BUILDINGENERGY BOSTON

AIA Provider: Northeast Sustainable Energy Association

Provider Number: G338

The Value of R-Value and NPV of PV: Selling High Performance Homes in an Indifferent Market

Course Number

Craig Foley, Brad Hevenor, Melanie Head, Jeff Gephart, Carolyn Sarno, Ben Hoen

Thursday, March 10, 2016

Credit(s) earned on completion of this course will be reported to AIA CES for AIA members. Certificates of Completion for both AIA members and non-AIA members are available upon request.

This course is registered with AIA CES for continuing professional education. As such, it does not include content that may be deemed or construed to be an approval or endorsement by the AIA of any material of construction or any method or manner of handling, using, distributing, or dealing in any material or product.

Questions related to specific materials, methods, and services will be addressed at the conclusion of this presentation.

RE/MAX LEADING EDGE

nep

MARKUS Appraisal INC.

EnergySmart Alternatives

Course Description

The ideal client hires you to build a net zero energy home, or to complete a deep energy retrofit of their existing home. Two questions arise: **How will the energy efficiency improvements impact the value of the construction loan? How much value is added to the home when it's time to sell?** These improvements change the value of the home and the perception of the home by potential buyers. **It is up to the real estate agent, the appraiser, and the seller to understand and convey the potential value to a buyer.** Learn from leading advocates, market participants, and analysts about the **contributory value of energy efficiency improvements and energy producing technologies like solar and geothermal**. Find out how these improvements increase homeowner equity and how they translate at the point of sale. **Overcome the barriers preventing realizing value for efficiency in real estate transactions**.

Learning Objectives

At the end of the this course, participants will be able to:

1. Define what is happening at upper levels of the **real estate trade organizations to support contributory value of high-performance home** characteristics on new and existing homes.

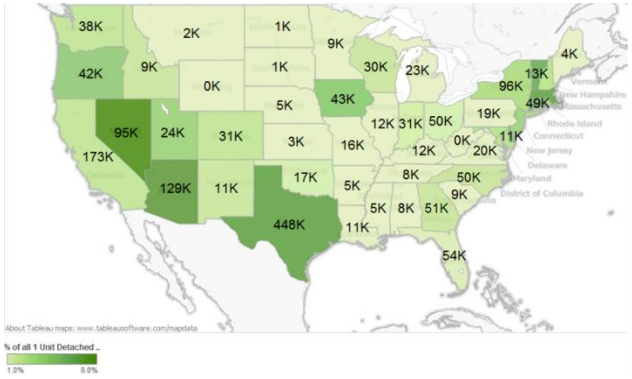
2. Define the latest **studies that support high-performance home value**.

3. Understand **the current barriers that make it difficult to monetize improvements**.

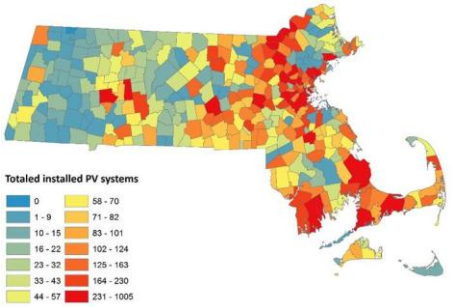
4. Define **what is being done to break down these barriers**.

The Value of R-Value and NPV of PV: Selling High Performance Homes **in an Indifferent Market**

The Value of R-Value and NPV of PV: Selling High Performance Homes **in an Indifferent Market**



Consumers don’t appear to be indifferent…



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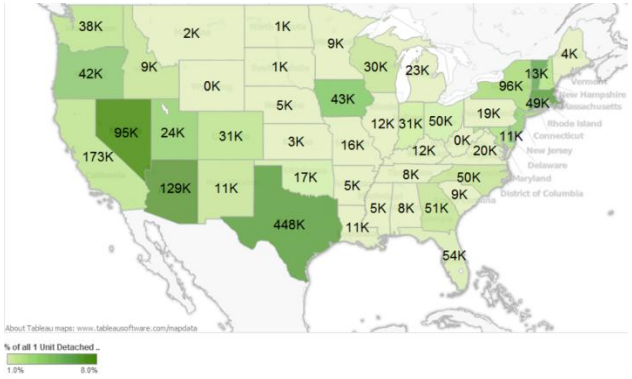

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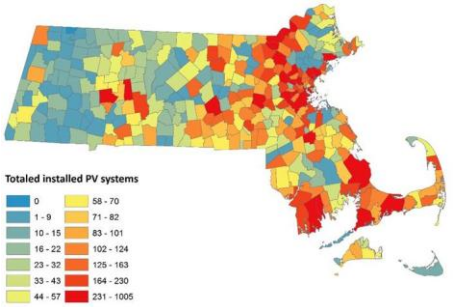
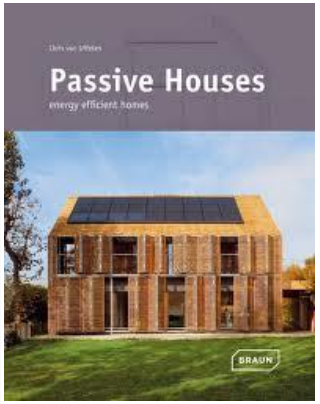


The product is not indifferent…



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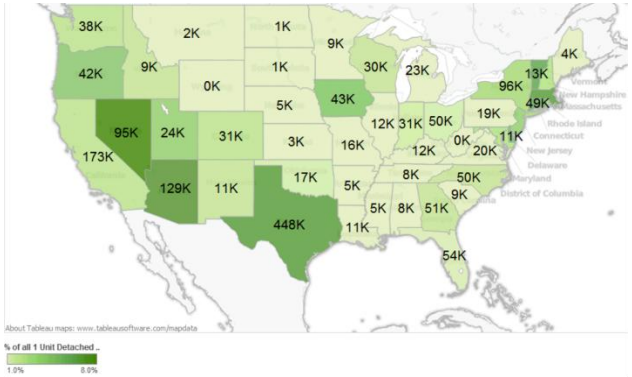

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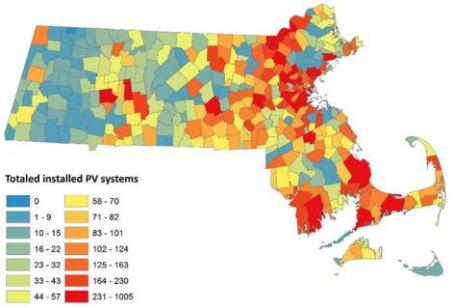
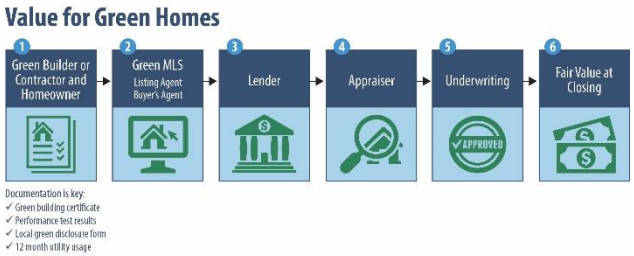
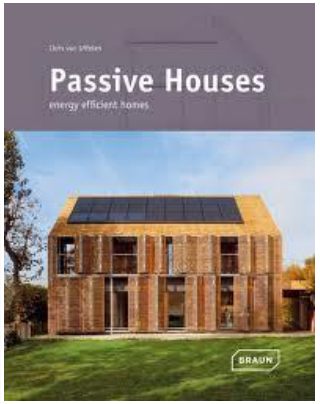


The product is not indifferent…

Even the upper levels of the RE trade organizations aren't indifferent…



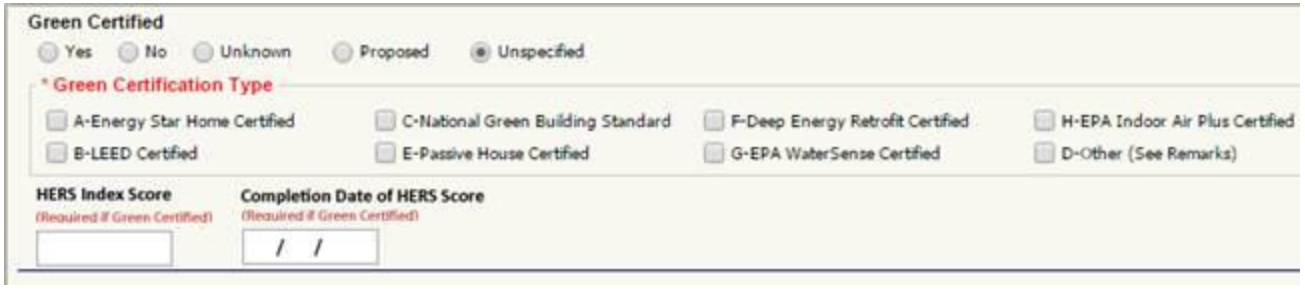


What is the MLS and why does it matter?

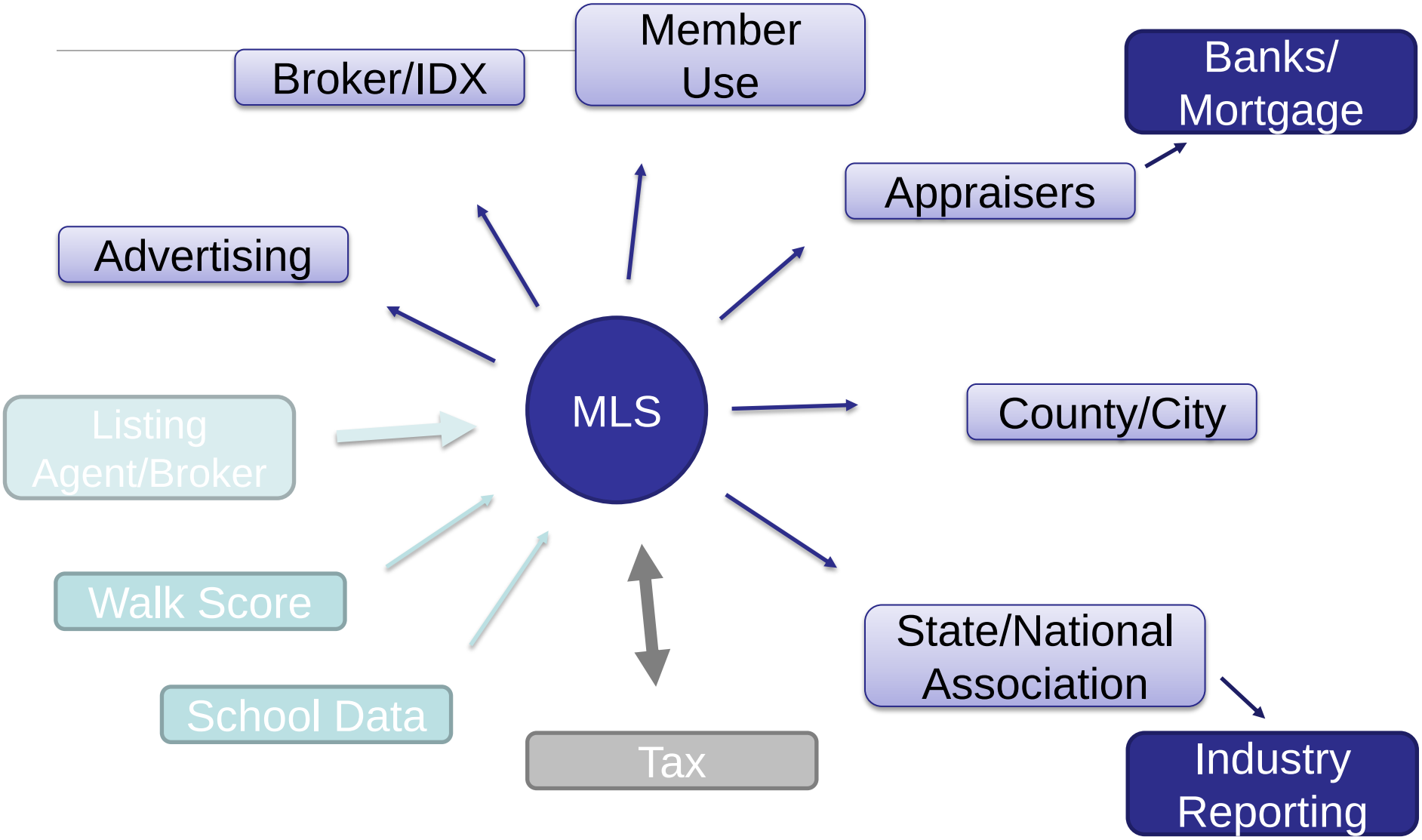
The MLS is not one entity: 850 MLSs in the U.S. served by multiple database venders

It is an agreement to cooperate among different brokerages in a geographic area

Information entered by the listing broker appears on websites including REALTOR.com, the local REALTOR® association's Web site, the local newspaper site, Yahoo, Google, CraigsList, Zillow and Trulia



Data Flow in a “typical” MLS

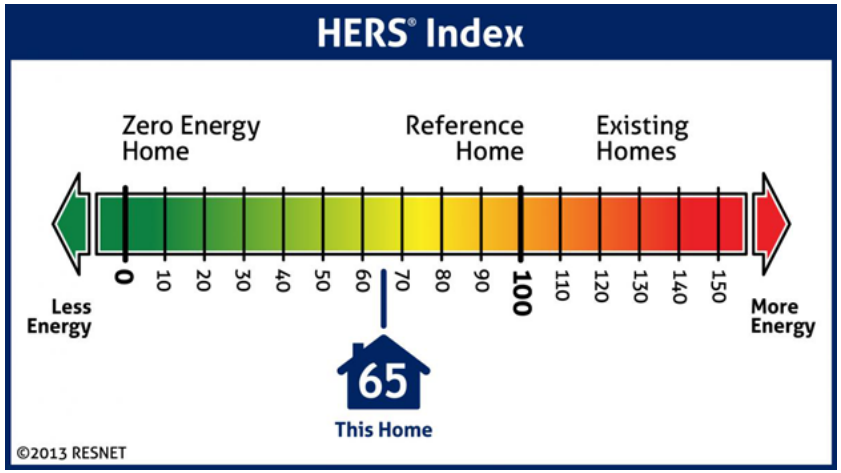


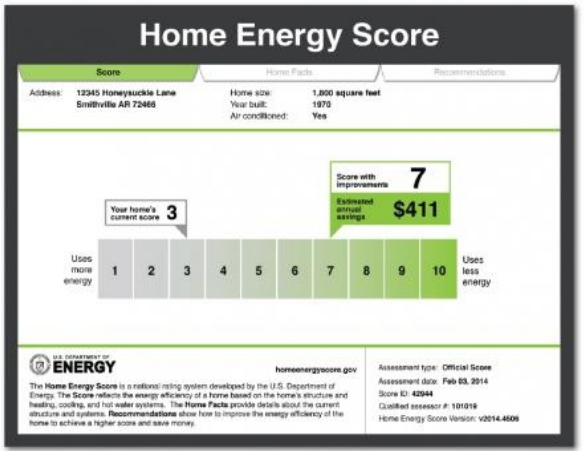
RESO Data Dictionary

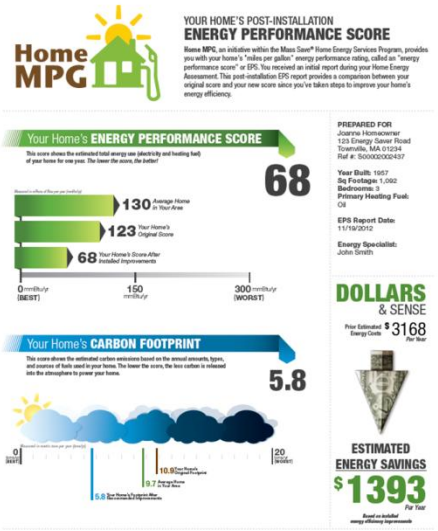
Jan 1, 2018 “Silver” compliance includes green data fields

For home buyers, they will be able to learn more about the energy efficiency features of homes, including achievements such as completing Home Performance with Energy Star, certification to LEED for Homes or the actual Home Energy Score achieved, for example.

Energy Asset Ratings and residential property







Our panelists ROCK!

Four questions for each:

Why are you committed to promoting homes that are more energy efficient and healthier to live in?

What are a few of your, or your organizations, **goals/projects for 2016**?

What are the **barriers that you face** to make those goals a reality?

What can you **share with our audience that they can do** to move the ball forward?

Brad Hevenor, MAI
Markus Appraisal, RI

MARKUS Appraisal INC.

Mechanic Street Passive House | No. 1262 | Certified | Daniel Roy

No.	1262	**Project**	Mechanic Street Passive House	**Status**	Certified
Lead CPHC	Daniel Roy	**Builder**	Stephen C. DeMetrick Fine Woodworking	**Location**	Wakefield , RI
QA/QC Rater	John Rodenhizer JSR Adaptive Energy Solutions	**Architecture Planning**	Steven Baczek Reading Ma	**Mechanical Systems Designer**	Daniel Roy
Constr. Type	Timber	**Bldg. Function**	Single Family	**Floor Area**	1404
Project Type	New Construction	**HERS Index**	32		
Energy Star Rating	--	**Heating Degree Days**	5792		

Air-tightness	0.155 ACH50

PHIUS
Passive House Institute US

Appraisal Institute®
Professionals Providing Real Estate Solutions

Valuation of Sustainable Buildings: Commercial

Professional Development Program Registry

	AI	Name	Company	City, State	Accepts Fee Assignments
SELECT	Designated Member	Bradford Hevenor, MAI	Markus Appraisal Inc.	East Greenwich, RI	Yes

Contributory Value – Three Requirements

1. The market must be convinced that renewable energy and high-performance building features have value.

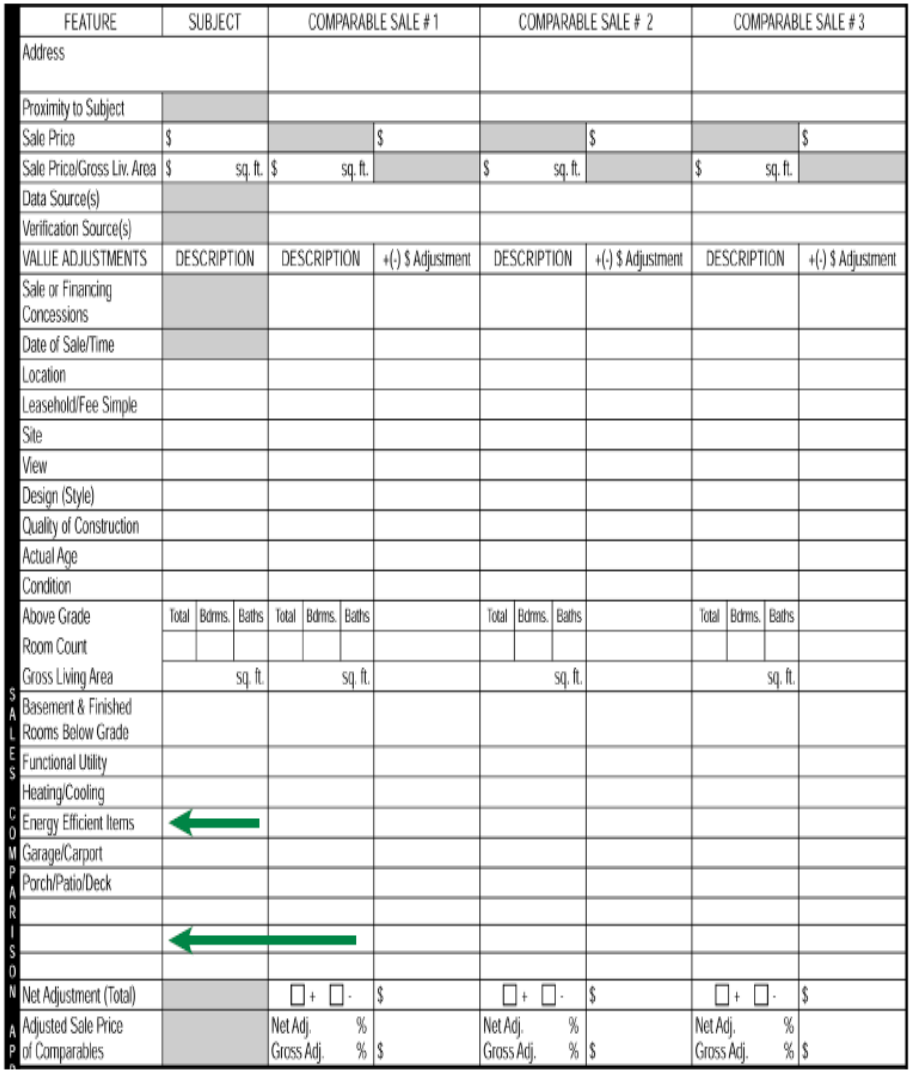
NOT the appraiser's responsibility.

Responsibility of the builders, designers, real estate brokers, certifying organizations, non-profits, and government agencies promoting high performance buildings.

2. Building technology must be understood.

3. The market reaction to the building features and attributes must be measured.

THE APPRAISER'S RESPONSIBILITY



FEATURE	SUBJECT	COMPARABLE SALE # 1	COMPARABLE SALE # 2	COMPARABLE SALE # 3
Address				
Proximity to Subject				
Sale Price	$	$	$	$
Sale Price/Gross Liv. Area	$ sq. ft.	$ sq. ft.	$ sq. ft.	$ sq. ft.
Data Source(s)				
Verification Source(s)				
VALUE ADJUSTMENTS	DESCRIPTION	DESCRIPTION +(-) $ Adjustment	DESCRIPTION +(-) $ Adjustment	DESCRIPTION +(-) $ Adjustment
Sale or Financing Concessions				
Date of Sale/Time				
Location				
Leasehold/Fee Simple				
Site				
View				
Design (Style)				
Quality of Construction				
Actual Age				
Condition				
Above Grade Room Count	Total / Bdrms. / Baths	Total / Bdrms. / Baths	Total / Bdrms. / Baths	Total / Bdrms. / Baths
Gross Living Area	sq. ft.	sq. ft.	sq. ft.	sq. ft.
Basement & Finished Rooms Below Grade				
Functional Utility				
Heating/Cooling				
Energy Efficient Items				
Garage/Carport				
Porch/Patio/Deck				
Net Adjustment (Total)		☐+ ☐- $	☐+ ☐- $	☐+ ☐- $
Adjusted Sale Price of Comparables		Net Adj. % Gross Adj. % $	Net Adj. % Gross Adj. % $	Net Adj. % Gross Adj. % $

SALES COMPARISON AP

Barriers to Recognizing Contributory Value

Understanding building technology

- Poor reporting among market participants
- Greenwashing (identifying characteristics that contribute value)
- Understanding various third-party certification and green building programs
- Ignoring cash flow implications of energy efficient and renewable energy components

Measuring market reaction

- Lack of comparable market-specific data
- Difficulty locating reliable, quantifiable evidence
- Challenges in deriving credible and supportable market-based adjustments
- Reluctance of market participants (reviewers, underwriters, banks) to accept adjustments

Remember..

*Appraisers are **not** the **source** of market value.*

The market, not the appraiser, determines the prices paid for high-performance properties and their energy efficient and renewable energy components. Appraisers develop values based on those reported market prices.

Appraiser Professionalism - Competency

USPAP's COMPETENCY RULE states that an appraiser must:

1. *be competent to perform the assignment;*
2. *acquire the necessary competency to perform the assignment; or*
3. *decline or withdraw from the assignment.*

Uniform Standards for Professional Appraisal Practice (USPAP)

THE APPRAISAL FOUNDATION

Authorized by Congress as the Source of Appraisal Standards and Appraiser Qualifications

(Don't forget…)

FannieMae

Freddie Mac

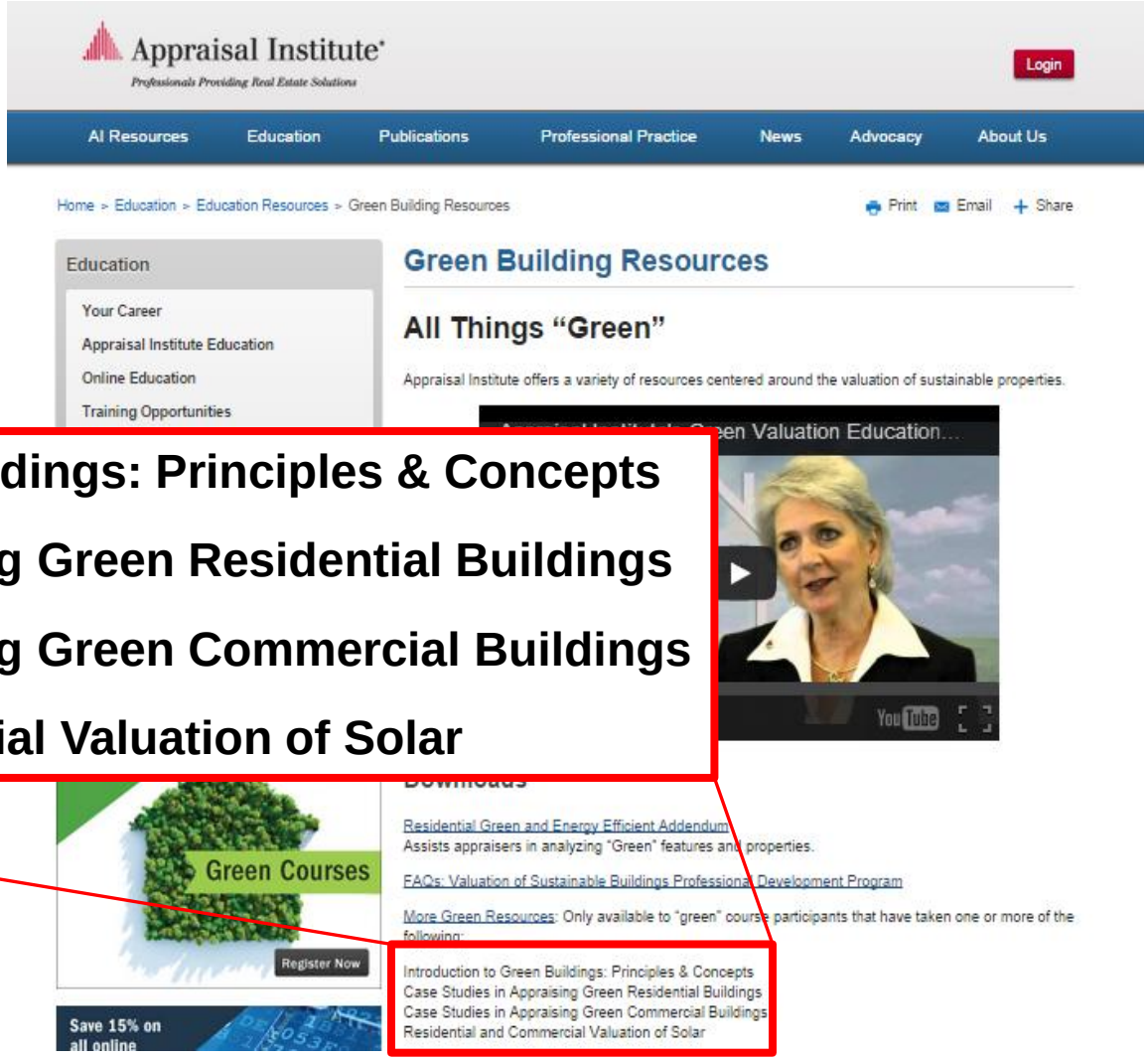
Your Door to FHA HOMEOWNERSHIP

VA | U.S. Department of Veterans Affairs

Competency – Appraiser Education

Appraisal Institute®

Professionals Providing Real Estate Solutions



Introduction to Green Buildings: Principles & Concepts

Case Studies in Appraising Green Residential Buildings

Case Studies in Appraising Green Commercial Buildings

Residential and Commercial Valuation of Solar

Competency - Professional Development

Valuation of Sustainable Buildings: Residential

Select State/Province: Massachusetts

	AI	Name	Company	City, State	Accepts Fee Assignments
SELECT	Designated Member	Jonathan W. Asker, SRA	North Atlantic Appraisal	West Bridgewater, MA	Yes
SELECT	Designated Member	Ryan D. Christman, MAI *		Boston, MA	No
SELECT	Designated Member	William J. Lanciloti, Jr., SRA	Suburban Appraisal Services	Newton, MA	Yes
SELECT	Candidate for Designation	Deborah Carlson	Needham Bank	Needham, MA	No
SELECT		Nathaniel Cramer *	Department of Revenue	Boston, MA	No
SELECT		Morgan Fennell *	The Appraisers Group	Westwood, MA	No

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en Building Resources

Things "Green"

l Institute offers a variety of resources centered around the valuation of sustainable properties.

nloads

Residential Green and Energy Efficient Addendum
Assists appraisers in analyzing "Green" features and properties.

FAQs: Valuation of Sustainable Buildings Professional Development Program

More Green Resources: Only available to "green" course participants that have taken one or more of the following:

Introduction to Green Buildings: Principles & Concepts
Case Studies in Appraising Green Residential Buildings
Case Studies in Appraising Green Commercial Buildings
Residential and Commercial Valuation of Solar

Appraisal Institute Green and EE Addendum

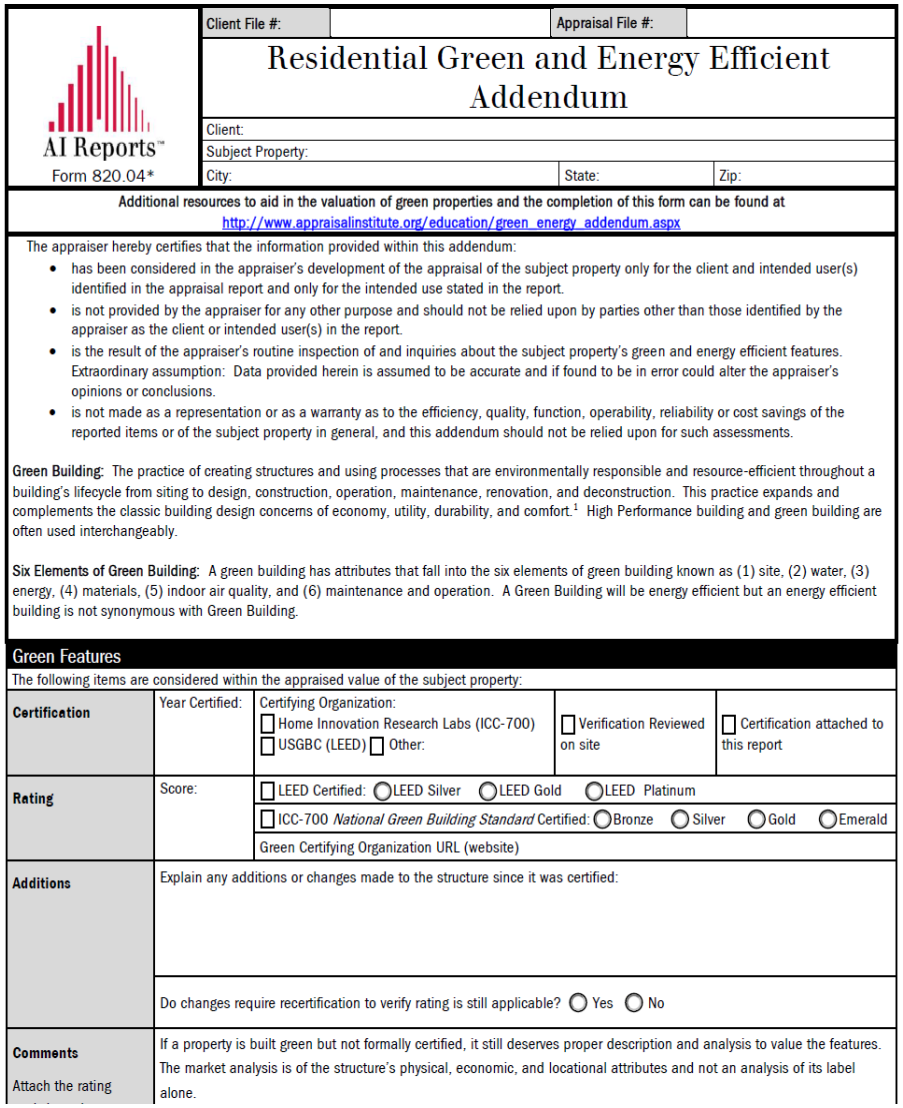
Appraisal Institute®

Professionals Providing Real Estate Solutions

The objective of this Addendum is to standardize the communication of the high performing features of residential properties.

Identifying the features not found on the 1004 form provides a basis for comparable selection & analysis of the features.

Builders, contractors, homeowners, and third party verifiers are encouraged to complete this Addendum and present to appraisers, agents, lenders, & homeowners.



AI Reports™
Form 820.04*

Client File #: | Appraisal File #:

Residential Green and Energy Efficient Addendum

Client:
Subject Property:
City: | State: | Zip:

Additional resources to aid in the valuation of green properties and the completion of this form can be found at
http://www.appraisalinstitute.org/education/green_energy_addendum.aspx

The appraiser hereby certifies that the information provided within this addendum:

- has been considered in the appraiser's development of the appraisal of the subject property only for the client and intended user(s) identified in the appraisal report and only for the intended use stated in the report.
- is not provided by the appraiser for any other purpose and should not be relied upon by parties other than those identified by the appraiser as the client or intended user(s) in the report.
- is the result of the appraiser's routine inspection of and inquiries about the subject property's green and energy efficient features. Extraordinary assumption: Data provided herein is assumed to be accurate and if found to be in error could alter the appraiser's opinions or conclusions.
- is not made as a representation or as a warranty as to the efficiency, quality, function, operability, reliability or cost savings of the reported items or of the subject property in general, and this addendum should not be relied upon for such assessments.

Green Building: The practice of creating structures and using processes that are environmentally responsible and resource-efficient throughout a building's lifecycle from siting to design, construction, operation, maintenance, renovation, and deconstruction. This practice expands and complements the classic building design concerns of economy, utility, durability, and comfort.[1] High Performance building and green building are often used interchangeably.

Six Elements of Green Building: A green building has attributes that fall into the six elements of green building known as (1) site, (2) water, (3) energy, (4) materials, (5) indoor air quality, and (6) maintenance and operation. A Green Building will be energy efficient but an energy efficient building is not synonymous with Green Building.

Green Features

The following items are considered within the appraised value of the subject property:

Certification	Year Certified:	Certifying Organization: ☐ Home Innovation Research Labs (ICC-700) ☐ USGBC (LEED) ☐ Other:	☐ Verification Reviewed on site	☐ Certification attached to this report
Rating	Score:	☐ LEED Certified: ◯ LEED Silver ◯ LEED Gold ◯ LEED Platinum		
		☐ ICC-700 *National Green Building Standard* Certified: ◯ Bronze ◯ Silver ◯ Gold ◯ Emerald		
		Green Certifying Organization URL (website)		
Additions		Explain any additions or changes made to the structure since it was certified:		
		Do changes require recertification to verify rating is still applicable? ◯ Yes ◯ No		
Comments Attach the rating		If a property is built green but not formally certified, it still deserves proper description and analysis to value the features. The market analysis is of the structure's physical, economic, and locational attributes and not an analysis of its label alone.		

What Can You Do?

1. **Make appraisers, lenders, and salespeople stakeholders**

   Reach out to appraisers, real estate salespeople, and financial institutions - at the beginning of your project.

2. **Use the Appraisal Institute to find competent appraisers and HIRE THEM.**

   INSIST THAT LENDERS USE THEM TOO!

3. **Share reliable information and market data.**

   Make contributory value tangible to the market.
   Use AI's Green and Energy Efficient Addendum.

Melanie Head, EnergySmart Alternatives

Why:
Design/installation of geothermal heating and cooling systems.
Offer a fossil fuel-free alternative for heating to homeowners.

Goals:
Education – builders, architects, real estate agents, other tradesmen
Involvement – Mass Clean Energy Center, Mass Save, NESEA and others

Barriers:
Misunderstanding, misinformation about geothermal
Limited ability to 'sell' benefits of geothermal because:
- Builder, seller agent, and owner can't explain how it works
- No value is given to the technology
- Becomes homeowner's responsibility to provide information


ELL DRILLING

Take away:

For Spec Builders:

- Have the geothermal installer provide efficiency ratings, estimated operating costs and other marketing materials.
- Have the installer meet with the seller agent.
- Keep copies of utility bills as supporting documentation.
- Make sure that the HERS rater is aware and provides the appropriate score for the heating and cooling system.

For Homeowners:

- Keep copies of utility bills to show potential buyers.
- Hire an agent who knows about value of energy efficiency improvements.

Jeff Gephart, Vermont*wise*
Energy Services, Inc.

Why are you committed to promoting homes that are more energy efficient and healthier to live in?

Jeff Gephart, Vermont*wise* Energy Services, Inc.

Jeff Gephart, Vermont*wise* Energy Services, Inc.

Rochester, VT September, 2011
Tropical Storm Irene aftermath

I live 2 miles down the road on the west side of the White River.

My office is a ¼ mile away from this bridge on the east side of the River.

- 4 days for the crudest foot bridge to be built.
- 7 weeks were required for a temporary bridge.
- 4 years for the full replacement

Jeff Gephart, Vermont*wise* Energy Services, Inc.

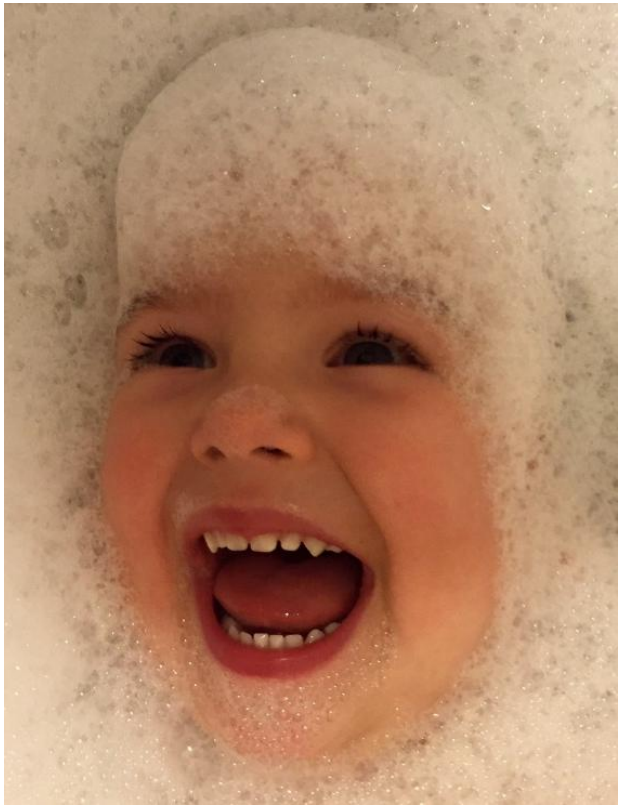
Rochester, VT September, 2011
Tropical Storm Irene aftermath

Jeff Gephart, Vermont*wise* Energy Services, Inc.

Rochester, VT September, 2011
Tropical Storm Irene aftermath

Jeff Gephart, Vermont*wise*
Energy Services, Inc.

I have a new title…



Grandpa

Jeff Gephart, Vermont*wise* Energy Services, Inc.

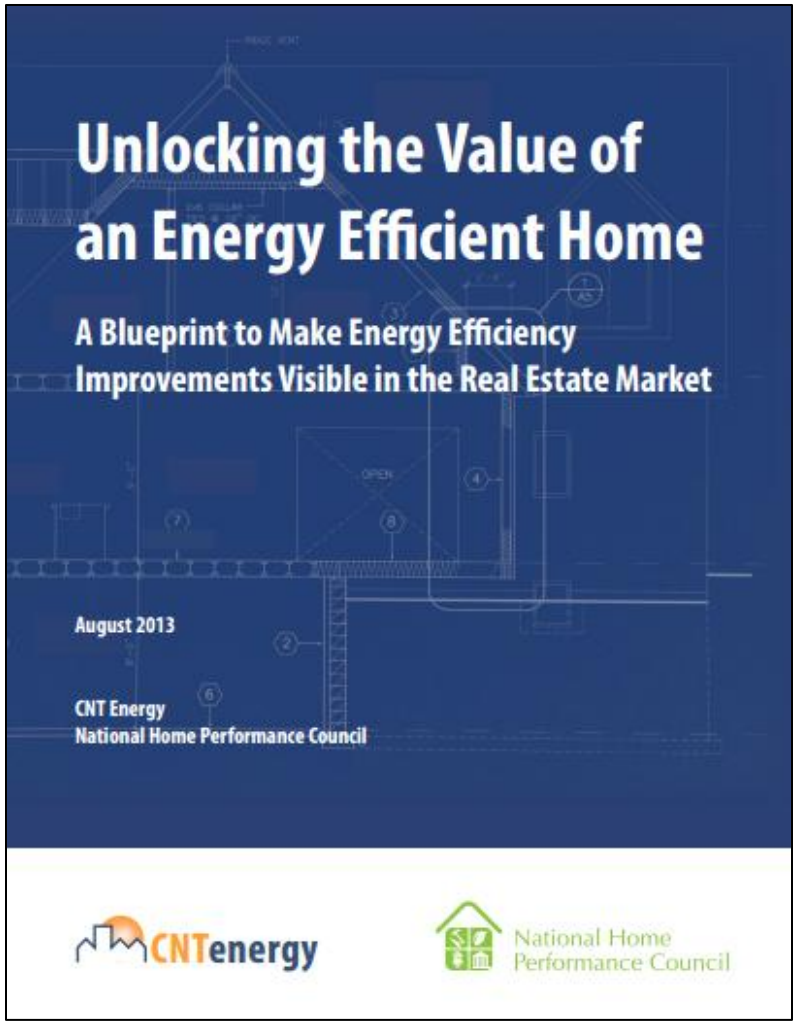
"*Politicians discussing global warming*."
Sculpture by Isaac Cordal

I'm not waiting on government action!

What are a few of your, or your organizations, **goals/projects for 2016**?

Transformation of the real estate market so that buyers and sellers can identify and accurately value energy efficiency and renewable energy benefits.

What are a few of your, or your organizations, **goals/projects for 2016**?



Visible Value Blueprint

www.mredllc.com/comms/documents/Unlocking_the_Value_an_Energy_Efficient_Home.pdf

What are a few of your, or your organizations, **goals/projects for 2016**?

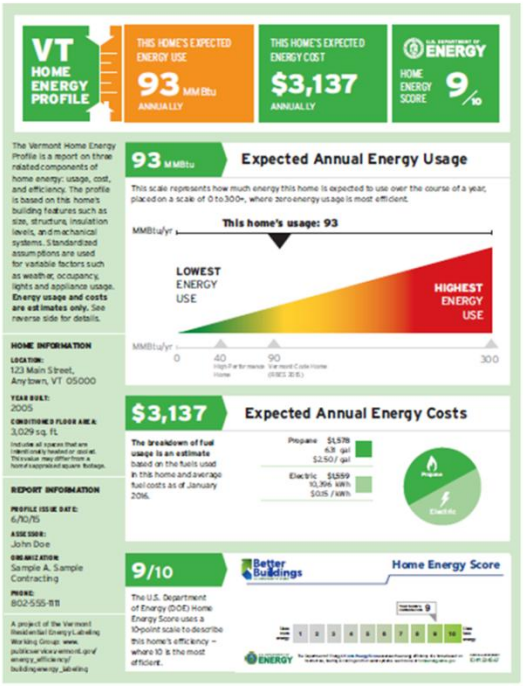
Visible Value Blueprint:

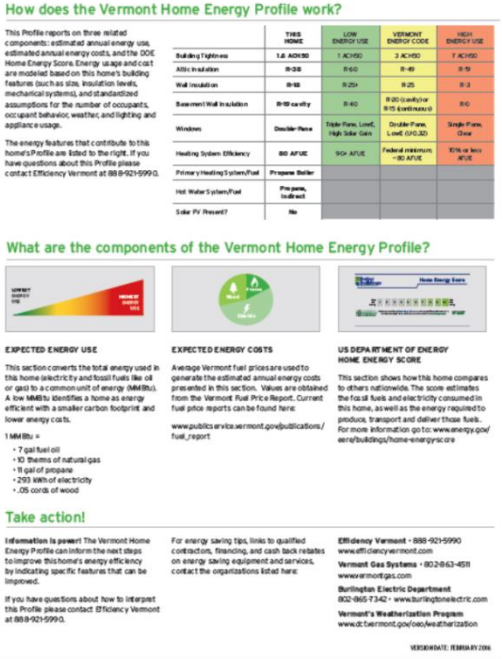
1. **Document** energy efficiency features and improvements using consistent, standardized methods.
2. **Disclose** inventories of energy efficient homes to track supply.
3. Capitalize on existing (and/or create) high-quality continuing **education** and designation training.
4. Work with the **MLS** community to ensure that **data** about home energy efficiency improvements are incorporated **into for-sale listings**.
5. Ensure that the data about home energy efficiency improvements are incorporated into the **appraisal process**.
6. Develop standards and IT solutions that allow quicker and more **automated transfer of data**.
7. Work with partner **financial institutions** to ensure selection of **qualified appraisers**.

What are a few of your, or your organizations, **goals/projects for 2016**?

1. **Document** energy efficiency features and improvements using consistent, standardized methods.

- Pilot the Vermont Home Energy Profile (Efficiency Vermont)
- Asset rating for existing homes (HERS is an asset rating)
- Profile estimates MMBtu/Year and will provide the DOE Home Energy Score





Jeffrey Gephart, Vermont*wise* Energy Services, Inc.

What are a few of your, or your organizations, **goals/projects for 2016**?

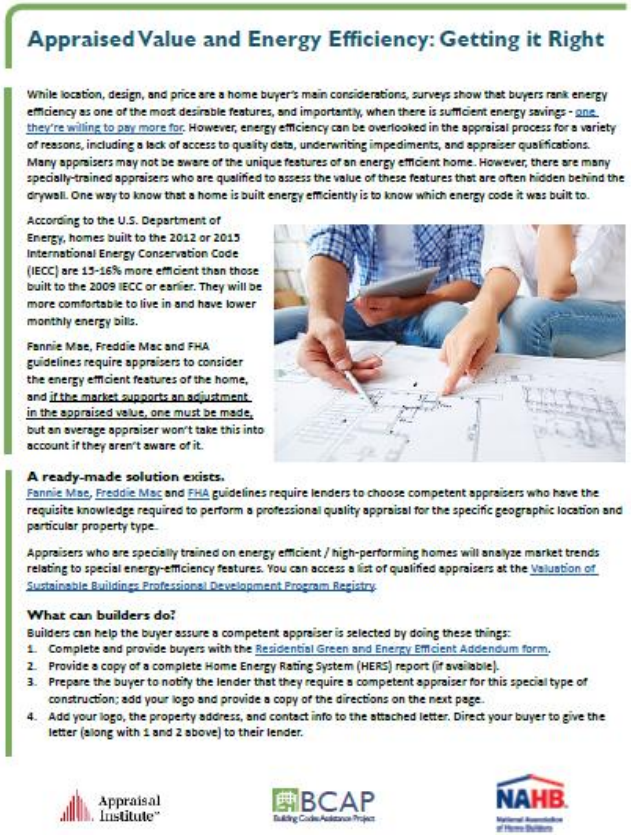
3. Capitalize on existing (and/or create) high-quality continuing **education** and designation training.

- Dramatically increase both shorter CEU energy and renewable energy courses and the more rigorous EcoBroker designation with Vermont Realtors®.
- Facilitate (by marketing/underwriting/incentivizing), a new round of the Appraisal Institute's Valuation of Sustainable Buildings Professional Development Program courses to gain more Registry listings of competent appraiser
- Expand VT/NH, cross-state educational opportunities and perpetuate last year's 2-state, Green Real Estate Symposium

What are a few of your, or your organizations, **goals/projects for 2016**?

7. Work with partner **financial institutions** to ensure selection of **qualified appraisers**.

Appraised Value and Energy Efficiency: Getting it Right



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 appraisal 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 13-16% 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 Valuation of Sustainable Buildings Professional Development Program Registry.

What can builders do?

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

1. Complete and provide buyers with the Residential Green and Energy Efficient Addendum form.
2. Provide a copy of a complete Home Energy Rating System (HERS) report (if available).
3. 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.
4. 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.

Appraisal Institute · BCAP Building Codes Assistance Project · NAHB National Association of Home Builders

Explains why there's an issue:

- Changes in market demand, energy code updates
- Fannie Mae, Freddie Mac, FHA requirements for competency

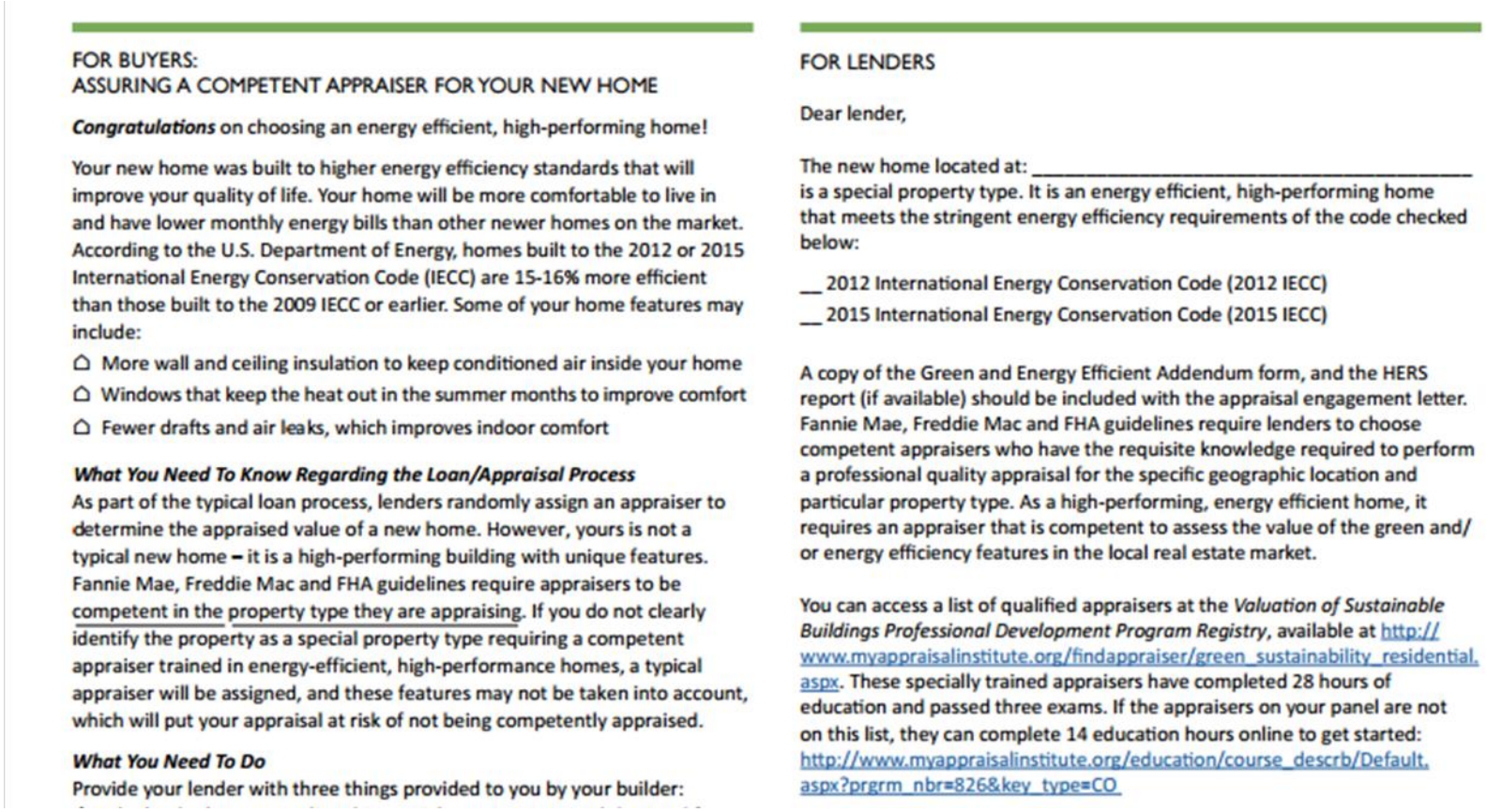
Explains:

- How to prepare a loan applicant for the mortgage application and appraisal
- What a loan applicant needs to do when seeking the mortgage

What are a few of your, or your organizations, **goals/projects for 2016**?

7. Work with partner **financial institutions** to ensure selection of **qualified appraisers**.

Appraised Value and Energy Efficiency: Getting it Right



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:

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:

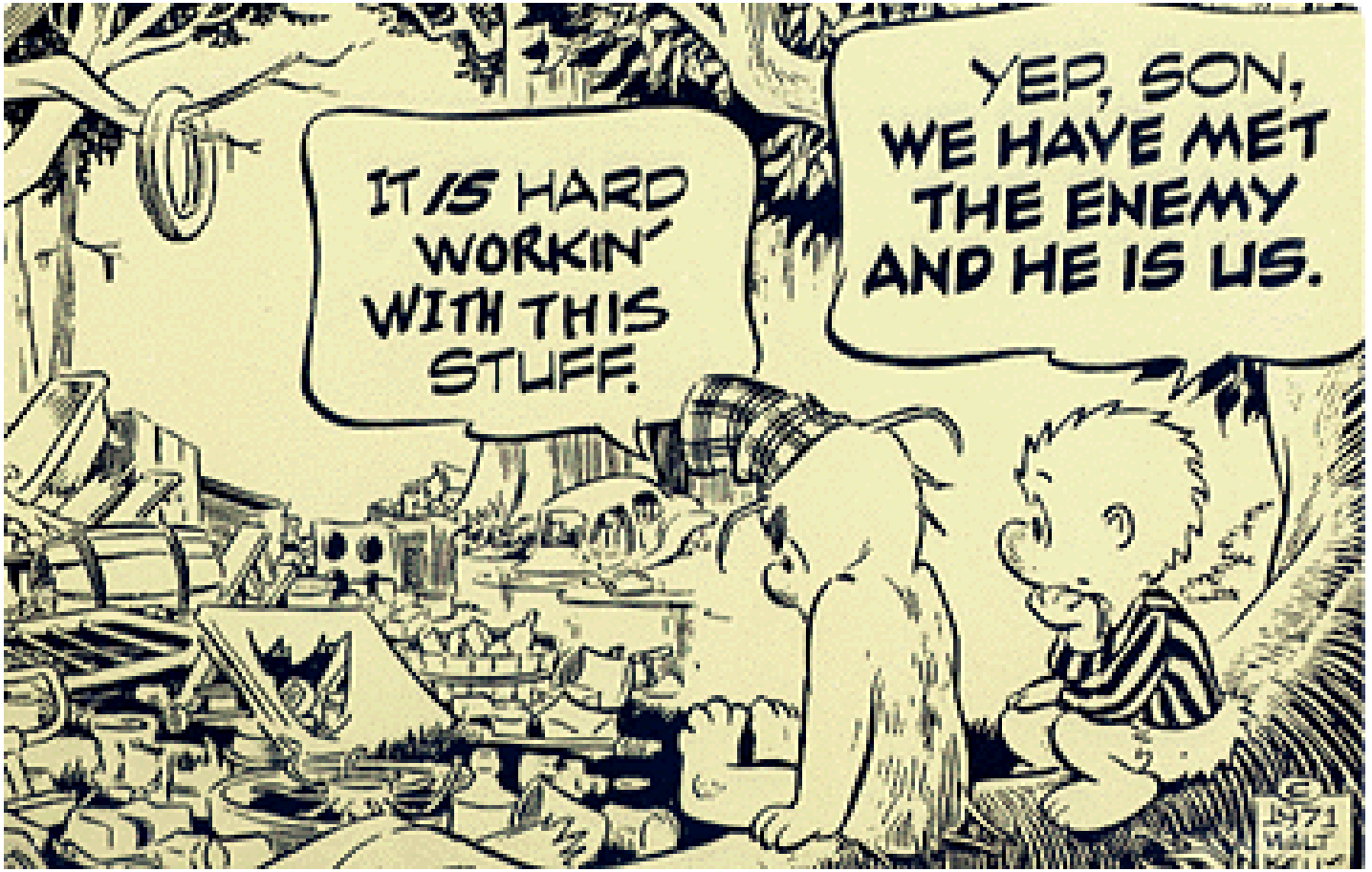
__ 2012 International Energy Conservation Code (2012 IECC)
__ 2015 International Energy Conservation Code (2015 IECC)

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

What are the **barriers that you face** to make those goals a reality?

The usual…



What can you **share with our audience that they can do** to move the ball forward?

- First and foremost, build sustainably!
- **Document energy efficiency features and improvements using consistent, standardized methods**
  - (e.g., HERS, ENERGY STAR® Homes, DOE Home Energy Score, Passive House, LEED for Homes, National Green Building Standard, etc.)
  - AI Residential Green & Energy Efficient Addendum – use it!
- Start looking for ways to build relationships with Realtors, lenders, and appraisers (help them help you)
- Be proactive regarding project appraisal & financing
  - Use: *Appraised Value and Energy Efficiency: Getting it Right* with your clients

What are a few of your, or your organizations, **goals/projects for 2016**?

7. Help us: Work with partner **financial institutions** to ensure selection of **qualified appraisers**. It will help you too!

Appraised Value and Energy Efficiency: Getting it Right

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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

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)

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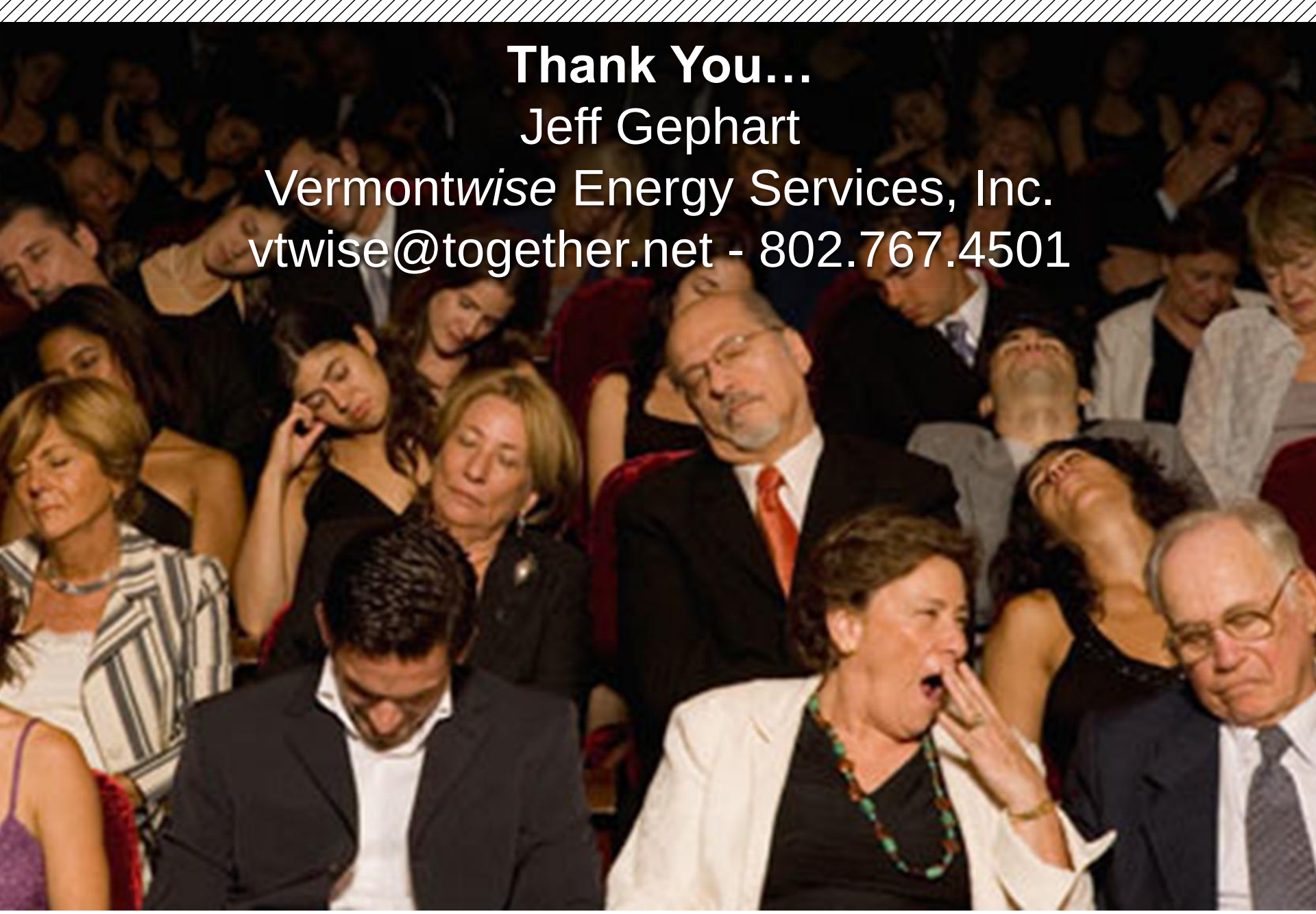
Appraisers on this list are not required to be Appraisal Institute members but must take the required courses and pass the exams to be listed.

Thank You…

Jeff Gephart
Vermont*wise* Energy Services, Inc.
vtwise@together.net - 802.767.4501

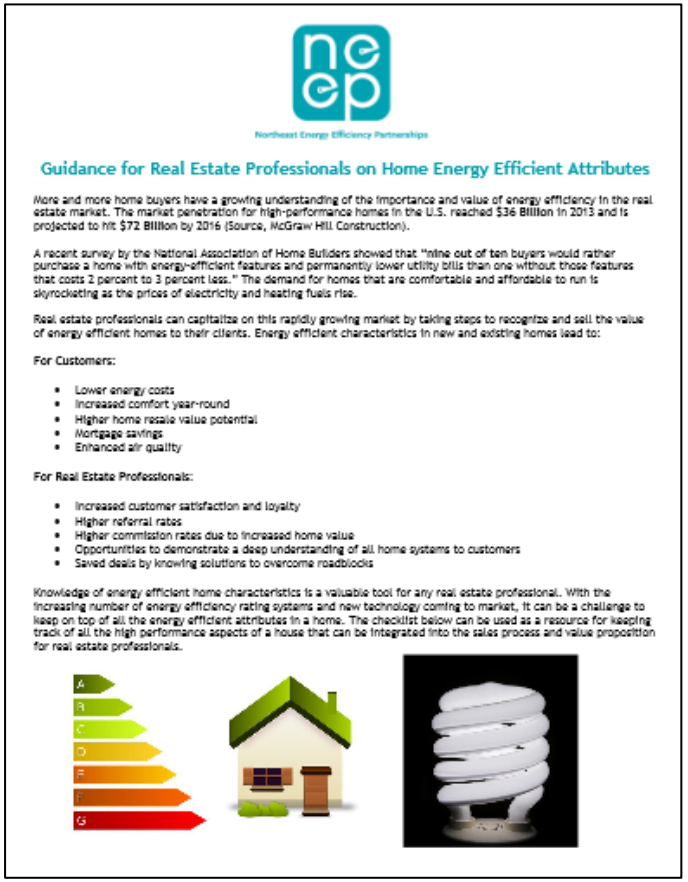


Carolyn Sarno Goldthwaite, NEEP

Goal: ***Making energy use transparent***

To expedite the creation of **large-scale home energy labeling policies and programs** that support the market valuation of energy efficiency in homes.

Making energy use transparent



Northeast Energy Efficiency Partnerships

Guidance for Real Estate Professionals on Home Energy Efficient Attributes

More and more home buyers have a growing understanding of the importance and value of energy efficiency in the real estate market. The market penetration for high-performance homes in the U.S. reached $36 Billion in 2013 and is projected to hit $72 Billion by 2016 (Source, McGraw Hill Construction).

A recent survey by the National Association of Home Builders showed that "nine out of ten buyers would rather purchase a home with energy-efficient features and permanently lower utility bills than one without those features that costs 2 percent to 3 percent less." The demand for homes that are comfortable and affordable to run is skyrocketing as the prices of electricity and heating fuels rise.

Real estate professionals can capitalize on this rapidly growing market by taking steps to recognize and sell the value of energy efficient homes to their clients. Energy efficient characteristics in new and existing homes lead to:

For Customers:

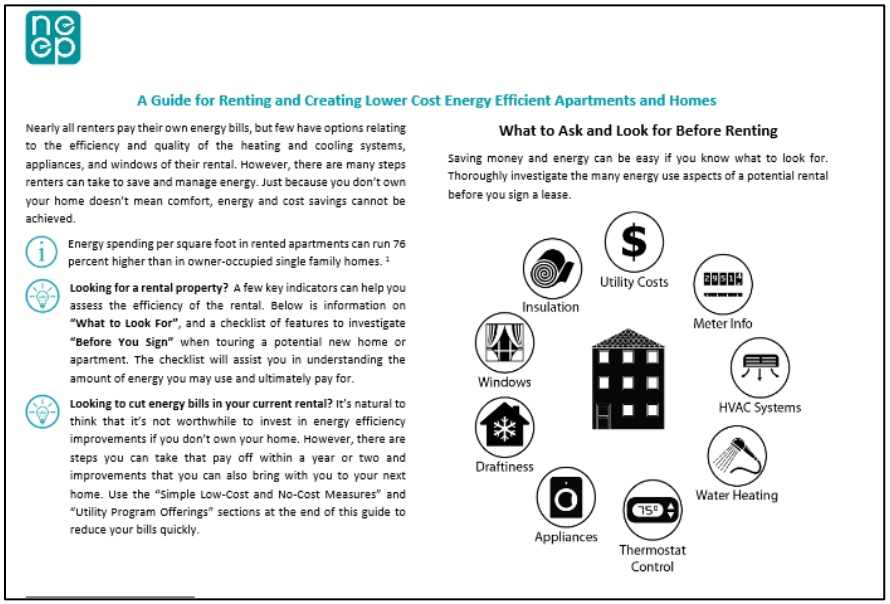
- Lower energy costs
- Increased comfort year-round
- Higher home resale value potential
- Mortgage savings
- Enhanced air quality

For Real Estate Professionals:

- Increased customer satisfaction and loyalty
- Higher referral rates
- Higher commission rates due to increased home value
- Opportunities to demonstrate a deep understanding of all home systems to customers
- Saved deals by knowing solutions to overcome roadblocks

Knowledge of energy efficient home characteristics is a valuable tool for any real estate professional. With the increasing number of energy efficiency rating systems and new technology coming to market, it can be a challenge to keep on top of all the energy efficient attributes in a home. The checklist below can be used as a resource for keeping track of all the high performance aspects of a house that can be integrated into the sales process and value proposition for real estate professionals.

- **Checklist for Real Estate Professionals**
- **Renter's Checklist**
- **Educational Webinars**
- **Greening the MLS**
- **HELIX**



A Guide for Renting and Creating Lower Cost Energy Efficient Apartments and Homes

Nearly all renters pay their own energy bills, but few have options relating to the efficiency and quality of the heating and cooling systems, appliances, and windows of their rental. However, there are many steps renters can take to save and manage energy. Just because you don't own your home doesn't mean comfort, energy and cost savings cannot be achieved.

Energy spending per square foot in rented apartments can run 76 percent higher than in owner-occupied single family homes. [1]

Looking for a rental property? A few key indicators can help you assess the efficiency of the rental. Below is information on **"What to Look For"**, and a checklist of features to investigate **"Before You Sign"** when touring a potential new home or apartment. The checklist will assist you in understanding the amount of energy you may use and ultimately pay for.

Looking to cut energy bills in your current rental? It's natural to think that it's not worthwhile to invest in energy efficiency improvements if you don't own your home. However, there are steps you can take that pay off within a year or two and improvements that you can also bring with you to your next home. Use the "Simple Low-Cost and No-Cost Measures" and "Utility Program Offerings" sections at the end of this guide to reduce your bills quickly.

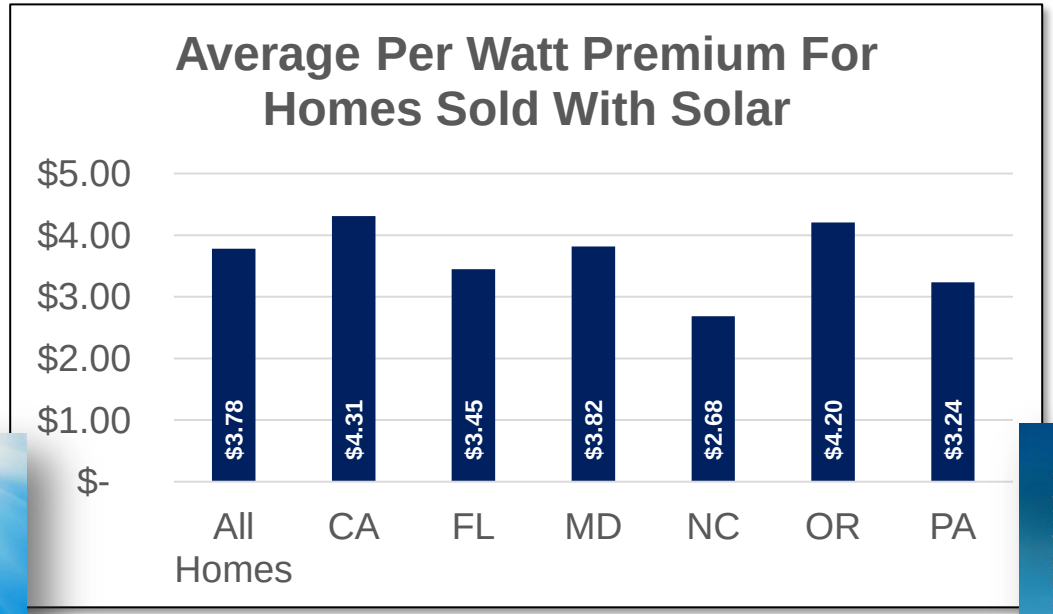
What to Ask and Look for Before Renting

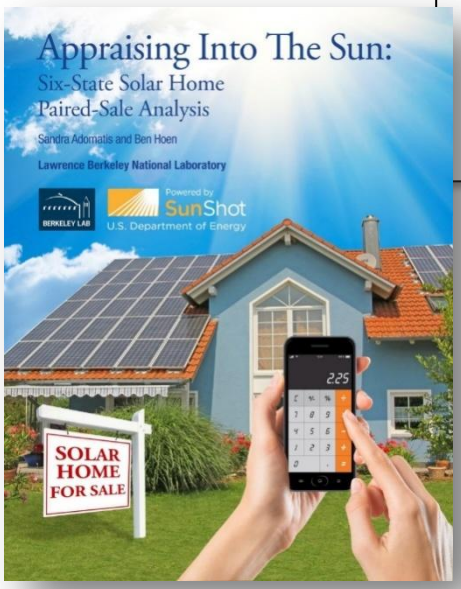
Saving money and energy can be easy if you know what to look for. Thoroughly investigate the many energy use aspects of a potential rental before you sign a lease.

http://neep.org/initiatives/energy-efficient-buildings/green-real-estate-resources

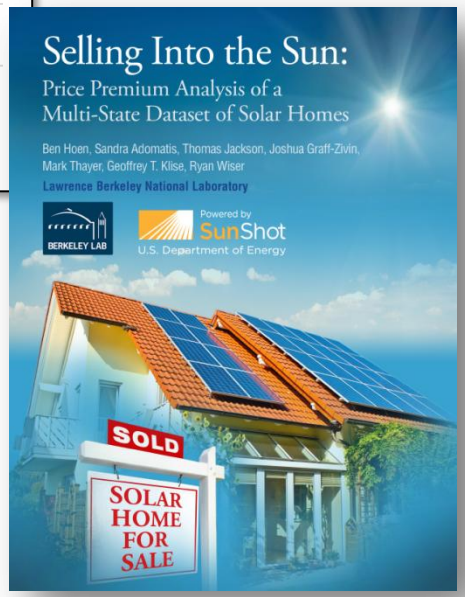
Ben Hoen, Lawrence Berkeley National Laboratory

Solar, when owned, has been found to increase values consistently



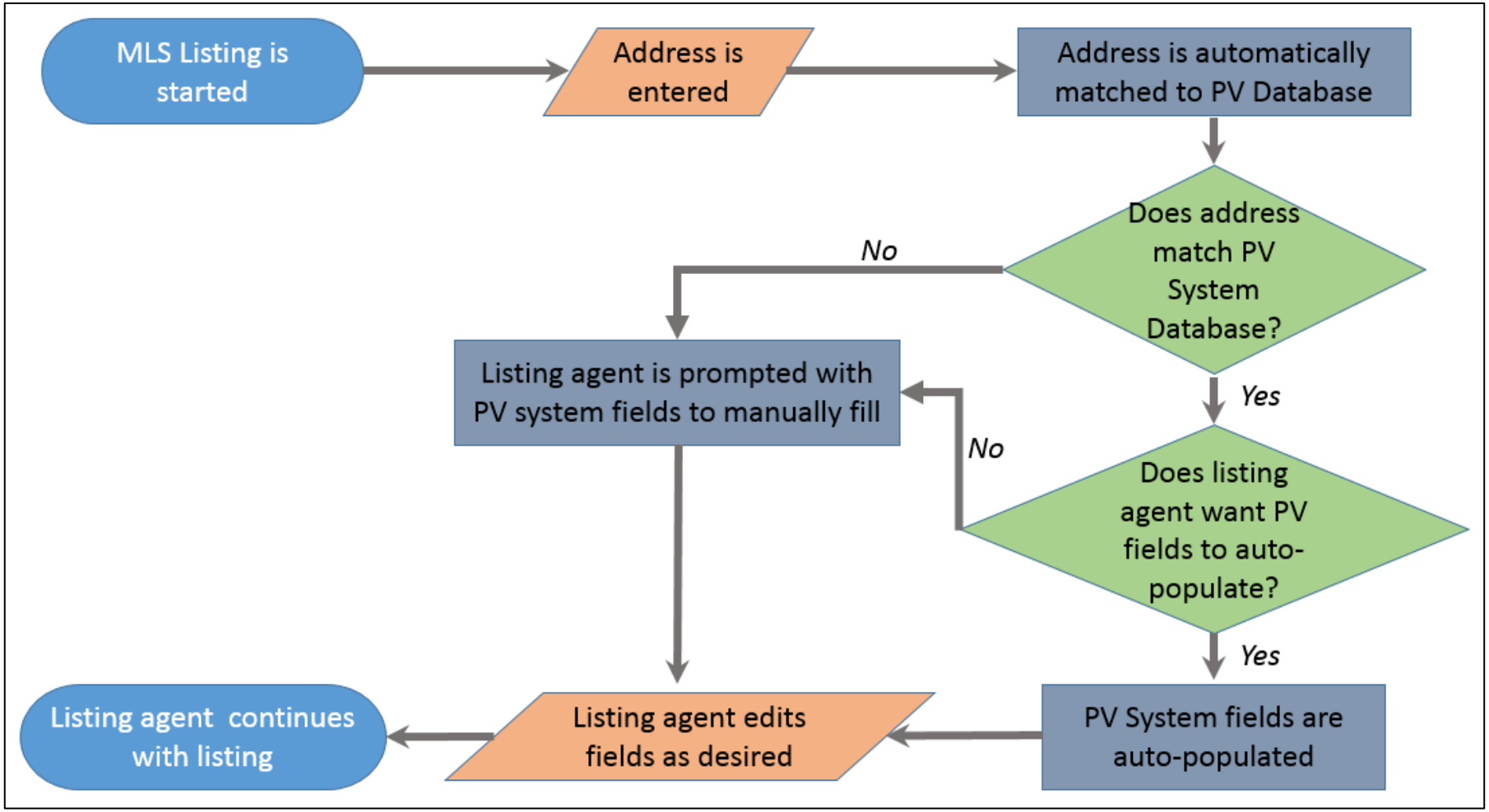


What happens for homes with solar systems that are owned by a third party (e.g., leased)?



PV Auto-Pop Roadmap Project:

Plan For How To Auto-Pop PV Data (Like Tax Data)



Time for questions and a few resources for you

AI Green Addendum:
www.appraisalinstitute.org/assets/1/7/AI_820_04-Residential_Green_and_Energy_Effecient_Addendum.pdf
Appraised Value and Energy Efficiency: Getting it Right:
www.appraisalinstitute.org/assets/1/29/AI-BCAP_Flyer.pdf
PV Solar Value Tool
www.pvvalue.com
Real Estate Pros EE Checklist:
www.neep.org/sites/default/files/resources/Guidance%20for%20Real%20Estate%20Professionals%20on%20Home%20Energy%20Efficient%20Attributes.pdf
NEEP Rental Checklist:
www.neep.org/sites/default/files/resources/A%20Guide%20for%20Renting%20and%20Creating%20Lower%20Cost%20Energy%20Efficient%20Apartments%20and%20Homes.pdf
LBNL *Selling Into the Sun*:
https://emp.lbl.gov/sites/all/files/selling-into-the-sun-jan12.pdf
DOE HES and FHA Financing:
http://betterbuildingssolutioncenter.energy.gov/beat-blog/doe%E2%80%99s-home-energy-score-and-fha-mortgages-new-tools-help-you-shop-and-buy-energy-efficient
RESNET National Registry
http://www.resnet.us/public-access-to-resnet-national-registry

This concludes The American Institute of Architects
Continuing Education Systems Course

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