-----------------------------------|------|
| 2024 | \$22,000,000 | \$2,189,258 | \$3,066,942 | \$27,256,200 | 18,500 | \$897 | \$4.25 | 211/28% | 2024 |
| | <i>*special electric benefit of \$340 per household not included in average benefit</i> | | | | | | | | |
| 2023 | \$34,346,336 | \$1,140,139 | \$7,366,942 | \$42,853,417 | 19,526 | \$1,494 | \$4.25 | 352/46% | 2023 |
| | <i>*includes additional \$4.3m in state funds; average benefit amount includes an additional \$625 payment to households 128% or less of FPL</i> | | | | | | | | |
| 2022 | \$47,361,943 | \$2,000,000 | \$3,066,942 | \$52,428,885 | 18,728 | \$1,893 | \$3.37 | 516/68% | 2022 |
| 2021 | \$15,746,232 | \$7,073,509 | \$3,066,942 | \$25,886,683 | 18,015 | \$1,096 | \$2.24 | 489/64% | 2021 |
| | <i>*\$5m in CARES money included in carry-over numbers</i> | | | | | | | | |
| 2020 | \$18,257,418 | \$1,467,240 | \$3,066,942 | \$22,791,600 | 18,725 | \$798 | \$2.60 | 307/ 40% | 2020 |
| 2019 | \$17,546,576 | \$945,866 | \$2,899,704 | \$21,392,146 | 19,768 | \$715 | \$2.57 | 278/ 36% | 2019 |
| 2018 | \$16,120,387 | \$3,706,712 | \$2,967,984 | \$22,795,083 | 20,526 | \$849 | \$2.65 | 320 / 42% | 2018 |
| 2017 | \$16,181,020 | 3,646,376 | 3,837,000 | 23,664,396 | 21,286 | \$831 | \$2.16 | 385 / 50% | 2017 |
| 2016 | \$14,664,644 | \$1,939,626 | \$2,857,970 | \$19,462,240 | 22,618 | \$699 | \$2.11 | 331 / 43% | 2016 |
| | <i>*LIHEAP block grant award is less \$2.8M transfer to Wx and less 10% of block grant, which was carried over into 2017. Projected 2017</i> | | | | | | | | |
| 2015 | \$18,965,161 | \$2,074,954 | \$5,000,000 | \$26,040,115 | 25,147 | \$783 | \$2.87 | 274 / 36% | 2015 |
| 2014 | \$19,140,144 | \$591,060 | \$8,100,000 | \$27,831,204 | 26,625 | \$792 | \$3.62 | 219 / 29% | 2014 |
| 2013 | \$18,359,509 | \$1,583,684 | \$9,700,000 | \$29,643,193 (5) | 27,776 | \$898 | \$3.85 | 233 / 31% | 2013 |
| 2012 | \$19,529,156 | \$4,005,000 | \$6,100,000 | \$29,634,156 | 27,100 | \$900 | \$3.61 | 249 / 33% | 2012 |
| 2011 | \$27,557,850 | \$6,687,000 | \$0 | \$34,244,850 (6) | 26,546 | \$866 | \$3.31 | 262 / 34% | 2011 |
| 2010 | \$27,341,881 | \$5,447,000 | \$0 | \$32,788,881 | 20,399 | \$1,064 | \$2.68 | 397 / 52% | 2010 |
| 2009 | \$38,642,377 | \$363,000 | \$0 | \$39,005,377 (7) | 19,227 | \$1,718 | \$2.62 | 656 / 86% | 2009 |
| 2008 | \$16,883,723 | \$1,780,000 | \$5,898,032 | \$24,561,755 (8) | 15,369 | \$1,362 | \$3.24 | 420 / 55% | 2008 |

- (1) LIHEAP Totals for 2016 - 2024 are total federal block grant awarded during the respective fiscal years less the 15% transfer to Weatherization
 - (2) The carry-over amounts are as of June 30 State Fiscal Year 2020 close-out plus pending fuel dealer refunds
 - (3) Heating Season "Blended price" for oil/propane/kerosene including MOR/DOR discounts
 - (4) Assumes average winter consumption of 764 gallons for a delivered petro fuel (oil/propane/kerosene)
 - (5) Includes \$130,000+ in non-block grant LIHEAP funds
 - (6) Income maximum increased from 156% federal poverty level gross per month to 185% fpl, and resource test eliminated
 - (7) In July 2008 - heating oil approached \$5.00/gallon
 - (8) State Funds Contributed Prior to SFY 2008: SFY2007 \$590,769; SFY2006 \$10,200,000; and SFY 2005 \$1,000,000
- No state funds were contributed to LIHEAP prior to FFY2005

-
- Additional
 - 53% of LIHEAP households heat with oil and kerosene, 19% propane, 11% nat gas, 5% electric, 12% wood and pellet. Only primary fuel source
 - Own housing - 20.7%
 - Rent and pay for all utilities 49.8%
 - Rent and pay for some utilities 27.2%
 - Other 2.5%
- CHS

- Conclusion

- Looking at the 23-24 heating season, we provided an average benefit \$897, which purchased 211 gallons and provided a household with 28% of their home heating need. If the Clean Heat Standard was in place and we paid the same benefit of \$897, then it would have only purchased 181 gallons which is 20% of their households heating need. The 30 gallons less = 14.2% less heating product...
- The Clean Heat Standard will have a greater impact on low-income Vermonters as they will need to purchase more product with their own funds and that will include a charge per gallon that the dealer will have to collect.

-
- DISCUSSION

- PP - what would you change about CHS
 - RG - concern about decreasing....
- SS - LIHEAP recipients are mostly renters, need to focus on how to decarbonize renters' heating systems. For this population, what financial tools would need to be available to access electrification?
 - Can't use LIHEAP \$ for loan, it's all in fuels and some gets reclaimed to the program at the end of the season. WAP can't use them as loan funds but can use it to weatherize. To upgrade systems in multifamily unit building that are eligible, there are a larger group who is eligible
- MC - two suggestions would be to (a) eliminate kerosene as obligated fuel b/c it's use is so concentrated in LIHEAP clients and (b) allow kerosene -> propane switching. If customer says they use wood and then go to crisis aid, what can they get?
 - They can get more wood through emergency, not another fuel
 - Can't switch fuel type during season because benefit is only issued once
 - Kerosene households usually have outside tanks
- MW - it's difficult to use HP as sole heating source, as more fed programs come online it's likely that households will use dual fuel systems. Do you see problem with single fuel assistance being an issue?
 - Pay out based on primary system
 - Some states have tried monthly benefits which would allow people to switch fuels mid-season
 - VT doesn't have capacity to do this right now, don't have the IT system
 - Feds could change guidance on this, it is being discussed
 - Electric benefits are much smaller than other fuel types
- GW - assistance only pays for 28% of heat, if well educated, use HP during most opportune times, still pull fuel assistance for other fuels
 - Yes, or could use assistance for electric
- CT - detail by housing type for data tables? How are mobile homes impacted
 - Don't have off hand, could have data people try
- CT - if utilities are included in rent, how is LIHEAP used?
 - Smaller benefit for those who don't pay whole utility bill, or if they have subsidized rent
 - Having tenant name on fuel bill important for getting assistance
- MC - most expensive fuel used in lowest income home due to outdoor tank. Are we looking at recommendations for PUC rule or for legislation? There are federal considerations and then fuel assistance is under a different law and would have to go through a separate rulemaking process to change the program
 - Yes, and just finished recent rule update
 - Lots of places want to have the most up to date and efficient systems, but people are realistic about having lots of renters and having old building stock
 - Almost 80% of clients are those who rent. For landlords to invest in upgrade, likely increase rent.

- Would need to incent landlords
- MW - is there anything that could reasonably be done by the leg to help LMI households in this landscape?
 - More weatherization, decrease fuel need, button up older houses. Provide WAP with data on highest consumption households, use to prioritize WAP work. Taking fuel assistance signs you up for WAP
- CT - what is the offset of switching to an HP, does that conversion impact LIHEAP?
 - All LIHEAP is fuel product. Lowering overall expenses would be good for households, don't know how it would impact. Electric pays least benefit.
- CT - could we stretch LIHEAP \$ further because switches allow for more assistance to those who haven't switched
 - Not exactly because household would receive lower benefit and see it as same % of budget
- PP - landlords are climate concerned and would be willing to spend on upgrades to contribute to the effort

ADVISING THE PUC

- SS - if goal is HP for every household, lowest cost is around \$80M, where does that money come from? These households would benefit from weatherization. Focus on benchmarking who is getting LIHEAP today and how long would it take to weatherize all those homes
- MC - Even if the installation, equipment, and maintenance were free, there are certain homes that whole home electric retrofit is not an option and combustion heat is necessary. The reliance on electric heat could cause significant structural damage to the more than 20,000 mobile homes in Vermont. Most mobile homes have exposed water pipes running underneath and can not rely on electric heat pumps, which blows warm air from above. Lacking a basement, these homes require an outdoor tank and can not utilize biodiesel. In many cases, the best recommendation to reduce greenhouse gas emissions and costs is to switch from kerosene to propane. However, Act 18 does not allow this energy-saving, greenhouse gas-saving, and money-saving approach to be counted as a credit. Suggested amendments to the Act 18: Remove kerosene from the list of obligated fuels. Suggested change to Fuel Assistance Regulation: Give consumers a "crisis assist" delivery for their secondary heating system. Regarding actions that we would urge the PUC to NOT take: They should not suggest fuel assistance dollars only go to electric heat.
- CT - trouble seeing a scenario where compliance fees are dedicated to anything but WAP and LIHEAP, would need to fund those background programs. WAP helps stretch LIHEAP. PUC should allocate all compliance fees to funding weatherization
- MC - could take fed \$ from LIHEAP grant and spend 15% of it on weatherization. State has decided not to, but EAG could advocate
 - 15% is right number, to go over that would require waiver and would pull funds from heating homes
- GW - every year the leg or adv group gets upset that LIHEAP \$ goes up the chimney. People need to remember that people don't have other \$ to heat their home. Without \$ from OEO people go cold, giving them a HP with that money leaves them without \$ to actually heat the building
 - Balance, decarb vs heating support. If we had 100% coverage funds could talk about redirecting those funds, but we don't and still need to help people stay warm. Without the heating \$, drives people to temp housing, which creates other problems
- PUBLIC COMMENT
 - Johanna Miller VNRC - weatherization is a key priority, still need a heating source. Want that heating source to be more sustainable. We don't create fossil fuel here, externalized impacts but also shipping dollars out of state. Status quo is deeply inequitable and unsustainable.
 - In chat: Thanks for the opportunity to comment! To follow up, since I went on too long: To Pike's question about what Richard would suggest changing about the CHS, Richard noted one of the best solutions is to make investments in cleaner heating technologies. I agree. That is exactly what the CHS is intended to do. With a core focus on making this an affordable, equitable transition to low to moderate income VTers in particular. As you know, but it's critically important to underscore, that approximately 60% of residential

services are intended to serve low to moderate income VTers. Requiring the importers of fossil fuel heating to help customers reduce their reliance on fossil fuels ... Perhaps helping to pay largely for – or wholly for – helping LMI VTers access cleaner heating technologies, like WX and heat pumps. Thankfully, those fuel providers – and VTers – can reduce program costs too by tapping the cleaner heating incentives enabled by the Inflation Reduction Act. It's my hope we can all continue to work together to shape a thermal performance standard so that it does begin to foster the inevitable and essential transition off of fossil fuels. We cannot afford the status quo – not when it comes to deep economic injustices right now – and not when it comes to doing our part to combat the climate crisis, so young people and future generations don't have to bear the inconceivable costs of too little action, too late. Again, many thanks again for all you do and I ... we... very much look forward to collaborating with you and so many others to help foster the essential, inevitable and equitable energy transition we need.

- CT - asking Johanna, do you have a sense of solutions to pursue to help mobile home residents and others who who have a hard time decarb
 - JM - cost of fuel has been rising over time, in the short term we need to figure out how to serve customers to bridge to longer term destination
- John McCormick - credit cost is going to increase as program goes on. In the outyears, LIHEAP clients will still need to pay more, esp if their homes cannot be electrified or weatherized
 - RG - would cost an additional \$2.285M to do same amount of gallons with 70c increase. There is a cost associated, either state pays or LI folks would have to use less
 - GW - we are an energy efficiency program housed in a services org. Goal is to help people put money back in their pockets. Base program on cost effectiveness, focus on customer economics. In doing so we've saved a lot of carbon, but mission is saving money. Customer economics is huge for LI people in program
 - Jen M - important to have full econ look, looking at effects over time as more people use less fossil fuels. Using something less volatile, the savings of using less fuel in the future
- Recommendations for PUC - email thoughts to be put in this document

Moderate income households - **Emily Roscoe**

05 24 2024 EAG DRAFT report outline - Moderate income Vermonters

- i. Existing challenges and gaps in existing programs for moderate income Vermonters
 - a. Act 18 describes a “customer with moderate income” means 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)).
 - b. Existing low- and moderate-income programs in Vermont can be found here: [Equity Advisory Group 4.30.24 Meeting Materials | Public Utility Commission \(vermont.gov\)](#).
 - c. There are assumptions that programs should require moderate income households to hold some financial burden of an energy transition when receiving an incentive. 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.

- d. Moderate income Vermonters include 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.
- ii. Potential benefits of the Clean Heat Standard for moderate income Vermonters
 - a. Under the Clean Heat Standard, increased funding could be directed toward incentives for installed clean heat measures such as weatherization and heat pumps.
 - b. 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
 - c. Programs today with 10% income match for moderate income households need increased incentives to increase program numbers, increasing supply and demand. Increased incentives will reduce the upfront purchasing cost of a clean heat measure.
- iii. Potential harms of the clean heat standard for moderate income Vermonters
 - a. One potential harm of the Clean Heat Standard for moderate income Vermonters is customer confusion. 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.
- iv. Recommendations
 - a. Market transformation activities funded through the Clean Heat Standard would support for low- and moderate-income Vermonters.
 - i. Workforce development 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.
 - ii. Market transformation activities would also support a statewide consistent experience of low- and moderate-income Vermonters navigating clean heat projects.

Would be helpful to have advance notice of what sections are going to be worked on to bring in EVT experts - ER

GW - concerns related to people choosing which work to do and missing important efficiency upgrades. A lot to making sure heat pumps, solar, is actually successful with quality control and inspections

8.6.24 Discussion

- PP - unsure about eligibility requirements out here, but mod income households may not be eligible for existing subsidies
- BB - LI is <60% AMI, MI is 60-120% AMI. 60-80% is eligible for WAP, but 80-120% won't be eligible and will have to resort to other methods of financing. Benefit cliff is real for this group
- CT - need to call out VT's severe housing shortage and the impacts that has financially. There are those who recently became homeowners but are cash-broke even if they have the appreciating asset of a home. Converting from fossil heating source will face a severe cash-on-hand problem. Not dissimilar to renters who are stuck with old heating systems. There are real barriers to achieving the transition, saying it "needs to be equitable" isn't enough, need to find a way to help MI folks make the transition
- BB - what capacity and additional funding is needed by organizations to serve this moderate income population? Is it about expanding LI programs to make MI eligible, is it about creating new programs for MI population? Interested in talking to EVT about what resources would be needed to serve the population?

- ER - can talk more about what services and programs EVT provides, EVT has provided some details in previous filings, have thought about how incremental investments could aid both LI and MI populations. Can be a point on resources on this topic.
- ER: EVT incentive calculator:
<https://www.encyvermont.com/blog/how-to/how-much-money-can-you-actually-get-in-clean-energy-incentives>
- CT: (glitched out) - half of vermonters have under \$75 K income - the programs we currently have do not address this bracket - just aligning with the current programs will not help these households
 - BB -
 - CT - how to we serve that bottom 50% who will be most vulnerable to price increases and increase in energy burden. Market rate customers will likely transition faster and not face costs that lower income populations wil. Not sure how market dynamics will help serve those bottom 50%
 - MC - easy to think CHS is an electrification program - it is not. It is a program to reduce GHGs in thermal sector. For those 40% of VTers who use oil and may have gotten new furnace recently. They can generate credits for renewable fuels. If PUC scored renewable fuels well for CHS, lots of Vermonters would be able to avoid increased energy burden. This policy is supposed to put all actions that can reduce GHGs in the same basket
 - ER - Adding color to market transformation, EVT is thinking about MI populations, ability to reach those populations
 - ER- Current EVT rebate overview: <https://www.encyvermont.com/rebates>
 - Other services at EVT summarized here: <https://www.encyvermont.com/services>

PUBLIC COMMENT

Sam Swanson - S. Burlington. Welcome careful attention to these details. Have been involved with VT IPL. Issues are extremely important, community supports this effort. Electric and non-electric options need to be worked out. Generally support finding ways to help those least able to transition to low carbon heating. Those who are being talked about are also heavily impacted by climate change.

9/3/24 Full Meeting Conversation

- MW - want to prep conversation for next meeting convo. Will also talk about on-bill financing
- ER - have shared info about existing program through PUC's req on existing programs. Next meeting will have EVT speaker on lessons from those programs. Board consumer insight for Moderate income customers. Will discuss view from MI households, trends on factors to completing work, look at the contractor outlook, challenges engaging with these communities, need for guidance through project.
- MW - have worked with EVT and other EEU's to create an on-bill financing program, VHFA fronts money to EEU's with state resources, only checking bill payment history w/o shutoffs. Have not gotten much take off in the program yet, trying to figure out how to do more with the next year of funding. Challenges with (a) clean payment history, (b) enabling home repairs, (c) complex projects, (d) general confusion, need more support to achieve higher volume, (e) contractor shortage. With MI customers, hard to get commitment to weatherize even when long term savings are clear. All the other challenges in the weatherization space exist for these customers
- SS - can you talk more about target end user for the MI on-bill payment program? How many were targeted, how many were engaged, how are projects going?
 - MW- Expected 1000 participants in first 3 years. Currently have 10 participants. EVT had some start up issues that hurt first season. With one more year of fundings, aiming for 300 participants.
 - PP - shows how challenging it is to actually get something up and running. This is where rubber meets road, this experience in implementation needs to be considered by PUC
 - MW - VHFA is usually not front door, have done some work to advertise better, but still figuring that out. Other places does by efficiency
- MC - terms of VHFA program?
 - 2% interest, \$0-3 monthly servicing fee. Special rules on realized savings, considering changing some to make projects more attractive.
- ER - SS had good point about community based approaches for MI Vermonters. Applies to everyone, sharing

some resources on using equity-focused engagement and outreach strategies. Also sharing white paper on serving target populations.

- BB - is the VHFA program just weatherization?
 - MW - primarily weatherization, if there are heating conversions can cover some. Different sources of money have different rules

Manufactured homes - **Chris Trombly**

Clean Heat Impact on Manufactured Housing

Chris Trombly, Vermont State Housing Authority

May 28, 2024

Overview

In Vermont, a Clean Heat Credit (CHC) is a tradeable unit representing a specific reduction in greenhouse gas emissions achieved through eligible clean heat measures. These measures could be anything from switching to renewable energy sources like solar or wind power to installing energy-efficient appliances or improving home insulation.

The Clean Heat Standard (CHS) is a regulatory framework intended to reduce greenhouse gas emissions from the heating sector. Under the CHS, obligated parties, such as fossil fuel importers and distributors, are required to acquire a certain number of CHCs to offset the emissions associated with the fuels they sell.

Here's how it works:

1. **Clean Heat Measures:** Eligible projects or actions that reduce greenhouse gas emissions are identified. These could include installing heat pumps, improving building insulation, or switching to cleaner fuels like renewable natural gas.
2. **Credit Generation:** When a clean heat measure is implemented, the resulting emissions reduction is quantified and certified, leading to the generation of CHCs.
3. **Obligation:** Fossil fuel importers and distributors are obligated to acquire a certain number of CHCs based on the amount of fossil fuels they bring into the state.
4. **Trading:** CHCs can be bought and sold in a marketplace. Obligated parties can either invest directly in clean heat measures to generate their own credits or purchase credits from others who have generated them.

For residents there are four paths they can follow:

1. **Conversion** - from heating fuel to clean heat measure, inclusive of weatherization.
2. **Weatherization** - Unable to convert to clean heat measure, we'll do the best we can but will stay on fossil fuels.
3. **Replacement** - Not feasible to weatherize or convert and requires a full replacement.

4. **No action** - Resident is unable or unwilling to convert, weatherize, or replace home.

Existing challenges / gaps

- **Financial Barriers:** Upfront costs of clean heat upgrades are a significant obstacle for many MH residents, exacerbated by limited incomes. Mobile homeowners often face financial constraints, and investing in clean heat measures like heat pumps or energy-efficient upgrades can be costly upfront. Mobile homeowners often have lower incomes and may struggle to afford the upfront costs of energy-efficient upgrades like heat pumps or improved insulation. Existing programs, while helpful, may not fully cover these costs, leaving a financial burden on homeowners.
- **Technical Limitations:** Older mobile homes may not be compatible with certain clean heat technologies due to structural or electrical limitations. Mobile homes might have specific technical limitations or requirements that make the implementation of certain clean heat measures more complex. Older mobile homes may not be suitable for certain upgrades due to structural or electrical limitations. Programs should address these technical challenges to ensure equitable access to energy-efficient heating solutions.
 - Technical Assistance needed from homeowner.
 - Financial capacity to pay for gaps in costs to convert, weatherize, or replace home.
 - Compel to make the weatherization needed to reduce heating fuels costs.
 - Existing home structural or layout not feasible for heat pump.
 - Most MH operates on either Propane, Kerosene, or oil.
 - Heat pump may be inadequate to be the sole heating source, require heating fuel to supplement/back up.
 - Existing electrical inadequate to convert.
 - Financial pain from increase in heating costs but unable to take advantage of clean heat measures.
 - LIHEAP only covers portion of heating fuel.
- **Awareness and Access to Information:** Many MH residents lack awareness of available programs and incentives, hindering their participation in the clean heat transition. : Many mobile homeowners might not be aware of the CHS, the available incentives, or the potential benefits of transitioning to cleaner heat sources. Many mobile homeowners may not be aware of the available programs or understand the benefits of energy-efficient heating options. Outreach and education efforts could be improved to reach this demographic effectively.
- **Limitations to existing programs for assistance** (*Ex. LIHEAP, Weatherization Assistance Program (WAP), Efficiency Vermont*). It's important to recognize that existing programs which are often cited as the solution for low- and moderate-income households in their current state are not delivering the desired outcomes to meet climate goals on proposed timeline. As a result, we are observing that in actual mobile home parks, most residents are on heating fuel such as propane or kerosene.
 - Capacity to exceed existing program volumes.
 - Awards ceilings leave a gap for residents which they cannot support.
 - Funding sources: ARPA funding is ending, and IRA funds not defined yet.
 - Clean Heat is not designed or estimate of revenue.

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



Potential Benefits

- **Reduced Energy Costs:** Investing in clean heat measures can significantly reduce energy bills over time, providing long-term financial benefits.
- **Improved Comfort:** Energy-efficient upgrades and cleaner heat sources can lead to a more comfortable living environment with consistent temperatures and better air quality.
- **Environmental Impact:** Transitioning to cleaner heat sources helps reduce greenhouse gas emissions, contributing to Vermont's climate goals and a healthier environment.
- **Financial Incentives:** The CHS might create financial incentives for mobile homeowners who invest in clean heat measures, either through direct incentives or through the potential to generate and sell CHCs.
- **Energy Savings:** Can significantly reduce heating costs compared to traditional systems like propane or oil furnaces.
- **Environmental Impact:** By reducing reliance on fossil fuels, help lower greenhouse gas emissions and contribute to a cleaner environment.
- **Year-Round Use:** can also provide cooling in the summer, eliminating the need for separate air conditioning units.
- **Significant Energy Cost Savings:** Clean heat technologies, like cold climate heat pumps, offer substantial long-term savings on energy bills.

- **Improved Comfort and Air Quality:** Modern heating systems provide more consistent warmth and better air quality, enhancing the quality of life for residents.
- **Environmental Advantages:** Transitioning away from fossil fuels reduces greenhouse gas emissions, aligning with Vermont's climate goals.

Recommendations

Equitable Outcome:

Achieving an equitable outcome for CHC ownership requires a holistic approach that addresses social, economic, and environmental factors. By prioritizing equity in the design and implementation of the CHS, Vermont can create a clean energy future that benefits all its residents.

1. **Fair Access and Participation:** All Vermonters, regardless of income level, geographic location, or housing type, should have equal opportunities to participate in the CHS and benefit from clean heat measures. This means addressing barriers to access such as upfront costs, technical knowledge, and information gaps.
2. **Equitable Distribution of Benefits:** The financial benefits of the CHS, such as reduced energy costs and potential income from CHC sales, should be distributed equitably across all income levels. This might require targeted incentives or subsidies for low- and moderate-income (LMI) households to ensure they can afford clean heat upgrades and participate in the CHC market.
3. **Protection from Harm:** The CHS should not disproportionately burden or harm any particular group, especially LMI households. This means carefully monitoring and mitigating potential unintended consequences, such as increased fuel prices or displacement due to energy upgrades.
4. **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.
5. **Transparency and Accountability:** The CHS should be transparent and accountable, with clear mechanisms for tracking and reporting on equity outcomes. This allows for ongoing monitoring and evaluation to ensure that the program is achieving its equity goals.
6. **Targeted Investments:** Public funds and incentives should be directed towards projects and programs that specifically benefit LMI communities, renters, and residents of manufactured homes. This might include grants, loans, technical assistance, or other forms of support to facilitate their participation in the CHS.

Recommendations (continued)

Potential Actions to consider:

These actions 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. Initiatives include exemption policies, enhanced incentives, and outreach programs. Through partnerships and investments, Vermont can advance clean heat while prioritizing vulnerable residents.

Financial Barriers

1. **Exemption for Low-Income Households:** 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.
2. **Target Low-Middle Income Households:** Prioritize eligibility for clean heat credits or assistance programs to low and middle-income households, aligning resources with areas of greatest need. By targeting assistance to these demographics, the impact of clean heat initiatives can be maximized, ensuring equitable access to benefits.
3. **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.
4. **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.
5. **Enhanced Financial Incentives:** Expand existing financial incentives and rebates to provide substantial support for mobile home residents transitioning to clean heat technologies. By alleviating upfront costs, these enhanced incentives make clean heat solutions more accessible and attractive for residents.

Technical Limitations

1. **Assessment of Electrical Infrastructure:** Conduct a thorough assessment of electrical infrastructure in mobile home parks 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.
2. **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 mobile home communities. Through competitive bidding, qualified providers will be enlisted to execute comprehensive weatherization projects tailored to mobile homes.
3. **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 mobile home residents are central to the planning and execution of clean heat initiatives.

4. **Dedicated WAP Funding:** Allocate dedicated or supplemental funding to bolster the Weatherization Assistance Program (WAP), specifically targeting resources to support mobile home 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.

Awareness and Access to Information

1. **Targeted Outreach and Education:** Develop tailored outreach and education programs to effectively communicate the benefits of clean heat technologies and available assistance programs to mobile home residents. These initiatives will empower residents with the knowledge and resources needed to make informed decisions about adopting clean heat measures.
 2. **Technical Assistance and Support:** Provide comprehensive technical assistance and support services to address the unique challenges faced by mobile home communities in implementing clean heat technologies. Expert guidance will help navigate technical complexities and ensure successful adoption of clean heat measures.
 3. **Community-Based Partnerships:** Forge partnerships with local organizations and community groups to ensure that outreach and assistance efforts are culturally relevant, linguistically accessible, and effectively reach mobile home residents. Collaborative initiatives will leverage existing community networks to maximize outreach and engagement.
- 6.

| Source | Link |
|---------------------------------------|---|
| Equity Advisory Group Final Report | https://docs.google.com/document/d/1_OJR8O LUbhlpW7_aK6pnzRNX8B6ba_BH/edit |
| Public Utility Commission - Regulator | https://puc.vermont.gov/clean-heat-standard?emci=acc6d00b-0203-ef11-96f3-7c1e521b07f9&emdi=77011c1e-0503-ef11-96f3-7c1e521b07f9&ceid=10150648 |
| Act 18 as enacted | https://legislature.vermont.gov/bill/status/2024/S.5 |
| Fuel Assistance | https://dcf.vermont.gov/benefits/fuel |
| Weatherization Assistance Program | https://outside.vermont.gov/dept/DCF/Shared%20Documents/Benefits/Weatherization-Income-Guidelines.pdf |
| Vermont Pathways | https://climatechange.vermont.gov/sites/climatecouncilsandbox/files/2022-03/Pathways%20Analysis%20Report_Version%202.0.pdf |

| | |
|--|---|
| Analysis Report | |
| Energy.gov Decarbonizing US Economy 2050 | Energy.gov: Decarbonizing US Economy 2050 |
| RMI: Low-Income Energy Assistance | https://rmi.org/by-the-numbers-low-income-energy-assistance/ |
| Rhode Island | CleanHeatRI.com |
| Maine | https://www1.maine.gov/governor/mills/news/governor-mills-us-department-energy-announce-10-million-federal-grant-support-energy |

- Challenges: Some MHs are occupied by renters, which face split incentive challenges like other renters (Mia)
- Challenges: Manufactured Homes are often located in Manufactured Home Communities (MHCs) which have shared community-level needs but may lack financial/organizational capacity to apply for larger-scale funding (Mia)
- Challenges: MHCs are often located on less desirable land, with a much higher likelihood of being in a flood zone. Will be hit much harder by climate change (Mia)
- Challenges: Older MH depreciate over time more than traditionally built homes. This makes larger financial investments into those homes a challenge (Mia)
- Benefit: comparatively easy to make new MHs net-zero, compared to other buildings, because of small size/factory production (Mia)
- Harms: MHs are typically occupied by low income households, with less financial capacity, will be more impacted by rising fuel costs (Mia)

*Accessibility is a topic wants to document better, its not clear who can assist someone who wants to complete a full heat pump conversion. Who would their liaison / navigator be?
Need more on electrical company side.*

Renters/Rental Property Owners - **Pike Porter**

Rental property owners and tenants have similar impediments to adopting clean heat measures as homeowners. Additionally, that the owner of the property and the property occupant have different financial incentives may create additional impediments. While a renter may meet income eligibility requirements for CHS programs to lower GHGs, the property owner may not. Unless crafted correctly, low and moderate income renters may not realize any benefits of the CHS, though they may still pay for higher fuel costs.

Programs may not be available for rental properties such as:

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

Not all tenants are eligible for programs

Renters have no say in type of heating system

Landlords must restrict tenancy to income eligible renters to access programs, grants, etc.

Hydronic heating systems hard to replace **Larger multifamily buildings are especially challenging to use heat pumps for hot water. These systems are more complex and require more costs due to skilled maintenance needs (Mia)**

Apartment layout not conducive to mini-splits

Electric service not adequate for load

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

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

Backlog for weatherization programs, wait list can be years-long

Affordable housing faces challenges with electrification without the ability (or desire) to raise rents/utility costs for low-income renters (Mia)

Potential Benefits:

Reduces GHGs that cause global warming

Lower costs to heat/cool homes

Less expensive to run than oil and propane

Provides AC, less drafty homes

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

Potential Harms:

Heating system is not as effective as the system it replaces, causing cold spots in the house.

Extra costs to replace system

Unanticipated maintenance costs
Colder basements—freezing pipes
Higher electricity costs
Heat pumps are more expensive per BTU than natural gas

[Chris] Financial capacity to afford substantial upgrades

[Chris] USDA Rural Development or HUD rent restrictions, either will be absorbed by property owners or passed onto tenants in the operating budget.

[Chris] Substantial amount of existing housing stock is old which presents conversion challenges. See housingdata.org for more data.

Recommendations:

Ensure programs exist that are eligible for rental units in addition to owned homes. Minimize required paperwork and any potential requirements that the unit must continue to be rented to income-eligible tenants.

Provide incentives to upgrade electric service.

Upgrade building codes to require energy efficient heating systems in existing buildings and clean heating systems in new buildings.

Provide builders incentives to comply with new building codes.

PP - Some help organizing bulleted info, feedback on blindspots.

MW - big difference between small and large rental arrangements. Also different situation for subsidized.

Looking at different kinds of rental situations would be important.

PP - interested in info on subcategories of rental units

MW - can share info on VHFA produced resources

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

RECOMMENDATIONS AND FURTHER QUESTIONS

- PP - CHCs shouldn't be distributed until LMI credits are fulfilled. Changes in building codes would be helpful.
- Jen M - This is a LMI issue, large amount of LIHEAP clients are renters. How can renters engage their landlords. Is there a way renters could call a central source to have them reach out to landlords. Targeted info campaign for landlords
- SS - how would one go about assessing weatherization opportunities in rental properties? Do we understand housing types of rental properties? How are landlords thinking about CHS and decarb?
 - Vermont apartment owners association
- MW - Split incentive is going to be major challenge this program runs into. There are currently programs for landlords. Conventional wisdom is that you have to subsidize entire cost of project, hard to get private landlords to convert. VT will have to offer incentives to landlords to get benefits to renters. Burlington imposed weatherization ordinance. Without any statewide approach, very hard to get any system in place. Quality system could create the infrastructure for rental quality and safety and decarb
- BB - landlords with hydronic heating systems have some options for decarb. There seems there would be an incentive to rent to LI tenants so that the property gets WAP upgrades.
- GW - WAP pays fully for any cost effective weatherization measure, but any health and safety improvements need to be covered by landlord. Important to have rent stabilization aspect of WAP

- CT - HFI has multifamily properties, capital improvements are heavily reliant on grants, operating budget costs are passed on to tenants who are not able to afford. Want to convert all units to clean heat, but many it doesn't make financial sense. Would be helpful to have state program to do needs assessment. Would need to define funds needed to make upgrades.
- SS - for all population segments, state should focus on replacement costs to turn over HVAC system. Get an inventory of HVAC systems, have capital on hand to target conversion opportunities. Have schedule for replacement.
- BB - may be existing programs that are going into homes that could flag furnaces.
- GW - Craig Peltier @ VHCB had worked on addressing split incentive, having renters pay towards weatherization
 - CT - the money used for that program comes out fund that VHCB uses to build new housing. Weatherization needs new bucket of funding. Who is accountable for weatherization statewide?
- MW - study estimated \$35k in costs per unit in multifamily housing to go from min RBES standard to high performance standard. Current incentives are much much lower (about \$3,500 per unit in affordable housing). There are long term benefits to highly efficient building, but is not estimated to covering whole cost, which is borne by housing dollars.
 - Housing funders are now estimating this at over \$60,000 per unit to do higher development costs - I will add a final citation once I get it (MW)
- MW: VHFA also running pilot on-bill financing program (WRAP), which renters can participate in with landlord participation. The renter pays the change on the utility bill until they move, at which time the next tenant takes over charge. There has been a slow uptake overall, esp among renters. Hard to get MI people to do weatherization due to cost constraints, although WRAP reduces/eliminates upfront costs and can be paid back over time. Also long wait time in some areas due to contractor shortage.
- PP - any update on weatherization wait time?
 - GW - any 5+ unit gets done by 3E, owners should reach out immediately. 1-4 unit rental are through local agencies; Central Vermont and NE Kingdom have <1 mo waitlist. Others longer

PUBLIC COMMENT

- John McCormick - 30 V.S.A. § 8129(c), concern about intersection of EAG disbanding when rule is adopted and the duties listed. Equitable transition and rapid energy transition are incompatible.

July 23rd Conversation

-Recommendations, data, and report language

- Jen M - need some way to engage landlords, ways to bring them into the program. Having a call center or clearinghouse for renters to call in and get their landlords engaged
- BB- incentivizing landlords to participate in this transition and doing home repairs for their buildings. Could need companion legislation. Would likely have to be limited by wealth of landlord, but could be helpful for enabling repairs.
 - What would those qualifiers be?
 - LI residents of owned buildings? Are landlords low income? Something that proves that the landlord doesn't have the resources to make the investment themselves
- GW - home repairs, removal of vermiculite, wiring upgrades. This is owner's business so shouldn't provide for free but what about low interest loans? If has LI residents WAP can weatherize for free after repairs are done. Renters aren't going to invest in owner's building, need to engage landlords
- PP - non-profits who are landlords, CT, does your org own properties? May be important to bring institutional perspective into this discussion

- CT - Yes, own 18 multi-family properties. all properties have residents who are subsidized. Renters are given a heating allowance, if properties exceed, need to find another way to cover. For mobile homes, most are leased by occupant.
- MW - EAG should recommend that state should enforce building codes. We've talked about lack of econ incentives for weatherization, burlington put in a weatherization ordinance but have been having trouble with workforce. WAP is not going to be able to address all individual sitions. Should use platform to advocate for rental building code standards and enforcement.
- PP - important to engage institutional landlords to indicate it's not an split-incentive problem but instead a factor of workforce and other ability to implement specific measures. Non-profit landlords don't have a profit motivation but are still facing trouble implementing CHMs
 - John M - nonprofit landlords have the same issue for profit landlords do, it's all money
 - GW - difference is private landlords will transfer increase in costs to tenets thru increased rents, non-profit/affordable housing cant/wont do that
 - CT - fluctuating fuel costs will be issue no matter if CHS is implemented. HPs do lower costs and variability in home heating, how do we find money to get there
- MW - haven't talked about CHS creating higher incentives for landlords to make improvements then turn out LI tenets for higher income tenets.
 - GW - WAP has rent stabilization provision
 - MW - if we assume most LI credits are generated by WAP, that has protections. But someone should have someone keeping an eye on that. Limited incentives paired with rent stabilization. Should make sure CHS doesn't accelerate this. Probably can't say every CHM implementation should carry rent stabilization, but we should think about what we can do.
 - BB - need a funding mechanisms to help landlords overcome upfront costs. Could have pool of money for landlords whos tenets qualify and put rent stabilization provision in that agreement
 - MW - there is VT rental improvement program that already exists that has rent stabilization, but generally new provision on this front needs protections
 - John M - vast majority of subsidized housing is owned by non profit landlords, those orgs have affordability missions which means they are already tied to keeping down rents

Public comments

- None heard

Cont. Discussion

- AP - Pike, is this enough to turn this into a set of recommendations to PUC or do you still have Qs
 - PP - have enough
- CT - talked about limits on raising rents, need to have funds in operating expenses, will set aside funds in capital needs, if that money is insufficient and can't pass costs on through rent, that money has to come from somewhere, would need a grant. Biggest takeaway would be need for a grant for non-profit landlords

Small businesses - **Sriram Srinivasan**

Clean Heat standard - Small businesses

In the thermal sector, the commercial segment accounts for 0.9 MMT of CO₂e/yr emissions representing ~31% of total emissions. Within the commercial segment where small business groups are part of fossil gas, fuel oil, propane as sources of emissions make up the major type of fossil fuels used with 43%, 26% and 25% respectively.

Vermont small businesses with < 500 employees account for 60% of the state's total employment. Within the small business segment represented by ~79,000 businesses, ~80% of the businesses are owned and operated by a sole proprietor. These businesses are most likely to have offices and(or) facilities that are either part of a home office or an office building that is shared. The rest of the ~20% of the small businesses employ more than one and up to 500 employees. As small businesses make up ~98% of the commercial segment with a variety of industry sectors, it may also present unique challenges in implementing any universal CHS installed and delivered measures due to the complexity and shared infrastructure of commercial buildings.

In the commercial segment, small businesses are represented by various industry sectors including Professional Services, Retail, Construction, Healthcare Services, Public Administration and Manufacturing. In implementing CHS, a focused effort on opportunities for electrification of large facilities including retail, office space and services can help reduce a significant amount of GHG emissions in the thermal sector. Cold climate heat pumps(CCHP) installed to-date for commercial applications represent only ~10% of total installations in VT over the last ~6 years. Several commercial buildings in VT have already benefited from solar panel installation to enable local renewable energy use and reduce overall electricity related GHG emissions.

Suggested Implementation Strategies

- 1) To facilitate good reach, best practice sharing and effective implementation, trade organizations that represent different groups of industries should be engaged in the design and implementation of CHS measures.
- 2) Also other programs such as Green business certification such as LEED certification with loan support from banks can be leveraged in partnership with commercial real estate companies to address electrification opportunities and GHG emission reduction initiatives.
- 3) Leverage the current US Treasury program, Small Business Credit Initiative (SBCI) to drive innovation in GHG emission reduction of small businesses in the areas of renewable energy, agriculture, manufacturing and healthcare.
- 4) Integrate CHS implementation with available credits from Inflation Reduction Act (IRA) available through 2033 for energy efficiency programs in commercial buildings.

Obligated entities - **Matt Cota**

2) OBLIGATED PARTIES AND THE CHS

The Harm of a CHS on Obligated Parties

There are concerns that a Clean Heat Standard could cause irreparable harm to the current heating fuel delivery infrastructure. Most of these damages would impact low and moderate-income Vermonters living in rural areas.

To understand *why*, it is essential to explain *who* is obligated under the law as written. Despite best efforts to move it upstream, the obligation is owned by the entity that brings heating fuel "in or into Vermont" for ultimate consumption.

Lacking a water terminal or pipeline, all fuel comes to Vermont by either rail car or tractor-trailer truck from larger terminals in Quebec, New Hampshire, New York, or Massachusetts. None of these terminals are obligated under the law. Instead, the company that brings the fuel into Vermont is obligated. This means the owner of a truck that sells a few thousand gallons of fuel a year is competing in the same credit market as Vermont's largest fossil fuel seller. Given the challenges of complying with this complicated program, several locally owned fuel businesses with retail locations in more than a dozen towns in rural areas have already given up. They have sold out to a larger multi-state corporation or restricted their delivery area. If the CHS is adopted by the Legislature in 2025, this trend will continue. For consumers, this means fewer choices in a less competitive marketplace.

Another concern is enforcement. Any law not enforced or applied unevenly will create an inequitable result. If people perceive that rules are not applied fairly, their willingness to comply with those laws and trust the institutions enforcing them diminishes. This can erode public trust in governmental institutions and cause the collapse of the delivery system, which 3 of every 5 Vermonters depend on for heat and hot water.

The first instance of this occurring with CHS is the [dealer registry](#). We are four months past the initial registry date, and the compliance rate is approximately 60% based on publicly available lists of fuel providers. This matters because any dealer not registering is unlikely to produce clean heat credits or pay the alternative compliance clean heat fee. The larger the fee, the bigger the price spread between a compliant and non-compliant dealer. In one winter, a compliant dealer could lose significant market share to a non-compliant dealer. To be clear, failure to register violates the Consumer Protection Act in 9 V.S.A. chapter 63, and a dealer faces penalties in addition to the clean heat fees. However, the competitive nature of the deliverable fuel business — and the seasonal nature of this industry— could cause financial damage to the marketplace. While utilities can recover costs through a regulatory filing at the PUC, delivery fuel dealers have all the burden of regulation under the CHS and none of the benefits.

Unless the PUC can police the borders, ensuring that all trucks carrying heating oil, propane, and kerosene are registered and compliant will be nearly impossible. Unlike motor fuels tax, which has fewer obligated entities and pays monthly rather than annually, there is no bonding requirement in the law for heating fuel sellers. *How will the PUC insert its authority in a private transaction between a homeowner in Brattleboro and a truck driver from Keene on a cold night in January?* The CHS anticipates that trucks that come across the border at all hours of the day will purchase credit obligations based on the gallons they sold the prior year. If the fuel is delivered on a truck, only law enforcement is empowered to place an obligated party "out of service" for non-compliance. No letter or threat of a fine from an attorney at the PUC will undo the damage to this competitive marketplace because of a lack of enforcement resources or capabilities. An obligation to obtain a "non-tangible commodity" called a "Clean Heat Credit" based on sales volume from the prior year can only be enforced on Vermont's town roads and state highways. A government policy that relies on businesses to "raise their hand" so that they can pay a competitor to take away their customers is nonsensical. Failure to fix this before the CHS is implemented will insert chaos into the orderly distribution of an essential commodity that a majority of Vermonters depend on for heat, hot water, and cooking.

The Benefit of a CHS on Obligated Parties

The CHS will benefit some of the largest corporations that sell fossil fuels in that it will diminish competition and choice.

Challenge of complying, concern with not identifying all entities that sell into Vermont makes it easy to cheat and then the entities who comply (and their customers) will be harmed. Challenge for PUC to identify and track all. Need help finding all OPs.

Want EAG to ask DPS and PUC to develop system to get everyone registered.

BB- PUC ones responsibility to create registry.

Other sections that need to be added:

- **Municipal buildings/schools (Mia)**
- **Small business, commercial industrial space (Ben)**

September 17, 2024

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

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

Dear Clerk Anderson,

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

Background:

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

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

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

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

The recently released Thermal Sector Carbon Reduction Potential Study prepared by NV5 has raised significant concerns that the percent total cumulative annual lifecycle emissions reduction potential from low-income households falls short of the statutory target of 16 percent.

However, despite the challenge posed in producing low-income credits under the CHS, the EAG feels that decreasing the low- or moderate-income requirements under Act 18 is not desirable.

This finding has reduced some prior concerns from EAG members that expanding the definition of a low- or moderate-income credits as outlined below, could have the potential to crowd out projects serving the residences of low- and moderate-income households. Expanding the pool of potential credit-producing projects while maintaining a clear link to activities that serve the essential needs of these households may offer greater flexibility to achieve the equity goals of Act 18.

Recommendation:

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

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

LMI credits may be derived from:

- a) *Measures installed in, or delivered to, property owned 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 acknowledges that part b) of the above framework may be difficult to define or verify. Part c) allows for confirmation that the entity is legitimately offering services and is not merely self-proclaimed to serve LMI households. However, removing part b) could conceivably expand the definition of LMI-serving institutions to include schools and

hospitals. While those institutions do often receive targeted funds to provide services to low- and moderate-income individuals, this is not the primary purpose for these institutions, and expanding the definition to such a large extent would likely dilute the intended benefits to low and moderate-income households.

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

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