

February 06, 2025 – House Committee on Energy and Digital Infrastructure

# Exploring Energy Burden in Vermont

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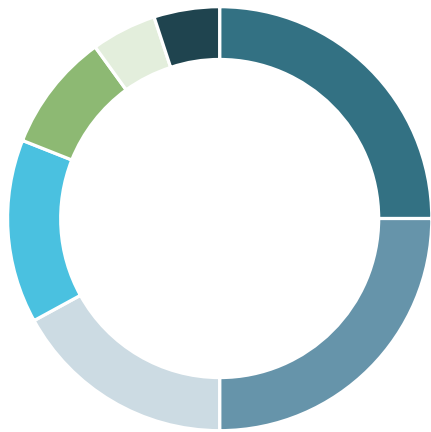
# Who we are

- Statewide\* energy efficiency utility
- Help Vermont transition to more affordable, low carbon energy use through education, incentives, and support for our clean energy workforce
- U.S. Environmental Protection Agency ENERGY STAR – Sustained Excellence partner

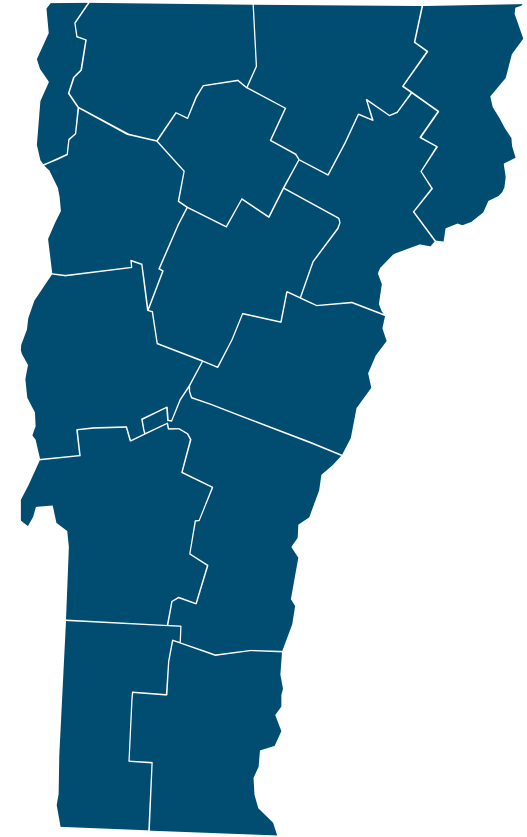


# Performance Requirements

Weight of each electric metric



- Total Resource Benefits
- MWH reduction
- Summer Peak kw
- Winter Peak
- Lifetime MWH
- GHG reduction
- Administrative Efficiency



Additional requirements\* include:

- Minimum benefits delivered to each county
- Minimum 1:1 of costs : electric system benefits

## Overview of Vermont's Energy Burden

Strategies for Alleviating  
Energy Burden

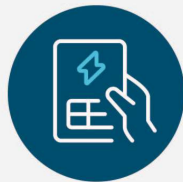
Beyond Energy Burden:  
Increasing Access for  
Customers

# Overview of Vermont's Energy Burden

# Energy Burden, Explained



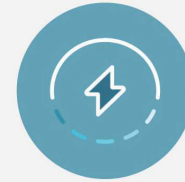
## 2023 Vermont Energy Burden Report: Calculating Total Energy Burden



Energy Spending



Household Income

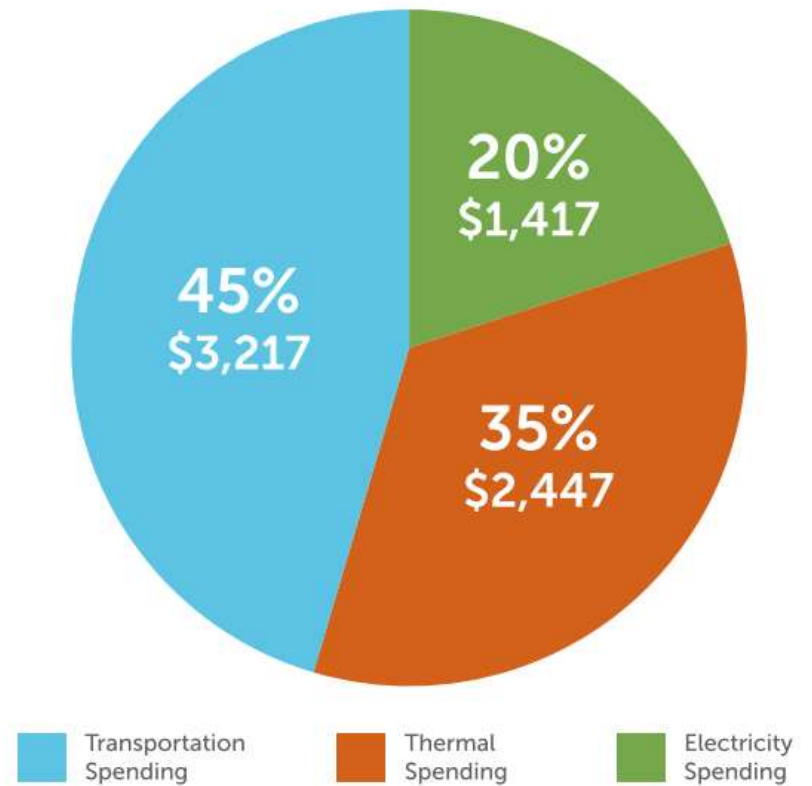


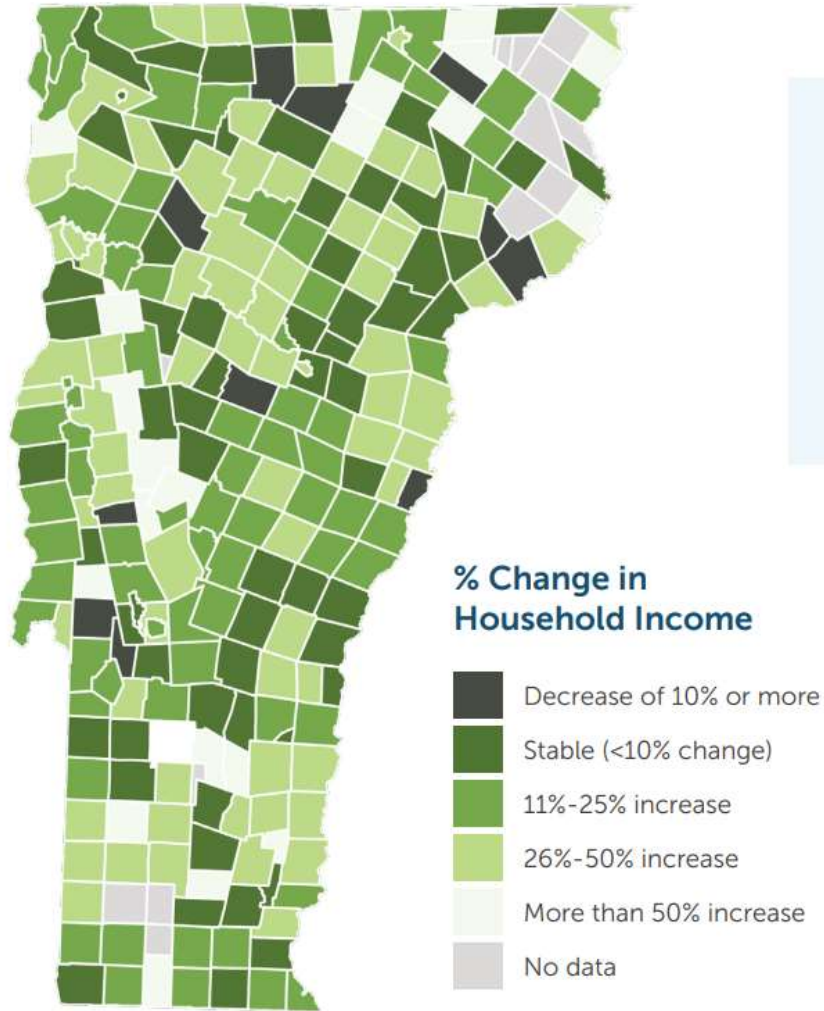
Total Energy Burden

# What makes up Energy Burden?

Average spending by category

[Efficiencyvermont.com/energyburden](http://Efficiencyvermont.com/energyburden)



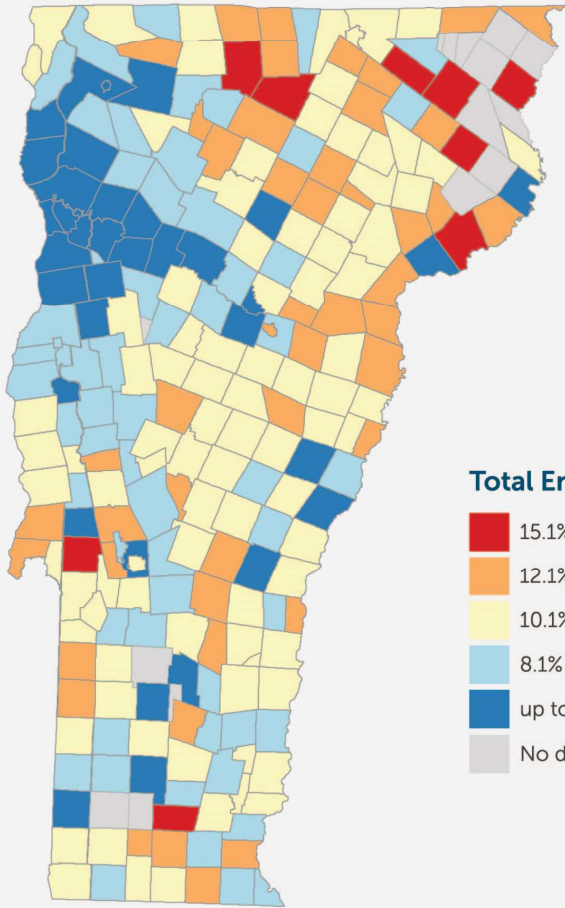


## Income & Burden

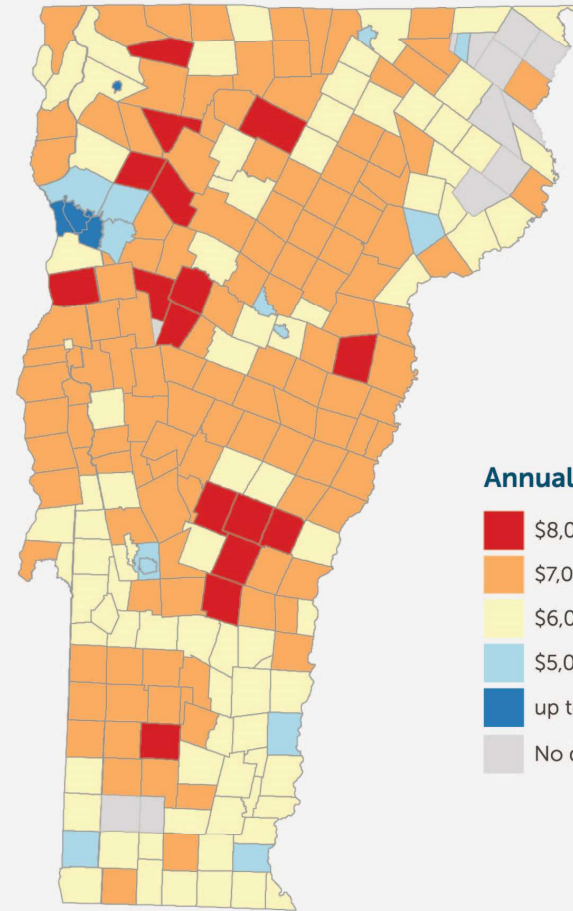
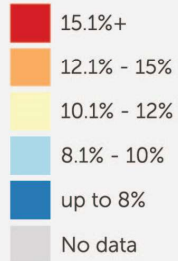
There were 37 towns that experienced significant declines in median income from 2017-2021. Where there was a decrease in median income, we generally observed a corresponding increase in energy burden.

Image 2: Percent change in median household income by town, 2017 ACS vs. 2021 ACS.

## 2023 Vermont Energy Burden Report: Total Energy Burden & Spending by Town



**Total Energy Burden**



**Annual Amount Spent**

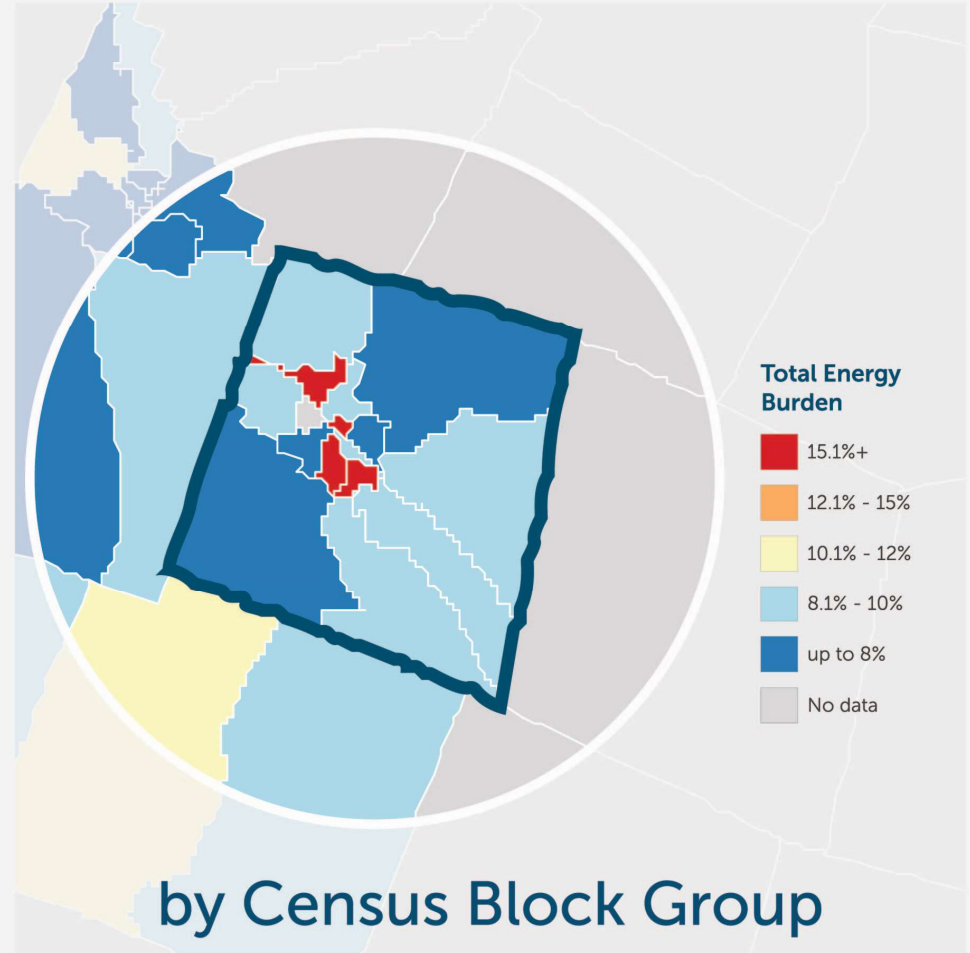
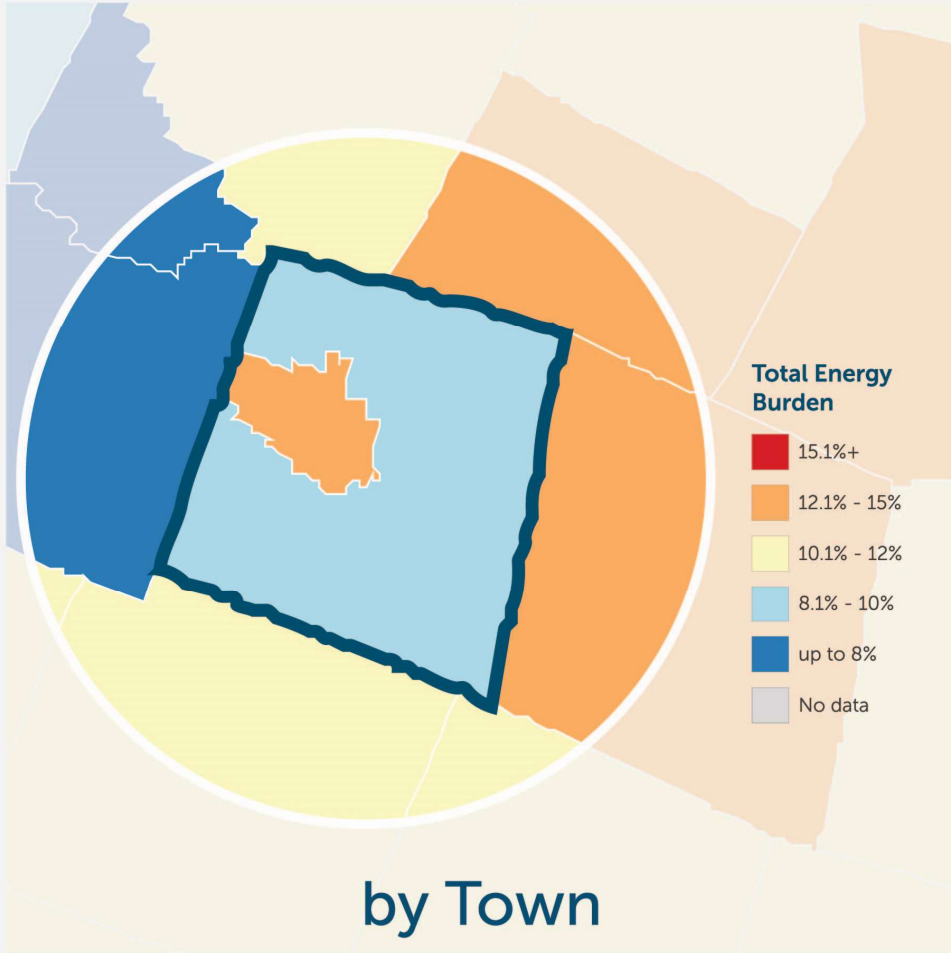




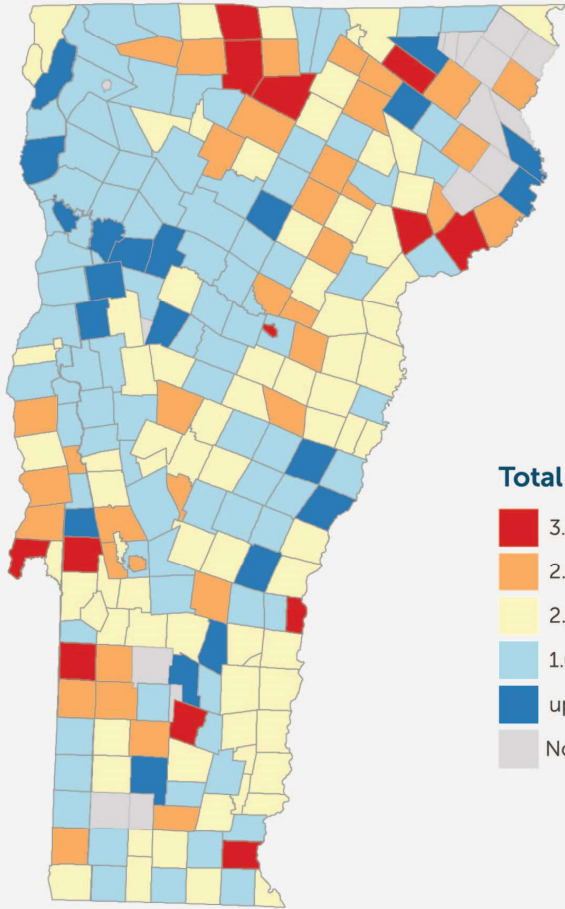
# Total Energy Burden >15%

Town	Total Households	Median Income (2017-21)	Thermal Burden	Electricity Burden	Transportation Burden	Total Energy Burden
Montgomery	522	\$30,500	7%	4%	12%	23%
Charleston	441	\$37,798	6%	3%	10%	19%
East Haven	132	\$36,250	6%	3%	10%	19%
Lowell	326	\$42,000	5%	3%	9%	17%
Concord	478	\$41,667	5%	3%	8%	16%
Brighton	558	\$42,431	5%	3%	8%	16%
Castleton	1,685	\$43,257	5%	3%	7%	15%
Dover	570	\$45,625	6%	2%	6%	15%
Bloomfield	115	\$46,563	5%	3%	8%	15%
Statewide	256,514	\$67,674	4%	2%	5%	11%

# 2023 Vermont Energy Burden Report: Barre, VT • Town vs. Census Block Group

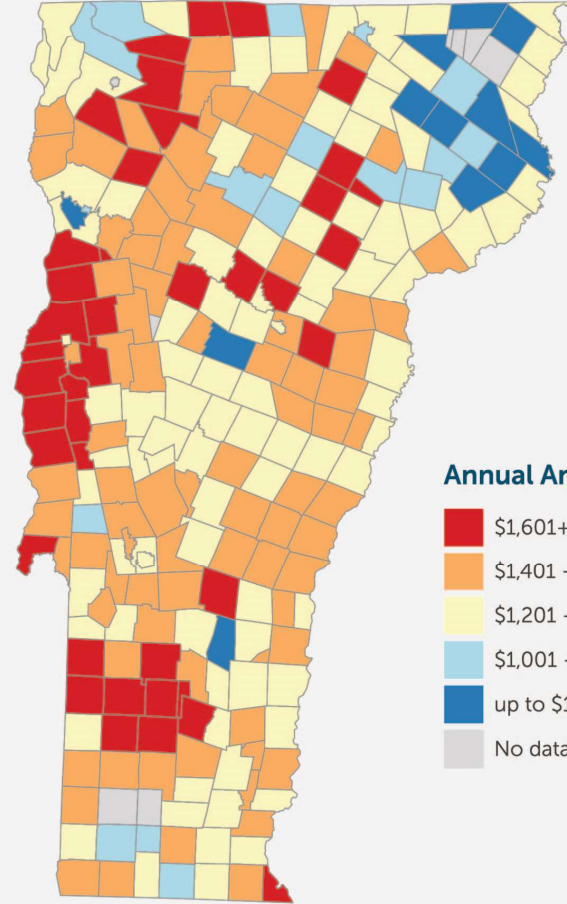


# 2023 Vermont Energy Burden Report: Electricity Burden & Spending by Town



**Total Electricity Burden**

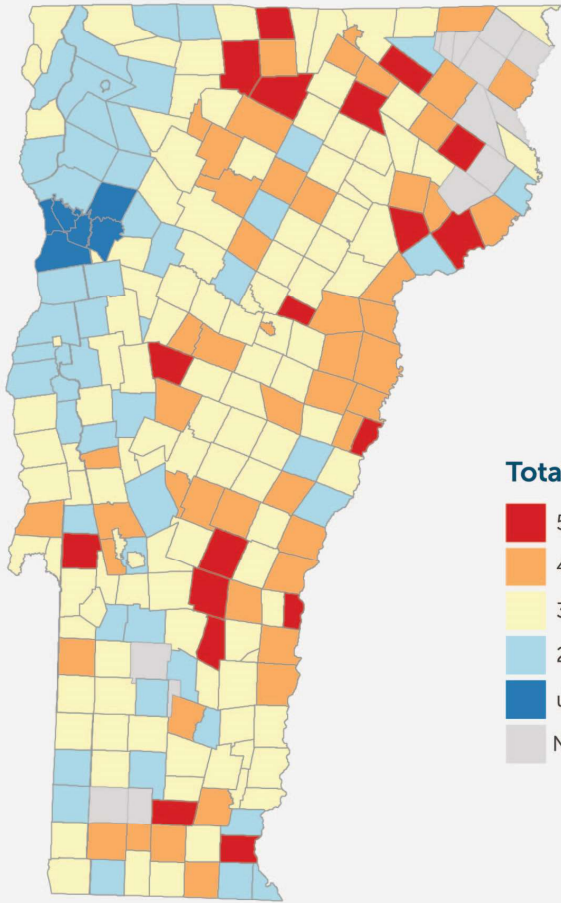
- 3.1%+
- 2.6% - 3.0%
- 2.1% - 2.5%
- 1.6% - 2%
- up to 1.5%
- No data



**Annual Amount Spent**

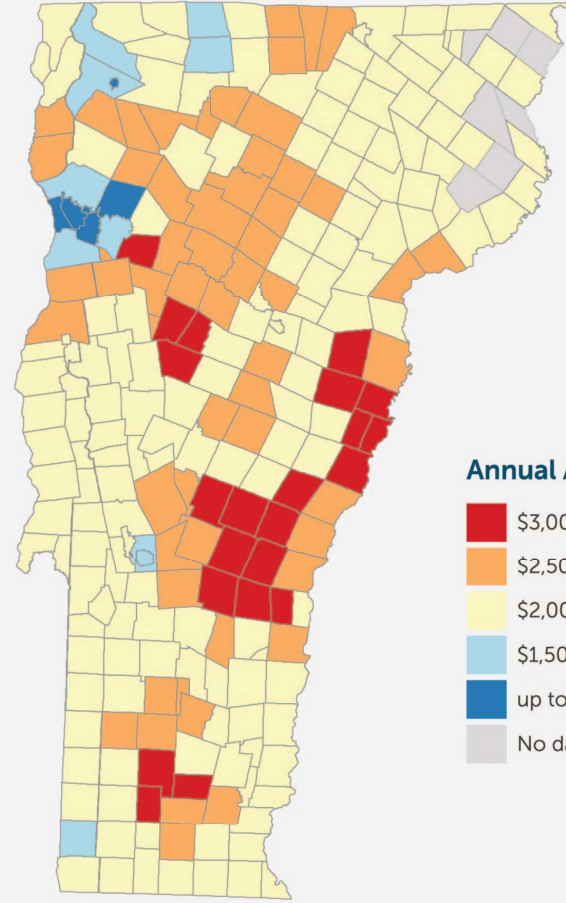
- \$1,601+
- \$1,401 - \$1,600
- \$1,201 - \$1,400
- \$1,001 - \$1,200
- up to \$1,000
- No data

# 2023 Vermont Energy Burden Report: Thermal Burden & Spending by Town



**Total Thermal Burden**

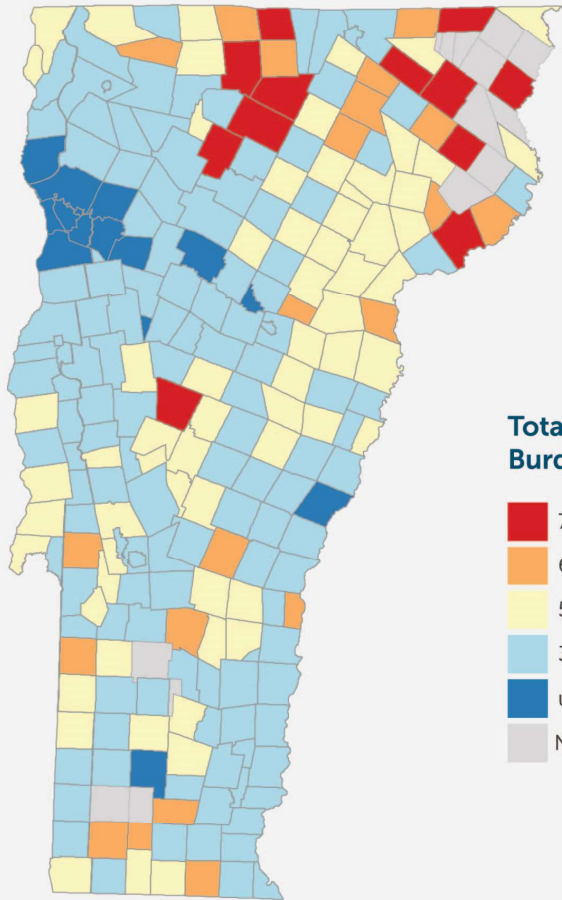
- 5.1%+
- 4.1% - 5%
- 3.1% - 4%
- 2.1% - 3%
- up to 2%
- No data



**Annual Amount Spent**

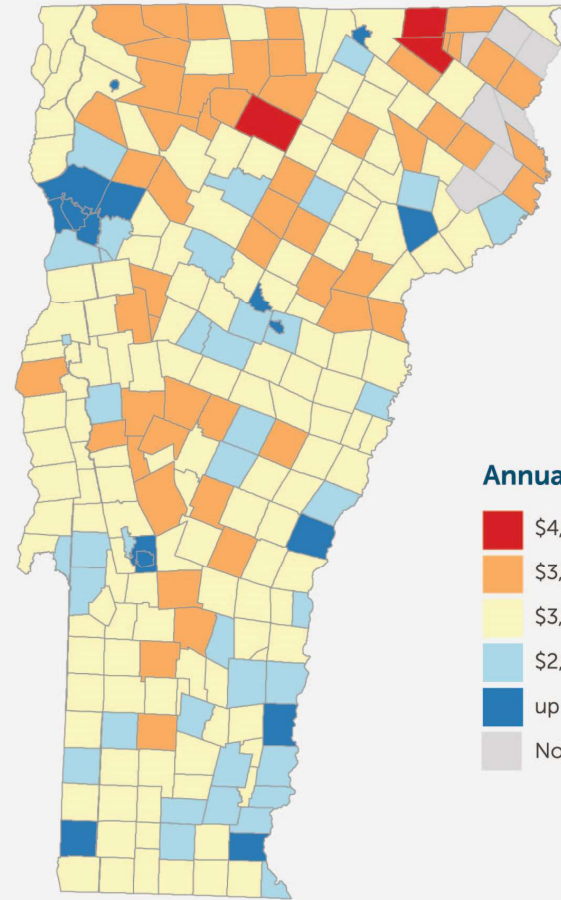
- \$3,001+
- \$2,501 - \$3,000
- \$2,001 - \$2,500
- \$1,501 - \$2,000
- up to \$1,500
- No data

# 2023 Vermont Energy Burden Report: Transportation Burden & Spending by Town



**Total Transportation Burden**

- 7.1%+
- 6.1% - 7%
- 5.1% - 6%
- 3.1% - 5%
- up to 3%
- No data



**Annual Amount Spent**

- \$4,001+
- \$3,501 - \$4,000
- \$3,001 - \$3,500
- \$2,501 - \$3,000
- up to \$2,500
- No data

Overview of Vermont's  
Energy Burden

Strategies for Alleviating  
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# Strategies for Alleviating Energy Burden

# Projects to reduce energy burden\*

## Electric vehicle

Switch from a fossil fuel powered vehicle to an all electric or plug in hybrid vehicle



11.8%  
to  
9.8%

## Multi-zone Heat Pump

Install a multi-zone heat pump in a home heated by fossil fuels



7.9%

## Weatherization

Comprehensively weatherize (air sealing, whole building insulation, improve windows, & attic/ceiling/wall insulation)



6.6%

## Single zone Heat Pump

Install a single zone heat pump in a home heated by fossil fuels



3.0%

\*for a "typical" VT home, with average energy usage and income (2023 VT Energy Burden Report)

# Context on Electrification

## It doesn't always reduce energy burden

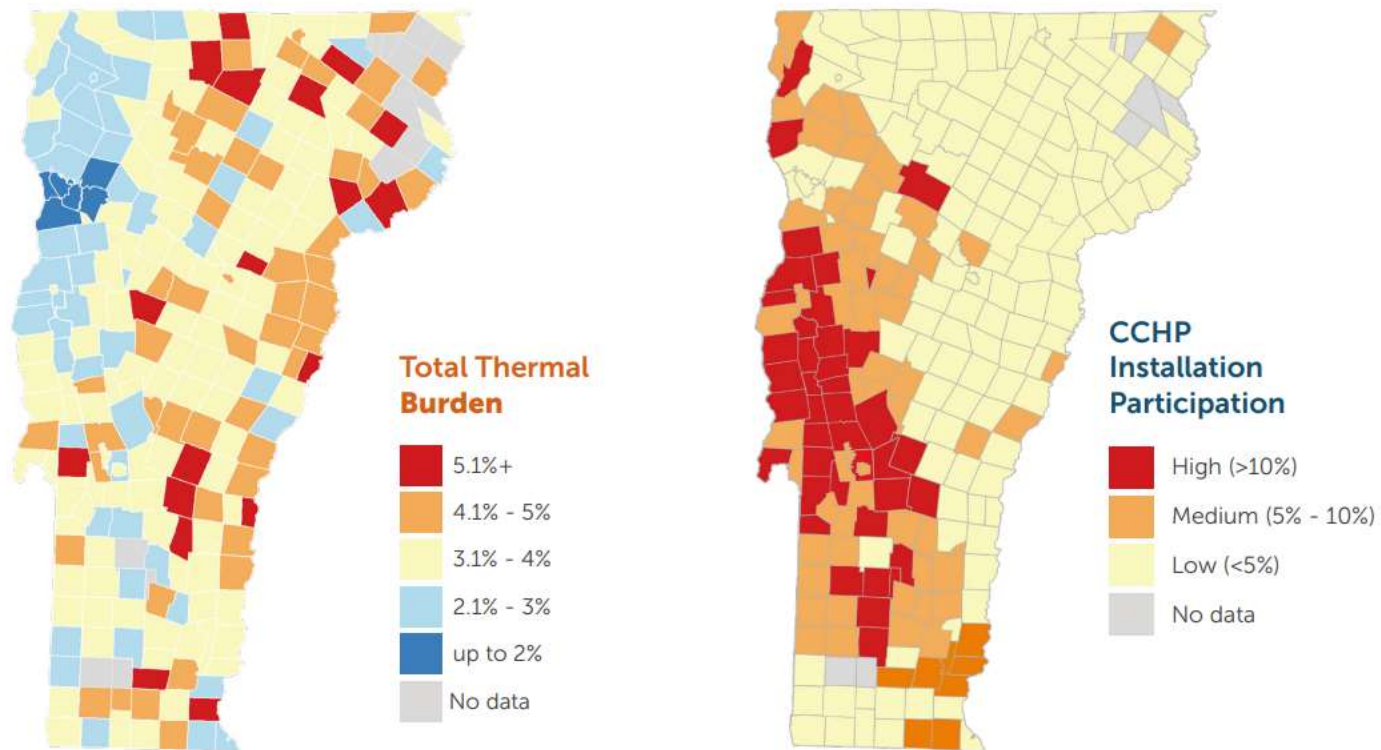
Electricity is not always the lowest cost option for every customer

Important to take specifics into account and support customers in making informed choices

County	Change in annual residential electric usage (2019-21)
Addison	12%
Bennington	8%
Caledonia	10%
Chittenden	11%
Essex	8%
Franklin	7%
Grand Isle	6%
Lamoille	2%
Orange	8%
Orleans	4%
Rutland	7%
Washington	8%
Windham	9%
Windsor	8%



# Where are customers taking action?



Thermal burden and per capita installations of cold climate heat pumps by town (2017-21)

# High Thermal Energy Burden (>5%)

Town	Median household Income	Est. CCHP Adoption rate	Est. WX Adoption rate
Montgomery	\$30,500	6.9%	4.2%
Dover	\$45,625	6.7%	9.8%
East Haven	\$36,250	1.0%	8.9%
Ludlow	\$46,928	12.2%	6.5%
Fairlee	\$53,767	15.1%	5.0%
Charleston	\$37,798	2.7%	9.4%
Brattleboro	\$41,001	12.4%	18.5%
St. Johnsbury	\$43,190	3.9%	12.9%
<i>Statewide</i>	<i>\$74,014</i>	<i>22.5%</i>	<i>13.7%</i>

Sources: Efficiency Vermont and Energy Action Network VT Energy Dashboard

# High Transportation Energy Burden (>7%)

Town	Median household income	Est. EV Adoption rate
Montgomery	\$30,500	.7%
Charleston	\$37,798	.3%
East Haven	\$36,250	.3%
Lowell	\$42,000	.6%
Brighton	\$42,431	.1%
Bloomfield	\$46,563	0%
Norton	\$48,000	.3%
Concord	\$41,667	.1%
Eden	\$54,861	.2%
<i>Statewide</i>	<i>\$74,014</i>	<i>2.1%</i>

Source: Energy Action Network VT Energy Dashboard

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Energy Burden

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# **Beyond energy Burden: Increasing Access for Customers**

# Serving Renters

## Appliance Voucher Program

Important improvements made in response to customer feedback:

- Renters can participate, without need to seek property owner permission, for any appliance they own – or are responsible for replacing
- Any income-eligible customer can participate, regardless of their energy burden

*For renters with low energy usage, energy burden as the primary program qualification was making the program less accessible*



# Language Access

## Translation vs. Interpretation

Addressing language access for customers requires a flexible approach, not just rote translation:

- Call Center
- In-field video interpretation
- Program and rebate materials

*Simply using translation apps and services often falls short and can create a barrier that prevents customers from accessing programs.*



# Questions?

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