Appraisal Institute®

Professionals Providing Real Estate Solutions

KNOWLEDGE. | EXPERIENCE. | INTEGRITY.

RESNET Conference

Jim Amorin, MAI, SRA, AI-GRS
Sandy Adomatis, SRA, LEED Green Associate

Communicating HERS to Appraisers and Real Estate Sales Agents

March 1, 2017

Jim Amorin, MAI, SRA, AI-GRS

Session Highlights

- HERS Rating
- Communicating with appraisers and real estate agents
- The importance of HERS
- Informed buyer and seller decisions

The HERS Ratings is Lowering

Year	Lowest HERS Rating	Highest HERS Rating	Avg. HERS Rating
2016	26	74	61
2015	36	76	62
2014	-3	87	60
2013	53	79	60
Source: RESNET			

4-year HERS history showing states with more than 40 percent of building permits with HERS ratings

State	AVG HERS 2013	AVG HERS 2014	AVG HERS 2015	AVG HERS 2016	% of Permits w/HERS 2013	% of Permits w/HERS 2014	% of Permits w/HERS 2015
DC	66	65	67	59	38.7%	38.9%	65.1%
MA	58	62	56	55	68.7%	72.8%	83.1%
IN	68	67	66	65	72.8%	68.9%	74.6%
IA	61	60	59	56	54.1%	58.3%	66.2%
MD	60	59	57	55	59.1%	54.5%	53.8%
CO	60	59	57	55	45.0%	49.0%	51.2%
CT	56	53	55	53	31.5%	29.7%	49.1%
AZ	61	62	63	63	16.6%	57.0%	49.7%
MN	54	57	53	51	11.1%	56.8%	38.3%
DE	59	57	55	53	46.9%	38.3%	55.2%
Average	**60**	**60**	**59**	**57**	**44.4%**	**52.4%**	**58.6%**
Median	**60**	**60**	**57**	**55**	**45.9%**	**55.6%**	**54.5%**

Source: RESNET and NAHB statistics on HERS Ratings compared to number of building permits

Just two questions for you …

Are the HERS ratings lost in the transaction?

If they are lost in the transaction, how can they gain relevance in the market if they are hidden?

Just two questions for you …

Roadmap Value for Data Holders

- Automating flow of information
- Auto-population
- Sharing data
- Best practices

Key National Industry Groups Support MLS Operators in Different Ways:

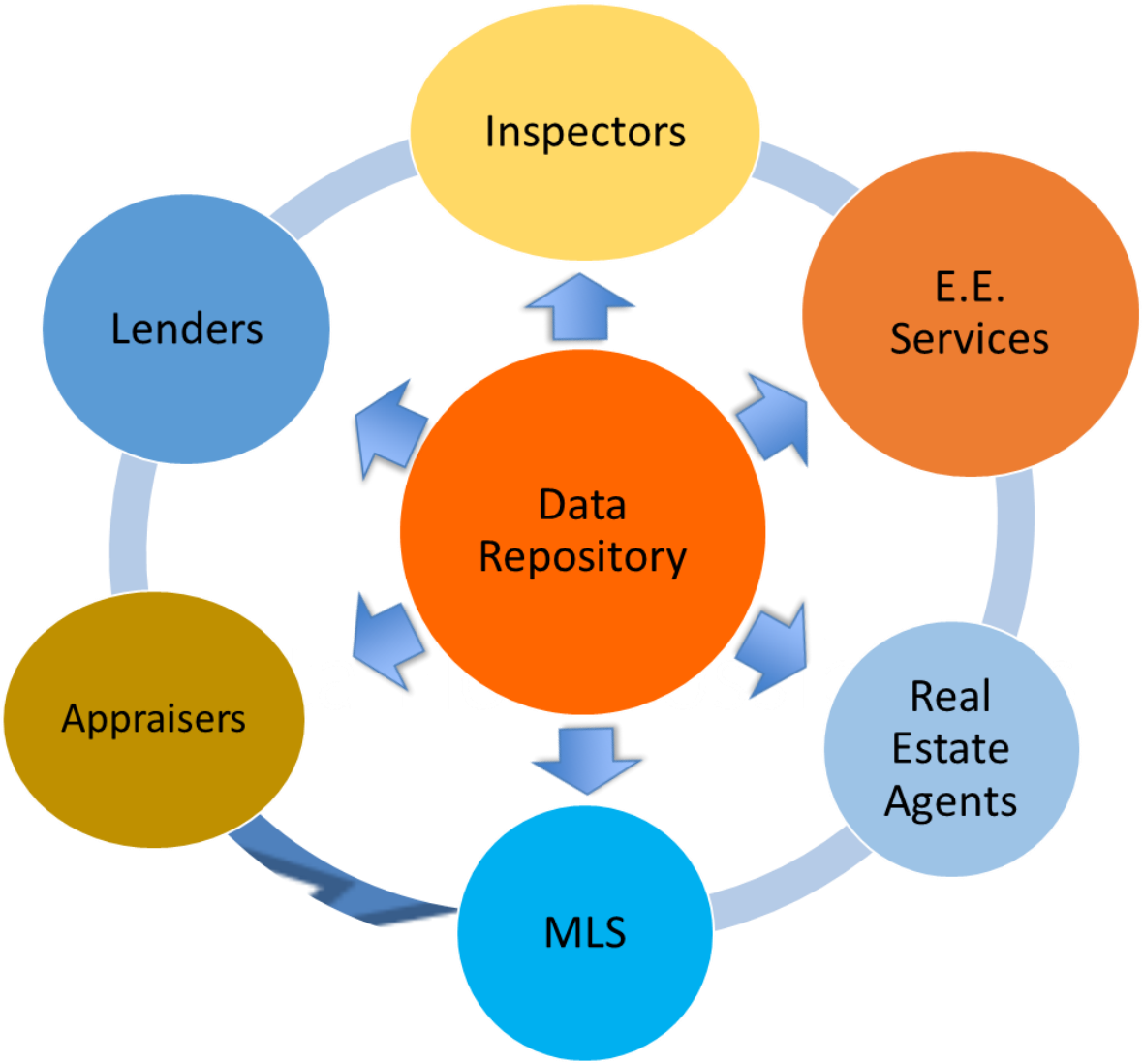
- National Association of REALTORS®
- The Real Estate Standards Organization
- The Council of Multiple Listing Services

Service Contracts May Need to Change to Allow Release of Data

- "Opt-In/Opt -Out" consent
- Affirmative choice
- Opt-out consent

https://emp.lbl.gov/sites/all/files/lbnl-1006628.pdf

Data Flow Possibilities



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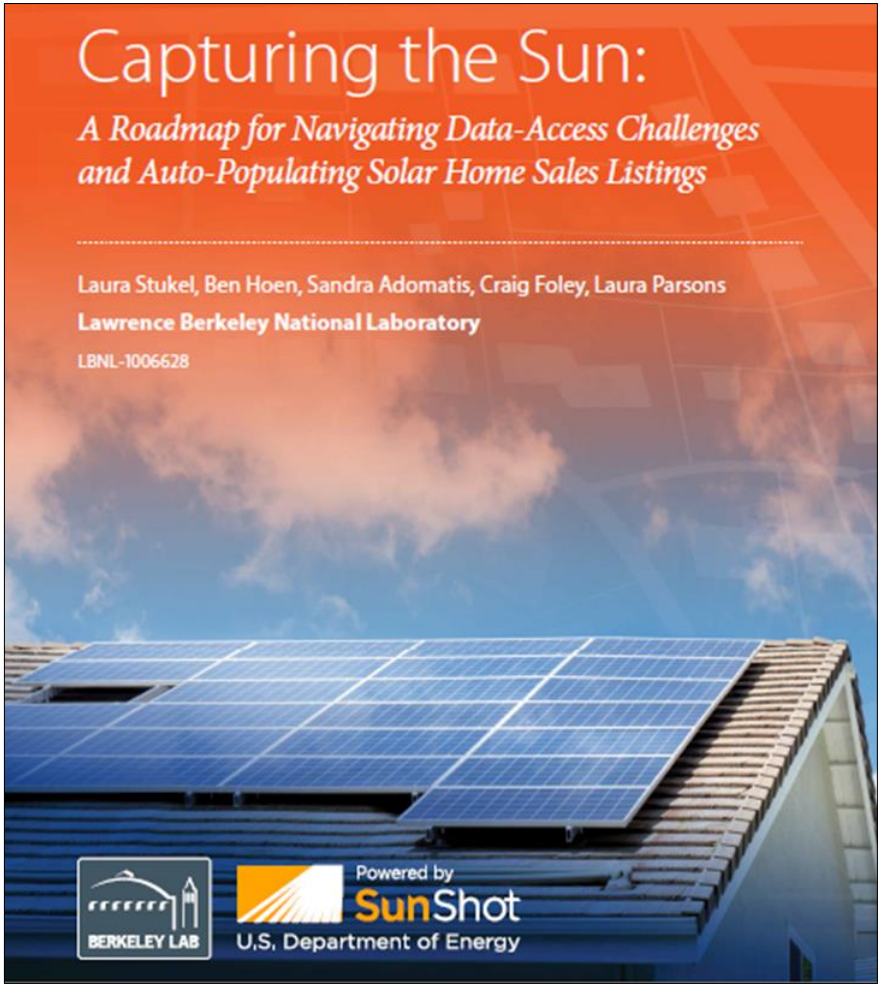
The Roadmap is Written



https://emp.lbl.gov/sites/all/files/lbnl-1006628.pdf

HERS Ratings

HERS Ratings are only a measure of value if the market understands them

Do market participants know that…

36 MPG
Miles per Gallon

0 HERS
Energy Efficiency Rating

Building Energy Code

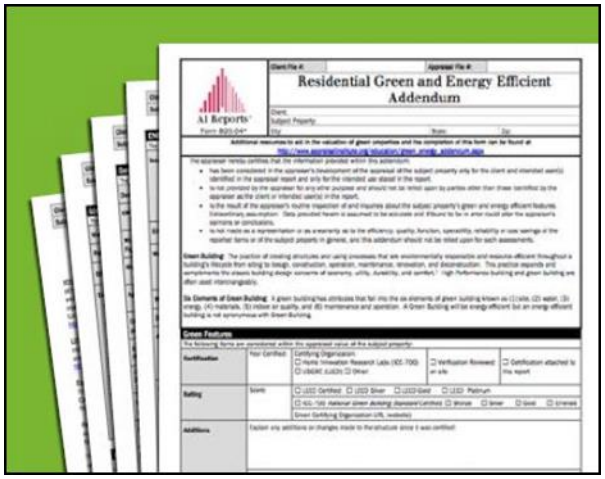
International Energy Conservation Code (IECC) Changes from 2006 and forward	
IECC Year	Percent of Change
2006	Base Year
2009	+15%
2012	+30%
2015	+31%
Seems there is a trend here that cannot be ignored	

- 2012 IECC Code requires a Blower Door test and a visual inspection

Identify the Hidden Value

Tell me what is behind the walls

New Version: 820.05



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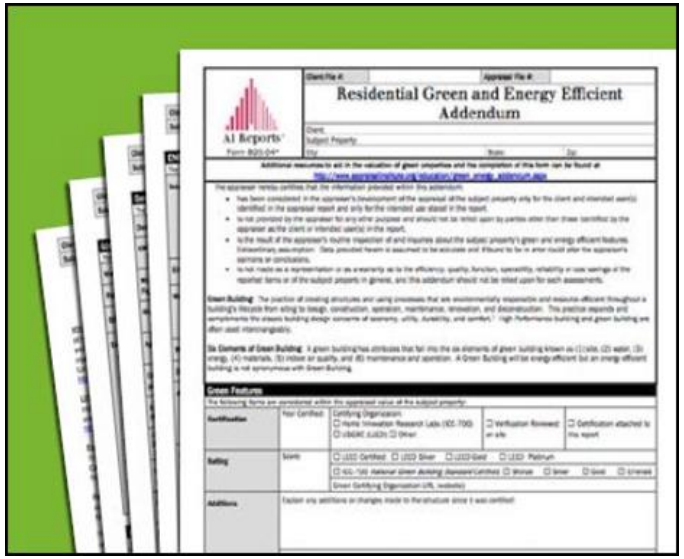
Who can complete Addendum?

- Rater
- Builder
- Architect
- Owner
- Developer



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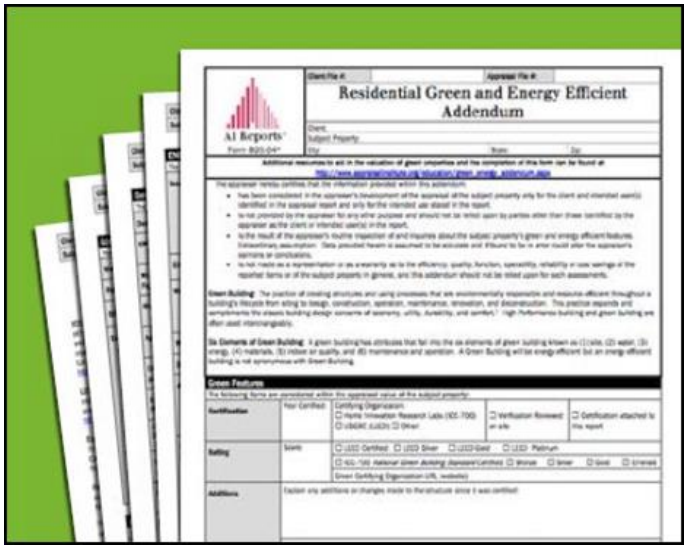
Who can complete Addendum?



Appraised Value & Energy Efficiency: Getting it Right

Appraisal Institute™ BCAP

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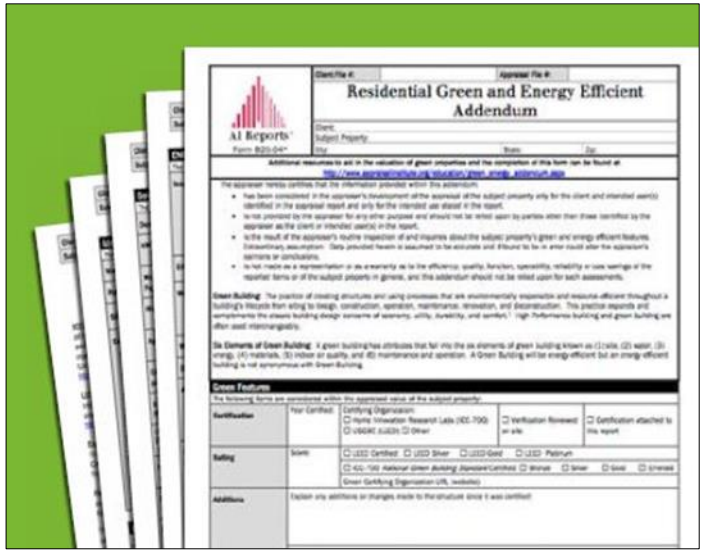
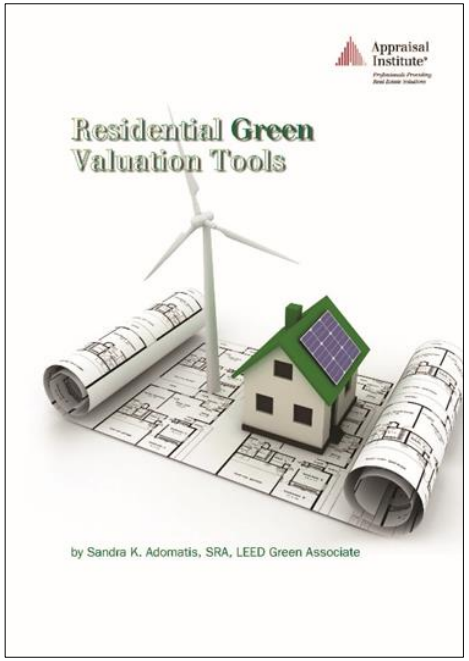
Sandy Adomatis, SRA,

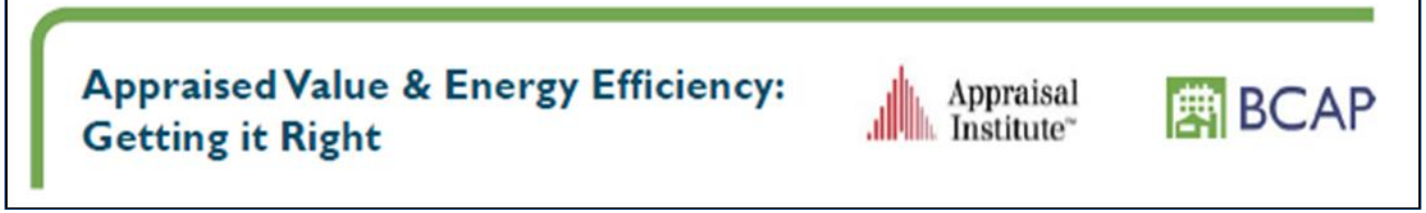
LEED Green Associate

AI Residential Green and Energy Efficient Addendum and Residential Green Valuation Tools

Complementary Tools







http://www.appraisalinstitute.org/education/education-resources/green-building-resources/more-green-resources/

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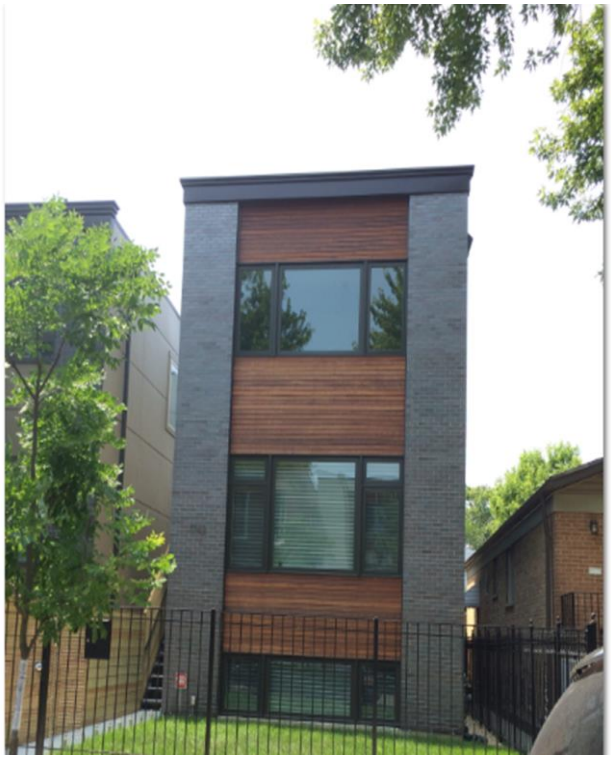
Some define green differently than intended



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Third-Party Verifications

THIRD-PARTY VERIFICATIONS (See types defined in glossary).					
The following verified items are considered within the appraised value of the subject property:					
Green Certification Certifications attest that the home meets certain minimum thresholds.	Environmental Protection Agency (EPA):	☐ Indoor airPLUS	☐ WaterSense	☐ ENERGY STAR	
	Energy Department (DOE):	☐ Zero Energy Ready Home (ZERH)			
	Home Innovation Research Labs NGBS Home Remodel:	☐ Basement	☐ Small Addition	☐ Bathroom	
		☐ Kitchen		☐ Whole House	
	Home Innovation Research Labs NGBS New Home:	☐ Bronze	☐ Silver	☐ Gold	☐ Emerald
	Living Building Challenge (LBC):	☐ Living Building Certified		☐ Petal Certification	
	Passivhaus Standard:	☐ PHI Low Energy	☐ EnerPhit	☐ Passive House	
	Passive House Institute US:	☐ PHIUS+ 2015			
	USGBC LEED:	☐ Certified	☐ Silver	☐ Gold	☐ Platinum
	Other:				
	Date Verified: __/__/____	Green Certification Version: ____ Organization URL: _____		**ABOVE VALID ONLY IF CHECKED:** ☐ Verification reviewed on site ☐ Verification attached to this report	

New Version: 820.05

From "Residential Green Valuation Tools," by Sandra K. Adomatis, SRA, Appraisal Institute, 2014, p. 89

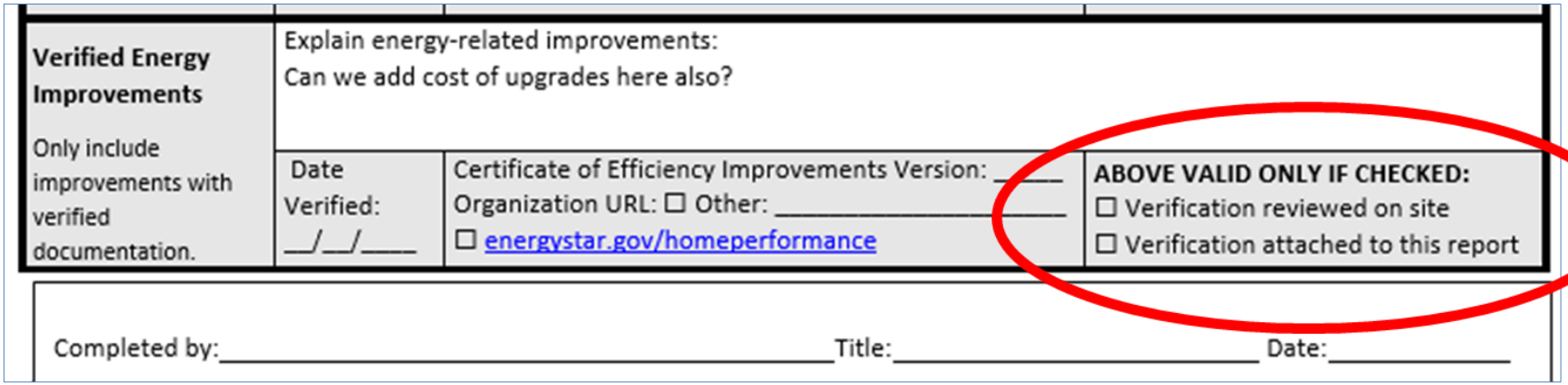
Third-Party Verifications

Energy Label Labels disclose the state the home's energy assets.	RESNET's HERS Rating (0 to 150): _____ ☐ Sampling Rating ☐ Projected Rating ☐ Confirmed Rating	Estimated energy cost for this home: $____/year For code home: $____/year *Score below 100 indicates energy costs are expected to be lower than average local code home per square foot. HERS Index Report estimates energy cost based on number of bedrooms plus one. Only a "confirmed rating" is a diagnostic test.*	
	DOE's Home Energy Score Score (1 to 10): _____ ☐ Official Score ☐ Unofficial Score	Estimated energy cost for this home: $____/year For average home: $____/year *Score above five indicates energy costs are expected to be lower than average local home. Home Energy Score estimates energy cost based on state average energy rates and the home's energy features.*	
	Other Energy Score: Value (____ to ____): _____	Estimated energy cost: $____/year Describe energy label system:	
	Date Verified: __/__/____	Score or Rating Version: ____ Organization URL: ☐ www.resnet.us/ ☐ www.homeenergyscore.gov ☐ Other: _____	**ABOVE VALID ONLY IF CHECKED:** ☐ Verification reviewed on site ☐ Verification attached to this report

New Version: 820.05

From "Residential Green Valuation Tools," by Sandra K. Adomatis, SRA, Appraisal Institute, 2014, p. 89

Third-Party Verifications



Verified Energy Improvements Only include improvements with verified documentation.	Explain energy-related improvements: Can we add cost of upgrades here also?		
	Date Verified: __/__/____	Certificate of Efficiency Improvements Version: _____ Organization URL: ☐ Other: _____ ☐ energystar.gov/homeperformance	**ABOVE VALID ONLY IF CHECKED:** ☐ Verification reviewed on site ☐ Verification attached to this report

Completed by:_____ Title:_____ Date:_____

New version: 820.05

From "Residential Green Valuation Tools," by Sandra K. Adomatis, SRA, Appraisal Institute, 2014, p. 89

Energy-Efficient Section of Addendum Form

EFFICIENCY FEATURES (Water, Energy, and Environmental. See types defined in glossary).							
The following items are considered within the appraised value of the subject property:							
Insulation	☐ Fiberglass Blown-In ☐ Foam Insulation ☐ Cellulose ☐ Fiberglass Batt Insulation ☐ R-Value ____Wall ____Ceiling ☐ Other (Describe): _____						
Building Envelope	Envelope Tightness: _____ Unit: ☐ __CFM25 ☐__ CFM50 ☐__ ACH50 ☐__ ACH natural Instructions: Insert the rating as a number that could be 0.5 to 7ACH50 or higher. The lower the number, the more air tight the envelope. Building Codes for area show maximum Envelope Tightness allowed based on the climate zone. Not all areas have adopted a building code. http://bcap-energy.org/						
Windows	☐ ENERGY STAR®	☐ Low E	☐ High Impact	☐ Storm	☐ Double Pane ☐ Triple Pane	☐ Tinted	☐ Solar Shades
Day Lighting	☐ # Of Skylights: ____	☐ # Of Solar Tubes: ____	☐ Other (Describe): _____ (% Of lighting LEDs): _____				
ENERGY STAR® Appliances	ENERGY STAR®: ☐ Dishwasher ☐ Refrigerator ☐ Washer/Dryer ☐ Other: _____ Energy Source: ☐ Propane ☐ Electric ☐ Natural Gas ☐ Other: _____ **Note:** ENERGY STAR® appliances do not result in an ENERGY STAR® Home.						
Water Heater	☐ ENERGY STAR®	Size: _____ gallons ☐ Tankless	☐ Solar (next page)	☐ Heat Pump	☐ Coil		

New version: 820.05

For more information: "Residential Green Valuation Tools," by Sandra K. Adomatis, SRA, Appraisal Institute, 2014, p. 112

Energy-Efficient Section of Addendum Form

HVAC & Related Equipment Describe in comments area.	☐ High Efficiency HVAC SEER: _____ Efficiency Rating: _____% AFUE* _____% *Annual Fuel-Utilization Efficiency	☐ Heat Pump Efficiency Rating: COP: _____ HSPF: _____ SEER: _____ EER: _____	Thermostat/Controllers? ☐ Yes ☐ No Programmable Thermostat? ☐ Yes ☐ No Auxiliary heat source? ☐ Yes ☐ No Radiant Floor Heat? ☐ Yes ☐ No Geothermal? ☐ Yes ☐ No Electric Vehicle Ready? (car charger) ☐ Yes ☐ No
Indoor Environmental Quality	☐ Energy (ERV) or Heat Recovery Ventilator (HRV) ☐ Other Measured Whole-House Ventilation Device (See glossary) ☐ Humidity Monitoring Device installed		☐ Non Toxic Pest Control ☐ Radon System: ☐ Active ☐ Passive
Water Efficiency	☐ Reclaimed Water System (Describe): _____ ☐ Greywater reuse system ☐ Water Saving Fixtures	☐ Rain Barrels Used in Irrigation Cistern size: _____ gallons Location of cistern: _____	
Utility Costs	Annual Utility Cost: $ _____/year, based on: __/__/____ to __/__/____ (full year). Includes (check all that apply): ☐ Electric ☐ Heating ☐ Water ☐ Other: _____		# Of Occupants: _____

New version: 820.05

For more information: "Residential Green Valuation Tools," by Sandra K. Adomatis, SRA, Appraisal Institute, 2014, p. 112

Energy Efficient Section of Addendum Form

Comments Include source for information provided in this section.	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. Provide additional information that illustrates how this property exceeds local building code. This document is intended for new construction or existing homes that have been retrofit to include higher energy or green features.

New version: 820.05

For more information: "Residential Green Valuation Tools," by Sandra K. Adomatis, SRA, Appraisal Institute, 2014, p. 112

Energy Efficient Section

Comments (Include source for information provided in this section) Attach documents or reference them in your workfile The energy element is the most measurable element of green or high performance housing.	Information was provided by: The envelope tightness is 0.50 ACH50 and indicates a tighter seal than the current building code requirement. The insulation provides additional soundproofing, envelope sealing, and good energy efficiency results. The insulation rating of 1 indicates it was installed to meet manufacturer's specifications. Attached is the completed HERS Index Report and the basis for the ratings on this Addendum. The HERS Index of -2 compared to the 2015 state average of 60 indicates this structure exceeds the state average energy rating. This is a net zero energy ready home that produces as much energy as it uses.

Keep your comments simple – ignore energy jargon

For more information: "Residential Green Valuation Tools," by Sandra K. Adomatis, SRA, Appraisal Institute, 2014, p. 113

Solar Panel Section of Addendum Form

Solar Panels

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

Solar Photovoltaic (Electric) System		
	Array #1	**Array #2 (if applicable)**
Type of Ownership	☐ Leased ☐ Owned ☐* Solar Loan with UCC Filing ☐ Power Purchase Agreement (PPA) If solar loan has UCC Filing, it is considered personal property and should not be included in market value.	☐ Leased ☐ Owned ☐ Solar Loan ☐ UCC Filing ☐ Power Purchase Agreement (PPA)
Panel Specifications	System Size: _____ kW (1kW = 1000 Watts) Age of Panels: _____ years Energy Production: _____ kWh Source of Energy Production Estimate: _____ Manufacturer: _____ Warranty on Panels: _____ years	System Size: _____ kW (1kW = 1000 Watts) Age of Panels: _____ years Energy Production: _____ kWh Source of Energy Production Estimate: _____ Manufacturer: _____ Warranty on Panels: _____ years
Array Placement Affects energy production. *Orientation	Location (roof, ground, etc.): _____ ☐ Fixed Mount ☐ Tracking Mount Tilt / Slope: _____ *Azimuth: _____	Location (roof, ground, etc.): _____ Tilt / Slope: _____ Azimuth: _____ Orientation (direction panels face): _____
Inverter Specifications	Number of Inverters per Array: _____ Age: _____years Wattage: _____watts Manufacturer: _____ Warranty Term: _____years	Number of Inverters per Array: _____ Age: _____years Wattage: _____watts Manufacturer: _____ Warranty Term: _____years
Name of Utility Company:		**Charge / kWh from Utility** $ _____/ kWh

For more information: "Residential Green Valuation Tools," by Sandra K. Adomatis, SRA, Appraisal Institute, 2014, p. 120

Solar Panel Section of Addendum Form

Name of Utility Company:		**Charge / kWh from Utility**	$ _____ / kWh
Solar Thermal Water Heating System			
Type of System	Active: ☐ Direct ☐ Indirect Passive: ☐ Integral collector ☐ Thermo-syphon	**Storage Tank Size**	Gallons: _____
Collector Type	☐ Flat-Plat ☐ Integral ☐ Evacuated-Tube Solar	**System Age**	Years: _____
Back-Up System	☐ Conventional Water Heater ☐ Tankless On Demand ☐ Tankless Heat Pump	**Warranty Term**	
Solar Energy Factor (SEF)	*Rating ranges 1 to 11. Higher number is more efficient.	**Manufacturer**	

For more information: "Residential Green Valuation Tools," by Sandra K. Adomatis, SRA, Appraisal Institute, 2014, p. 120

Solar Panel Section of Addendum Form

Comments Discuss incentives available for new panels, condition of current panels, and any maintenance issues. If leased, provide the lease terms.	Discuss source of information and define other renewable energy sources, such as wind, hydropower, biomass power, etc. **Note: Leased solar PV systems** and **Power Purchase Agreements** should not be considered in market value appraisal. These systems are personal property and usually taxed as personal property. If a system is lease or a PPA the terms must be provided to the appraiser for analysis. Appraisers must analyze the effect if any the terms of the lease or PPA have on the price buyers are willing to pay for the property. A free online tool and manual for valuing the energy production of the Solar PV System is available at www.pvvalue.com. PV Value® is a discounted cash flow (Income Capitalization Approach) to valuing energy produced. The solar PV system inputs on this form are necessary to use this program. Attending the "Residential and Commercial Valuation of Solar" course provided by the Appraisal Institute will provide a hands-on classroom experience in using this software. http://www.myappraisalinstitute.org/education/course_descrb/Default.aspx?prgrm_nbr=844&key_type=C

Completed by:_____ Title:_____ Date:_____

For more information: "Residential Green Valuation Tools," by Sandra K. Adomatis, SRA, Appraisal Institute, 2014, p. 120

Location Section of Addendum Form

Location - Site			
The following items are considered within the appraised value of the subject property:			
Walk Score	Score: 60	Source: (Example: http://www.walkscore.com)	
Public Transportation	☐ Bus – Distance: Blocks	☐ Train – Distance: Blocks	☐ Subway – Distance: Blocks
Site	Orientation - front faces: ○ East/West ◉ North/South	Landscaping: ☑ Water Efficient ☐ Natural	
Comments	The Walkscore indicates an automobile is necessary for some services. The front of the house faces the north with a true south orientation at the rear where the solar photovoltaic system will be located. The placement of doors and windows will maximize the energy efficiency of the structure's orientation. Landscaping includes indigenous plants that require minimal watering.		

For more information: "Residential Green Valuation Tools," by Sandra K. Adomatis, SRA, Appraisal Institute, 2014, p. 124

Objective of this Addendum

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 and analysis of the features.

- Builders, contractors, homeowners, and third party verifiers are encouraged to complete this Addendum and present to appraisers, agents, lenders, and homeowners. Appraisers typically do not have sufficient information to complete this addendum without builder, contractor, or third party verifier documentation.
- Attach this completed document to the MLS listing to provide sufficient detail on sales and listings to assist buyers, appraisers, and real estate agents in understanding the high performance features of the property.
- Complete the pages that apply to the property appraised and provide to appraiser prior to the completion of an appraisal.
- Provide the Addendum to the lender at the time of loan application to assist them in understanding the property type so an appraiser with sufficient knowledge of this property type will be engaged to provide an appraisal to meet secondary mortgage market guidelines.

Completed by:_____ Title:_____ Date:_____

For more information: "Residential Green Valuation Tools," by Sandra K. Adomatis, SRA, Appraisal Institute, 2014, p. 124

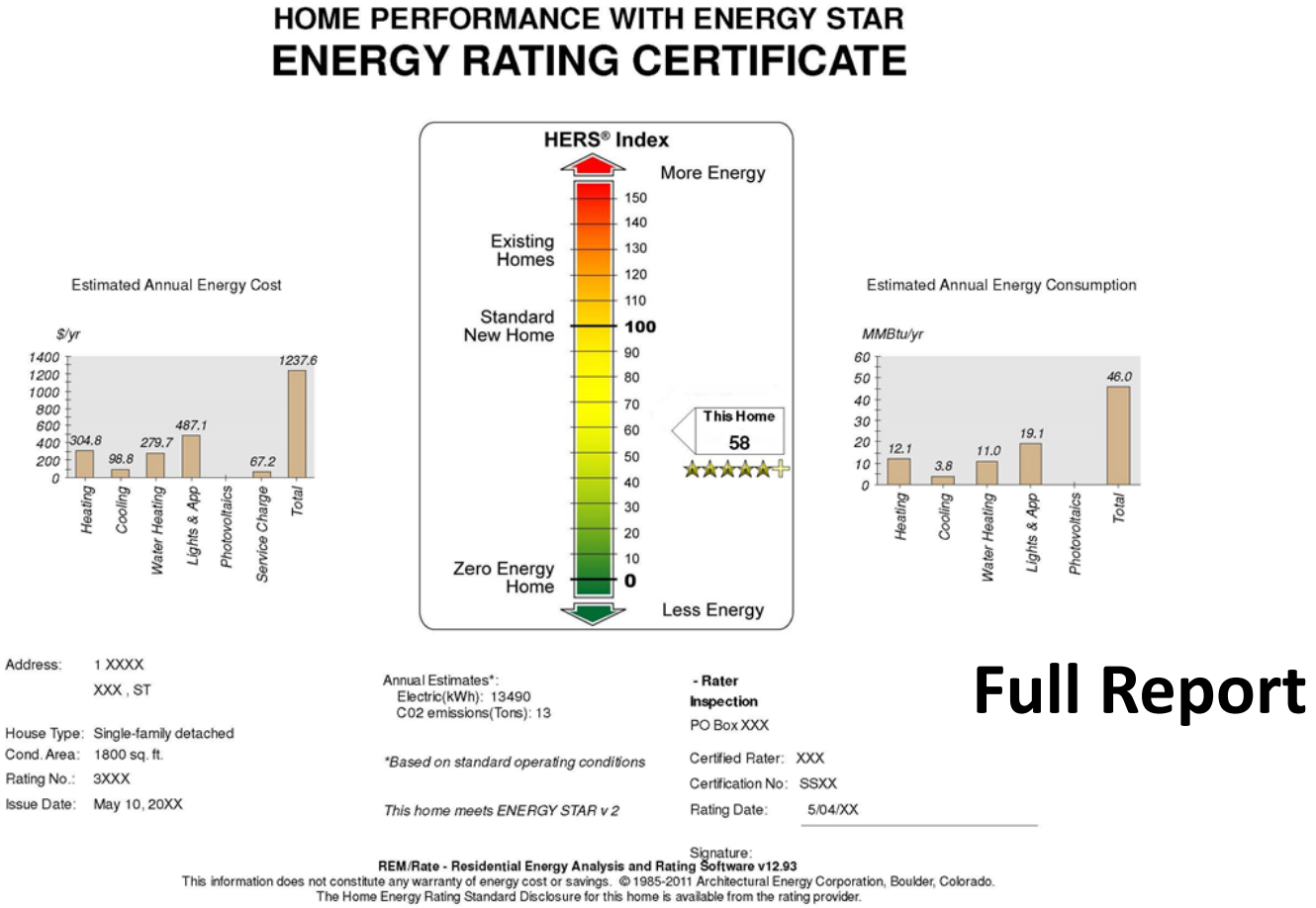
Include Infrared Photographs

Exhibit 6.22 Infrared Photographs

Source: Photographs appear courtesy of the EPA.

From "Residential Green Valuation Tools," by Sandra K. Adomatis, SRA, Appraisal Institute, 2014, p. 111

Attach to the AI Residential Green & Energy Efficient Addendum



HOME PERFORMANCE WITH ENERGY STAR

ENERGY RATING CERTIFICATE

Estimated Annual Energy Cost

$/yr

1400 1200 1000 800 600 400 200 0

304.8 98.8 279.7 487.1 67.2 1237.6

Heating Cooling Water Heating Lights & App Photovoltaics Service Charge Total

HERS® Index

More Energy

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0

Existing Homes

Standard New Home

Zero Energy Home

This Home 58

Less Energy

Estimated Annual Energy Consumption

MMBtu/yr

60 50 40 30 20 10 0

12.1 3.8 11.0 19.1 46.0

Heating Cooling Water Heating Lights & App Photovoltaics Total

Address: 1 XXXX
XXX , ST

House Type: Single-family detached
Cond. Area: 1800 sq. ft.
Rating No.: 3XXX
Issue Date: May 10, 20XX

Annual Estimates*:
Electric(kWh): 13490
C02 emissions(Tons): 13

Based on standard operating conditions

This home meets ENERGY STAR v 2

- Rater
Inspection
PO Box XXX

Certified Rater: XXX
Certification No: SSXX
Rating Date: 5/04/XX

Signature:

REM/Rate - Residential Energy Analysis and Rating Software v12.93

This information does not constitute any warranty of energy cost or savings. © 1985-2011 Architectural Energy Corporation, Boulder, Colorado.
The Home Energy Rating Standard Disclosure for this home is available from the rating provider.

Full Report

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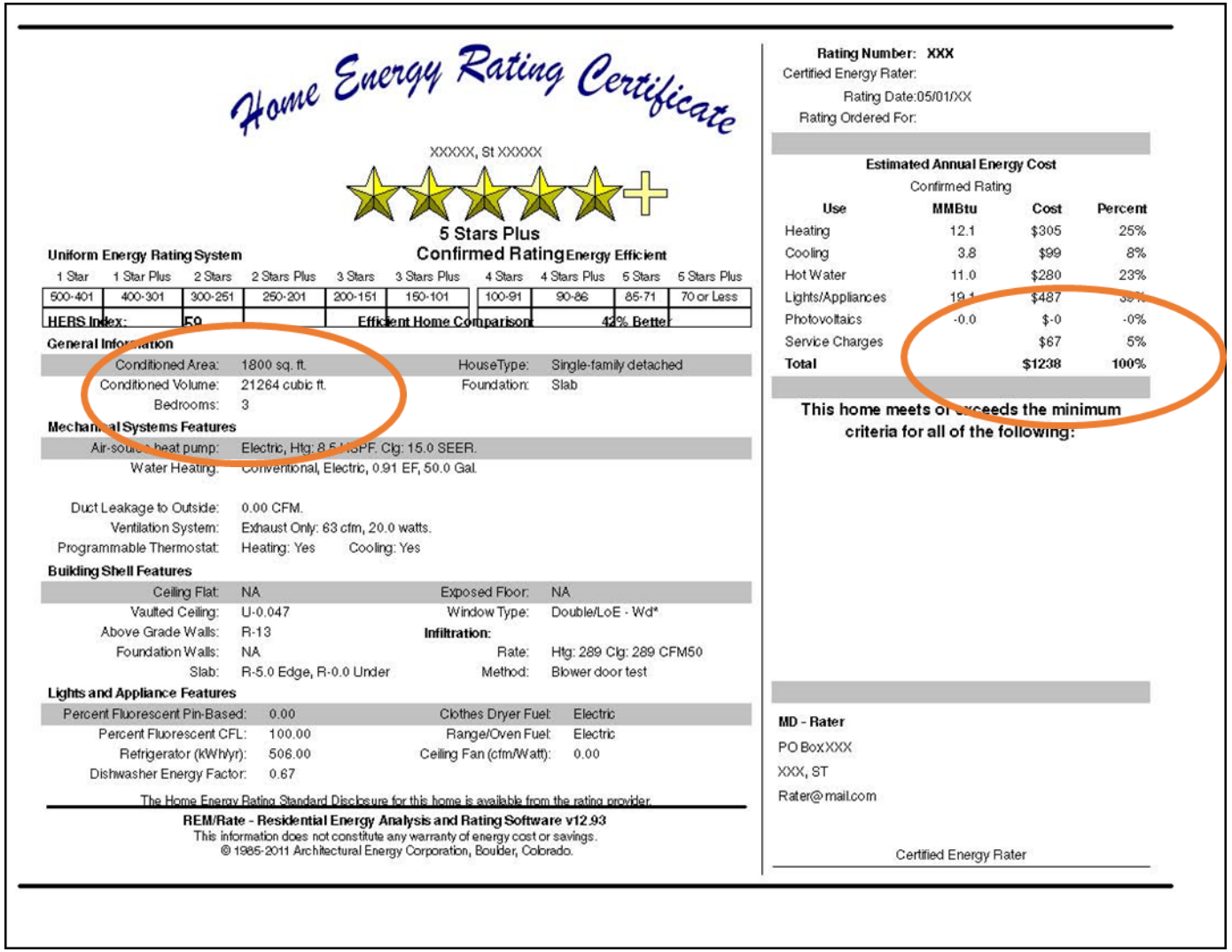
Home Energy Rating Certificate



Home Energy Rating Certificate

XXXXX, St XXXXX

5 Stars Plus

Confirmed Rating

Uniform Energy Rating System — Energy Efficient

1 Star	1 Star Plus	2 Stars	2 Stars Plus	3 Stars	3 Stars Plus	4 Stars	4 Stars Plus	5 Stars	5 Stars Plus
500-401	400-301	300-251	250-201	200-151	150-101	100-91	90-86	85-71	70 or Less

HERS Index: 59 — Efficient Home Comparison — 42% Better

General Information

Conditioned Area:	1800 sq. ft.	HouseType:	Single-family detached
Conditioned Volume:	21264 cubic ft.	Foundation:	Slab
Bedrooms:	3		

Mechanical Systems Features

Air-source heat pump:	Electric, Htg: 8.5 HSPF, Clg: 15.0 SEER.
Water Heating:	Conventional, Electric, 0.91 EF, 50.0 Gal.
Duct Leakage to Outside:	0.00 CFM.
Ventilation System:	Exhaust Only: 63 cfm, 20.0 watts.
Programmable Thermostat:	Heating: Yes Cooling: Yes

Building Shell Features

Ceiling Flat:	NA	Exposed Floor:	NA
Vaulted Ceiling:	U-0.047	Window Type:	Double/LoE - Wd*
Above Grade Walls:	R-13	**Infiltration:**	
Foundation Walls:	NA	Rate:	Htg: 289 Clg: 289 CFM50
Slab:	R-5.0 Edge, R-0.0 Under	Method:	Blower door test

Lights and Appliance Features

Percent Fluorescent Pin-Based:	0.00	Clothes Dryer Fuel:	Electric
Percent Fluorescent CFL:	100.00	Range/Oven Fuel:	Electric
Refrigerator (kWh/yr):	506.00	Ceiling Fan (cfm/Watt):	0.00
Dishwasher Energy Factor:	0.67		

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

REM/Rate - Residential Energy Analysis and Rating Software v12.93

This information does not constitute any warranty of energy cost or savings.

© 1985-2011 Architectural Energy Corporation, Boulder, Colorado.

Rating Number: XXX

Certified Energy Rater:

Rating Date:05/01/XX

Rating Ordered For:

Estimated Annual Energy Cost

Confirmed Rating

Use	MMBtu	Cost	Percent
Heating	12.1	$305	25%
Cooling	3.8	$99	8%
Hot Water	11.0	$280	23%
Lights/Appliances	19.1	$487	39%
Photovoltaics	-0.0	$-0	-0%
Service Charges		$67	5%
Total		**$1238**	**100%**

This home meets or exceeds the minimum criteria for all of the following:

MD - Rater

PO Box XXX

XXX, ST

Rater@mail.com

Certified Energy Rater

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What Do YOU Put in the Electrical Box?

- HERS Index and/or Green Rating
- Envelope Rating
- Duct Rating
- Insulation Installation Rating
- Date Rated
- Name of Rater

What Do YOU Put in the Electrical Box?

EarthCents® New Home

- HERS Index
- Envelope Rating
- Duct Rating
- Insulation Installation Rating
- Date Rated
- Name of Rater

GEORGIA POWER
A SOUTHERN COMPANY

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An MLS Photo Gallery Usually Looks Like This

Copyright 2016 Sandra K. Adomatis, SRA, LEED Green Associate

Imagine the MLS Photo Gallery Looking Like This


GEORGIA POWER | earthcents®

Georgia Power

hereby recognizes the home located at

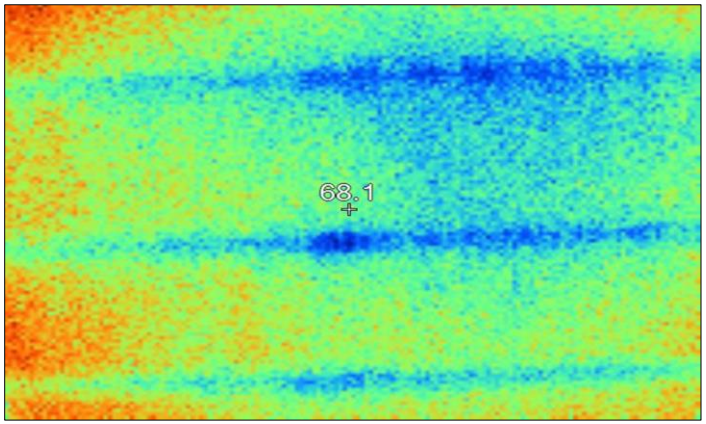
123 Smith Street

City GA 30809

has been qualified by an independent HERS Rater utilizing the national standard Home Energy Rating System guidelines to be more energy efficient than a standard code home thereby

EARTHCENTS NEW HOME

Georgia Power — Date




ENERGY STAR

An ENERGY STAR® Version 2 Qualified Home

This home built at

XX#1234

by XXX Homes, Inc.

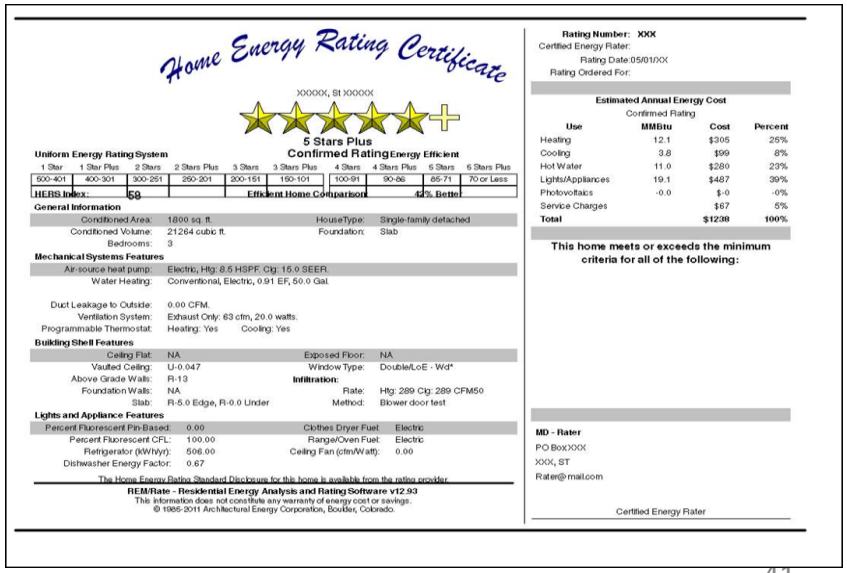
has been verified by inspection 3rd Party an independent professional or organization, to meet or exceed strict energy efficiency guidelines set by the U.S. Environmental Protection Agency.

HERS Index: 58

5/04/XX

Sam Rashkin
National Director
ENERGY STAR for Homes

www.energystar.gov


Home Energy Rating Certificate

XXXXX, St XXXXX

5 Stars Plus

Confirmed Rating Energy Efficient

Uniform Energy Rating System

1 Star	1 Star Plus	2 Stars	2 Stars Plus	3 Stars	3 Stars Plus	4 Stars	4 Stars Plus	5 Stars	5 Stars Plus
500-401	400-301	300-251	250-201	200-151	150-101	100-91	90-86	85-71	70 or Less

HERS Index: 58 — Efficient Home Comparison — 42% Better

General Information

Conditioned Area:	1800 sq. ft.	HouseType:	Single-family detached
Conditioned Volume:	21264 cubic ft.	Foundation:	Slab
Bedrooms:	3		

Mechanical Systems Features

Air-source heat pump:	Electric, Htg: 8.5 HSPF, Clg: 15.0 SEER.
Water Heating:	Conventional, Electric, 0.91 EF, 50.0 Gal.
Duct Leakage to Outside:	0.00 CFM.
Ventilation System:	Exhaust Only: 63 cfm, 20.0 watts.
Programmable Thermostat:	Heating: Yes Cooling: Yes

Building Shell Features

Ceiling Flat:	NA	Exposed Floor:	NA
Vaulted Ceiling:	U-0.047	Window Type:	Double/LoE - Wd*
Above Grade Walls:	R-13	Infiltration:	
Foundation Walls:	NA	Rate:	Htg: 289 Clg: 289 CFM50
Slab:	R-5.0 Edge, R-0.0 Under	Method:	Blower door test

Lights and Appliance Features

Percent Fluorescent Pin-Based:	0.00	Clothes Dryer Fuel:	Electric
Percent Fluorescent CFL:	100.00	Range/Oven Fuel:	Electric
Refrigerator (kWh/yr):	506.00	Ceiling Fan (cfm/Watt):	0.00
Dishwasher Energy Factor:	0.67		

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

REM/Rate - Residential Energy Analysis and Rating Software v12.93

This information does not constitute any warranty of energy cost or savings.

© 1985-2011 Architectural Energy Corporation, Boulder, Colorado.

Rating Number: XXX

Certified Energy Rater:

Rating Date:05/01/XX

Rating Ordered For:

Estimated Annual Energy Cost

Confirmed Rating

Use	MMBtu	Cost	Percent
Heating	12.1	$305	25%
Cooling	3.8	$99	8%
Hot Water	11.0	$280	23%
Lights/Appliances	19.1	$487	39%
Photovoltaics	-0.0	$-0	-0%
Service Charges		$67	5%
Total		$1238	100%

This home meets or exceeds the minimum criteria for all of the following:

MD - Rater

PO Box XXX

XXX, ST

Rater@mail.com

Certified Energy Rater

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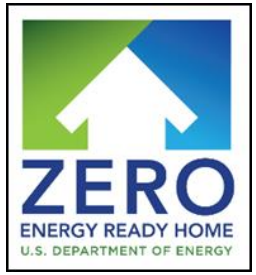
Certificates

- Real estate agents love certificates
- Complete and leave on site
- Provide appraisers with third-party verified assurance



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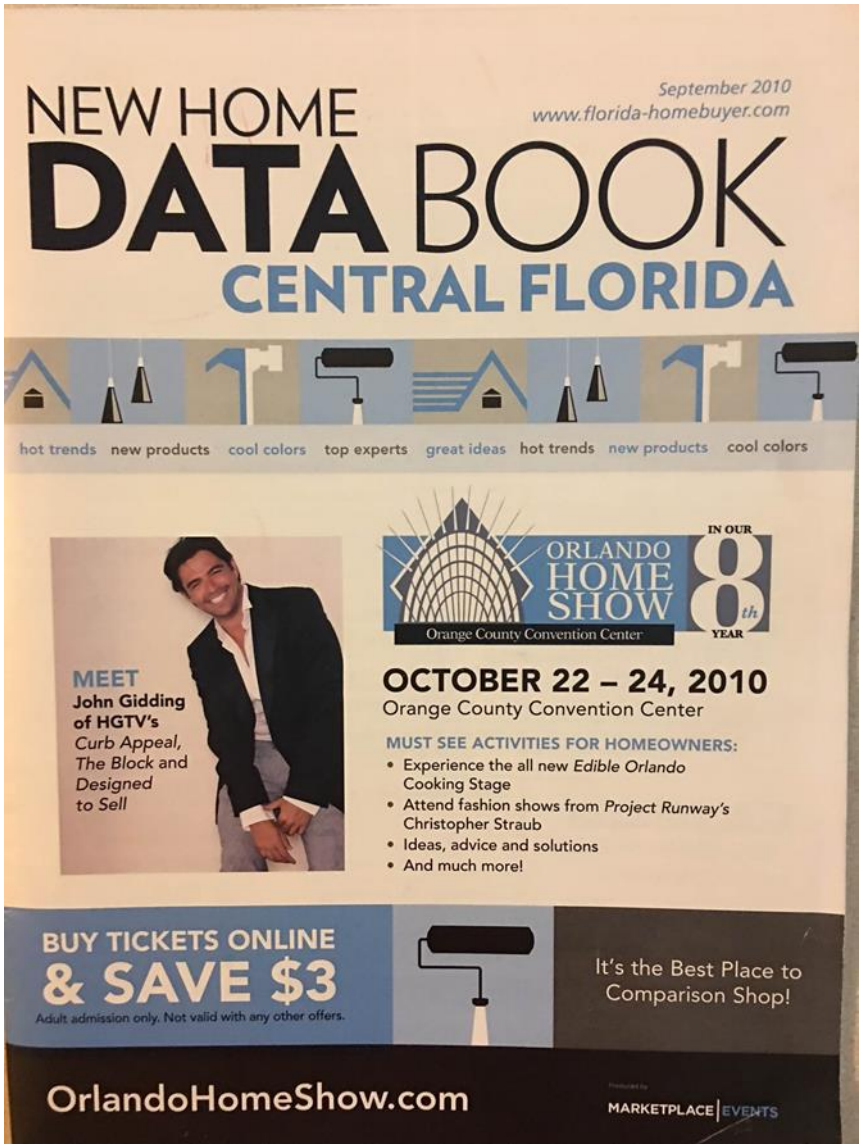
Advertising



Do your builder's home magazines advertise energy efficiency or green features. This book had one ad that mentioned energy efficiency.

Documents to provide to appraiser

- Complete HERS Report
- Green Rating and worksheets
- Complete cost breakdown
  - Highlight the cost of additional energy or green features.
- Sales data on similar properties
- Completed AI Residential Green and Energy Efficient Addendum

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Choosing an Appraiser

Lenders have responsibilities in choosing the appraiser

Lender's Responsibility Confirmed by Fannie Mae

Selection of the Appraiser

The lender

- is responsible for the selection of appraisers and for the qualifications and quality of work provided by the appraisers that are selected;
- may not use appraisals ordered or received by borrowers or other parties with an interest in the transaction, such as the property seller or real estate broker. Fannie Mae does allow lenders to use third-party vendors (for example, appraisal management companies) to manage the appraiser selection process. However, it should be noted that if a lender enters into a contract with any vendor, contractor, or third-party service provider, the lender is accountable for the quality of the work performed as if it was performed by an employee of the lender.

The lender (or its authorized agent)

- must establish policies and procedures to ensure that qualified individuals are being selected in accordance with Fannie Mae requirements, including the *Appraiser Independence Requirements*.

Printed copies may not be the most current version. For the most current version, go to the online version at https://www.fanniemae.com/singlefamily/originating-underwriting. 541

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High Performance-Competency

Residential Appraiser Competency Requirements

Competency Requirement	USPAP	Fannie Mae	Freddie Mac	FHA	VA
Before Completing Assignment	X				X
Before Accepting Assignment		X	X	X	

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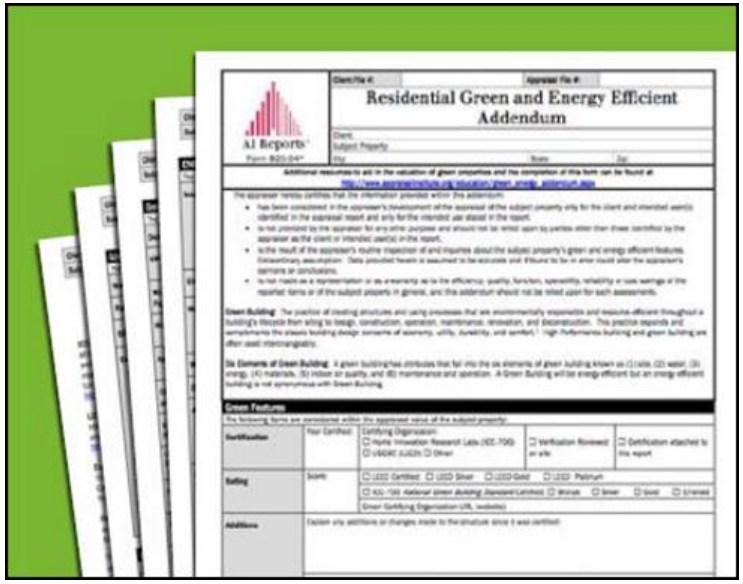
Appraisal Ordering Process Unveiled

If borrower does not clearly identify the property as a "high performance" property, chances are the appraiser choice will not be appropriate



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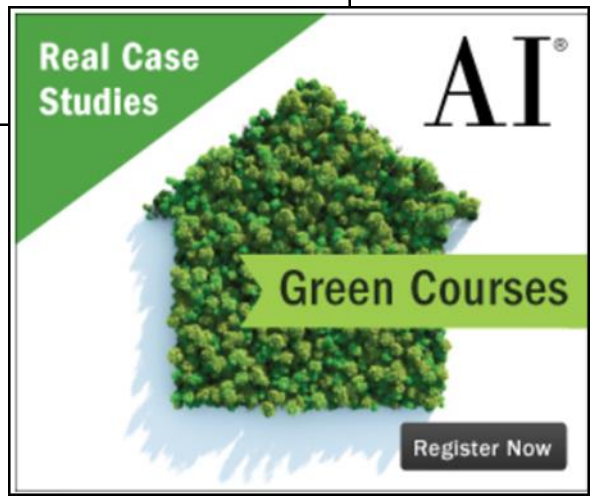
Appraisal Institute Courses

Valuation of Sustainable Buildings

Title	Hours	State Approval
Introduction to Green Buildings	8	State Approval
Case Studies in Appraising Green Residential Buildings	8	State Approval
Residential and Commercial Valuation of Solar	15	State Approval
Case Studies in Appraising Green Commercial Buildings	15	State Approval

FAQs
Program Registry – Residential
Program Registry – Commercial

Find Green Appraiser



http://www.appraisalinstitute.org/education/your-career/professional-development-programs/

Appraisal Institute Efforts

Follow the process to avoid appraisals that “don’t get it right”

Appraisal Institute®

Jim Amorin, MAI, SRA, AI-GRS

Handout

Appraised Value & Energy Efficiency: Getting it Right

Appraisal Institute

BCAP

NAHB

Handout – Tool with Power Tips

http://bcap-energy.org/wpcontent/uploads/2015/11/Appraisal_Guidance_2pager_2016.pdf

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Point Out the Solution to Builders Problems

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.

http://bcap-energy.org/wp content/uploads/2015/11/Appraisal_Guidance_2pager_2016.pdf

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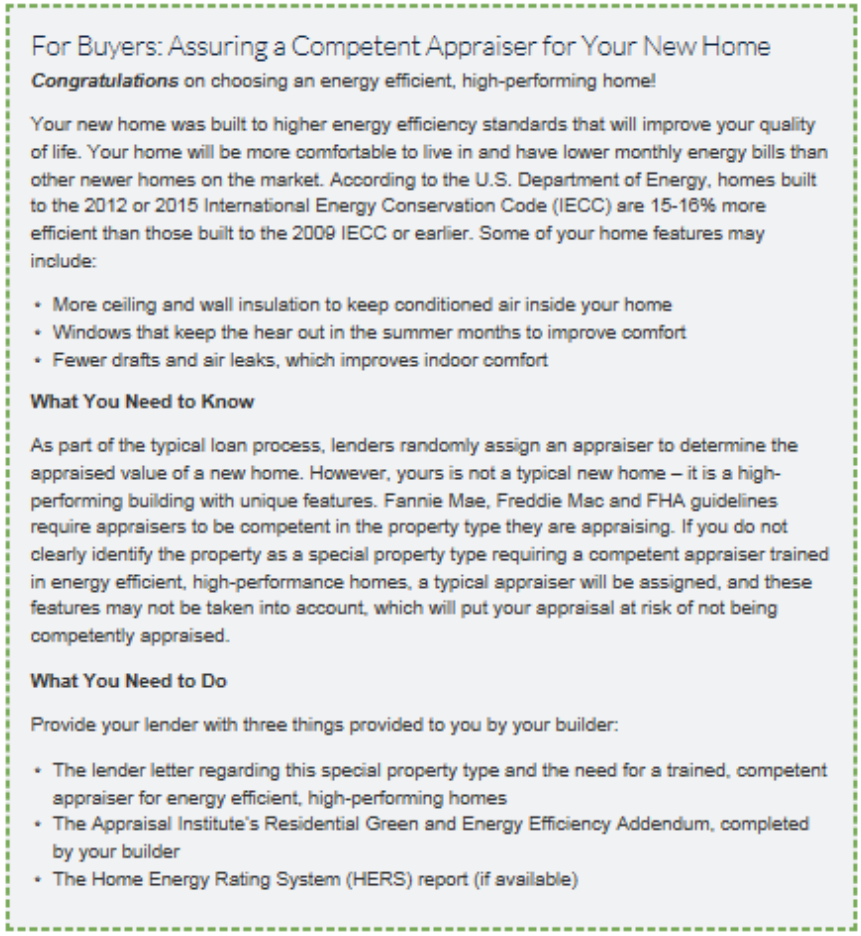
For Buyers



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

What You Need to Know

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 buyers: Assuring a competent appraiser for your new home

http://bcap-energy.org/appraised-value-and-energy-efficiency-getting-it-right/

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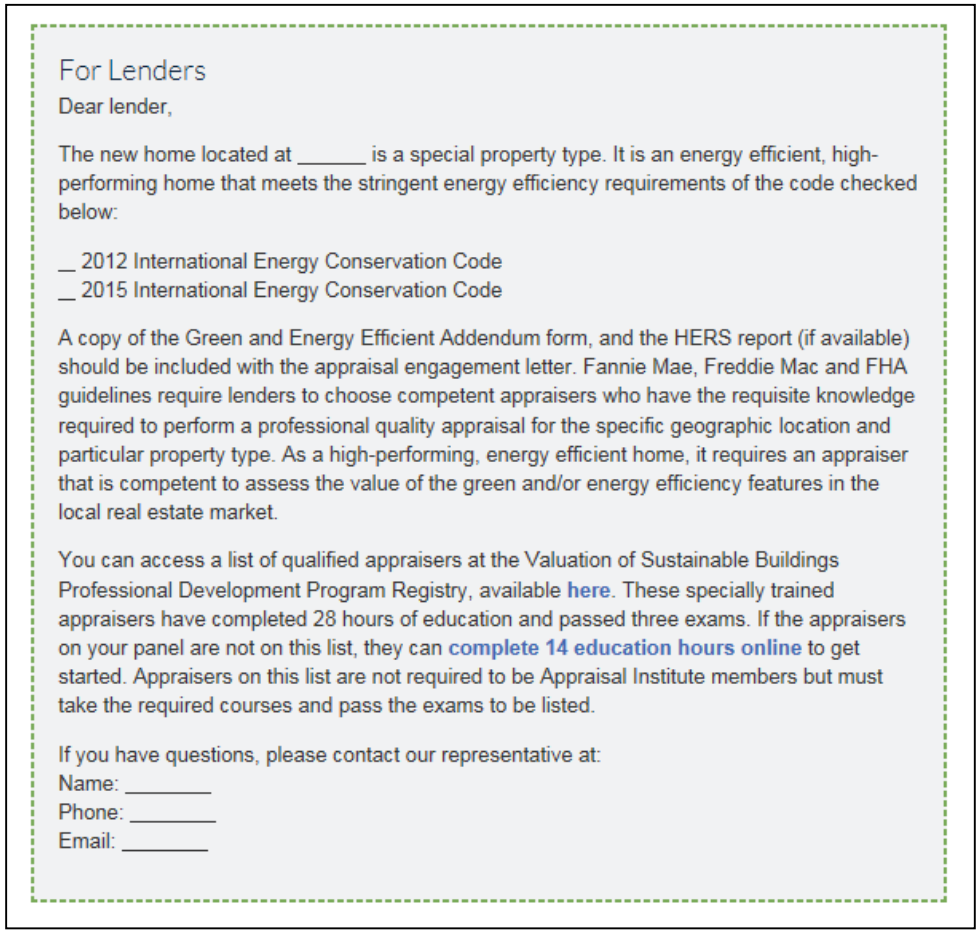
For Lenders



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
_ 2015 International Energy Conservation Code

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 here. 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. 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: _____

2nd page of handout

Encourage builder to use this lender letter with every loan application

http://bcap-energy.org/appraised-value-and-energy-efficiency-getting-it-right/

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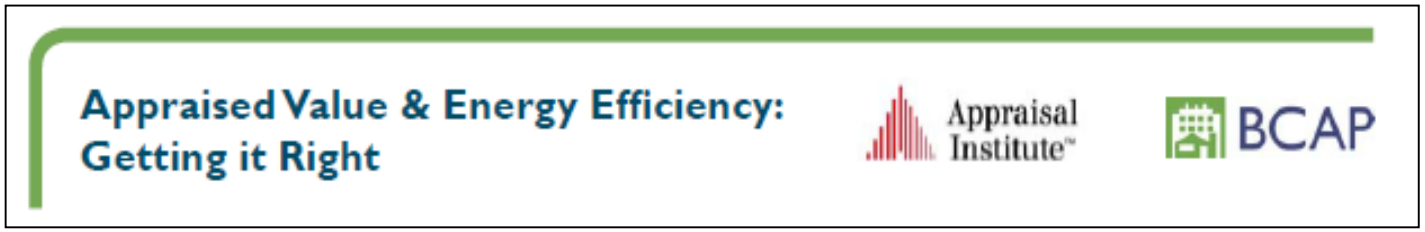
“Getting It Right”



- Builders
- REALTORS®
- Retrofit Contractors

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“Getting It Right”

- Follow the procedure
- “Getting It Right”
- Energy features

Reconsideration of Value Request Form

New American Funding Loan #		**Date:**	
Borrower Name:		**Branch/OLA:**	
Property Address:			
Appraised Value:		**Date Ordered:**	

ADDITIONAL SALES/LISTINGS SUBMITTED FOR RECONSIDERATION (SEE BELOW).

Property #1:	
Property #2:	
Property #3:	
Property #4:	

CLIENT'S CONCERNS WITH THE ORIGINAL APPRAISAL (SEE BELOW).

Concern #1:	
Concern #2:	
Concern #3:	
Concern #4:	

Reconsideration of Value Request Form

Reconsideration of Value Request Form Instructions

- Required loan information
- Sales, listings, and/or concerns requested
- Verify all information
- Do not specify a requested value

Questions?

Jim Amorin, MAI, SRA, AI-GRS
jamorin@appraisalinstitute.org

Sandra K. Adomatis, SRA,
LEED Green Assoc.
Adomatis@Hotmail.com

Appraisal Institute®

Professionals Providing Real Estate Solutions

KNOWLEDGE. | EXPERIENCE. | INTEGRITY.

RESNET Conference

Jim Amorin, MAI, SRA, AI-GRS
Sandy Adomatis, SRA, LEED Green Associate

Communicating HERS to Appraisers and Real Estate Sales Agents

March 1, 2017