

Home Energy Labeling Working Group

September 28, 2022

Today's Agenda

1. Meeting Introduction
2. Questions and Feedback
From August Meeting
3. South Carolina Label Design
4. Action Items for Next Meeting

Meeting Format

- 1 Hour WG Meeting
- Each WG Meeting to Focus on Particular Questions
- WG Input to be Collected with Feedback at Future Meetings
- Jam Board Available for Comments/Ideas

Energy Label Project Phases

- Energy Label Design
 - What is the key information for the SC label
 - How is the Information presented on the label
- Administration
 - Who creates the label
 - Who manages the assessor/rater
- Training & Education Needs
 - Who needs training
 - What is critical to use/understand the label
- Pilot Program
 - Possible locations / participants

Energy Label Design

- What is the key information for the SC label to emphasize?
- How is the label information presented?
- Is there any key information missing from the label?

Energy Label Design – Information

- What is the key information for the SC label to emphasize?

Follow Up From August Meeting/Survey

Label Design

- Survey Sent to WG Members
- Results Compiled
 - Weighted Based On # Of Respondents Ranking Item As #1 or #2 Priority
- Label Information Prioritized by WG
- Tiers of Information From High Priority to Low Priority
- Important to Remember:
 - None of the Information Needs To Be Eliminated From the Label
 - Priority Helps Decide How Prominent the Information Item Will Be
 - Final Label Design Will Be Created By Label Provider

Survey Results – Highest Priority

92% - 100%

- Total Estimated Energy Use
- Home Energy Score
- Estimated Savings with Improvements

Survey Results – High Priority

85%

- List of Improvements
- Score with Improvements

Survey Results – Medium Priority

69%

- Electric, Gas or Other Energy Source Use
- Home Information – Age, Area, # of Bedrooms, etc.
- Where To Find More Information

Survey Results – Medium Low Priority

55%

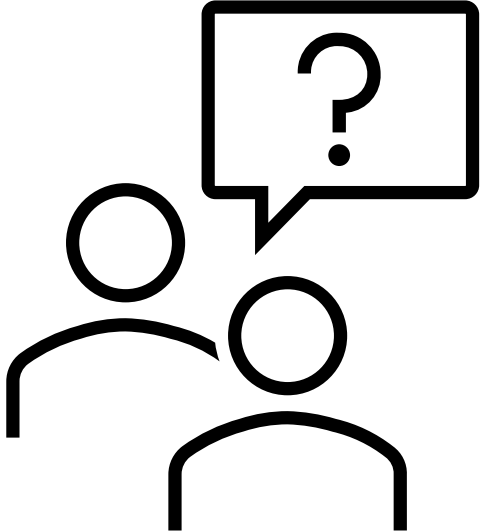
- Carbon Footprint
- Carbon Footprint With Improvements

Survey Results – Low Priority

7%

- Assessor Identification

Questions?



Energy Label Design – Information

- Is there any key information missing from the label?

Additional Information For Label

- visual charts and graphs to better display information
- comparison of home to others like it in the neighborhood
- Equipment efficiency information
- Just make sure any jargon that may be used on the label is defined
- This relates to "where to find more information" but having a list of resources to energy efficiency, weatherization, and sustainable facts or a one-pager people could access
- Renewable energy use such as solar, wind and passive design strategies
- I think some type of combination from these examples would be good
- Information on radon testing/measurement (especially if energy efficiency measures are recommend). Sometimes after envelope-tightening of a building radon levels are higher than before
- What about using a QR to direct to a webpage with more info (if there is one that's relevant)?

Energy Label Design - Layout

- How is the label information presented?

Follow Up From August Meeting/Survey

Label Layout

- Survey Results Compiled
 - Weighted Based On Respondent Preference For Each Label
- Review and Discuss Preferences

Most Popular

PORTLAND HOME ENERGY SCORE
Know the score. Outsmart energy waste.

U.S. DEPARTMENT OF ENERGY

THIS HOME'S SCORE 3 OUT OF 10

THIS HOME'S ESTIMATED ENERGY COSTS

\$1,233 PER YEAR

HOME PROFILE

LOCATION:
123 Main St
Portland, OR 97201

YEAR BUILT:
1924

HEATED FLOOR AREA:
1,500 sq. ft.

NUMBER OF BEDROOMS:
3

ASSESSMENT

ASSESSMENT DATE:
12/22/2016

EXPIRATION DATE:
12/22/2021

ASSESSOR:
Maria Gomez
Gomez Energy Partners

PHONE:
503-555-1211

EMAIL:
maria@gomezenergy.com

CCB LICENSE #: 1234567890

Flip over to learn how to improve this score and use less energy!

Better Buildings Home Energy Score

Official Assessment | ID#1234567

The Home Energy Score is a national rating system developed by the U.S. Department of Energy. The Score reflects the energy efficiency and is based on the home's structure and heating, cooling, and hot water systems. The average score is a 5, a 3 means more than most homes in your area.

HOW MUCH ENERGY IS THIS HOME LIKELY TO USE?

Electric: 10,000 kWh/yr.....	\$600
Natural Gas: 700 therms/yr.....	\$633
Other: _____ gal/yr.....	\$0
TOTAL ENERGY COSTS PER YEAR \$1,233	

THIS HOME'S CARBON FOOTPRINT:

Estimated average carbon footprint for a similar sized home: 3.8 tons of CO₂ equivalent emissions per year.

- Actual energy use and costs may vary based on occupant behavior and other factors.
- Estimated energy costs were calculated based on current utility prices (9.15/kwh for electricity; \$8.85/therm for natural gas; \$2.50/gal for heating oil; \$3.50/gal for propane).
- Carbon footprint is based only on estimated building energy use.
- Carbon emissions are estimated based on utility- and fuel-specific emissions factors provided by the Oregon Department of Energy.
- This report meets Oregon's Home Energy Performance Score Standard and complies with Portland City Code Chapter 17.108.

Score today:	Score with improvements*:	Estimated energy savings with improvements:	Estimated carbon reduction with improvements:
3	7	\$500	27%

TACKLE ENERGY WASTE TODAY!

Enjoy the rewards of a comfortable, energy efficient home that saves you money.

- Get your home energy assessment (Done!)
- Choose which energy upgrades to address first
- Get a bid. Find an Energy Trust trade ally contractor by visiting www.energytrust.org/findacontractor or calling toll free 1-866-368-7878
- Find financing options and other helpful services at www.enhabit.org

* PRACTICAL ENERGY IMPROVEMENTS | COMPLETE NOW OR LATER

To achieve the "score with improvements," all recommended improvements listed below must be completed. Improvements all have a simple payback of ten years or less and may be eligible for mortgage financing. For a more detailed explanation of costs and payback, please get a bid from a contractor.

FEATURE	TODAY'S CONDITION	RECOMMENDED IMPROVEMENTS
Basement wall insulation	No insulation	Insulate to R15
Attic insulation	No insulation	Insulate to R49
Foundation wall insulation	No insulation	Insulate to R11
Wall insulation	No insulation	Insulate to R15
Envelope Air Sealing	Not professionally air sealed	Seal the gaps and cracks that leak air into your home
Duct insulation	R5	Insulate to R6
Duct sealing	41% leakage	Reduce leakage to 10% of total airflow
Floor insulation	R5	Insulate to R18
Gas furnace	78% AFUE	Upgrade to ENERGY STAR 90% AFUE
Stairways	Single-paneled	Replace with ENERGY STAR double-pane solar-control low-E argon gas wood frame
Water heater	Standard electric tank	Upgrade to ENERGY STAR heat pump (if 2.76)
Windows	Single-pane aluminum	Replace with ENERGY STAR double-pane solar-control low-E argon gas wood frame

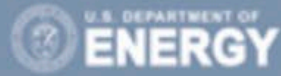
YOU CAN DO IT YOURSELF!

Looking for low-cost ways to cut energy waste, boost your comfort and lower your energy bills? Visit the resources below to learn about easy changes you can make today:

www.energytrust.org/tips and www.communityenergyproject.org/services

PORTLAND HOME ENERGY SCORE

Know the score. Outsmart energy waste.



THIS HOME'S SCORE **3** OUT OF 10

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\$1,233 PER YEAR

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Home Energy Score



Official Assessment | ID#1234567

The Home Energy Score is a national rating system developed by the U.S. Department of Energy. The Score reflects the energy efficiency of a home based on the home's structure and heating, cooling, and hot water systems. The average score is a 5. Learn more at HomeEnergyScore.gov.

HOW MUCH ENERGY IS THIS HOME LIKELY TO USE?

Electric: 10,000 kWh/yr.....\$600
Natural Gas: 700 therms/yr.....\$633
Other: _____gal/yr.....\$0

TOTAL ENERGY COSTS PER YEAR **\$1,233**

How much renewable energy does this home generate?
3,000 kWh/yr

THIS HOME'S CARBON FOOTPRINT:



- Actual energy use and costs may vary based on occupant behavior and other factors.
- Estimated energy costs were calculated based on current utility prices (\$0.11/kwh for electricity; \$0.85/therm for natural gas; \$2.50/gal for heating oil; \$3.50/gal for propane).
- Carbon footprint is based only on estimated building energy use.
- Carbon emissions are estimated based on utility- and fuel-specific emissions factors provided by the Oregon Department of Energy.
- This report meets Oregon's Home Energy Performance Score Standard and complies with Portland City Code Chapter 17.306.

Score today:
3

Score with improvements*
7

Estimated energy savings with improvements:
\$500

Estimated carbon reduction with improvements:
27%

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Duct insulation	R0	Insulate to R6
Duct sealing	41% leakage	Reduce leakage to 10% of total airflow
Floor insulation	R0	Insulate to R20
Gas furnace	70% AFUE	Upgrade to ENERGY STAR 90% AFUE
Skylights	Single-paneled	Replace with ENERGY STAR double-pane solar-control low-E argon gas-wood frame
Water heater	Standard electric tank	Upgrade to ENERGY STAR heat pump (E 2.70)
Windows	Single-paneled aluminum	Replace with ENERGY STAR double-pane solar-control low-E argon gas-wood frame

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Least Popular

Home Energy Rating Certificate Confirmed Report

Rating Date:
Registry ID: 631462669
Rating Number: 631462669



HERS® Index Score:

47

Your home's HERS score is a relative performance score. The lower the number, the more energy efficient the home. To learn more, visit www.hersindex.com

Annual Savings

\$5,912

*Relative to an average U.S. home

Home:

123 Fake St, Anytown, CO

Builder:

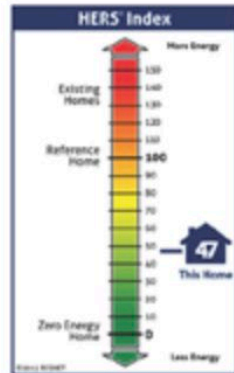
Ekotrope

Your Home's Estimated Energy Use:

	Use (MBtu)	Annual Cost
Heating	77.0	\$2,182
Cooling	0.9	\$53
Hot Water	17.1	\$240
Lights/Appliances	36.0	\$1,944
Service Charges		\$0
Generation (e.g. Solar)	23.1	-\$2,689
Total:	131.1	\$1,730

This home meets or exceeds the criteria of the following:

- Energy Star v3
- Energy Star v3.1
- 2006 International Energy Conservation Code
- 2009 International Energy Conservation Code
- 2012 International Energy Conservation Code
- 2015 International Energy Conservation Code



Home Feature Summary:

- Home Type: Single family detached
- Conditioned Floor Area: 4,500 sq. ft.
- Number of Bedrooms: 4
- Primary Heating System: Furnace • Natural Gas • 95 AFUE
- Primary Cooling System: Air Conditioner • Electric • 16 SEER
- Primary Water Heating: Water Heater • Natural Gas • 0.67 Energy Factor
- House Tightness: 1660 CFM50
- Duct Leakage to Outside: 0 CFM25
- Above Grade Walls: R-21
- Ceiling: R-50
- Window Type: U-Value: 0.310, SHGC: 0.250
- Foundation Walls: R-11

Rating Completed by:

Energy Rater: Test Rater
RESNET ID: 5459458

Rating Company: Ekotrope Rating Co.

Rating Provider: Ekotrope Provider



Test Rater, Certified Energy Rater



Ekotrope HERS Rating Tool - Version: 2.0.0.1590

The Home Energy Rating Standard Disclosure for this house is available from the rating provider.

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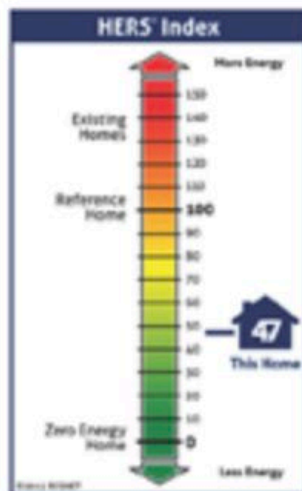
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Test Rater, Certified Energy Rater

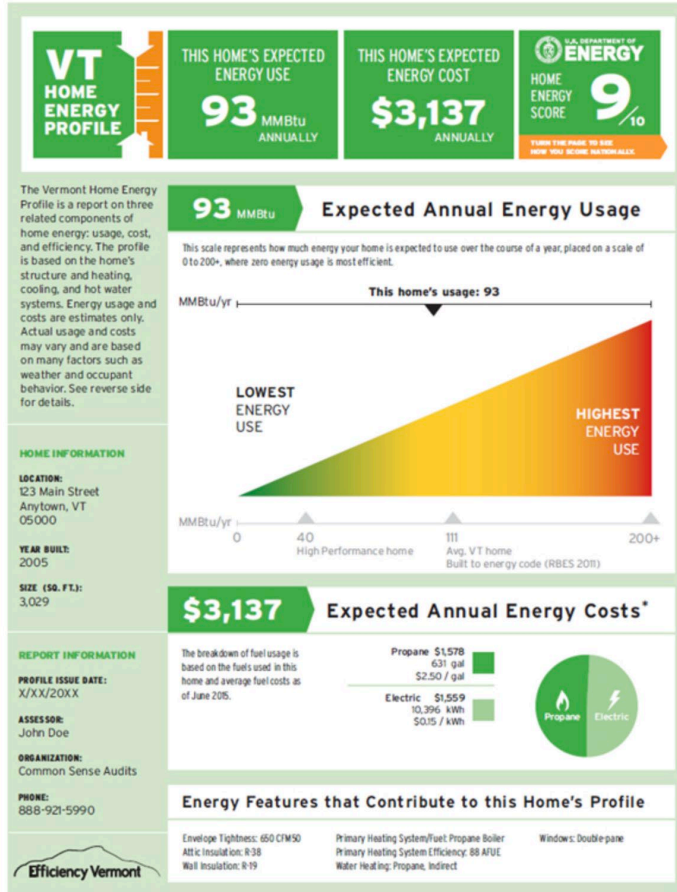


Ekotrope HERS Rating Tool - Version: 2.0.0.15.90

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Second Most Popular





THIS HOME'S EXPECTED ENERGY USE
93 MMBtu ANNUALLY

THIS HOME'S EXPECTED ENERGY COST
\$3,137 ANNUALLY



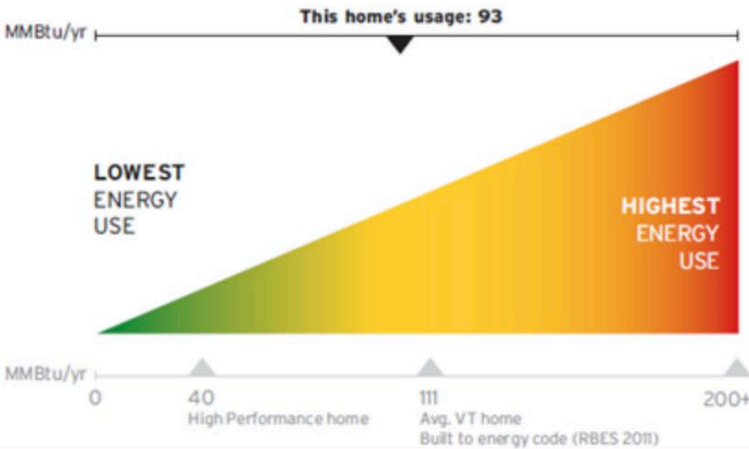
TURN THE PAGE TO SEE HOW YOUR SCORE COMPARES

The Vermont Home Energy Profile is a report on three related components of home energy: usage, cost, and efficiency. The profile is based on the home's structure and heating, cooling, and hot water systems. Energy usage and costs are estimates only. Actual usage and costs may vary and are based on many factors such as weather and occupant behavior. See reverse side for details.

93 MMBtu

Expected Annual Energy Usage

This scale represents how much energy your home is expected to use over the course of a year, placed on a scale of 0 to 200+, where zero energy usage is most efficient.



HOME INFORMATION

LOCATION:
123 Main Street
Anytown, VT
05000

YEAR BUILT:
2005

SIZE (SQ. FT.):
3,029

\$3,137

Expected Annual Energy Costs*

The breakdown of fuel usage is based on the fuels used in this home and average fuel costs as of June 2015.

Propane \$1,578
631 gal
\$2.50 / gal

Electric \$1,559
10,396 kWh
\$0.15 / kWh



REPORT INFORMATION

PROFILE ISSUE DATE:
X/XX/20XX

ASSESSOR:
John Doe

ORGANIZATION:
Common Sense Audits

PHONE:
888-921-5990

Energy Features that Contribute to this Home's Profile

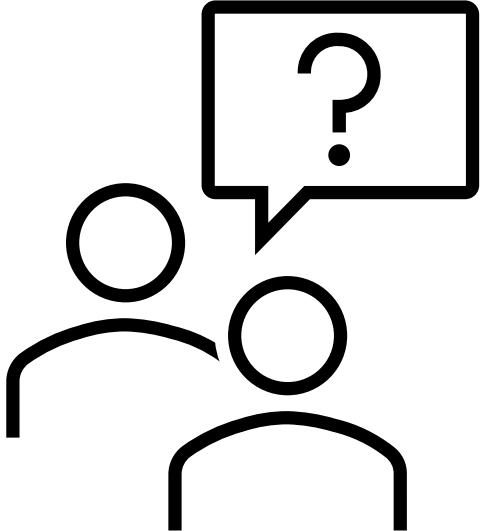
Envelope Tightness: 650 CFM50
Attic Insulation: R-38
Wall Insulation: R-19

Primary Heating System/Fuel: Propane Boiler
Primary Heating System Efficiency: 88 AFUE
Water Heating: Propane, Indirect

Windows: Double-pane



Questions?



Next Steps

- Connect with Possible Label Providers/Generators
- Select Provider For Labeling
- Create South Carolina Draft Label Based on WG Label Design
- Review SC Draft label With WG

Questions or Comments

Next Meeting 10/26/2022 – 10:30 AM

swashington@ors.sc.gov

builtenvironmentllc@gmail.com

Project Information Page:

<https://energy.sc.gov/node/3970>

ENERGY.SC.GOV

