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# Vermont's Heating Landscape

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# Efficiency Vermont

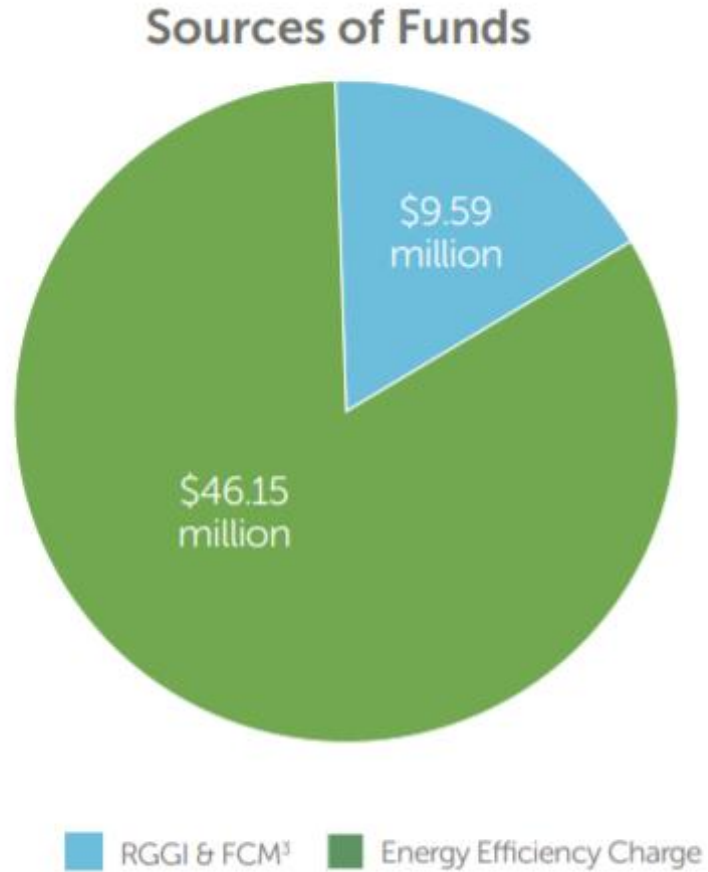
- Statewide infrastructure
- Network of partners
- Market transformation

## Results

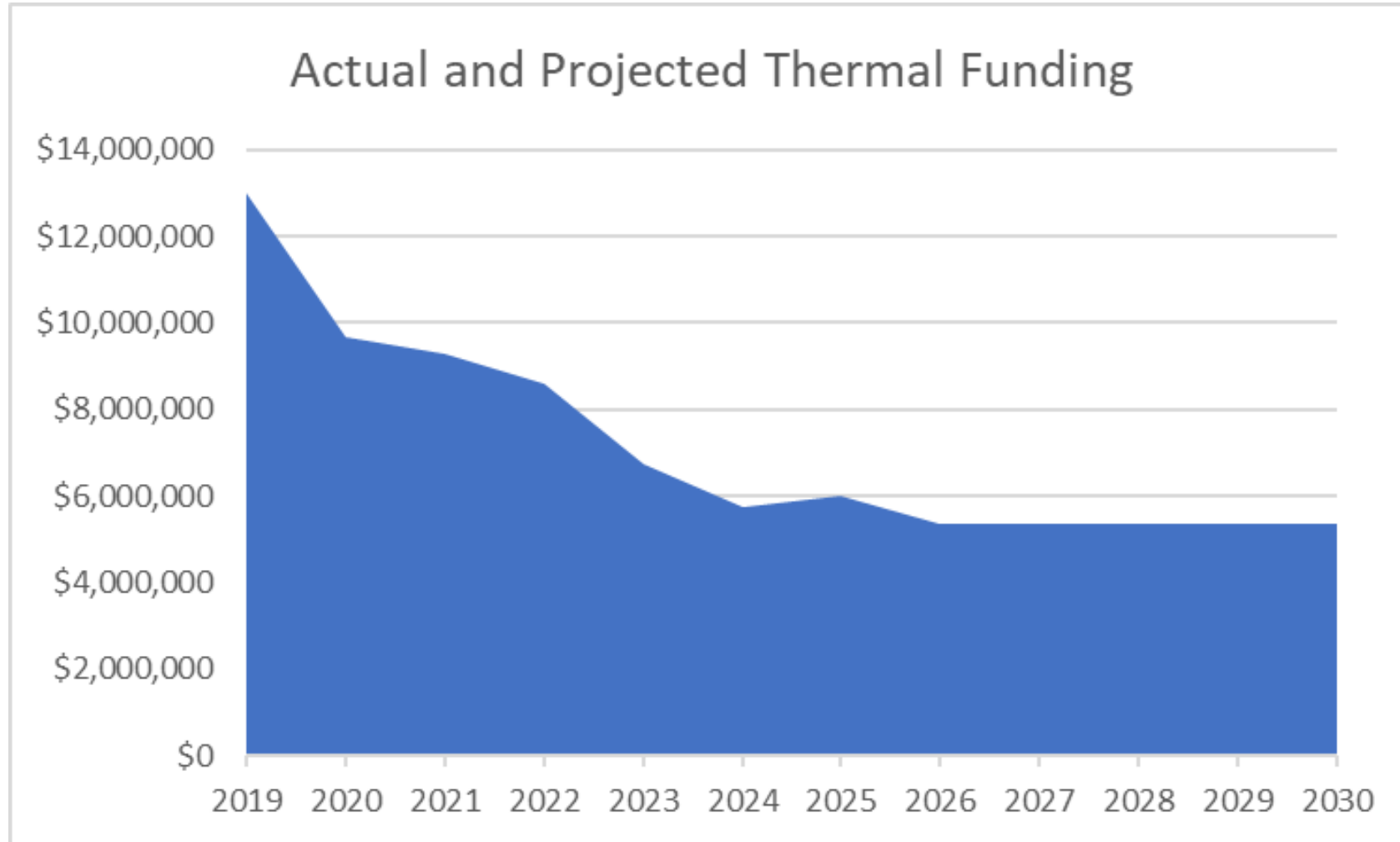
- Over \$2.8 billion in energy cost savings
- Over 12.5 million metric tons of CO<sub>2</sub>e
- Robust efficiency workforce



# 2020 Efficiency Vermont Budget Breakdown



# Efficiency Vermont Thermal Funding Set to Decline



# Vermonters Need Help with High Heating Bills

- Over **100k** views of Ductless Heat Pump rebate page and **64k** visits to Home Performance w/ENERGY STAR rebate page in 2020-2021
- Survey shows Vermonters prioritize weatherization over all other areas of Efficiency Vermont's work
  - Top motivations included: 1) saving money, 2) saving Energy, and 3) home comfort
  - Greatest barriers across all income categories were: 1) cost and 2) uncertainty of what actions to take



In 2010, Bill (a Manager for VocRehab) and his wife Nathalie (a social worker at Randolph Elementary) weatherized their home with an **Efficiency Excellence Network** contractor.

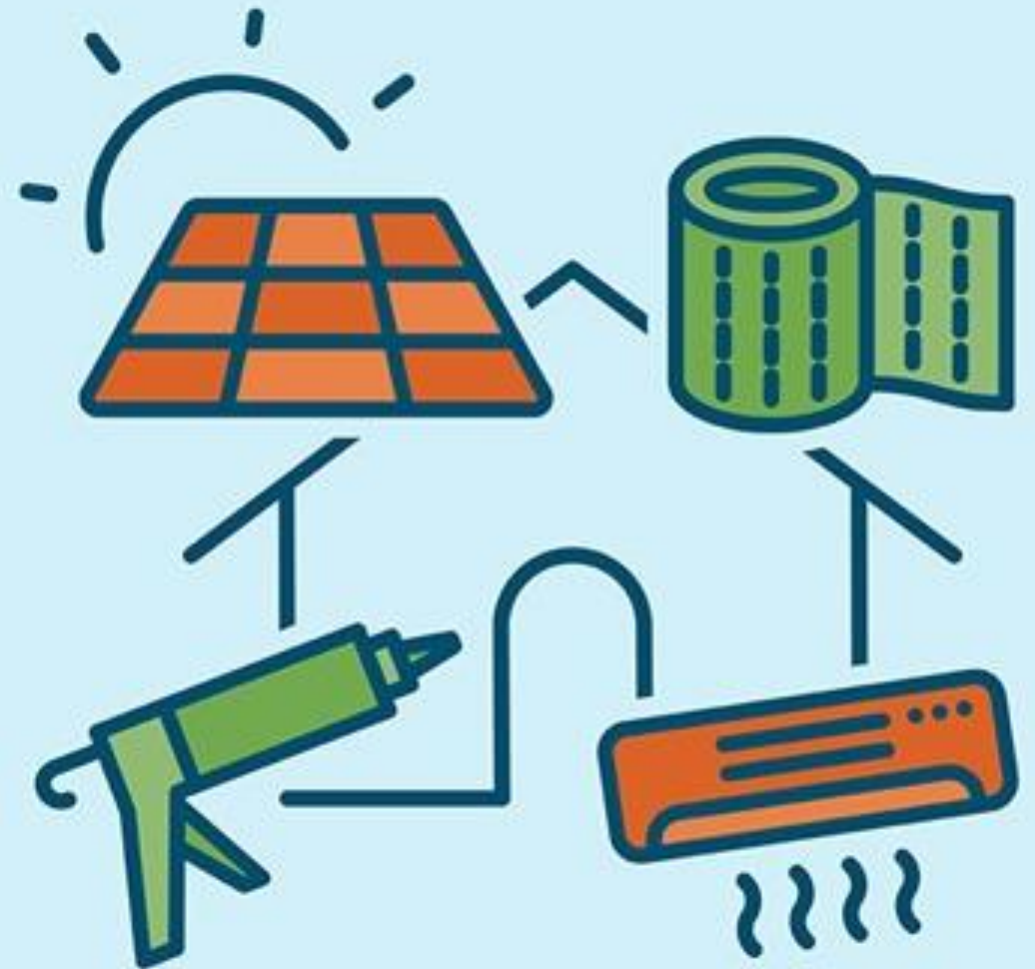
In 2021, after receiving a **Virtual Home Energy Visit** from Efficiency Vermont, they decided their next best step was to install a ductless heat pump.

**“We don’t have to debate anymore! It’s just one question: do you want to turn on the heat pump? And the answer is yes!”**

Bill Sugarman, Barre

# Efficiency Vermont believes Weatherization & Clean Heat go hand in hand

Efficiency  
Vermont





# Weatherization

## On-ramps for every Vermonter

- DIY Weatherization Program
  - \$100 back to homeowners who complete small-scale weatherization projects on their own
- Low-Income Multifamily Retrofit
  - Support for renters and multi-family dwellings through a strong partnership with 3E Thermal
- Home Performance with ENERGY STAR
  - Comprehensive weatherization, with bonus incentives for low- & moderate-income Vermonters



# Weatherization Results at a Glance

## Low Income Multifamily Retrofit Estimated Impact (2010 – 2021)

Number of Housing Units Served	3,377 units
mmBTU saved	72,604 mmBTU
GHG reduction (lbs. CO2)	12,362,152 lbs CO2

## Home Performance with Energy Star Recent Projects

Year	# of HPwES Projects (Total)	# of Moderate-Income Projects
2019	796	524
2020	1,048	713
2021	898	464

## Home Performance with ENERGY STAR

- Efficiency Vermont provides custom incentives, based on income, for projects that meet minimum air leakage threshold
  - 50% of project costs, up to \$3,000 for income-eligible households, and up to \$1,000 for those who don't qualify for the income threshold
- In the past three years, 60% of projects have been done by moderate-income homeowners



# Heat Pumps

## Statewide partnerships yield success

- Efficiency Vermont partners with sixteen distribution utilities to offer heat pump programs
- Together we support five heat pump technologies:
  - Ducted & Ductless Heat Pumps
  - Heat Pump Water Heaters
  - Air to Water Heat Pumps
  - Ground Source Heat Pumps
  - Integrated Controls for Ductless Heat Pumps
- Residential customer incentives range from \$300 (HPWH) - \$21,000 (GSHP max)
- Over 12,000 units installed in 2021



# Additional Thermal Program Support

1

## One-on-One Technical Assistance

- Phone call or video consultation with an Efficiency Vermont Energy Consultant covering whole-home efficiency topics

2

## Community Engagement

- Since 2015, Efficiency Vermont has served 18 communities with tailored efforts in partnership with local and statewide stakeholders, focusing on energy burdened towns
- Button Up Vermont

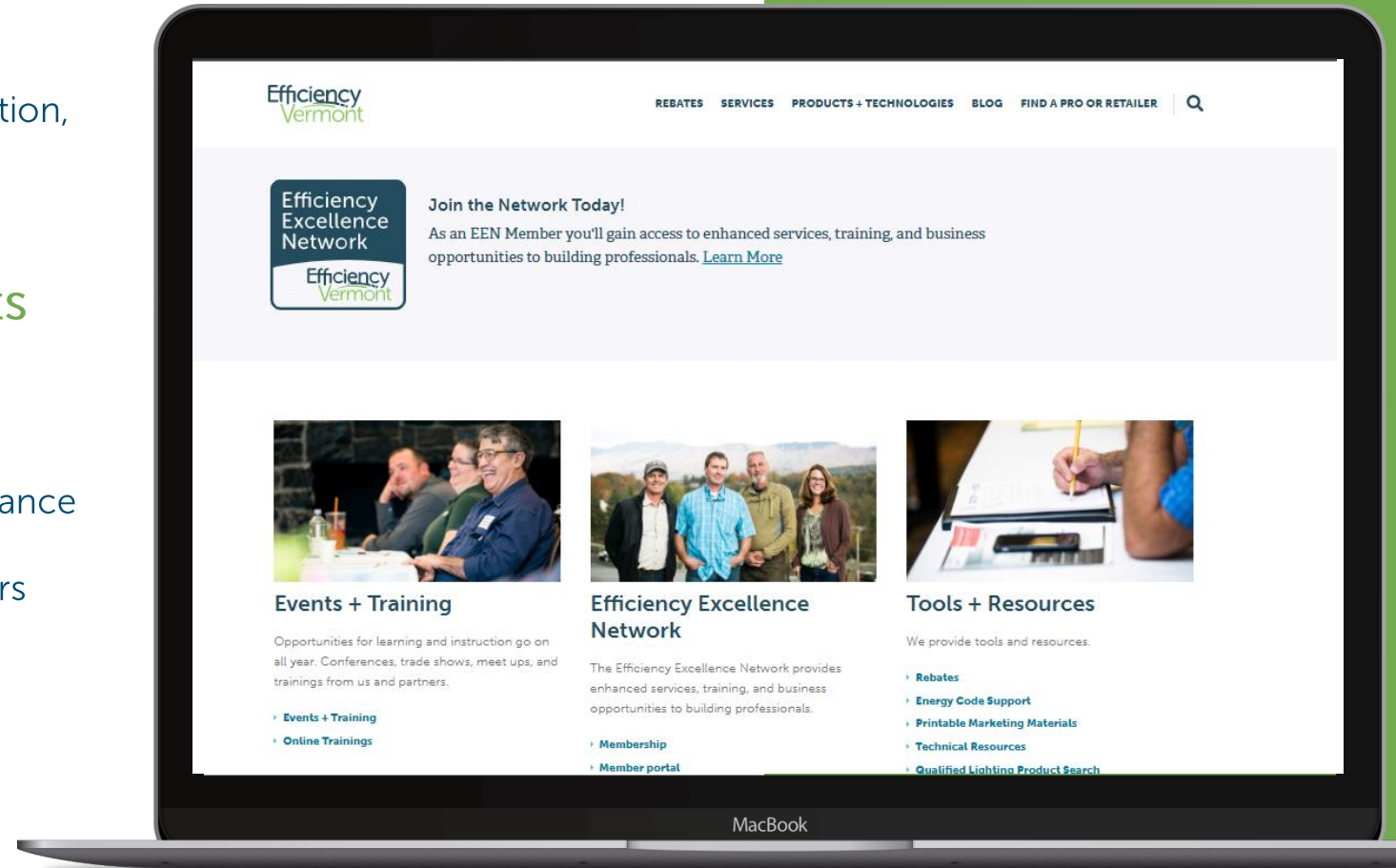
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## Financing

- Low-to-no interest financing for income eligible Vermonters
- Weatherization Repayment Assistance Program (WRAP) being developed in collaboration with VHFA, VGS, and electric utilities

# Efficiency Excellence Network

- 7 distinct trade ally groups
  - HVAC, Electrical/Lighting, Refrigeration, Building Design Professionals, Weatherization, New Construction (Residential), Lighting Design, Midstream Distributor & Retailer
- EEN contractors provide benefits to end-use customers
  - Licensed and insured
  - Supported by Efficiency Vermont staff for marketing, mentoring and technical assistance
  - Educated on energy efficient technologies, and committed to customers
- 330 EEN members in total
  - 61 Home Performance Contractors
  - 158 HVAC Contractors







# Workforce Development

- EAN estimates 90,000 homes need to be weatherized by 2030 to meet climate goals
  - Workforce needs to grow five-fold in next five years
- Experience in 2020 shows robust incentives increase projects and build the workforce
  - HPwES projects quadrupled in months with enhanced incentives
  - A Fall 2020 survey showed 88% of EEN members maintained or increased staff between Mar-Sept 2020
- EVT helped convene working group in 2021 under direction of VT Legislature to identify workforce growth opportunities

# Summary

1. Vermonters need help lowering their heating bills
2. Weatherization and clean heat solutions are both needed to reduce GHG
3. Efficiency Vermont, the distribution utilities, and weatherization agencies are all working together to tackle the problem
4. Funding sources that Efficiency Vermont relies on are declining





# Clean Heat Policy Considerations

1. How to determine eligibility?
  - Weatherization, advanced wood heating, heat pumps, biofuels, renewable natural gas, other?
2. How to incorporate equity?
  - In setting the policy?
  - In implementing the policy?
3. How to address cross-state issues?
  - Fossil fuels sourced outside of Vermont?
4. How to implement quickly and cost-effectively?
  - Use existing program delivery platforms or establish new ones?
  - Who measures results, and how?

# Questions?

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