

What Raters Need To Know About Appraisals

Presented by: Sandra K. Adomatis, SRA, LEED Green Associate, NAR GREEN

RESNET 2018 Conference

February 27, 2018

4:00 pm – 5:30 pm

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Overview of the Appraisal Institute

- Appraisal Institute was established in 1932
- Membership is voluntary capturing 19,000+/- appraisers from around the world
- U.S. has approximately 73,000 appraisers
- Residential appraisers make up around 60% of the 73,000 appraisers
- Designated Members (MAI, SPRA, SRA, AI-RRS, AI-GRS) met higher education and experience standard than state licensed appraisers.

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News Flash –
Appraisers are
not required to
belong to AI



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Our
Industry
Faces
Changes

Automated Valuation Models
versus actual appraisal

Liability that often has no
statue of limitation

Fees that are declining

Data challenges

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What are the components of an appraisal?

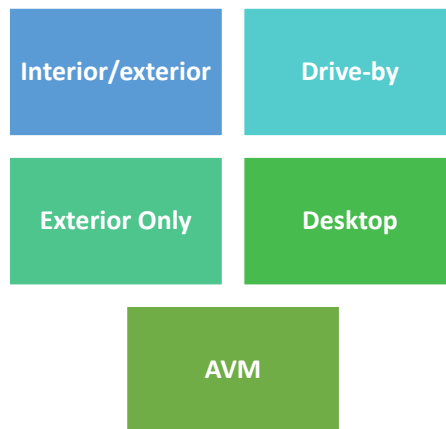
- Written or Oral
- Description of property and location
- Highest and best use
- Analysis of Comparable Sales
- Market Trends



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Appraisal Types



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Appraisal Standards, Secondary Mortgage Market Guidelines, & Lender Guidelines

- All appraisals must comply with Appraisal Standards (USPAP) if federally related transaction appraisal.
- Appraisals for mortgage market guidelines must also meet a second set of guidelines
- Appraisals for lender sometime have another set of guidelines coming from the lender.



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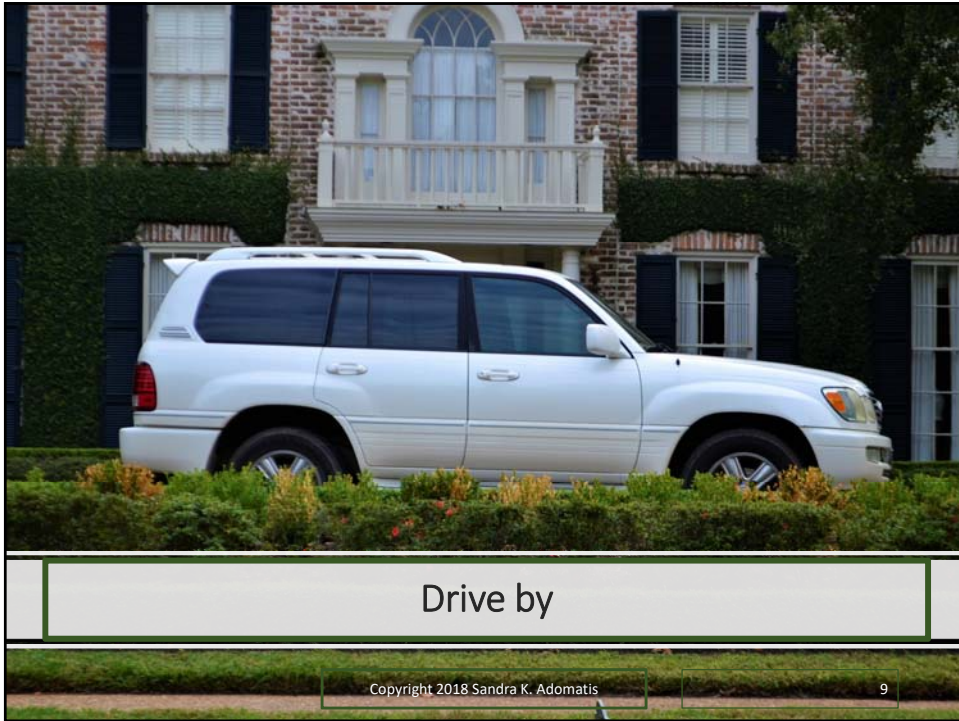
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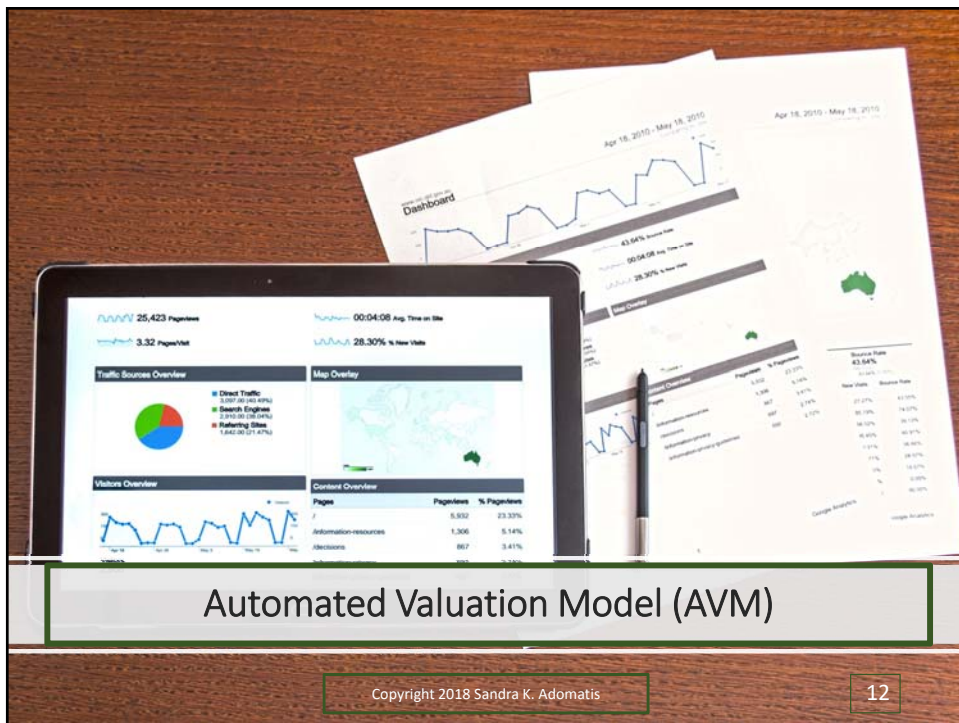


Interior/Exterior Appraisal

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Guess what happens to energy features in AVM



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Builders Must Prepare Borrower



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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 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 [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.



**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

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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).

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This sample letter must be given to borrower along with documents for the lender.

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)

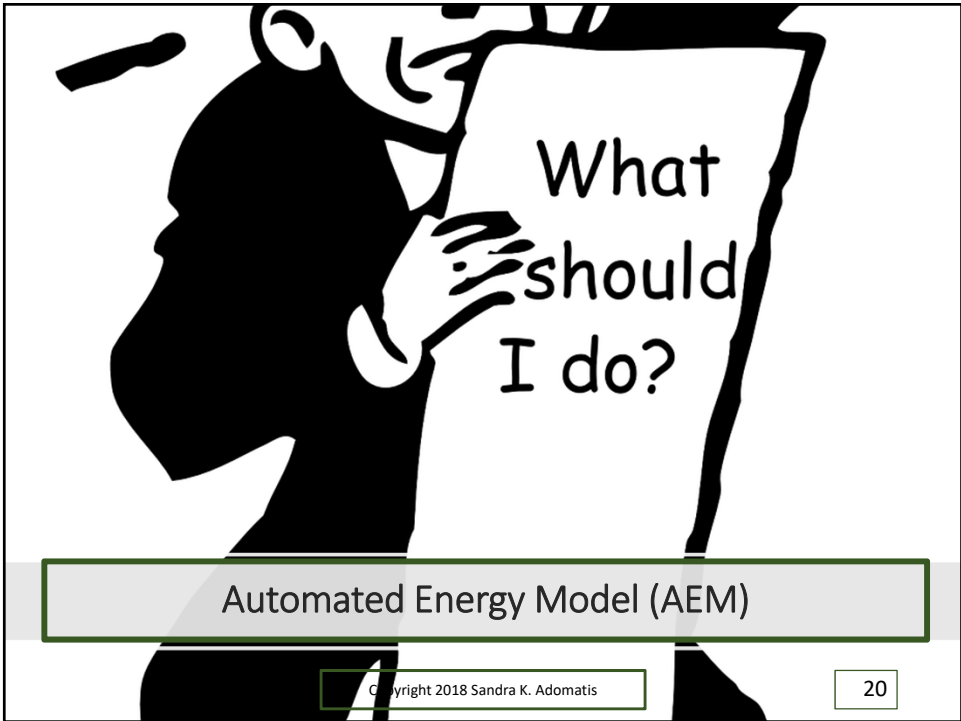
A copy of the Green and Energy Efficient Addendum form, and the HEERS report (if available) should be included with the appraisal engagement letter. Fannie Mae, Freddie Mac and FHA guidelines require lenders to choose competent appraisers who have the requisite knowledge required to perform a professional 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 ADDRESS: _____



Automated Energy Models

1. Clearlyenergy
2. EnerScore
3. MyUtilityScore
4. SaveniaHome
5. TLCEngine
6. DwellAware
7. Tendrill

Currently, the **Real Estate Standards Organization Dictionary** does not include AEM fields.

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Discover

Discover the EnerScore of any home – its energy performance rating and estimated energy bills – by entering an address.



Compare

Compare homes, based on energy ratings and costs.

<http://www.enerscore.com/>

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RESNET and Appraisal Institute Collaboration Importance

HERS Reports give residential appraisers reliable data sources to make more credible value opinions.

Appraisers' use of HERS Reports adds value to your profession and ours.

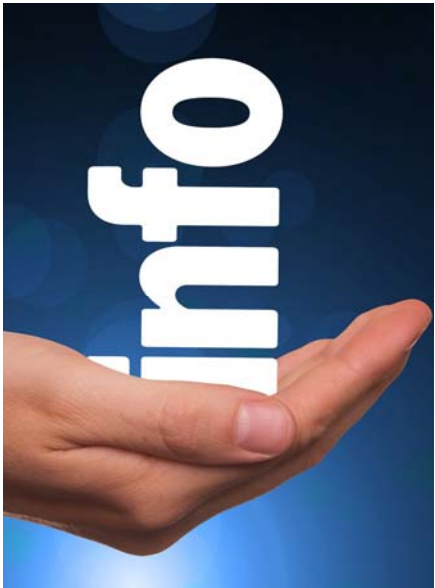
AI Members have access to the RESNET Appraisal Dashboard

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Your Message to Appraisers and Real Estate Agents

- RESNET has a public HERS Registry that is open to search for HERS Ratings by address. That will remain public.



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Confirmed Ratings Only

Looking for a HERS Rated Home?

Homes with HERS Index scores are more energy efficient, resulting in lower energy bills and higher home comfort. To find out if a home has been HERS-rated, enter its full address in fields below.



Street Address * City

State * Zip Code

*required field **Q FIND**

Public Site for HERS Registry

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Your Message to Appraisers and Real Estate Agents

Appraisal Institute Members will have access to the RESNET Appraiser Dashboard



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A Search for Energy Trends

RESNET

- Dashboard
- HERS Index Search
- My Profile
- Logout

Home > RESNET HERS Index Search Tool

RESNET HERS Index Search Tool

The tool allows appraisers to search for home HERS Index scores by state, city, zip code or address. Simply start your search below.

By State/City

State

City

Search

By Zip Code

Zip Code

By Address

Address

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Search Results

Show

Home Address	HERS Score	Builder Name	HERS Rating Company Name	Annual Energy Costs	Annual Savings	Year of Constr.	Energy Star Certified	
	66			\$1778	\$220	2013	No	View
	55			\$1266	\$304	2017	Yes	View
	59			\$1100	\$208	2017	Yes	View
	53			\$1394	\$172	2012	No	View
	51			\$2323	\$1675	2014	No	View
	63			\$2747	\$1048	2015	No	View
	60			\$3116	\$1448	2015	Yes	View
	63			\$2746	\$1049	2013	No	View

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Search Filters

FILTERS

Use the filters below to refine your search results.

HERS Index Score Range

51 72

Builder Name HERS Rating Company Name

Select from the dropdown Select from the dropdown

Estimated amount for annual energy costs (\$) Annual savings over reference home (\$)

50 \$3,116 \$0 \$1,075

Year of Construction Range

Year to Year

Update

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Appraisers can track trends with real data to prove energy ratings

The RESNET Appraiser HERS Index Portal allows us to download into an Excel spreadsheet of HERS Ratings by zip, state, or city. Here's how I would use it in an appraisal report.

Improvement Section

Does the property generally conform to the neighborhood (functional utility, style, condition, use, construction, etc.)? Yes No If No, describe: **In the last 4 years, 41 new homes had an avg HERS of 60 (range of 51-72) and 11 of the 41 are certified Energy Star Homes. The estimated avg energy costs is \$1,896 & estimated avg annual savings is \$696. The subject's HERS Index is 45, est. avg annual energy is \$1,211 & savings of \$575; a rating 6% more efficient than the 41 rated homes in the past 4 years. Source: RESNET Appraisers HERS Index Portal.**

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Home Buyers and Appraisers Searching Public MLS for Energy Efficient Homes

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FARGO, ND Public MLS Search

297 results in Fargo for Homes

LOCATION: Fargo x
City, Area, Zip, MLS, or Addr

TYPE: Single Family

BEDS: Any

BATHS: Any

PRICE FROM: Min

PRICE TO: \$30,000,000

STYLE: Style

MIN FT²: 0

MIN ACRES: 0

YEAR BUILT: Any

WALKSCORE: Any

OPTIONS: Options

KEYWORDS: Energy efficient x HERS x Solar x Comfort x Low energy x

Keywords: Keywords

[http://www.fmhomesearch.com/index.php?types\[\]=1&areas\[\]=city:Fargo&beds=0&baths=0&min=0&max=30000000&map=0&sortby=listings.listingdate+DESC&quick=1&ppc=reply:Fargo&addht=KVPaidBuyer#rst](http://www.fmhomesearch.com/index.php?types[]=1&areas[]=city:Fargo&beds=0&baths=0&min=0&max=30000000&map=0&sortby=listings.listingdate+DESC&quick=1&ppc=reply:Fargo&addht=KVPaidBuyer#rst) [Less Search Options](#)

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How can appraiser or buyer find an energy efficient home in MLS?

KEYWORDS

Energy efficient x HERS x Solar x Comfort x Low energy x
Keywords

Search VIEW Grid List Map SORT BY:

Sorry, no results were found - please refine your search.

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Atlanta, GA

Atlanta, GA Real Estate & Homes for Sale

6,867 Homes

Home Size	Any	▼
Lot Size	Any	▼
Home Age	Any	▼
Stories	Any	▼
Garage	Any	▼
Parking	None Selected	▼
Heating / Cooling	None Selected	▼

Inside / Rooms	None Selected	▼
Outside Features	None Selected	▼
Lot / Views	None Selected	▼
Community Amenities	None Selected	▼

View 6867 Listings

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The screenshot shows the Zillow website interface. At the top, there are navigation links: Buy, Rent, Sell, Mortgages, Agent finder, Home design, and More. The search bar contains 'Atlanta, GA'. Below the search bar, there are filters for Listing Type, Any Price, 0+ Beds, and Home Type. A yellow notification box states: 'Only showing results that contain "Energy, HERS, Green, LEED". Show all results.' Below this, the main heading is 'Atlanta GA Real Estate' with 'No Results' next to it. Underneath are tabs for 'Homes for You', 'Newest', 'Cheapest', and 'More'. A red circle highlights a yellow box that says 'No matching results...' followed by the text 'Try zooming out to include more results. Or, change your search criteria.' Below this, there is a URL: https://www.zillow.com/homes/for_sale/Atlanta-GA/37211_rid/Energy,-HERS,-Green,-LEED_att/globalrelevanceex_sort/33.947632,-84.185143,33.585737,-84.775658_rect/10_zm/ and a search box with 'LEED' and an 'Apply' button. At the bottom, there is a copyright notice 'Copyright 2018 Sandra K. Adomatis' and the number '35'.

The diagram is enclosed in a green border and contains the following text: 'AI Member Appraisers will have access to RESNET Appraisers HERS Index Portal'. Below this, there are three white rounded rectangular boxes, each on a grey horizontal bar, representing steps in a process: 'Define search criteria', 'Search local MLS For Sales & Listings', and 'Download results into Excel Spreadsheet'. At the bottom, there is a copyright notice 'Copyright 2018 Sandra K. Adomatis' and the number '36'.

Excel Spreadsheet Becomes A Platform for "Comparable Sales Search"

Download MLS Sales Search Results for last year and sort by address with the addresses here. BINGO!

Show 100

Download

Home Address	HERS Score	Builder Name	Company Name	Energy Costs	Annual Savings	Year of Constr.	Energy Star Certified
[REDACTED]	66	[REDACTED]	[REDACTED]	\$1778	\$220	2013	No
[REDACTED]	55	[REDACTED]	[REDACTED]	\$1266	\$364	2017	Yes
[REDACTED]	59	[REDACTED]	[REDACTED]	\$1100	\$208	2017	Yes
[REDACTED]	53	[REDACTED]	[REDACTED]	\$1394	\$172	2012	No
[REDACTED]	51	[REDACTED]	[REDACTED]	\$2323	\$1675	2014	No
[REDACTED]	63	[REDACTED]	[REDACTED]	\$2747	\$1048	2015	No
[REDACTED]	60	[REDACTED]	[REDACTED]	\$3116	\$1448	2015	Yes
[REDACTED]	63	[REDACTED]	[REDACTED]	\$2746	\$1049	2013	No

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In A Perfect World

FEATURE	SUBJECT	COMPARABLE SALE NO. 1	COMPARABLE SALE NO. 2	COMPARABLE SALE NO. 3
High Performance Home	405 Brown St	607 Knight Dr	803 Balloon St	
Address	Energville, USA	Energville, USA	Energville, USA	
Proximity to Subject	4 blocks NW	6 blocks SE	11 blocks NNW	
Sale Price	\$ 295,000	\$ 285,000	\$ 310,000	
Sale Price/Gross Liv Area	\$ 160.76/sq ft	\$ 156.76/sq ft	\$ 158.97/sq ft	
Date Sold (Yr)	MLS #108 DOM 90	MLS #219 DOM 45	MLS #321 DOM 35	
Verification Source(s)	Agent, HERS Report, AIGREEA	Agent, HERS Report, AIGREEA	Agent, HERS Report, AIGREEA	
VALUE ADJUSTMENTS	DESCRIPTION	DESCRIPTION	DESCRIPTION	
Sale or Financing Concessions	ArmLth Conv:0	ArmLth Conv:0	ArmLth Conv:0	
Date of Sale/Time	s02/18,c02/18	s01/18,c11/17	s01/18,c11/17	
Location	N,Res;	N,Res;	N,Res;	
Leasehold/Fee Simple	Fee Simple	Fee Simple	Fee Simple	
Size	12000 sf	11600 sf	13500 sf	
Views	N,Res;	N,Res;	N,Res;	
Design (Style)	DT2,Colonial	DT2,Cape Cod	DT2,French Prev	
Quality of Construction	Q3	Q3	Q3	
Actual Age	-1	-1	1	
Condition	C2	C2	C2	
Above Grade Room Count	7 4 2.1	7 4 2.1	7 4 2.1	
Gross Living Area/75	1,835 sq ft	1,825 sq ft	0	
Basement & Finished Rooms Below Grade	0sf	0sf	0sf	
Functional Utility	Average	Average	Average	
Heating/Cooling	F/WA/Central	F/WA/Central	F/WA/Central	
Energy Efficient Items	HERS 45	HERS 65	HERS 35	
Garage/Carpport	2ga	2ga	2ga	
Porch/Patio/Deck	Cov and Screen	Cov and Screen	Cov and Screen	
Other Features	5 kW Solar PV	3 kW Solar PV	4 kW Solar PV	
Net Adjustment (Total)	\$ 11,000	\$ 13,600	\$ 27,900	
Adjusted Sale Price	Net Adj 3.9%	Net Adj -4.4%	Net Adj -8.6%	
Price of Comparables	Gross Adj 3.9% \$ 296,000	Gross Adj 4.4% \$ 296,400	Gross Adj 8.6% \$ 297,100	

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FEATURE	SUBJECT	COMPARABLE SALE NO. 1	COMPARABLE SALE NO. 2	COMPARABLE SALE NO. 3	
High Performance Home	405 Brown St Essexville, USA	807 Knight Dr Essexville, USA	803 Balloon St Essexville, USA		
Property Subst.	4 Blocks RMV	5 blocks SE	11 blocks RMV		
Sale Price	\$ 295,000	\$ 285,000	\$ 310,000	\$ 325,000	
Sale Price/Grav. Area	\$ 160.76 sq. ft.	\$ 156.90 sq. ft.	\$ 158.97 sq. ft.	\$ 154.78 sq. ft.	
Date Source(s)	MLS #108 DDM 90	MLS #219 DDM 45	MLS #303 DDM 35		
Verification Source(s)	Agent, HERS Report, AOREEA	Agent, HERS Report, AOREEA	Agent, HERS Report, AOREEA		
VALUE ADJUSTMENTS		DESCRIPTION	DESCRIPTION	DESCRIPTION	DESCRIPTION
Sale of Financing		AMLRN	AMLRN	AMLRN	
Concessions		Conv.0	Conv.0	Conv.0	
Date of Sale/Time		sd2/18,cd2/18	sd1/18,ct1/17	sd1/18,ct1/17	
Location	N.Res.	N.Res.	N.Res.	N.Res.	
LotArea/Grav. Slope	Fee Simple	Fee Simple	Fee Simple	Fee Simple	
Site	12000 sf	11500 sf	13500 sf	11900 sf	
View	N.Res.	N.Res.	N.Res.	N.Res.	
Design (Style)	DT 2 Colonial	DT 2 Cape Cod	DT 2 Georgian	DT 2 French Prov	
Grade of Construction	G3	G3	G3	G3	
Local Age	-1	-1	0	1	
Condition	G2	G2	G2	G2	
Home Style	See Brnd. Len	See Brnd. Len	See Brnd. Len	See Brnd. Len	
Room Count	7 / 4 / 2.1	7 / 4 / 2.1	7 / 4 / 2.1	8 / 4 / 2.1	
Grav. Lump Area 75	1,835 sq. ft.	1,829 sq. ft.	0	2,100 sq. ft.	-19,900
Basement & Finish	Grf	Grf	Grf	Grf	
Room Equip. Grade					
Functional Util.	Average	Average	Average	Average	
Heating/Cooling	FVA/Central	FVA/Central	FVA/Central	FVA/Central	
Energy (Brnk) Item	Standard	Standard	Standard	Standard	
Energy Cert.	Q9a	Q9a	Q9a	Q9a	
Finch/Pan/Deck	Cov and Screen	Cov and Screen	Cov and Screen	Cov and Screen	
Other Features	Solar	Solar	Solar	Solar	
Date Adjustment Total	(0) -	(0) -	(0) -	(0) -	19,900
Adjusted Sale Price	Net Adj. 0%	Net Adj. 0%	Net Adj. -2.8%	Net Adj. -0.1%	
# of Comparables	One Adj. \$ 295,000	One Adj. \$ 285,000	Two Adj. \$ 301,400	One Adj. \$ 305,100	

0

Imperfect Data Results in this

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Reasons for Imperfect Data

- HERS Reports are not provided at time of appraisal
- MLSs do not include HERS Report or HERS Rating
- MLSs report HERS Ratings inaccurately
- Solar PV details are not publicly accessible in some areas.
- Appraisers and real estate agents have limited knowledge of energy features.

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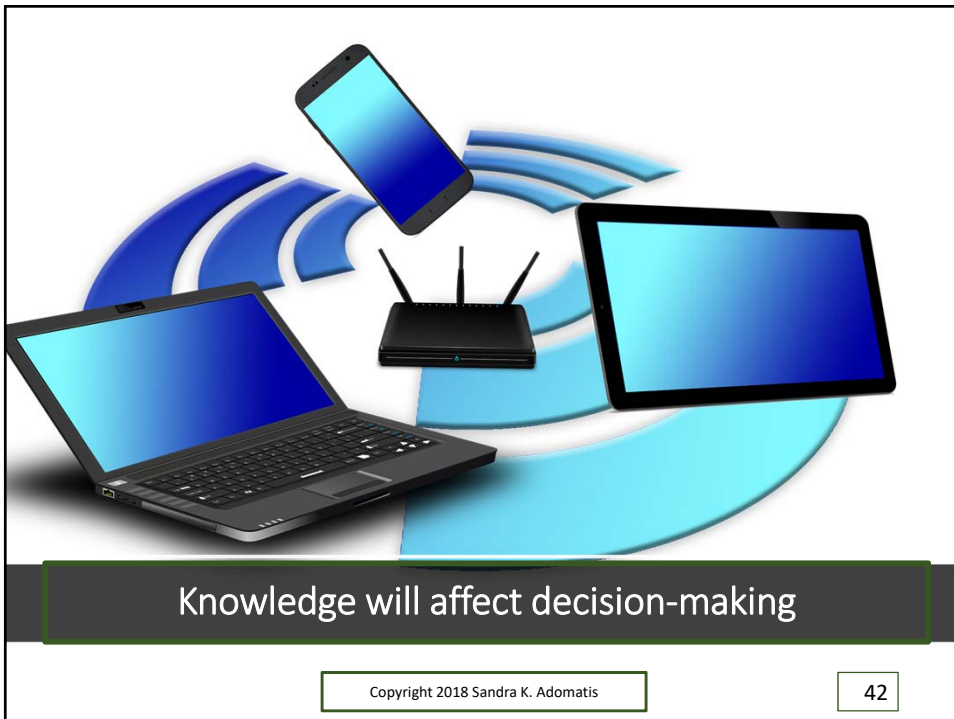
Your Message to Builders

- If you are not getting a HERS Rating now, how will the market know your product is competitive with the builders that have a rating that is now public?



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Knowledge will affect decision-making

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Energy Cost "Auto-Pop" in Chicago


Welcome **Becky R** Realtor for Team Becky
Contact

My MLS
Search
Listings
Reports
Forms
Setup

Search Results - Attached Single

← List View ← Refine Criteria | Full - Agent | Show | Quick | Advanced

← showing 1 of 1 listings →



Detached Single

Status: **NEW** | List Date: **06/26/2013** | List Price: **\$399,900**

Area: **8021** | List Dt Rec: **06/26/2013** | Orig List Price: **\$399,900**

Sold Price:

Directions: **Diversey West to Rockwell, North to Property**

Sold by: | Contract: | Lst. Mkt. Time: **1**

Closed: | Financing: | Contingency: | Points:

Off Market: **1920** | Blt Before 78: **Yes** | Curr. Leased: **No**

Dimensions: **37.5X125**

Ownership: **Fee Simple** | Subdivision: | Model:

Corp Limits: **Chicago** | Township: **North Chicago** | County: **Cook**

Coordinates: **N:2900** | # Fireplaces:

W:2600

Rooms: **7** | Bathrooms: **1 / 1** | Parking: **Garage**

Bedrooms: **4** | (full/half): | # Spaces: **Gar:2**

Basement: **Full** | Master Bath: **None** | Parking Incl: **Yes**

Bsmnt. Bath: **No** | Parking: **Incl. Yes**

Utility Costs: Elec. - \$770.60/yr, \$64.22/mo; Gas - \$1198.00/yr, \$99.83/mo

Remarks: **CHARMING 4 BED+DEN, 1.1 BATH SINGLE FAMILY HOME ON LOT & A HALF IN DESIRABLE LOGAN SQUARE/AVONDALE LOCATION. REMODELED APPROX 10 YEARS AGO W/ NEWER HVAC, ELECTRIC, PLUMBING, H2O HEATER BROOF. DIAG HDWD FLRS; LARGE EAT IN KITCHN W/ SS APPLS; HIGH CEILINGS; FULL BASEMENT; HUGE FENCED YARD W/ BLUE STONE PATIO; SECURITY SYS OVERSIZED 2 CAR GARAGE. CLOSE TO 90/94 & ALL LOGAN SQUARE/BUCKTOWN SHOPPING & RESTAURANTS!**

Source: [MRED LLC](#)

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Roselle, IL Farmhouse Sale

- Year built 1906
- Sold in 2015 after a recent total Green Rehab-Retrofit
- Sold in 9 days at 97% of list price



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Appraisals should reflect the market's reaction to value.

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Published Studies of Green Homes

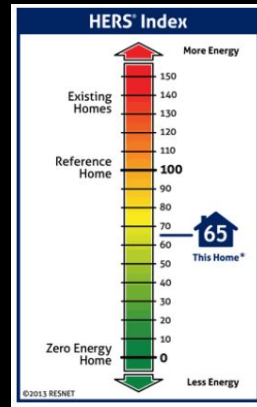
Study Name	Date Published & Author	Data Period Covered & Market Area	Sales Price Premium Range
<i>"What is Green Worth? Unveiling High-Performance Home Premiums in Washington, D.C."</i>	September 2015 Sandra K. Adomatis, SRA Donald Boucher, SRA and Tamara Pappas, SRA Real estate Appraisers	February 2013 - July 2015 Washington, D.C.	Range of 2% to 5%
<i>"An Early Look at Energy Efficiency and Contributory Value: Case Studies of Residential Properties in the Greater Denver Metro Area"</i>	Lisa Desmarais, SRA A real estate appraiser Published in 2015	2006 through 2014 data Greater Denver Metro Area	An overall range of 1% to 15%. Excluding outliers, the range is 2% to 5%.
<i>"The Market Valuation of Energy Efficient and Green Certified Northwest Homes"</i>	Taylor Watkins and other appraisers Published May 2013	2014-2015 data (30 pairs) Northwest U.S. Oregon, Washington	A range of -0.2% to 8%
<i>"An Empirical Assessment of the Value of Green in Residential Real Estate"</i>	Alejandra Cadena, PhD and Thomas A. Thomson, PhD Published in Appraisal Journal - Winter 2015	October 2008-September 2013 data Bexar County-San Antonio, TX	1% increase for a green certification, 2% increase for green components, and 6% increase for energy efficient features.
<i>"The Value of LEED Homes in the Austin-Round Rock Real Estate Market."</i>	Greg Hillman of McCombs School of Business Published 2017	2008-2016 data Austin-Round Rock, TX	A house with a green designation sells for 6% more than one without, and a house with a LEED certification sells for 8% more
<i>"Green Home Sales Price Premiums in Northern California"</i>	Sandra K. Adomatis, SRA, LEED Green Assoc. and Denis DeSaux, MAI, SRA Appraisers	2015-2017 data Northern CA in San Francisco Bay and Sacramento Areas	Houses with green features sold for 2.19% more than similar non-green homes
<i>"Appraisers Analyze Data on Pearl Home Certified Sales"</i>	Sandra K. Adomatis, SRA, LEED Green Assoc., Donald Boucher, SRA, AI-RES, real estate appraisers Published 2017	2016 and 2017 data Mostly Virginia sales with one sale in Maryland	In markets where Pearl has established a presence and where agents are marketing the certification effectively, the average premium is 5%. The Pearl Home Certification Premium study found an average (mean) premium of just over 1%

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Measure of Market Reaction

1. Sales compared to sales
2. Cost new less all forms of loss
3. Income Approach
4. Trends



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Appraisers Do Not Add Value

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New Construction Appraisal

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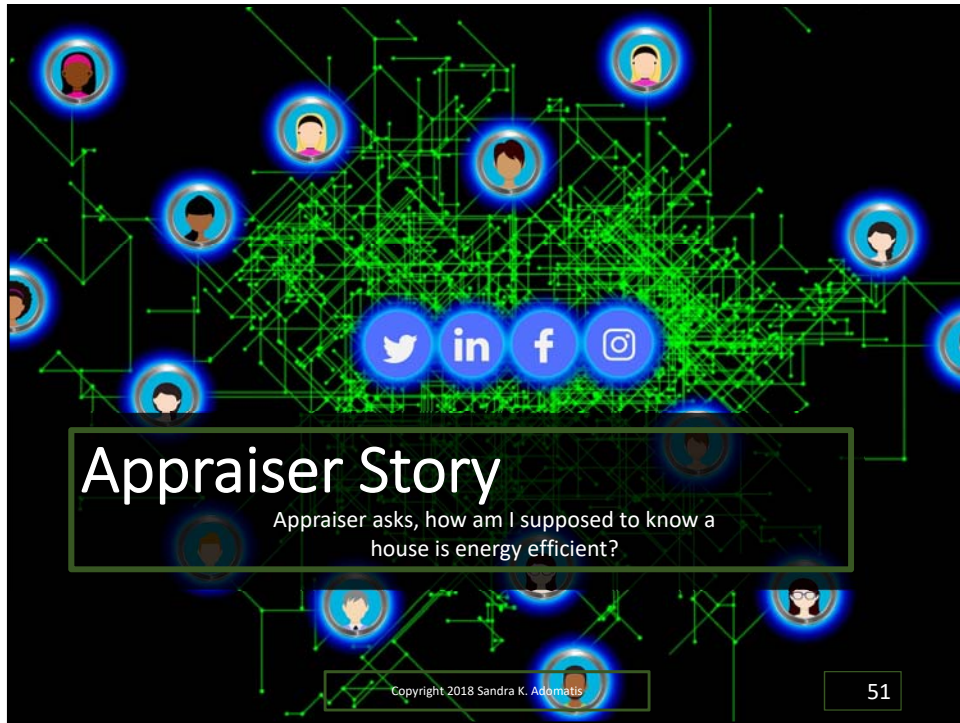
New Construction Appraisal Timing

- From plans and specifications before ground breaking
- After ground breaking but with plans and specifications
- If no “projected” HERS Rating, most likely no acknowledgement of energy efficiency will happen.



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Appraiser Story

Appraiser asks, how am I supposed to know a house is energy efficient?

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Appraiser Story

Appraiser says, "I was appraising a new construction that the builder says is green. I asked for the HERS Rating and he looked at me like I was from mars."

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Our world will change

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- 3 pilot projects are working on auto populating the MLS
- HERS Ratings that can be implemented through auto population directly from the source is a game changer!

Auto Population of MLS

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HELIX
Home Energy Labeling Information eXchange

Regional MLS Initiative





HELIX will hold 3rd party verified energy efficiency and green building ratings, scores, and certifications.

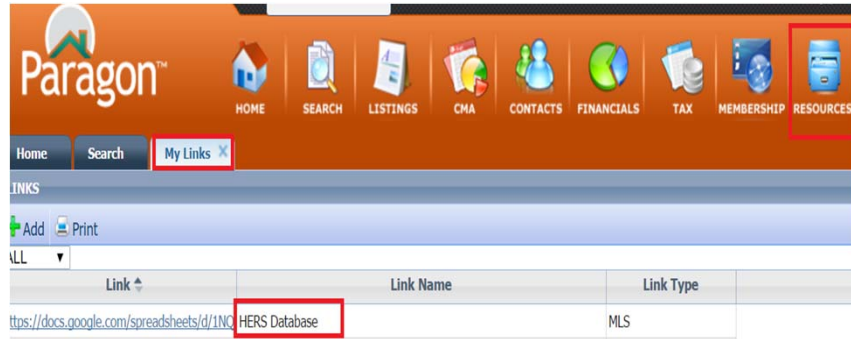
Realtors and appraisers will be able to access that data through the MLS.

Available in 2018.



<u>New Construction</u> 	<u>Existing Home</u> 	
<ul style="list-style-type: none"> • Efficiency Vermont Memos (buyer & lender) • Residential Green and Energy Efficient Addendum • HERS report <ul style="list-style-type: none"> • Savings versus code home • Building certifications • Code certificate • Incremental cost for high performance versus code – builder supplied • PV Value – solar contractor 	<ul style="list-style-type: none"> • Template letters (buyer & lender) – Home Performance Contractor (HPC) supplied • Residential Green and Energy Efficient Addendum • Vermont Home Energy Profile & US DOE Home Energy Score - Assessor • Building certification if any • Code certificate • Incremental cost for high performance versus code – HPC supplied • PV Value – solar contractor 	
Better Buildings By Design 2018	Copyright 2018 Adomatis & Gephart	56

NEREN's link to HERS Database within Paragon MLS
 (Click on Resources – My Links – HERS Database):



The HERS Database has data on all Vermont Homes with a Home Energy Rating Score (HERS) – homes that participated in Efficiency Vermont's Residential New Construction Service going back to October of 2011.



HERS Database available in Paragon MLS



NEREN MLS Export (2nd Qtr. 2017) from Efficiency Vermont
 08/08/17 From: 04/01/17 To: 06/30/17

State	County	City	Postal Code	Development Name	Street Name	Address 1	Address 2	HERS Index Score	ENERGY STAR Home	LEED for Homes	Home Innovation Research Lab (NAHB) BUILTWASH RAE 700 National Green Building Standard	Passiv House	Vermont Builds Greener	Claimed Complete to Date	Efficiency Vermont Certified High Performance Home	Efficiency Vermont Certified
VT	Addison							33	TRUE			TRUE		05/24/17	TRUE	
VT	Addison							48						08/28/17		TRUE
VT	Addison							53						10/26/17		TRUE
VT	Addison							44						06/25/17	TRUE	
VT	Barnesington							48						06/06/17		TRUE
VT	Caladonia							75	TRUE					04/10/17	TRUE	
VT	Caladonia							-1	TRUE					04/20/17	TRUE	
VT	Caladonia							-1	TRUE					07/29/17	TRUE	
VT	Caladonia							-1	TRUE					05/29/17	TRUE	
VT	Caladonia							-2	TRUE					06/17/17	TRUE	
VT	Caladonia							6	TRUE					06/30/17	TRUE	
VT	Caladonia							-4	TRUE					05/29/17	TRUE	
VT	Caladonia							-2	TRUE					06/17/17	TRUE	
VT	Chattenden							58	TRUE	BRONZE				04/20/17		TRUE
VT	Chattenden							65		BYPASS				05/04/17		TRUE
VT	Chattenden							57		BRONZE				05/04/17		TRUE
VT	Chattenden							42		BRONZE				06/07/17	TRUE	
VT	Chattenden							54						04/20/17		TRUE
VT	Chattenden							51						04/28/17		TRUE
VT	Chattenden							60						06/06/17		TRUE
VT	Chattenden							50						06/01/17		TRUE
VT	Chattenden							65						04/28/17		TRUE
VT	Chattenden							64						04/28/17		TRUE
VT	Chattenden							64						04/28/17		TRUE
VT	Chattenden							67						06/01/17		TRUE
VT	Chattenden							59						07/20/17		TRUE
VT	Chattenden							63						05/24/17		TRUE
VT	Chattenden							66						05/24/17		TRUE
VT	Chattenden							61						04/20/17		TRUE
VT	Chattenden							60						04/20/17		TRUE
VT	Chattenden							59						05/02/17		TRUE
VT	Chattenden							55						06/27/17		TRUE
VT	Chattenden							55						06/01/17		TRUE
VT	Chattenden							54						05/26/17		TRUE
VT	Chattenden							30						04/20/17		TRUE
VT	Chattenden							40						06/20/17		TRUE
VT	Chattenden							51						06/20/17		TRUE

- New Home Data Included:**
- State
 - County
 - Address
 - HERS Index Score
 - All 3rd Party Verified Building Certifications Earned
 - Date Completed in Efficiency Vermont Program



AI Res. Green & EE Addendum 820.05

<p>AI Reports® Form 820.05*</p>	Client File #:	Appraisal File #:																																								
	Residential Green and Energy Efficient Addendum																																									
	Client:																																									
	Subject Property:																																									
	City:	State: Zip:																																								
<p>Additional resources to aid in the valuation of green properties and the completion of this form can be found at http://www.aireports.com/resources/residential-green-energy-addendum.aspx</p> <p>The appraiser hereby certifies that the information provided within this addendum:</p> <ul style="list-style-type: none"> 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 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. <p>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 (US EPA). High Performance building and green building are often used interchangeably.</p> <p>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 environmental quality, and (6) maintenance and operation. The energy and water elements are the most measurable elements of green or high performance housing. Appraisers need savings amounts to develop an income approach to support energy efficient contributory value.</p> <p>THIRD-PARTY VERIFICATIONS (See types defined in glossary)</p> <p>The following verified items are considered within the appraisal analysis of the subject property:</p> <table border="0"> <tr> <td>Green Certifications</td> <td>Environmental Protection Agency (EPA):</td> <td><input type="checkbox"/> Indoor airPLUS</td> <td><input type="checkbox"/> WaterSense</td> <td><input type="checkbox"/> ENERGY STAR</td> </tr> <tr> <td>Certifications attest that the home meets certain minimum thresholds.</td> <td>Energy Department (DOE):</td> <td><input type="checkbox"/> Zero Energy Ready Home (ZERH)</td> <td></td> <td></td> </tr> <tr> <td></td> <td>Home Innovation Research Labs (NGBE) Home Remodel:</td> <td><input type="checkbox"/> Bronze</td> <td><input type="checkbox"/> Silver</td> <td><input type="checkbox"/> Gold</td> </tr> <tr> <td></td> <td>Home Innovation Research Labs (NGBE) New Home:</td> <td><input type="checkbox"/> Living Building Certified</td> <td><input type="checkbox"/> Emerald</td> <td><input type="checkbox"/> Partial Certification</td> </tr> <tr> <td></td> <td>Passive House Standard:</td> <td><input type="checkbox"/> 2nd Low Energy</td> <td><input type="checkbox"/> EnerCert</td> <td><input type="checkbox"/> Passive House</td> </tr> <tr> <td></td> <td>Passive House Institute US:</td> <td><input type="checkbox"/> PHIUS+ 2015</td> <td></td> <td></td> </tr> <tr> <td></td> <td>USGBC LEED:</td> <td><input type="checkbox"/> Certified</td> <td><input type="checkbox"/> Silver</td> <td><input type="checkbox"/> Gold</td> </tr> <tr> <td></td> <td></td> <td><input type="checkbox"/> Platinum</td> <td></td> <td></td> </tr> </table> <p>Date: _____ Green Certification Version: _____</p> <p>Verified: _____ Organization URL: _____</p> <p>ABOVE VALID ONLY IF CHECKED:</p> <p><input type="checkbox"/> Verification reviewed on site</p> <p><input type="checkbox"/> Verification attached to this report</p>			Green Certifications	Environmental Protection Agency (EPA):	<input type="checkbox"/> Indoor airPLUS	<input type="checkbox"/> WaterSense	<input type="checkbox"/> ENERGY STAR	Certifications attest that the home meets certain minimum thresholds.	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		<input type="checkbox"/> Platinum																																								

Contact:
E-Mail: Adomatis@hotmail.com
Twitter: @Sadomatis
Website: www.adomatisappraisalservice.com

Thank You!

Sandra Adomatis, SRA, LEED Green Assoc., NAR Green
Designee

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