

Appraisal Institute[®]

Professionals Providing Real Estate Solutions

Green Building & Property Valuation

September 15, 2015



- 80 plus year old professional society of real estate valuers
- 21,000 members in 60 countries
- Advance professionalism and ethics, global standards, methodologies and practices
- Leader in appraisal education, literature
- A leader in development of the body of knowledge



- Cost \neq Value
- Cost is the amount paid for acquiring a good or service
- Value is the utility of a good or service
- Cost is objective; value is subjective
- Water vs. diamonds



- The appraiser is data driven
- Green valuation is still an evolving market and sometimes data can be hard to find
- Cost Approach, Income Capitalization Approach, & Sales Comparison Approach
 - Residential = Sales Comparison
 - Commercial = Income Cap.



- USPAP requires an appraiser to consider all property characteristics that affect value
- But, no concise way for the appraiser to analyze and report data regarding energy efficient improvements
 - One line on the Fannie Mae 1004/URAR



- Residential & Commercial Green & Energy Efficient Addenda
 - Intended to be a research tool for appraisers
 - Includes fields for information on types of improvements that would affect value
 - Help in identifying comparables
 - Open source – available on the AI website



	Client File #:	Appraisal File #:
	Residential Green and Energy Efficient Addendum	
Client:		
Subject Property:		
City:		
State:		
Zip:		
Additional services to add in the valuation of green properties and the acceptance of this form can be found at http://www.appraisalinstitute.com/education/real_estate_addendum		
The appraiser hereby certifies that the information provided within this addendum: <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 of and inquiries about the subject property's green and energy efficient features. Extraordinary assumptions: 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.* 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 operations. 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: <input type="checkbox"/> Home Innovation Research Labs (ICC-700) <input type="checkbox"/> USGBC (LEED) <input type="checkbox"/> Other:
		<input type="checkbox"/> Verification Reviewed on site <input type="checkbox"/> Certification attached to this report
Rating	Score:	<input type="checkbox"/> LEED Certified <input type="checkbox"/> LEED Silver <input type="checkbox"/> LEED Gold <input type="checkbox"/> LEED Platinum <input type="checkbox"/> ICC-700 National Green Building Standard Certified: <input type="checkbox"/> Bronze <input type="checkbox"/> Silver <input type="checkbox"/> Gold <input type="checkbox"/> Emerald Green Certifying Organization URL (website):
Address	Explain any address or changes made to the structure since it was certified:	
	Do changes require recertification to verify rating is still applicable? <input type="radio"/> Yes <input type="radio"/> No	
Comments	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.	
	Attach the rating worksheet that provides the ratings for each element to provide a better understanding of the features. The worksheet will assist in comparing the subject to sales rated by different organizations.	
The objective of this Addendum is to determine the appropriateness of the high performing features of residential properties. Identifying the features and based on the 1006 form provides a basis for comparable selection and analysis of the features, building, materials, construction, and third party written or completed to complete this Addendum and present to appraisers, agents, buyers, and homeowners.		

* U.S. Environmental Protection Agency at www.epa.gov/epaosopr/disp/info/efact2.cfm.

*NOTE: The Appraisal Institute publishes this form for use by appraisers when the appraiser deems use of the form appropriate. Depending on the assignment, the appraiser may need to provide additional data, analysis and work product not called for in this form. The Appraisal Institute makes no representation, warranty or guarantee as to, and assumes no responsibility for, the data, analysis or work product provided by the individual appraiser(s) in the specific contents of the AI Reports®, AI Reports® AI-RES-04 Residential Green and Energy Efficient Addendum © Appraisal Institute 2013, All Rights Reserved. January 2013

Client:	Client File #:
Subject Property:	Appraisal File #:
ENERGY EFFICIENT ITEMS	
The following items are considered within the appraised value of the subject property:	
Insulation	<input type="checkbox"/> R-Value Above-In <input type="checkbox"/> Foam Insulation <input type="checkbox"/> Cellulose <input type="checkbox"/> Fiberglass Batt Insulation <input type="checkbox"/> Other (Describe): <input type="checkbox"/> Basement Insulation (Describe): <input type="checkbox"/> EERS Insulation Installed Rating: <input type="radio"/> 1 <input type="radio"/> 2 <input type="radio"/> 3 (See Glossary)
Envelope	Envelope Tightness: Unit: <input type="radio"/> DM25 <input type="radio"/> DM50 <input type="radio"/> ACH50 <input type="radio"/> ACHnatural <input type="checkbox"/> Envelope Tightness based on Blower Door Test <input type="checkbox"/> Recycled Water System (Explain): <input type="checkbox"/> Dishes - Size: Gallons Location of cistern: <input type="checkbox"/> Dripwater reuse system <input type="checkbox"/> Rain Barrels Provide Irrigation
Water Efficiency	<input type="checkbox"/> WaterSense® Fixtures <input type="checkbox"/> Rain Barrels Provide Irrigation ENERGY STAR: <input type="checkbox"/> Low E <input type="checkbox"/> High Impact <input type="checkbox"/> Storm <input type="checkbox"/> Double Pane Triple Pane <input type="checkbox"/> Tinted <input type="checkbox"/> Solar Shades
Windows	<input type="checkbox"/> Skylights - # <input type="checkbox"/> Solar Tubes - # <input type="checkbox"/> Other (Explain): # <input type="checkbox"/> ENERGY STAR Light Fixtures
Day Lighting	Appliances ENERGY STAR® Appliances: <input type="checkbox"/> Dishwasher <input type="checkbox"/> Refrigerator <input type="checkbox"/> Other: Water Heater: <input type="checkbox"/> Solar <input type="checkbox"/> Heat Pump <input type="checkbox"/> Tankless <input type="checkbox"/> Cal. <input type="checkbox"/> Gas Appliance Energy Source: <input type="checkbox"/> Gas <input type="checkbox"/> Electric <input type="checkbox"/> Natural Gas Other (Describe):
HVAC (Describe in Comments Area)	<input type="checkbox"/> High Efficiency HVAC SEER: Efficiency Rating: % ARIE: % Annual Fuel Utilization Efficiency <input type="checkbox"/> Programmable Thermostat <input type="checkbox"/> Radiant Floor Heat <input type="checkbox"/> Geothermal <input type="checkbox"/> Heat Pump Efficiency Rating: COP: HSPF: SEER: EER: <input type="checkbox"/> Thermostat/Controls <input type="checkbox"/> Passive Solar (Defined in Glossary)
Energy Rating	<input type="checkbox"/> ENERGY STAR Home - Versant <input type="checkbox"/> Other (Describe): Home Energy Score (HES) (Score range 1-10): Score <input type="text"/> <input type="checkbox"/> Certification Attached
Indoor Air Quality	<input type="checkbox"/> Indoor Air PLUS Package <input type="checkbox"/> Energy Recovery Ventilator Unit or Whole Building Ventilation System <input type="checkbox"/> Non Toxic Pest Control
HERS Information	Rating: Monthly Energy Savings on Rating \$ <input type="text"/> Date Rated: <input type="text"/>
Utility Costs	Average Annual Utility Cost: \$ <input type="text"/> per month based on: <input type="text"/> # of Occupants: <input type="text"/>
Energy Audit	<input type="checkbox"/> Infrared Photograph Attached Has an energy audit/rating been performed on the subject property? <input type="radio"/> Yes <input type="radio"/> No <input type="radio"/> Unknown If yes, comment on work completed as result of audit.
Comments	Information was provided by: <input type="text"/> (Include source for information provided in this section) Attach documents or reference them in your remarks The energy element is the most measurable element of green or high performance housing.

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- Success with the residential addendum in the home building community
 - Home Innovation Labs, ResNet
 - Builders, raters, and contractors can fill out the form and provide it to the appraiser
- Works really well with builders that have their own mortgage companies
 - Pipeline for information



- Challenges with the addenda
 - Lenders focused on complying with regulations and satisfying regulators
 - Green valuation far down the priority list for lenders
 - Lack of awareness of adjustments by U/W
 - Investor guidelines are gospel; green valuation not addressed; FHA more explicit
 - Need to comply with in order to insulate from repurchase demands



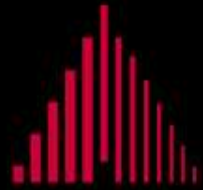
- One area for consideration
 - Could state housing finance agencies mandate the use of the Residential Green & Energy Efficient Addendum?
 - Coordination between EO and HFA?



- AI is the leading organization educating appraisers on green valuation
 - Valuation of Sustainable Building Professional Development Program
 - 4 course series
 - 400+ appraisers on the Registry; Thousands of others have taken one or more of the courses
 - Seminars, webinars, and publications



- MoU with the Colorado Energy Office signed in 2012
 - Jointly promote wide use of tools to document home energy features
 - Jointly develop valuation studies
 - 2013 – Partnered to provide an analysis of the impact of solar PV systems on the home-buying process in the metro Denver area
 - Promote continuing education
 - CEO provides funding to bring in AI education ¹²



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