



### Introduction to Efficiency Vermont Senate Committee on Natural Resources and Energy January 23, 2015

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## **Key Concepts for Today**

- 1. Energy Efficiency Keeps Costs Down for Everyone
- 2. Efficiency Vermont Helps Customers Take Full Advantage of Benefits
- 3. Efficiency Vermont Services are Comprehensive and Cost Effective
- 4. Resources Planned and Invested Under Strict Oversight and Regulation
- 5. Continued Adaptation and Innovation to Meet State Policy and Customer Needs



# Efficiency Vermont Reduces Vermont's Electric Bill

Background:

- Electric and gas utilities required to provide service on a "least cost" basis (30 VSA s.218c)
- Energy efficiency costs less than comparable electric supply (less than half)
- Result: utilities required to invest in efficiency to minimize costs to ratepayers



"Vermont's electric energy efficiency programs save more energy than comparable programs, with costs that are very similar to their peers."

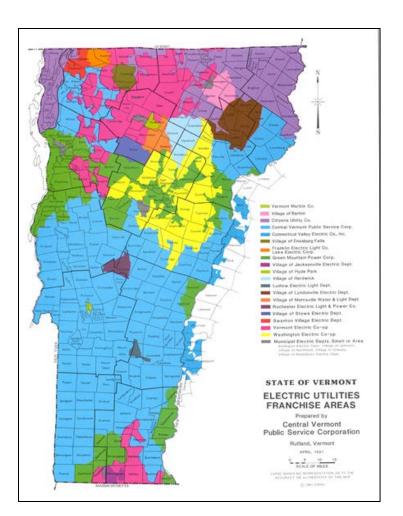
- Public Service Department Benchmarking Evaluation, 1/16/15



## The Old Model

The 1990s

- 22 electric utilities delivered energy efficiency services
- Confusing to customers, equipment vendors
- Inequities in spending, services, and results
- High regulatory cost, administrative inefficiencies





### The Current Model

#### 2000 - present

- Energy efficiency services delivered by a single entity statewide: Efficiency Vermont (30 VSA s. 209d)
- Performance-based model
- Consistent services, programs, incentives statewide
- More equitable for all Vermonters
- More ratepayer transparency
- Easier to promote and coordinate with suppliers, vendors, etc.



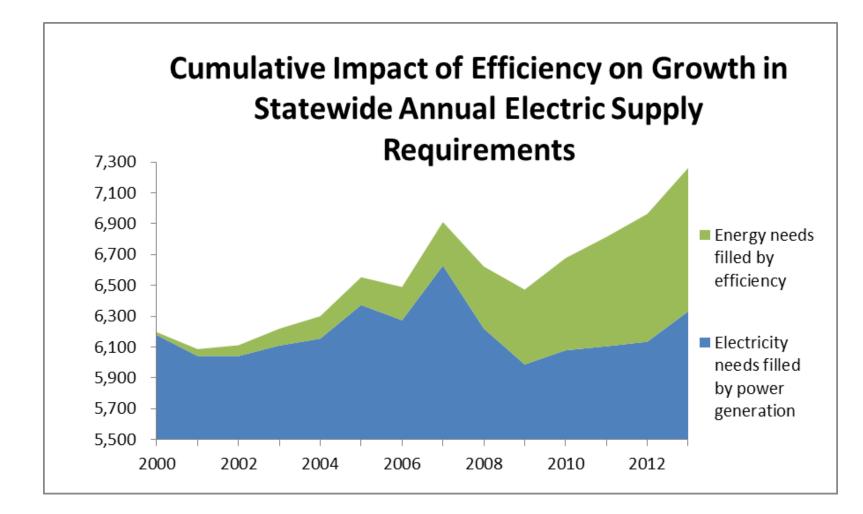


## Vermonters want comprehensive services

- Legislature responds: authorizes Efficiency Vermont expansion to "all fuels" in 2008 (30 VSA s.209d(7))
  - Forward Capacity Market
  - •Regional Greenhouse Gas Initiative
- "Thermal efficiency" services now include:
  - •Home Performance with ENERGY STAR
  - Building Performance
  - •Biomass heating system incentives



Cumulative Impact of Efficiency on Growth in Statewide Annual Electric Supply Requirements





# Accuracy, Verification & Oversight

### Internal Systems & Processes

- Information Technology
- Quality Assurance
- Data Accuracy & Verification
- Continual Improvement

### External Oversight

- Vermont Public Service Board
- Independent Auditor
- Technical Advisory Group

# Extensive Reporting & Transparency

### Reports to the PSB & PSD:

- Monthly
- Quarterly
- Preliminary Savings Claim
- Annual Report
- Annual Plan

Legislative Audit (30 VSA s.209e(12))

Forward Capacity Market savings verification



# Looking to 2015-17: Program budgets and funding sources

- Electric efficiency: \$148.1 million
  - Funded by the Energy Efficiency Charge
  - Every \$1 invested must generate at least \$2 in benefits
- Thermal efficiency: \$19.5 million
  - Funded by the Regional Greenhouse Gas Initiative and Forward Capacity Market
- Funding sources <u>must be kept separate</u>



# Looking to 2015-17: <u>Some</u> expectations from our regulator (Public Service Board)

- 1. \$336.3 million in economic benefits
- 2. 321,800 MWh savings
- 3. 41,300 kW summer peak demand savings
- 4. 53,700 kW winter peak demand savings
- 5. Deliver high quality services for low-income Vermonters
- 6. Increased focus on reducing heating costs for small businesses



## Efficiency Vermont How Does it Help Vermonters?

- 1. Helps Vermonters reduce their energy use and costs.
  - Upstream incentives make efficiency easy for customers no rebate form needed
  - Meeting customers where they are at with DIY options and flexible programs
  - Deep engagement with large businesses such as Husky
- 2. Transforms the marketplace to make efficiency the standard.
- 3. Plans for Vermont's energy future.









### Direct Energy Savings are Only the Beginning

Vermonters investing in electrical efficiency:

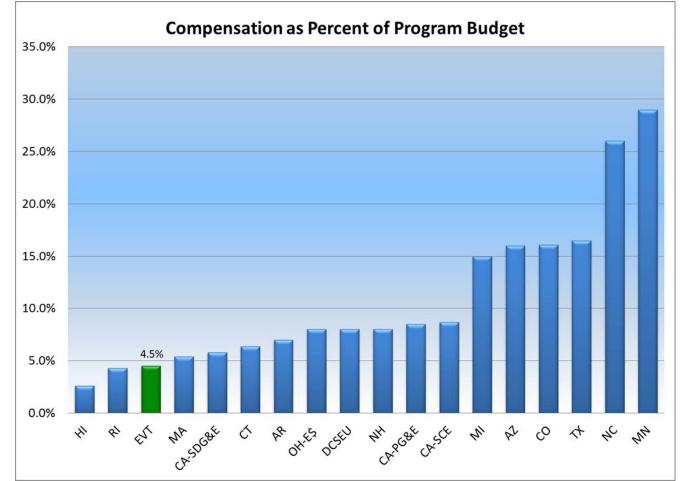
- Save money, improve properties, strengthen businesses.
- Avoid rate increases.
  - Less demand = less generation = less new infrastructure & costs.
  - Less demand = lower transmission prices for Vermont.
- Use the cheapest energy.
  - o Efficiency costs less than electricity.
- Strengthen the local economy.
  - o Energy dollars stay in Vermont.

#### • Protect the environment.

- o Cutting power plant pollution.
- Allowing the capacity to power new, efficient electric vehicles and electric heating



# All provided at very low cost to Vermonters vs. other states





# Looking Ahead: Some issues we are focusing on 2015-2017

- Helping more Vermonters save on their heating bills
- Linking customers to quality contractors and equipment
- Making efficiency easy
- Promotion of new energy efficiency technologies
- Aligning our work with other state goals



### Questions?

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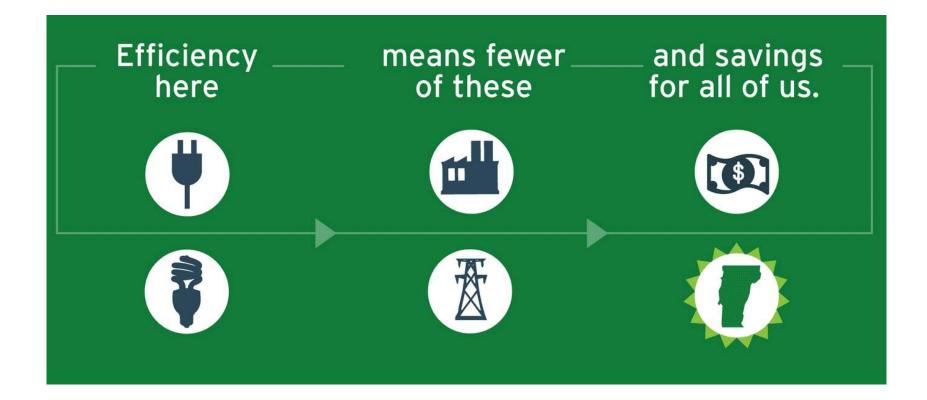
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## **Additional Information**



# Efficiency Plays a Critical Role in Vermont's Electric System





# What are the Barriers to Energy Efficiency?

#### **Residential:**

- Cost to complete a project
- I don't own my home
- Reluctant to replace things that are "working fine"

#### **Business:**

- Cost to complete a project
- Lack of project financing
- Potential business disruption during project



## Substantial Economic and Environmental Benefits for Vermont

## Key Results 2012-2013

#### Electric

25,658 kw summer peak demand savings 2,286,562 lifetime MWh saved

\$207,525,725 total resource benefit savings









## Key Results 2012-2013

#### Thermal

#### 2,334,300 lifetime MMBtu savings

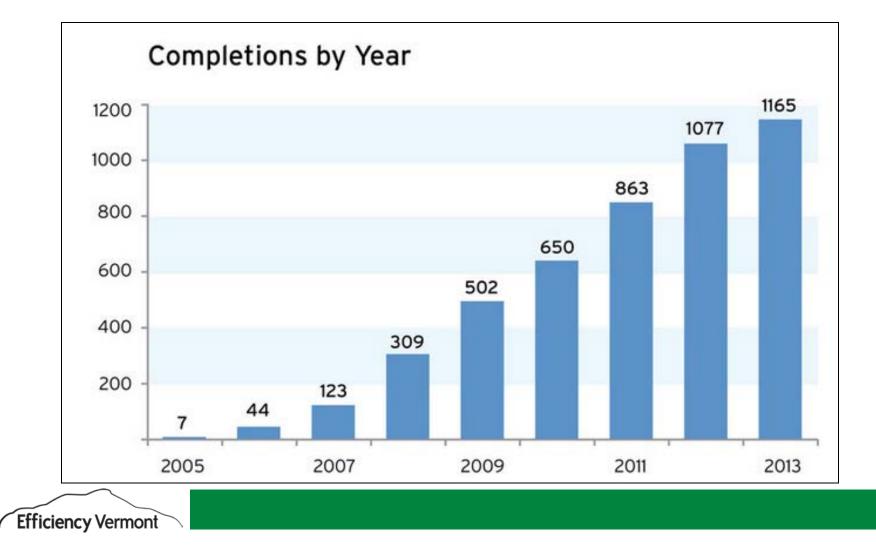
\$50,053,994 total resource benefit savings



Efficiency Vermont partners: BPI-certified contractors.



# Results: Rapid increase in weatherizing Vermont homes



## How does it work for customers?

Average residential customer spends roughly \$72 per year in EEC

If they spend \$30 to install 6 LEDs, they get:

- \$90 in upstream EVT incentives + \$36 annual savings
- Net savings of \$24

If they spend \$1,100 to install a heat pump water heater, they get:

- \$550 in upstream EVT incentives + \$499 annual savings
- Net cost of \$123 (but continued \$499 savings the following year)



## Vermont Leads the Nation

### Nationally recognized results

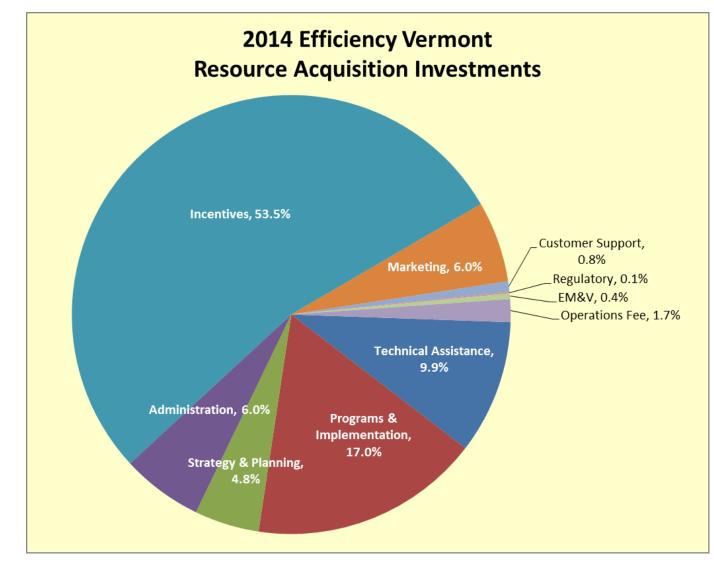
- Ranked #3 in ACEEE national energy efficiency scorecard
- Numerous awards from ENERGY STAR for program excellence
- Winner of prestigious Kennedy School of Government "Innovations in American Government" award

### We are exporting the model – and finding lots of takers

- Efficiency Smart
- DC Sustainable Energy Utility
- Consulting for numerous states



## Efficiency Vermont Spending Overview





# Efficiency Vermont Spending Overview

