



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)



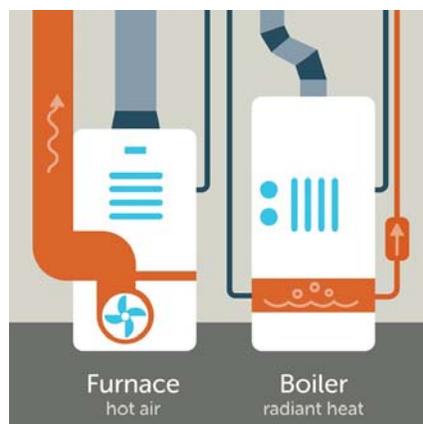
Your heating system

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

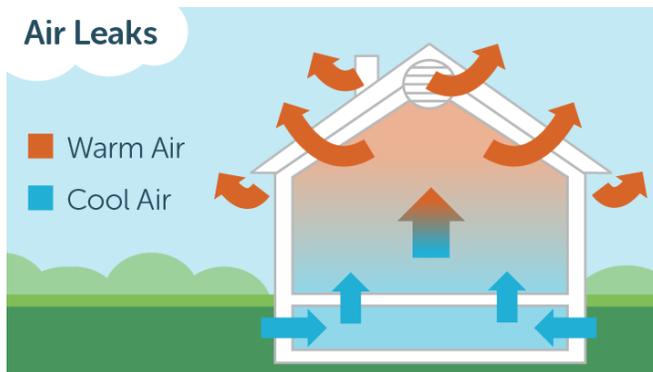
Sweater & Windbreaker



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

<i>Data from Efficiency Vermont</i>	
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





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Thank you!