Realizing the Market Value for High Performance Homes: *Reports from the Field*

Visible Value Blueprint

Steps 1, 2, & 7

Presented by Jeffrey Gephart Vermont*wise* Energy Services, Inc. 802.767.4501 vtwise@together.net

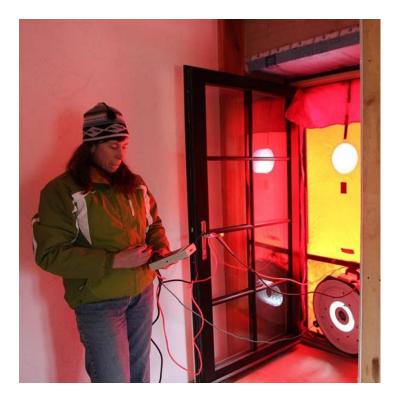
features and improvements using consistent, standardized methods.

Is there a group that understands documenting building features & performance more than this one?

Along with being educators, inspectors, scolds, advocates, & serial enablers,

identifying building features, testing performance, documenting it, QC on all that, plus evaluation...

it's a huge part of what you do. Step 1 is you.

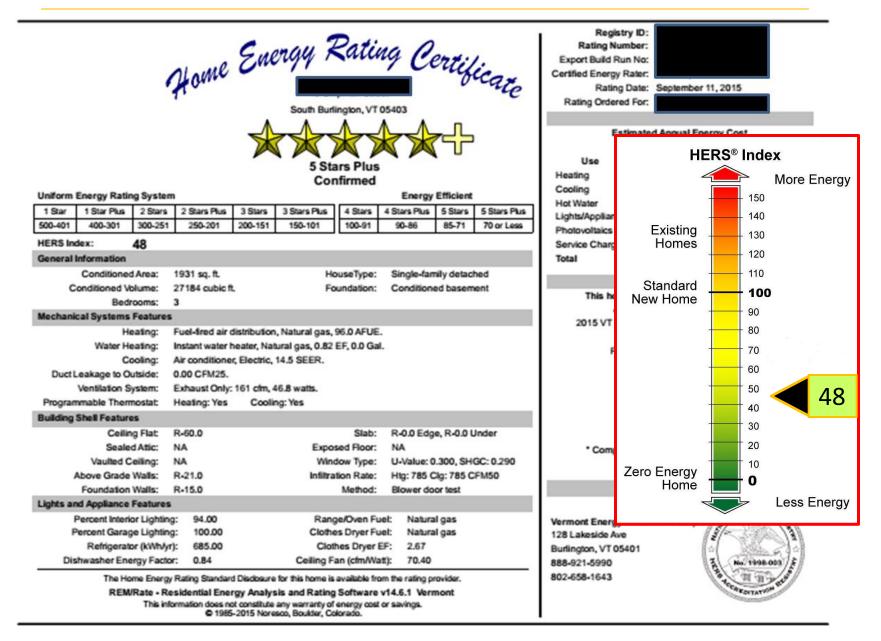


Jennifer Severidt, Efficiency Vermont

features and improvements using consistent, standardized methods.

What's a consistent, standardized method?

Blueprint Step 1: Document



Blueprint Step 1: Document

Other means to document energy efficiency features & improvements using consistent, standardized methods.







features and improvements using consistent, standardized methods.

What's happening to make sure we can share energy information?

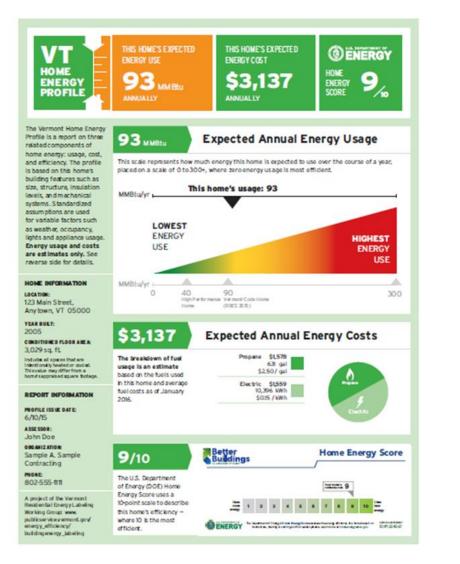
Step 1: Document/Data Collection Standards

Collect 3rd party verified ratings/scores/building certifications & upgrade information in a standard & consistent way that is MLS & appraiser-friendly.

Why: Accuracy, consistency, & compatibility is necessary to make energy data transferrable & usable in the real estate market.

Step One	Step Four	Step Five
Energy Efficiency	MLS	Appraisal Industry
BPI 2101HPXML	 RESO Data Dictionary RETS Green MLS Implementation Guide 	 Appraisal Institute Green and Energy Efficient Addendum

New existing home Vermont Home Energy Profile



How does the Vermont Home Energy Profile work?

This Profile reports on three related components: estimated annual energy use, estimated annual energy costs, and the DOE Home Energy Score, Energy usage and cost are modeled based on this home's building features (such as size, insulation levels, mechanical systems), and standardized assumptions for the number of occupants. occupant behavior, weather, and lighting and appliance usage.

The energy features that contribute to this home's Profile are listed to the right. If you have questions about this Profile please contact Efficiency Vermont at 888-921-599 0.

	THIS	LOW ENERGY USE	VERMONT ENERGY CODE	HIGH ENERGY USE
Building Tightness	1.6 AOI 50	1 ACH50	3 ACH50	7 ACHSO
Atti c in sul ation	R-36	R:60	R~49	R-9
Well Insulation	R-15	R 25+	P 25	R-3
Base men t Wall in su latio n	R-19 cavity	R-40	R-20 (cavity) or R-15 @ontinuous)	RO
Windows	Double- Pan e	Triple Pane, Lovel, High Solar Gain	Double:Pane, LowE (U-0.32)	Single Pane, Clear
Heating System Efficiency	BO AFUE	90+ AFUE	Federal minimum - 80 AFUE	X0% or less AFUE
Primary Heating System/Fuel	Propana Boliar			
Hot Water System/Puel	Pro pane, In direct			
Solar PV Present?	No			

Reiter ...

Home Energy Score

<u>______</u>

This section shows how this home compares

to others nationwide. The score estimates

the fossil fuels and electricity consumed in

produce, transport and deliver those fuels.

eere/buildings/home-energy-score

this home, as well as the energy required to

For more information go to: www.energy.gov/

Binny "teaching to be seen and being to be

US DEPARTMENT OF ENERGY

HOME ENERGY SCORE

What are the components of the Vermont Home Energy Profile?

EXPECTED ENERGY COSTS

generate the estimated amual energy costs

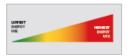
presented in this section. Values are obtained

from the Vermont Fuel Price Report, Current

www.publicservice.vermont.gov/publications/

fuel price reports can be found here

fuel report



EXPECTED ENERGY USE

This section converts the total energy used in Average Vermont fuel prices are used to this home (electricity and fossil fuels like oil or gas) to a common unit of energy (MMBtu). A low MMBtu identifies a home as energy efficient with a smaller carbon footprint and lower energy closts.

1 MM Rh =

- 7 cal fuel oil
- 10 therms of natural gas
- Ti gai of propare
- + 293 kWh of electricity
- +.05 cords of wood

Take action!

Information is power! The Vermont Home Energy Profile can inform the next steps to improve this home's energy efficiency by indicating specific features that can be improved.

If you have questions about how to interpret this Profile please contact Efficiency Vermont at 888-921-599 0.

For energy saving tips, links to qualified contractors, financing, and cash back rebates on energy saving equipment and services. contact the organizations listed here.

Efficiency Vermont + 888-921-5990 www.efficiencyvermont.com Vermont Gas Systems + 802-863-451

www.vermont.gas.com

Burilington Electric Department 802-865-7342 · www.burlingtonelectric.com

Vermont's Weatherization Program www.dcf.vermont.gov/oeo/weatherization





The Vermont Home Energy Profile is a report on three related components of home energy: usage, cost, and efficiency. The profile is based on this home's building features such as size, structure, insulation levels, and mechanical systems. Standardized assumptions are used for variable factors such as weather, occupancy, lights and appliance usage. Energy usage and costs are estimates only. See reverse side for details.

HOME INFORMATION

Anytown, VT 05000

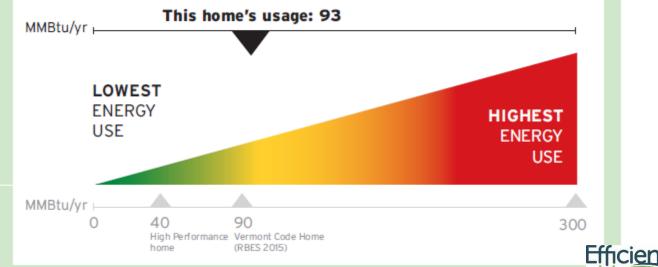
123 Main Street,

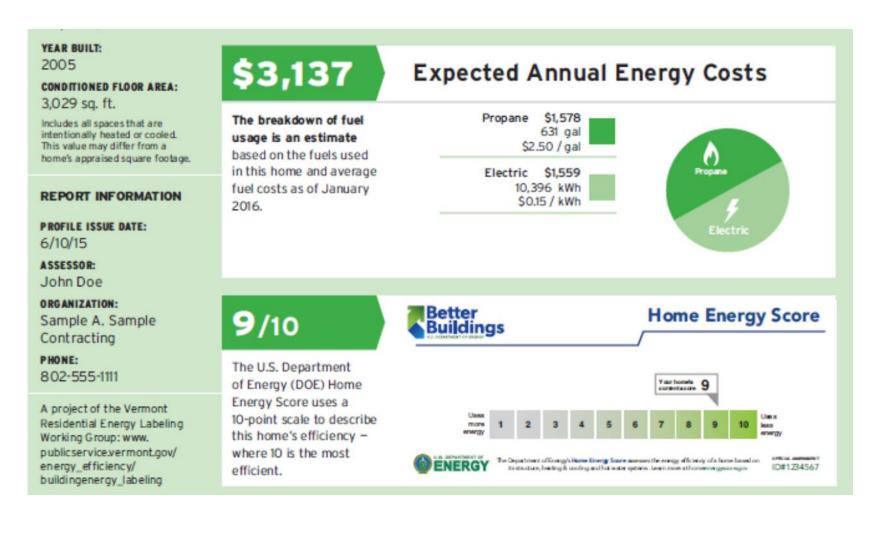
LOCATION:

93 MMBtu

Expected Annual Energy Usage

This scale represents how much energy this home is expected to use over the course of a year, placed on a scale of 0 to 300+, where zero energy usage is most efficient.







2016 Vermont Energy Profile Pilot – (existing home energy label) **Efficiency Vermont**, partnered with:

- Burlington Electric Dept.
- Vermont Gas Systems
- Weatherization Assistance Programs
- Non-profits (Neighborworks)

Goals

- assess the market for the Profile in Vermont
- evaluate customer types willing to pay for the Profile & under what circumstances
- see whether & how home performance contractors, home inspectors, & Realtors[®] can fit the Profile into their business models.



Vermont Home Energy Profile 2016 Pilot - Efficiency Vermont

- Assessors solicited from 3 professions: HPw/ES Contractors (BPI/RESNET), Home Inspectors, & Realtors[®]
- Participation is completely voluntary no payment, incentives, or subsidies for customers to get the Profile
- Assessors will have the opportunity to pilot the Profile with 2 customer types:
 - Those completing Home Performance energy audits & improvements - HPw/ES Contractors (BPI/RESNET)
 - Home buyers and sellers at time of sale– Home Inspectors & Realtors[®]

(and refinance?)





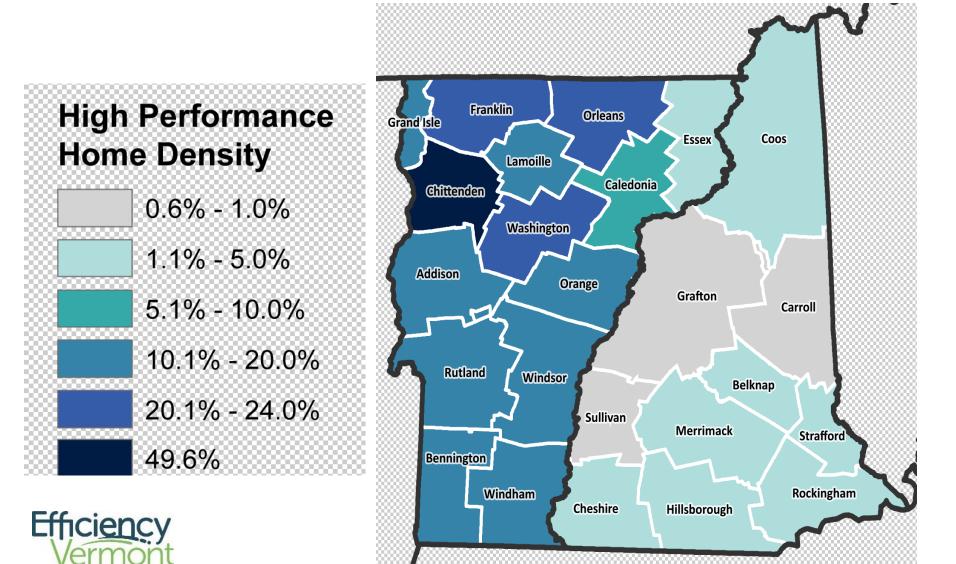
- Continue your good work as Home Energy Raters (or program managers), meaning educators, inspectors, scolds, advocates, and serial enablers
- Ensure that your data is documented using "consistent, standardized methods (no problem)



 Do you know what the high performance home density is where you live? If yes, how do you know?

Blueprint Step 2: Disclose inventories/track supply

Vermont & New Hampshire spooning since 1791



Blueprint Step 2: Disclose inventories

Efficiency Vermont Residential New Construction Services Data:

6,355 HERS homes built from March, 2000 to end of August, 2015.

1,420 homes are approved for release of HERS data & that data is <u>included is currently available to appraisers & Realtors® in our</u> <u>MLS.</u>

This includes the following data:

- RESNET accredited Home Energy Ratings
- Any third-party verified building certification earned by HERS rated homes (e.g., EPA ENERGY STAR Homes, USGBC LEED for Homes, National Green Building Standards, Passive House Institute U.S. PHIUS+ certified homes)



Blueprint Step 2: Disclose inventories

Efficiency Vermont Existing Home Service

Home Performance with ENERGY STAR & WAP

> 4,000 participating Home Performance with ENERGY STAR homes since 2005 & thousands of VT Weatherization Assistance Program homes

- Efficiency Vermont does not have permission to release the data for these homes.
- Unlikely that VT Home Energy Profiles and DOE Home Energy Scores can be retroactively generated due to data limitations



Blueprint Step 2: Disclose inventories

What – Priority for Tracking 3rd party verified ratings/scores/ & certifications

RESO DD Approved Third-Party Verified Rating/Score &	Enumeration Set 1	Enumeration Set 3			
Building Certification Fields					
Green Building Verification (program)	Home Energy Rating (HERS)	ENERGY STAR [®] Homes			
Green Verification Body (program sponsor)	Residential Energy Services	U.S. Environmental Protection			
	Network (RESNET)	Agency			
Green Year Verified	year	year			
Green Verification Rating (level achieved)	n/a	ENERGY STAR [®] Home			
Green Verification Status (proposed or official)	Proposed or Official	Proposed or Official			
Green Verification Metric (efficiency score results)	-200 to 500	n/a			
Green Verification URL (web address for more details)	http://www.resnet.us/	www.energystar.gov/index.cfm?			
		c=new homes.hm index			

RESO added this important green field to their Data Dictionary at the request of Earth Advantage & Efficiency Vermont to improve the HERS value to Realtors[®]:

- listing agent = marketing
- buyer's agent = finding inventory

Step 2: Disclose Inventories Case Study VT

Home Energy Rating & Building Certification Appraiser Database

Privacy Issues?

- Yes, we had to secure approval from state utility regulators
- We use Efficiency Vermont's Residential New Construction Enrollment Form to acquire the necessary owner approval



HOME ENERGY RATING INFORMATION RELEASE:

The enrollee hereby authorizes Efficiency Vermont to release the following Home Energy Rating System (HERS) information for the purpose of assisting real estate appraisers and realtors in the development of accurate home appraisals: the physical address of the rated property; the HERS Index Score; whether the home is labeled as ENERGY STAR[®], LEED for Homes, National Green Building Standard, or Passive House; and the date that Efficiency Vermont criteria was met.

Requests by enrollees to withhold such release will be honored, providing such notification is received prior to completion of HERS documentation. For all enrolled properties, Home Energy Rating and associated project documentation will be available to subsequent owners of the property upon request.

Step 2: Disclose Inventories Case Study VT



Condominium

20 Thorn Bush Rd Hinesburg, Vermont 05461 \$259,900



MLS #: 3063781 Price: \$259,900 Total Rooms: 5 BedRooms: 2 Total Baths: 2 Acres: 0.00 Square Feet: 1348 Sq Ft Above GRD: 1348 Sq Ft Below GRD: 0 Taxes: \$0 Tax Year: 2009 Year Built: 2010 Condo Fees: \$175 Community:



Remarks:

Great Hinesburg "Smart Growth" neighborhood to be built by Sterling Construction in Thistle Hill. Home is Energy Star and National Green Building Standards rated. Garden homes with maintenance-free living in a village setting: lawn mowing, snow removal, trash, and landscaping handled by association. Home near 14 acres of wooded common land with walking trails. This home features 9 foot ceilings, GE appliances, and first floor master bedroom and laundry. Ground-level is awaiting your custom design touch! Other plans available.

Interior Features: Cable, Eat-in Kitchen, Living

Closet

Water: Public

Sewer: Public

Foot Print: Seasonal: No Surveyed: Yes Zoning: Res Flood Zone: No Book: 197 Page: 128 Map: 167B&C HERS Index: 58

School District:

Features:

Style: Townhouse
Color: Sand
Amenities: Garden Space, Snow Removal, Trash,
Other
Full Baths: 2
3 / 4 Baths: 0
1 / 2 Baths: 0
Roads: Association, Private
Water Heater: Gas-Natural
Basement: Unfinished, Walk Out, Other
Construction: Wood Frame
Driveway: Paved
Electric: 100 Amp, Circuit Breaker(s)
Exterior: Vinyl
Foundation: Concrete
Garage / Parking: Attached, Auto Open, Off
Premises
Heating / Cooling: Baseboard, Multi Zone
Heat Fuel: Gas-Natural
Lot Description: Common Acreage, Subdivision,
Trail/Near Trail, Village
Roof: Shingle-Architectural

Room, Living/Dining, Master BR with BA, Smoke Master Bedroom: 12x14 Det-Hdwired w/Batt, Vaulted Ceiling, Walk-in Bedroom 2: 12x13 Kitchen: 9x10 Living Room: 16x14 Dining Room: 9x10 Elementary: Hinesburg Elementary School Junior High: Hinesburg Elementary School High School: Champlain Valley UHSD #15

Room Dimensions:

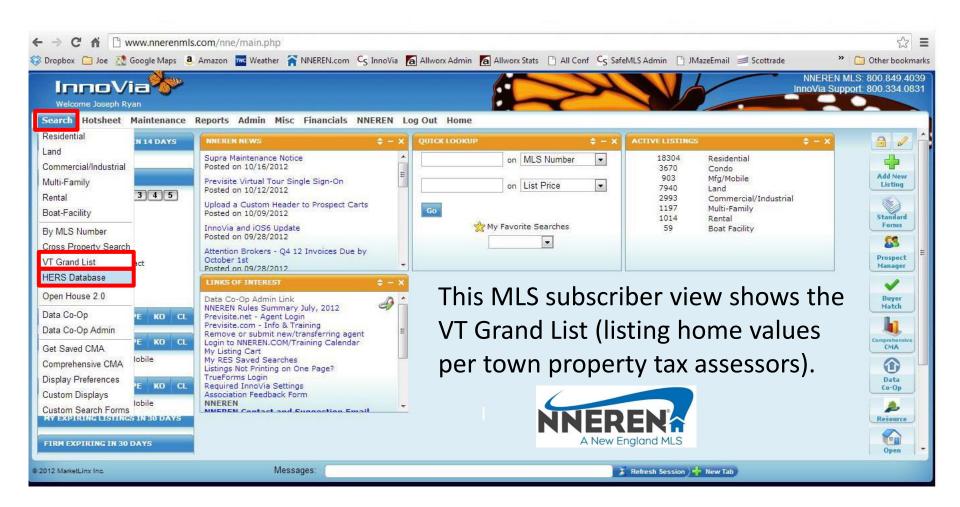
HERS® Index More Energy 150 140 Existing 130 Homes 120 110 Standard 100 New Home 90 80 70 This Home 60 58 50 40 30 20 10 Zero Energy 0 Home Less Energy

Many of Vermont's most energy efficient & green certified new homes are custom homes that are never listed on the MLS.

To ensure that appraisers & Realtors[®] have a broader view of market trends we developed a work around with our MLS.

Blueprint Step 2: Disclose Inventories Case Study VT

MLS Home Energy Rating & Building Certification Database



Blueprint Step 2: Disclose Inventories Case Study VT

MLS Home Energy Rating & Building Certification Database

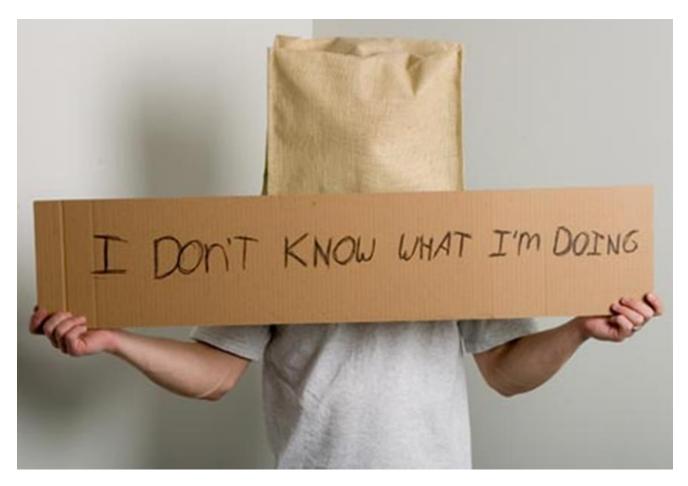


State	County	City	Postal Code	Development Name	StreetNr	Address1	Address2	HERS Index Score	ENERGY STAR Home	LEED for Homes	NAHB - Nat Green Bldg Std	Passive House	Vermont Builds Greener	Claimed Complete Date
VT	Addison	Addison	05491					55						05/31/12
VT	Addison	Ferrisburg	05456				_	63	TRUE					01/11/12
VT	Addison	Ferrisburg	05456				_	1	TRUE					9/6/2012
VT	Addison	Lincoln	05443				_	57	TRUE					01/20/12
VT	Addison	Lincoln	05443				_	53	TRUE					06/12/12
VT	Addison	Lincoln	05443				_	16	TRUE					8/6/2012
VT	Addison	Lincoln	05443				_	52	TRUE					9/6/2012
VT	Addison	Middlebury	05753				_	58						12/6/2012
VT	Addison	Middlebury	05753				_	55						12/11/2012
VT	Addison	Middlebury	05753					54						12/14/2012
VT	Addison	Middlebury	05753				-	55	TRUE					11/04/11
VT	Addison	Middlebury	05753				-	55	TRUE					11/04/11
VT	Addison	Middlebury	05753				-	56	TRUE					11/04/11
VT	Addison	Middlebury	05753				_	58	TRUE					11/08/11
VT	Addison	Middlebury	05753				_	53	TRUE					11/08/11
VT	Addison	Middlebury	05753				_	57	TRUE					11/08/11
VT	Addison	Middlebury	05753				_	56	TRUE					11/08/11
VT	Addison	Middlebury	05753				_	54	TRUE					11/11/11
VT	Addison	Middlebury	05753				_	56	TRUE					11/11/11
VT	Addison	Middlebury	05753				_	54	TRUE					11/11/11
VT	Addison	Middlebury	05753				_	54	TRUE					11/16/11
VT	Addison	Middlebury	05753				_	53	TRUE					01/06/12
VT	Addison	Middlebury	05753				_	50	TRUE					01/09/12
VT	Addison	Middlebury	05753					55	TRUE					01/09/12
VT	Addison	Middlebury	05753					55	TRUE				1	01/10/12
VT	Addison	Middlebury	05753					55	TRUE				1	01/10/12
VT	Addison	Middlebury	05753					51	TRUE					01/11/12
VT	Addison	Middlebury	05753					52	TRUE					01/11/12

Call to Action: Step 2 Disclose Inventories

- Organize your data to facilitate sharing information through MLS
- Ask local energy efficiency program sponsors and/or 3rd party verifiers to create a database to append to the MLS (to accelerate market awareness of the efficient custom homes being built or renovated homes not being sold)
 - List all homes that get HERS Ratings & earn 3rd party verified building certifications to help appraisers & realtors with local comparable sales data
- HERS Raters or program sponsors to provide a completed AI Addendum for "Proposed from Plans" Ratings to interest Realtors[®]

Disclaimer:



The finance industry members of the Vermont Green Home Alliance include:

- Association of Vermont Credit Unions
- Vermont Housing Finance Agency
- Vermont Mortgage Bankers Association
- VSECU a credit union serving all Vermonters

Vermont Bankers Association tolerates my spam & sometimes distributes our information to its members.

In general, we're seeing far better uptake & collaboration from credit unions.

Written & supplied multiple articles (short bits or they don't distribute them) to the lending associations on:

- VT Energy Code
- Appraisal Institute's Valuation of Sustainable Buildings Professional Development Program & <u>Registry</u>
- Appraisal Institute's *Residential Green & Energy Efficient Addendum*

We also feed information, if appropriate, to the VT Bar Assoc. & the Title Insurance folks (e.g., energy code) hoping they counsel lender's to verify code compliance.

Appraised Value and Energy Efficiency: Getting it Right

While location, design, and price are a home buyer's main considerations, surveys show that buyers rank energy efficiency as one of the most desirable features, and importantly, when there is sufficient energy savings - one. they're willing to pay more for. However, energy efficiency can be overlooked in the approisal process for a variety of reasons, including a lack of access to quality data, underwriting impediments, and appraiser qualifications. Many appraisers may not be aware of the unique features of an energy efficient home. However, there are many specially-trained appraisers who are qualified to assess the value of these features that are often hidden behind the drywall. One way to know that a home is built energy efficiently is to know which energy code it was built to.

According to the U.S. Department of Energy, homes built to the 2012 or 2015 International Energy Conservation Code (IECC) are 15-16% more efficient than those built to the 2009 IECC or earlier. They will be more comfortable to live in and have lower monthly energy bills.

Fannie Mae, Freddie Mac and FHA guidelines require appraisers to consider the energy efficient features of the home, and if the market supports an adjustment, in the appraised value, one must be made, but an average appraiser won't take this into account if they aren't aware of it.

A ready-made solution exists.

Fannie Mae, Freddie Mac and FHA guidelines require lenders to choose competent appraisers who have the requisite knowledge required to perform a professional quality appraisal for the specific geographic location and particular property type.

Appraisers who are specially trained on energy efficient / high-performing homes will analyze market trends relating to special energy-efficiency features. You can access a list of qualified appraisers at the <u>Valuation of</u> <u>Sustainable Buildings Professional Development Program Registry</u>.

What can builders do?

Builders can help the buyer assure a competent appraiser is selected by doing these things:

- Complete and provide buyers with the <u>Residential Green and Energy Efficient Addendum form</u>
 Provide a copy of a complete Home Energy Rating System (HERS) report (if available).
- Prepare the buyer to notify the lender that they require a competent appraiser for this special type of construction; add your logo and provide a copy of the directions on the next page.
- Add your logo, the property address, and contact info to the attached letter. Direct your buyer to give the letter (along with 1 and 2 above) to their lender.







Explains why there's an issue:

- Changes in market demand
- Energy code updates
- Fannie Mae, Freddie Mac, FHA requirements for competency
- Al's Valuation of Sustainable
 Buildings Professional
 Development Program & Registry
- AI Residential Green & Energy Efficient Addendum
- What a builder can do



FOR BUYERS:

ASSURING A COMPETENT APPRAISER FOR YOUR NEW HOME

Congratulations on choosing an energy efficient, high-performing home!

Your new home was built to higher energy efficiency standards that will improve your quality of life. Your home will be more comfortable to live in and have lower monthly energy bills than other newer homes on the market. According to the U.S. Department of Energy, homes built to the 2012 or 2015 International Energy Conservation Code (IECC) are 15-16% more efficient than those built to the 2009 IECC or earlier. Some of your home features may include:

- More wall and ceiling insulation to keep conditioned air inside your home
- Windows that keep the heat out in the summer months to improve comfort
- Fewer drafts and air leaks, which improves indoor comfort

What You Need To Know Regarding the Loan/Appraisal Process

As part of the typical loan process, lenders randomly assign an appraiser to determine the appraised value of a new home. However, yours is not a typical new home – it is a high-performing building with unique features. Fannie Mae, Freddie Mac and FHA guidelines require appraisers to be competent in the property type they are appraising. If you do not clearly identify the property as a special property type requiring a competent appraiser trained in energy-efficient, high-performance homes, a typical appraiser will be assigned, and these features may not be taken into account, which will put your appraisal at risk of not being competently appraised.

What You Need To Do

Provide your lender with three things provided to you by your builder:

- The lender letter regarding this special property type and the need for a trained, competent appraiser for energy-efficient, high-performing homes.
- The Appraisal Institute's Residential Green and Energy Efficiency Addendum, completed by your builder.
- The Home Energy Rating System (HERS) Report (if available).

FOR LENDERS

Dear lender,

The new home located at: _

is a special property type. It is an energy efficient, high-performing home that meets the stringent energy efficiency requirements of the code checked below:

- ____ 2012 International Energy Conservation Code (2012 IECC)
- ___ 2015 International Energy Conservation Code (2015 IECC)

A copy of the Green and Energy Efficient Addendum form, and the HERS report (if available) should be included with the appraisal engagement letter. Fannie Mae, Freddie Mac and FHA guidelines require lenders to choose competent appraisers who have the requisite knowledge required to perform a professional quality appraisal for the specific geographic location and particular property type. As a high-performing, energy efficient home, it requires an appraiser that is competent to assess the value of the green and/ or energy efficiency features in the local real estate market.

You can access a list of qualified appraisers at the Valuation of Sustainable Buildings Professional Development Program Registry, available at http:// www.myappraisalinstitute.org/findappraiser/green_sustainability_residential. aspx. These specially trained appraisers have completed 28 hours of education and passed three exams. If the appraisers on your panel are not on this list, they can complete 14 education hours online to get started: http://www.myappraisalinstitute.org/education/course_descrb/Default. aspx?prgrm_nbr=826&key_type=CO_

Appraisers on this list are not required to be Appraisal Institute members but must take the required courses and pass the exams to be listed.

If you have questions, please contact our representative at:

NAME:	
PHONE:	
EMAIL ADDRI	S:

FOR BUYERS: ASSURING A COMPETENT APPRAISER FOR YOUR NEW HOME

Congratulations on choosing an energy efficient, high-performing home!

Your new home was built to higher energy efficiency standards that will improve your quality of life. Your home will be more comfortable to live in and have lower monthly energy bills than other newer homes on the market. According to the U.S. Department of Energy, homes built to the 2012 or 2015 International Energy Conservation Code (IECC) are 15-16% more efficient than those built to the 2009 IECC or earlier. Some of your home features may include:

- More wall and ceiling insulation to keep conditioned air inside your home
- Windows that keep the heat out in the summer months to improve comfort
- Fewer drafts and air leaks, which improves indoor comfort

FOR LENDERS

Dear lender,

The new home located at: _

is a special property type. It is an energy efficient, high-performing home that meets the stringent energy efficiency requirements of the code checked below:

___ 2012 International Energy Conservation Code (2012 IECC)

___2015 International Energy Conservation Code (2015 IECC)

A copy of the Green and Energy Efficient Addendum form, and the HERS report (if available) should be included with the appraisal engagement letter. Fannie Mae, Freddie Mac and FHA guidelines require lenders to choose competent appraisers who have the requisite knowledge required to perform a professional quality appraisal for the specific geographic location and particular property type. As a high-performing, energy efficient home, it requires an appraiser that is competent to assess the value of the green and/ or energy efficiency features in the local real estate market.