

"Understanding Gaps in Uptake in State Weatherization Programming"

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BCRC ENERGY INTERN

Vermont Energy Goals

Vermont Goals

- Reduce Energy Usage 30% by 2050
- Weatherize 120,000 homes by 2030

Bennington Goals

- Reduce energy usage 50% by 2050
- Increase the usage of electricity 50% by 2050

Energy Burden

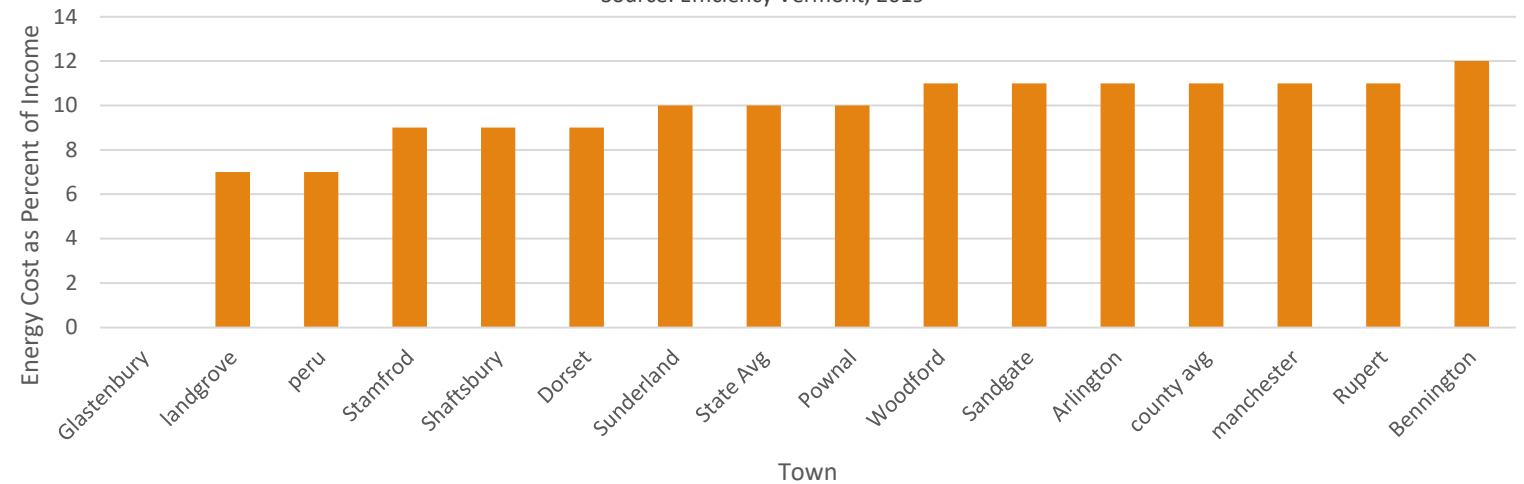
Energy Burden is a metric of total energy cost as a percentage of total income. It indicates how great of a financial strain energy costs are on households.

According to the Vermont Low Income Trust for Electricity, a burden more than 10% is considered "fuel poor". Statewide, the average is 10% and in Bennington County, 12%. This suggests that a large portion of residents fall into this category

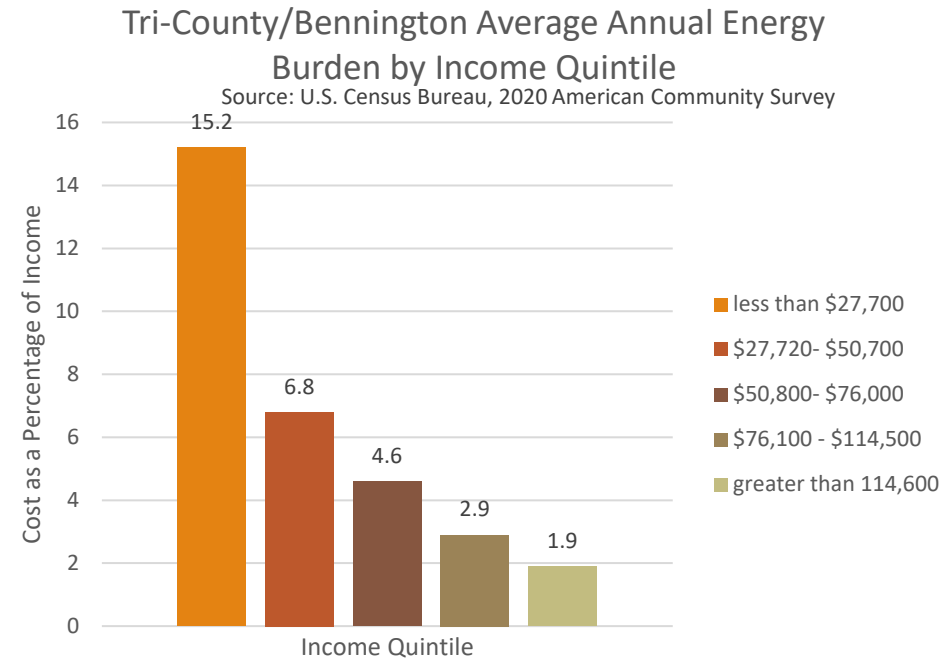
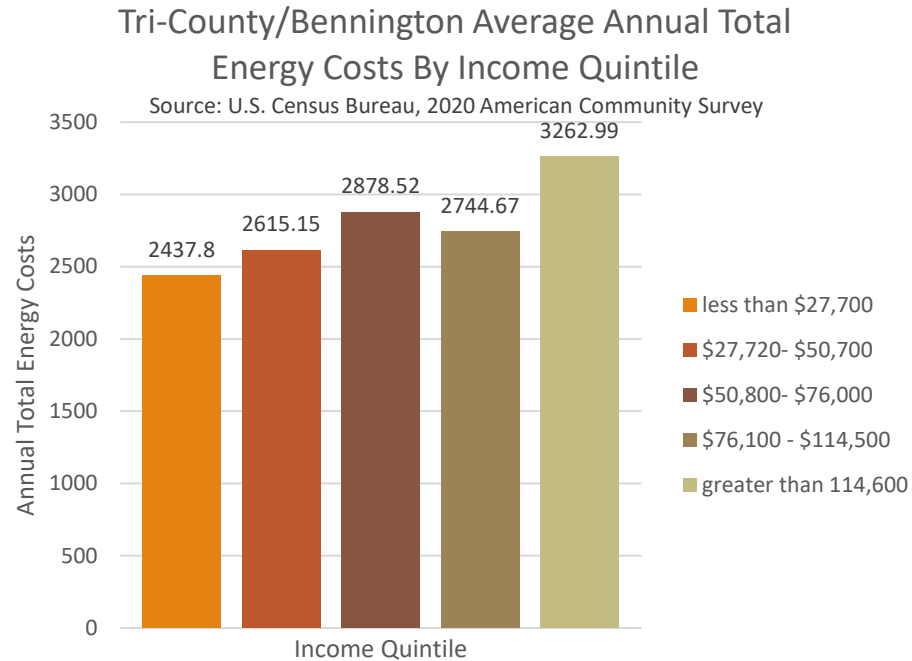


Average Energy Burden in Bennington County

Source: Efficiency Vermont, 2019



Energy Burden Across Income Quintiles



Although households in the lowest income bracket spend 25% less on energy, it takes up 8x as much of income

Weatherization

- Measures that make homes more energy efficient
 - Ex: insulation, efficient appliances, heat pumps
 - Year round benefits
- Crucial for state energy conservation efforts
 - 50% of state energy usage goes towards thermal sector
 - 60% of thermal sector (30% of total energy) is used for home heating
 - 32% of Bennington energy spending
 - *heavily fossil fuel dependent
- State Goals
 - Weatherize 80,000 homes by 2020 and 120,000 by 2030 (31,535 since 2008)

Weatherization benefits

ENVIRONMENTAL

- WEATHERIZED HOMES USE LESS FUEL
- OVER 3 MILLION LBS OF CO2 ESTIMATED TO HAVE BEEN SAVED IN BC IN 2021

FINANCIAL

- LESS FUEL USAGE MEANS LOWER ENERGY BILLS
- SAVINGS RANGE FROM A COUPLE HUNDRED TO OVER A THOUSAND
- 10-30% REDUCTION IN BURDEN

HEALTH

- WEATHERIZATION HAS BEEN SHOWN TO HAVE POSITIVE HEALTH BENEFITS
- LOWER RATES OF ASTHMA, RESPIRATORY ILLNESS, OR TEMPERATURE RELATED STRESS
- LOWER RATES OF HOSPITALIZATIONS AND PREMATURE DEATHS

Low-Income Access

- State focus on equity
 - LMI households have most to gain and least access
 - Highest burden and environmental risk
 - Avg cost of comprehensive weatherization: \$ 9,500
 - 20,000/80,000 (avg 900/year or 10,800 since 2008)
- VT Legislature has approved an unprecedented amount of funding towards LMI weatherization
 - \$45 million for 3000-4000 low- income households
 - \$35 million for 8000-9000 moderate-income households
 - Funding is funneled through regional Community Action Organizations and other rebate programs

Weatherization Services



	The Bennington-Rutland Opportunity Council (BROC)	HeatSquad
Overview	Local arm of the Vermont Weatherization Assistance Program. Free home weatherization for income qualifying residents. Includes home audit and comprehensive renovation all conducted by BROC.	Low-cost home energy audits and project management for all income levels. Helps at all stage of the process
cost	Project value: \$9,500 (covered by state funding)	Home Energy Audit: \$150 (\$50 for LMI) Renovation: depends on scope of work *incentives and loans available through partnering institutions
Low-income options	Available for households depending on income and # of residents (Ex: \$47,110 for a household of one)	Discounted audits and increased incentives through partnering institutions (Efficiency Vermont + VLITE); Financing at 0% interest
Uptake	79 projects in 2021; (approx. 185 since 2019); recent high demand	500 audits; 200 projects (120 LMI)



Efficiency Vermont

Efficiency Vermont (EVT) is a state "Efficiency Utility" created by the PUC to coordinate energy related projects and rebates. The organization offers its own efficiency services and offers incentives to encourage certain measures. EVT also offers larger rebates and additional programs for income qualifying customers.

Home Performance with ENERGY STAR (HPES)

- Rebate to cover cost of home weatherization when using EVT approved contractor (EEN)
 - Up to 75% off up to \$2000
- Income Qualifying households can get 75% up to \$5000
 - Starting at \$78,000 for one person
- *63 HPES rebates claimed in 2021 in BC (216 since 2019)

Income-Based Energy Bill Reduction Program

- Free or low-cost efficiency measures of LMI households
 - Free or low-cost efficient appliances
 - Replacing energy intensive products
 - *count limited
- Home energy visit and project recommendations
 - starting at 51,950 for one person
- *18 Home Visits in 2021 (32 since 2019)

The Home Energy Loan:

Efficiency Vermont, through its three partnering financial institutions, offers an accessible loan program, "The Home Energy Loan". Borrowers can take on up to \$20,000 for weatherization with terms up to 15 years. Households below \$90,000 can get 5-year loans at 0%, with rates rising slightly.

*since November 2021, VSECU has offered 13 Home Energy Loans in BC, with an average value of \$10,300. 5 loans went to Low-Income Households and 3 to Moderate-Income Households.



VSECU

**EMPOWERING
POSSIBILITIES**



Uptake: Bennington County

BROC:

- 79 in 2021
- Approx. 185 since 2019

HEAT Squad:

- 500 Audits
- 200 Projects
- *since 2014

EVT:

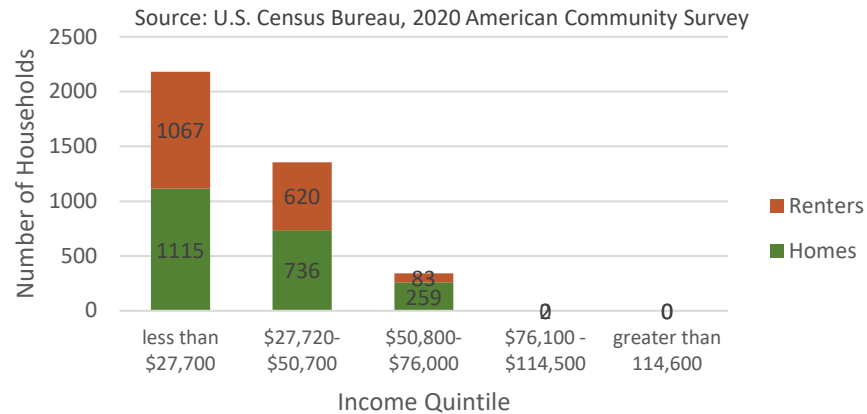
- 63 HPES in 2021
216 since 2019
- 18 visits in 2021
32 since 2019

VSECU:

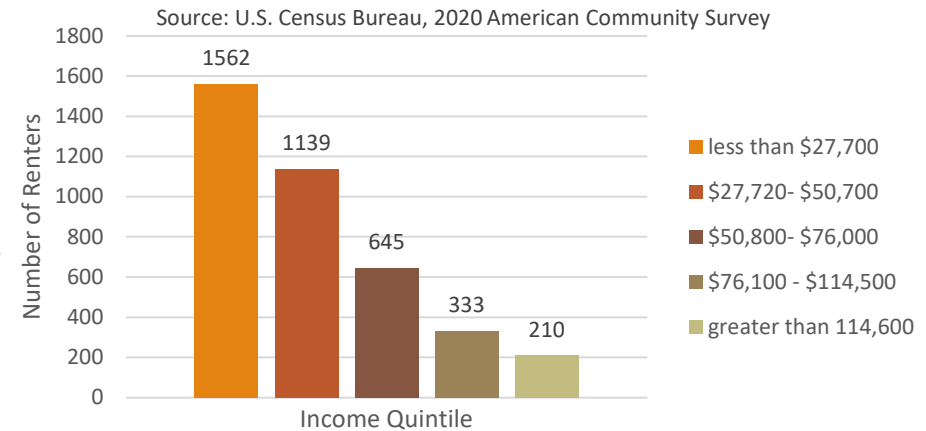
- 13 since 11/21
5 Low-income
3 Moderate-income

Barrier: Tenure Status

Estimated Number of Bennington County Households That Qualify for BROC, by Tenure and Income Quintile



Estimated Number of Renters in Bennington County by Income Quintile



TENURE:

- In BC: 3,886 households (26.6%) are renters
 - Split Incentive and little leverage disincentives large-scale weatherization
 - Energy may be part of utilities (24.7% of renters don't have separate gas bills)

Barrier: Information Overload

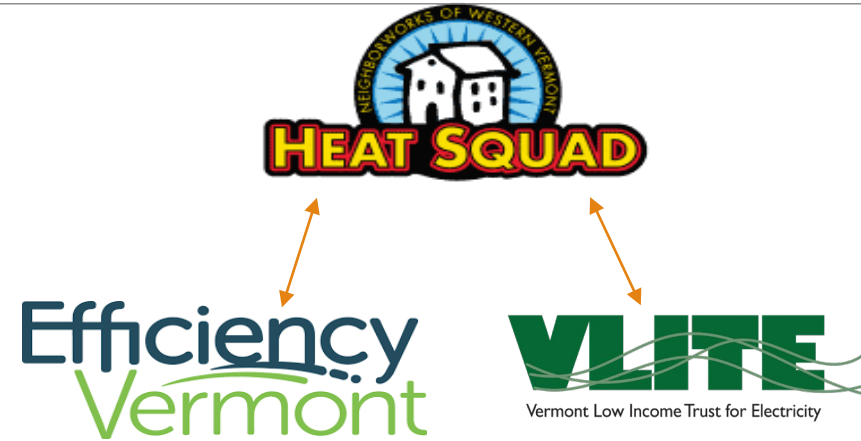
"The challenge is the variety of programs tailored to different households with different resources"-
Ann Lawless, Heat Squad



Barrier: Coordination

LACK OF COORDINATION:

- Little to clarify differences
- Too Decentralized
 - "If we were truly all in this together in the same way, with the same rules, income guidelines, methods of doing audits, etc. it would be easier for the customer. But when does that ever happen!!" -- Ann Lawless, Heat Squad
- Few, large-scale cross-collaborative efforts
 - "we totally are happy to help them with a referral or to reach out to their local cap...to connect the with weatherization services and potentially fuel assistance and... look at what is best for the member" -- Laurie Fielder, VSECU



Barrier: Cost and Financial Options?

"its way more economical really... to do weatherization...There's a lot more rebates locally available" --Laurie Fielder

"we'll do the financing in combination with any rebate" -- Laurie Fielder

"somebody who couldn't qualify for a \$6000 loan but they can qualify for a \$3000 loan"
-- Laurie Fielder

"Money is not the only issue. Certainly its one of the largest barriers." -- Ann Lawless

EVT: \$9500
-\$5000
VLITE: -\$1500
\$3000

VSECU:

\$50/ month for 60 months

\$ 600/year

Savings: -\$1000/ year

\$400/ year net savings

*available for 23.9% of all Bennington County Residents (all LMI)

Barrier: Time and Bureaucratic Complexity

"For low- and moderate-income households, attention may be on a number of **other pressing concerns**, such as job security or medical care...**Given limits** of time, mental energy, or income, **people may settle** for heating sources that satisfy their needs, even if an upgrade may save them money."

- Tara Santi, "Increasing Energy Efficiency and Beneficial Electrification in Low-Income Households in the Northeast Kingdom"

Barrier: Financing Limitations

FINANCIAL BARRIERS:

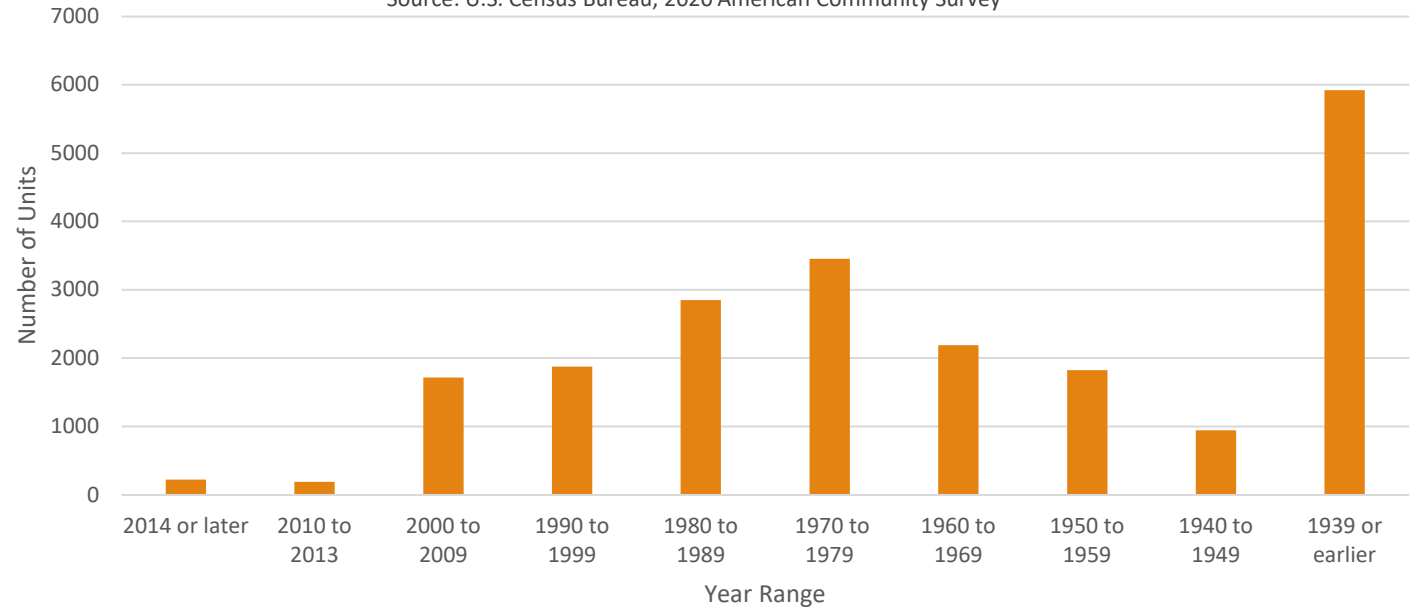
- LMI households may not have adequate credit history
 - 30% of low-income consumers nationwide are credit invisible and 15% are unscored
 - "low to moderate income is one of those things we really think about carefully" -- Laurie Fielder, Vgreen Program Director, VSECU
 - "the people that are less than positioned to utilize the credit are people with credit challenges...they've defaulted in the past or they've defaulted with us in the past"-- Laurie Fielder, Vgreen Program Director, VSECU
- Risk of over-leverage

Barrier: Land Conditions

Generally, LMI households live in older, poorly-maintained homes. This means that more extensive/non-subsidized renovations will be required. This is a particularly prevalent issue given that 41% of housing units in BC were built before 1960, and only 10% since 2000

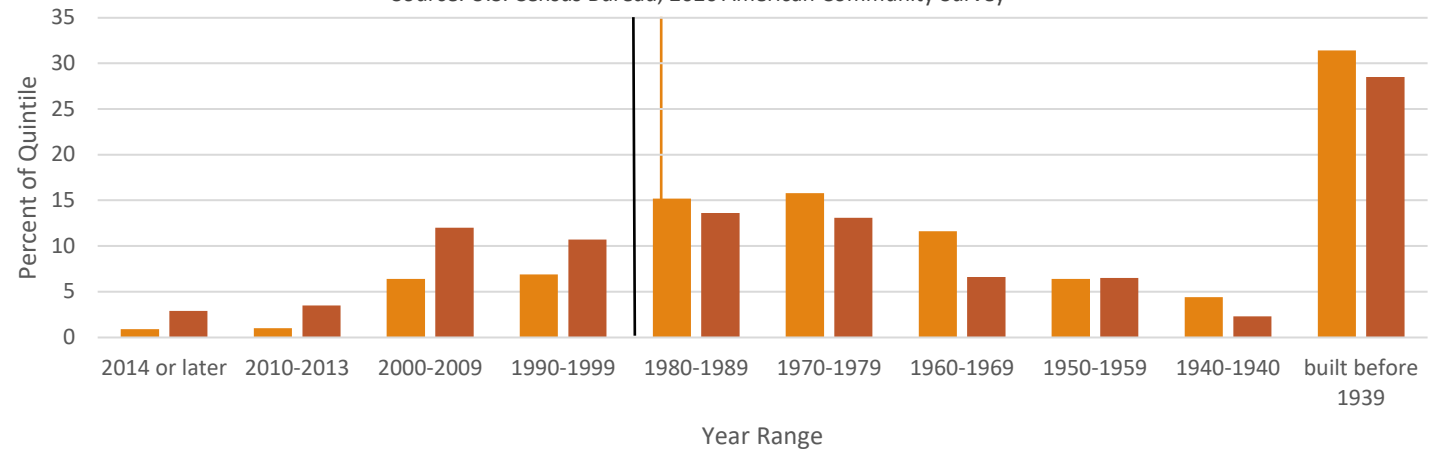
Year Bennington County Housing Units Were Built

Source: U.S. Census Bureau, 2020 American Community Survey



Tri-County/Bennington Percentage of Bottom and Top 20% living in housing built in a given range

Source: U.S. Census Bureau, 2020 American Community Survey



Barrier: Future Uncertainty

INCOME INSTABILITY

- LMI HOUSEHOLDS FACE LESS JOB AND INCOME SECURITY. THUS MAKING A LARGE HOME INVESTMENT SEEMS UNREALISTIC

HOUSING INSTABILITY

- LMI HOUSEHOLDS FACE GREATER HOUSING INSECURITY AND MAY BE TWICE AS LIKELY TO HAVE MOVED IN THE LAST YEAR.

UNFORSEEN COSTS

- HOUSEHOLDS MAY BE CONCERNED ABOUT BEING OVERLEVERAGED AND FINANCIALLY STRAINED IN THE EVENT OF UNFORSEEN COST (HEALTHCARE, CAR, ETC)

Barrier: Labor Shortage

Unfortunately, we have a lack of contractors, and most are out with work until Dec/Jan so anyone getting an energy audit this summer most likely will not have their work done before winter.”

-- Melanie Paskevich, HEAT Squad

Barrier: Data

WEATHERIZATION:

Information about the progress in residential weatherization scattered among the different actors

Much of available data doesn't add LMI lens

Small time-range

COSTS AND SAVINGS:

Providers offer piecemeal information about project costs and associated savings

*While its case specific, little established baseline or formula

ELIGIBLE HOUSEHOLDS:

Little data or reports currently exist to estimate how many households in BC may qualify and where they are in the region

"we don't necessarily know how many people could certainly use a loan" -- Laurie Fielder, VSECU

Recommendations

Increase Coordination Among Stakeholders to **Clarify Responsibilities and Maximize Savings**

- Encourage service providers and stakeholders to collaborate to **identify areas to streamline the weatherization process**
 - Establish differentiated responsibilities and objectives
 - Collaborate on public-facing work to make system more user friendly
 - Create centralized system to have constituent eligibility requirements, estimates, and metrics of success
 - Identify areas for cross-collaboration and program development
 - *"To say you do what you do best, and we'll do what we do best and then where we meet in the middle is where can develop programs that... really get to those borrowers" -- Laurie Fielder*
 - Developed standardized reporting system
- Promote and support the *Green Saving Smart* program to teach financial literacy and help residents understand/maximize the cost-saving options available to them
- Ensure that LMI interests are represented in program develop and collaboration
 - Work with LMI organizations to develop new forms of participation and troubleshoot

Recommendations

Increase LMI outreach

- Work with towns and LMI organizations to develop and **distribute materials** about energy and financing options
 - Provide **comprehensive data** on costs and savings
- Utilize **grassroots, community-based outreach** methods
 - Ex: tabling, presentations at gatherings, neighborhood demonstrations
 - "A referral from a trusted friend or family member is great"- Ann Lawless
- Support Local Town Action as an alternative to independent outreach infrastructure
 - Support town officials and energy committee members as interconnected, trusted leaders
 - Offer help to towns coordinating events, forums, and campaigns

Recommendations

Support Workforce Development

- Use state resources to invest in vocation training and other educational opportunities
- Take steps to make the career more competitive
 - Increase pay for state employed crewmembers
 - Use marketing campaigns to counteract poor public perceptions and highlight benefits
- Collaborate with service providers and vocational programs to promote vocational training at high schools and youth programming events
 - Career fairs
 - Expand offerings and outreach at Southwest Vermont Tech
- Encourage tangential contractors to diversify

Recommendations

Explore Innovative Offerings for Renters

- Use state mandates and incentives to ensure that public and affordable housing developments are weatherized
 - Regulatory and executive action
 - Added funding for those who weatherize
- Support 3E Thermal expansion into Bennington Region
- Support development of Renter's Unions and collective bargaining
- Explore incentives that will shift landlord cost-benefit

Questions?

Thank You!
