



**ButtonUp**  
Vermont

## **Project Kick-Off - Bristol**

**A Home Energy Saving Workshop**

### **What We Will Cover Tonight**

1. Conservation and Efficiency in the home
2. Home heat loss 101
3. Energy resources and incentives
4. How the free contractor walk-through works
5. Meet the contractors



## Why Weatherize?

1. Reduce energy use and costs
2. Increase home comfort
3. Increase home health & safety
4. Improve home durability
5. Good for the environment



## Behavior & Technology

- Conservation – Use less energy by changing behaviors (mostly low and no-cost options).
- Efficiency – Get more work per unit of energy used with efficient products.
- Behavior
- Technology



## Controlling the temperature in your home

### CONSERVATION

- For each degree you turn the thermostat down in the winter (around the clock), you save about 2% on your heating bill.

### EFFICIENCY

- A programmable thermostat makes setting back the temperature more convenient.



## Hot water usage

### CONSERVATION

- Set hot water tank temperature to 120° F
- Wrap warm pipes and electric tank

### EFFICIENCY

- Install low-flow shower heads and faucet aerators
- Purchase high-efficiency hot water system



## Doing laundry

### CONSERVATION

- Wash in cold water
- Only wash full loads
- Air dry clothes outside

### EFFICIENCY

- Purchase ENERGY STAR® certified clothes washers and dryers



## Your home electronics

Home electronics account for about 15% of household electricity use. When your electronics are off, they may still use power – power that you pay for!

### CONSERVATION

- Turn off electronics when not in use.

### EFFICIENCY

- Use an Advanced Power Strip to shut the power off for you.



## Lighting in your home

### CONSERVATION

- Turn off lights when they are not in use

### EFFICIENCY

- Replace incandescent or compact fluorescent light bulbs (CFLs) with ENERGY STAR certified light emitting diodes (LEDs)



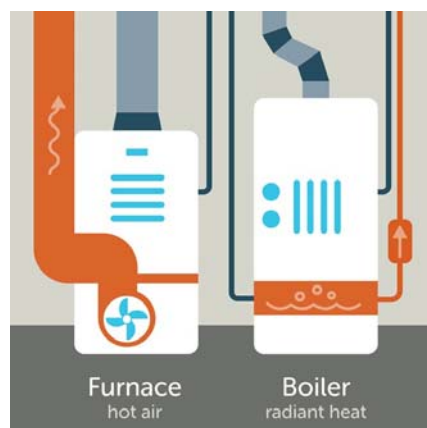
## Your heating system

### CONSERVATION

- Whether you have a furnace or a boiler, proper maintenance is important
- Seal ducts outside heated space
- Keep air registers clear

### EFFICIENCY

- Consider investing in a more efficient heating system



## We've done the research on efficient products for you

- Look for SMART CHOICE when shopping
  - At local retailers for lighting, electronics & appliances
  - Proven to save you money and energy



## Prevent heat loss by buttoning up

### Sweater & Windbreaker

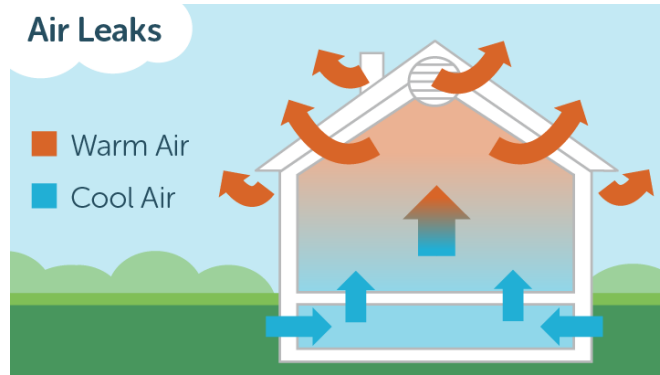


## Air Leakage

### Air Leaks

■ Warm Air

■ Cool Air



## Air sealing creates an air barrier

Stops air leaks that are coming through  
the attic and basement

*"The Shell"  
or "Windbreaker"*



## Insulation creates a thermal barrier

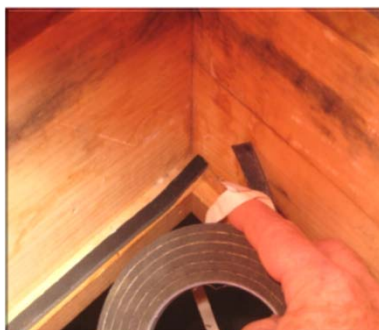
Insulation helps your home resist conductive heat loss.

*"The Sweater"* –  
less effective if air flows through it



## Seal the attic hatch

Weather-stripping is a cost-effective way to create a seal and insulate your attic hatch



Images courtesy of EnergySmart of Vermont





## Seal plumbing penetrations



## Seal chimney bypass



## Seal the box sills & foundation

- Seal with caulk or spray foam around rigid foam at:
  - junction of sill and foundation,
  - foundation windows,
  - plumbing and wiring penetrations,
  - and small cracks in the foundation.



Images courtesy of EnergySmart of Vermont

## Seal the bulkhead door



Image courtesy of Efficiency Vermont



## Air sealing priorities

- Attic – you can stop warm air leaking out
- Basement – you can stop cold air being sucked in
- Center level of house – can be challenging and costly



## Efficiency and Healthy Homes

A certified professional will test and correct any issues with:

- *Carbon monoxide* caused by incomplete burning
- *Moisture and mold* which can cause health and building problems
- *Back drafting* when gases from combustion appliances come back in your house
- *Other health and safety issues*



## Home Performance with ENERGY STAR

- Statewide weatherization program of private, certified energy contractors
- Managed by Efficiency Vermont
- Rebates available up to \$2,000 to offset costs



## Trained and Certified Professionals

- Contractors certified by Building Performance Institute (BPI)
- Participate in Efficiency Vermont's Home Performance with ENERGY STAR®
- Familiar with financing
- Handle Efficiency Vermont rebate paperwork



## Costs and Benefits

### *Data from Efficiency Vermont*

Average Cost of Efficiency Improvements	\$7,800
Average Efficiency Vermont Rebate	\$1,500
Average Energy Savings	26%



## Heat Saver Loan Program



WHERE	Across Vermont
WHAT	Efficiency work, health & safety measures
AMOUNT	Up to \$35k, 100% of cost
TERM	Up to 15 years
HASSLE	2-day processing, minimal paperwork
RATES	.99% - 5.99%



## Vermont's Weatherization Assistance Program

- Free diagnostic and improvement services for low-income Vermonters, operated by Community Action Agencies and other agencies



## Free Contractor Walk-Throughs

- Customer completes on-line survey (hard copies available too)
  - Information about home characteristics and energy use, and select contractor
- <https://buttonupvermont.org/get-contractor>
- Contractors are signed up for each community



## Contractor Follow-Up

- Contractor, customer, and Efficiency Vermont get a copy of customer survey
- Contractor responds to homeowner within 3 days and sets up time for walk-through
- Community Partners follow-up with customers to encourage them to move forward



## Contractor Walk-Through/Proposal



- Visual assessment of energy saving opportunities (i.e. air sealing and insulation)
- No blower door
- Takes 1 – 1 ½ hours
- Customer should be present
- Contractor provides free proposal with scope, and estimated savings and cost



## Timeline

Milestones	Timeline
Team organizing, training, and planning	September – October
Promote and host kick-off events	Late October – early November
Additional outreach to community members	October – December 15
Sign-up deadline for free walk-through	December 15
Contractors conduct free walk-throughs	October 1 – March 15
Volunteers reach out to participants	November – mid-April 2019
Residents make commitment to move forward (eligible to win prize)	April 22, 2019 (Earth Day)



## Meet the Contractors

Harvestar

Eric Hartman

Silver Maple Construction

Nate Wallace-Gusakov







**ButtonUp**  
Vermont

**Thank you!**