AI Reports®
Form 820.05*

| 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 (US EPA). 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 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.

## THIRD-PARTY VERIFICATIONS (See types defined in glossary).

The following verified items are considered within the appraisal analysis 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:
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: ____<br>Organization URL: _____ | **ABOVE VALID ONLY IF CHECKED:**<br>☐ Verification reviewed on site<br>☐ Verification attached to this report |
|---|---|---|

### Energy Label

Labels disclose the state of the home's energy assets.

| RESNET's HERS Rating (0 to 150): _____<br>☐ Sampling Rating<br>☐ Projected Rating<br>☐ Confirmed Rating | Estimated energy savings for this home: $____/year ____¢kWh rate dated__/__/__<br>*Energy Savings includes electricity, heating & Cooling.*<br>*Score below 100 indicates energy costs are expected to be lower than average code-built home. HERS Index Report occupancy estimates energy cost based on number of bedrooms plus one. Only a "confirmed rating" is diagnostically tested.* |
|---|---|
| DOE's Home Energy Score<br>Score (1 to 10): _____<br>☐ Official Score<br>☐ Unofficial Score | Estimated energy savings for this home: $____/year ___¢kWh rate dated __/__/__<br>*Energy Savings includes electricity, heating & Cooling.*<br>*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:<br>Range ( ____ to ____ ):<br>_____ | Estimated energy savings: $____/year __¢ kWh rate dated __/__/__<br>Describe energy label system: |

| Date Verified: __/__/____ | Score or Rating Version: ____<br>Organization URL: ☐ www.resnet.us/<br>☐ www.homeenergyscore.gov<br>☐ Other:_____ | **ABOVE VALID ONLY IF CHECKED:**<br>☐ Verification reviewed on site<br>☐ Verification attached to this report |
|---|---|---|

### Verified Energy Improvements

Only include improvements with verified documentation.

Explain energy-related improvements:
Cost of improvements: $_____

| Date Verified: __/__/____ | Certificate of Efficiency Improvements Version: _____<br>Organization URL: ☐ Other: _____<br>☐ energystar.gov/homeperformance | **ABOVE VALID ONLY IF CHECKED:**<br>☐ Verification reviewed on site<br>☐ Verification attached to this report |
|---|---|---|

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## EFFICIENCY FEATURES (Water, Energy, and Environmental. See types defined in glossary).

The following items are considered within the appraisal analysis 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

**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: _____

**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.

Completed by:_____Title:_____ Date:_____

**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 appraisal 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. 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.**

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## Solar Panels

The following items are considered within the appraisal analysis of the subject property:

| Solar Photovoltaic (Electric) System | | |
|---|---|---|
| | **Array #1** | **Array #2 (if applicable)** |
| **Type of Ownership** | ☐ Leased ☐ Owned ☐* Solar Loan with UCC Filing<br>☐ Power Purchase Agreement (PPA)<br>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<br>☐ Power Purchase Agreement (PPA) |
| **Panel Specifications** | System Size: _____ kW (1kW = 1000 Watts)<br>Age of Panels: _____ years<br>Energy Production: _____ kWh<br>Source of Energy Production Estimate:<br>_____<br>Manufacturer: _____<br>Warranty on Panels: _____ years | System Size: _____ kW (1kW = 1000 Watts)<br>Age of Panels: _____ years<br>Energy Production: _____ kWh<br>Source of Energy Production Estimate:<br>_____<br>Manufacturer: _____<br>Warranty on Panels: _____ years |
| **Array Placement**<br>Affects energy production.<br>*Orientation | Location (roof, ground, etc.): _____<br>☐ Fixed Mount ☐ Tracking Mount<br>Tilt / Slope: _____<br>*Azimuth: _____ | Location (roof, ground, etc.): _____<br>Tilt / Slope: _____<br>Azimuth: _____<br>Orientation (direction panels face): _____ |
| **Inverter Specifications** | Number of Inverters per Array: _____<br>Age: _____years<br>Wattage: _____watts<br>Manufacturer: _____<br>Warranty Term: _____years | Number of Inverters per Array: _____<br>Age: _____years<br>Wattage: _____watts<br>Manufacturer: _____<br>Warranty Term: _____years |
| **Energy Storing Batteries** | Battery Type: □ Lithium-ion □ Lithium-ion Polymer □ Lead Acid □ Lead Calcium □ AGM □ GEL<br>Manufacturer: _____ Storage Capacity: _____kWh<br>Warranty Term: _____ years Battery age: _____ | |

| | | | |
|---|---|---|---|
| **Name of Utility Company:** | | **Charge / kWh from Utility** | $ _____ / kWh |

| Solar Thermal Water Heating System | | | |
|---|---|---|---|
| **Type of System** | Active: ☐Direct ☐ Indirect<br>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<br>☐ Tankless Heat Pump | **Warranty Term** | |
| **Solar Energy Factor (SEF)** | *Rating ranges 1 to 11. Higher number is more efficient. | **Manufacturer** | |

**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 included in the value of the real property as these systems generally are considered personal property. If a system is a lease or a PPA the terms must be provided to the appraiser for analysis. Appraisers must analyze the effect any of the terms of the lease or PPA have on the price buyers are willing to pay for the property.

Completed by:_____Title:_____ Date:_____

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## Location - Site

The following items are considered within the appraisal analysis of the subject property:

| | | | |
|---|---|---|---|
| **Walk Score** | Score: | Source: ☐ http://www.walkscore.com ☐ Other: _____ | |
| **Public Transportation** | ☐ Bus Distance: _____ Blocks | ☐ Train: Distance: _____ Blocks | ☐ Subway Distance: _____ Blocks |
| **Site** | Orientation (front faces):<br>☐ East / West ☐ North / South | Landscaping:<br>☐ Water Efficient ☐ Natural ☐ Pond/Lake on site ☐ Rain Garden | |
| **Comments** | | | |

## Incentives – Amount of Incentive and Terms

The following items are considered within the appraised value of the subject property and **based on effective date of value**.

| | |
|---|---|
| **Federal** | |
| **State** | |
| **Local** | |
| **Comments** | Incentives offset cost and should be reported and described in the cost approach section of the report. Clearly identify the incentives that offset the gross cost of construction to meet appraisal standards. Incentives are typically not a sales concession in sales comparison approach since they do not transfer with the property and are not paid by the seller. Incentives are typically for a specified period and only those available as of the date of value should be addressed in the appraisal process. Incentives may be available to offset repairs or deferred maintenance items as well. Incentives, rebates, and tax credits for most U.S. properties can be found at www.dsireusa.org |

Completed by:_____Title:_____ Date:_____

**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 appraisal 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.

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# Residential Green and Energy Efficient Addendum
# Additional Resources

**Appraised Value and Energy Efficiency: Getting it Right.** This document provides links to resources in understanding the secondary mortgage market guidelines on appraisals of energy efficient and green features. It addresses the following:

- What can builders do?
- For Buyers: Assuring a competent appraiser for your home
- For Lenders: A sample letter that should be completed and provided to the lender at the time of mortgage application alerts the lender to the special features that requires an appraiser with knowledge of the property type.

https://www.appraisalinstitute.org/assets/1/29/AI-BCAP_Flyer.pdf

**PV Value®.** 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. www.pvvalue.com.

**Residential Green Valuation Tools.** A textbook resource for completing the AI Residential Green and Energy Efficient Addendum is available. It can be purchased at the following website: http://www.appraisalinstitute.org/residential-green-valuation-tools/

# Glossary

**ASHRAE 700 / ICC National Green Building Standard (NGBS):** An ANSI-approved residential green building standard developed by the National Association of Home Builders (NAHB) and the International Code Council (ICC). It is applicable to single and multifamily projects, renovations and additions and residential land development. To comply, all buildings must incorporate sustainable lot development techniques and address energy, water & material resource efficiency and indoor environmental quality. Also, all owners must be educated about building operation and maintenance. https://www.nahb.org/en/research/nahb-priorities/green-building-remodeling-and-development/icc-700-national-green-building-standard.aspx

**Building Envelope:** The building envelope is everything that separates the building's interior from the exterior. This includes the foundation, exterior walls, roof, doors and windows. The envelope rating should be compared to the local building code requirements for this rating to identify a structure that exceeds the building code.

**Energy Recovery Ventilation System (ERV) or Heat Recovery Ventilators (HRV):** These systems provide fresh air without wasting all the energy already used to heat the indoor air. By recovering sensible (heat) or latent (moisture) energy from the stale indoor air, they offer fresh air ventilation with reduced energy loss.

**ENERGY STAR Certified New Homes**: EPA's ENERGY STAR certified homes are independently verified to be at least 15 percent more efficient that code-built homes, and include additional energy efficiency measures that can deliver savings of up to 30 percent compared to standard new homes. More than just a collection of ENERGY STAR products, an ENERGY STAR certified home includes a comprehensive package of energy efficiency systems and features that work together to deliver better performance, including a High-Efficiency Heating & Cooling System, a Complete Thermal Enclosure System; a Water Protection System; and Efficient Lighting & Appliances. www.energystar.gov/newhomes

**ENERGY STAR Products:** Behind each blue label is a product, building, or home that is independently certified to use less energy and cause fewer of the emissions that contribute to climate change. Today, ENERGY STAR is the most widely recognized symbol for energy efficiency in the world. In order to earn the label, ENERGY STAR products must be third-party certified based on testing in EPA-recognized laboratories. In addition to up-front testing, a percentage of all ENERGY STAR products are subject to "off–the–shelf" verification testing each year. The goal of this testing is to ensure that changes or variations in the manufacturing process do not undermine a product's qualification with ENERGY STAR requirements. https://www.energystar.gov/about/origins_mission

**Geothermal:** A geothermal heat pump uses the constant below ground temperature of soil or water to heat and cool your home. http://energy.gov/energysaver/articles/geothermal-heat-pumps

**HERS Index:** The Home Energy Rating System (HERS) Index is an industry standard by which a home's energy efficiency is measured. It's also the nationally recognized system for inspecting and calculating a home's energy performance. A qualified third party certifier assesses the house based on its physical characteristics. The energy estimates from this assessment may vary depending on the lifestyle of the occupants, increasing utility expenses, and changes in the maintenance or characteristics of the energy features. There are three rating types: sampling rating, projected rating, and confirmed rating. A **Sampling Rating** is an application of the Home Energy Rating process whereby fewer than 100% of a builder's new homes are randomly inspected and tested to evaluate compliance with a set of threshold specifications. A **Projected Rating:** A Rating Type that encompasses one individual dwelling or dwelling unit and is conducted in accordance with Section 5.1.4.3.1 through 5.1.4.3.5 of the ANSI/RESNET/ICC Standard 301. A **Confirmed Rating** is a rating type that encompasses one individual dwelling or dwelling unit and is conducted in accordance with Sections 5.1.4.1.1 through 5.1.4.1.3. More information: http://www.resnet.us/hers-index. The ANSI standard utilized in the HERS Index is posted at https://codes.iccsafe.org/public/chapter/content/7324/.

**Home Energy Score (HES)**: The Home Energy Score, developed and managed by the U.S. Department of Energy (DOE), is a national system that allows homes to receive an energy rating, like the MPG rating available for cars. The Home Energy Score uses a 10-point scale to reflect how much energy a home is expected to use under standard operating conditions. The Home Energy Score uses a standard calculation method and considers the home's structure and envelope (walls, windows, foundation) and its heating, cooling, and hot water systems. Only Assessors who pass DOE's Simulation Training can provide the Home Energy Score. www.HomeEnergyScore.gov

**Indoor airPLUS**: EPA's Indoor airPLUS is a voluntary EPA label for new homes that integrate a set of construction practices and technologies to reduce indoor air pollutants and improve the indoor air quality in a new home beyond minimum code requirements. It is only available to homes that first meet ENERGY STAR® Certified Home requirements. Http://www.epa.gov/indoorairplus

**LEED:** Leadership in Energy and Environmental Design is a green certification program created by the U.S. Green Building Council (USGBC). As an internationally recognized mark of excellence, LEED provides building owners and operators with a framework for identifying and implementing practical and measurable green building design, construction, operations and maintenance solutions. http://www.usgbc.org/DisplayPage.aspx?CMSPageID=1988

**Living Building Challenge:** Created by the Living Future Institute, the Living Building Challenge is the world's most rigorous proven performance standard for buildings. People can use the regenerative design framework to create spaces that, like a flower, give more than they take. Living Building Challenge certification requires actual rather than modeled performance. Therefore, projects must be operational for at least twelve consecutive months prior to evaluation. https://living-future.org/lbc/basics/

**Low E:** "Low emissivity" indicates a coating is added to the glass surface. The coating allows visible light to pass through the glass while stopping radiant heat energy from entering the building by passing through the glass. Approximately 40% of the sun's harmful ultra violet rays are blocked and insulation enhanced. https://energy.gov/energysaver/energy-efficient-windows

**NGBS Small Project Remodel:** Run by the Home Innovation Research Labs, this program certifies whole house and small project remodels as energy efficient. Unlike the Whole–House Remodel, the Small Project certification is prescriptive. Chapter 12 of the National Green Building Standard includes a list of mandatory practices, related to materials use, sustainable products, energy efficiency, and indoor environmental quality. A Home Innovation Accredited NGBS Green Verifier gives a final inspection to verify Small Project certification. During inspection, the Verifier will ensure the applicable practices have been met.
http://www.homeinnovation.com/services/certification/green_homes/remodeling_certification/remodel_home_certification_process

**NGBS Whole Home Remodel:** Run by the Home Innovation Research Labs, this program certifies whole house and small project remodels as energy efficient. Certification of a whole-building remodel requires demonstrating that there has been a minimum of a 15% reduction in energy consumption and at least a 20% reduction in water consumption over the pre-remodel condition. There are some mandatory practices that must be met. A minimum number of points must be obtained from practices related to Lot Design, Resource Efficiency, Indoor Environmental Quality, and Homeowner Education.
http://www.homeinnovation.com/services/certification/green_homes/remodeling_certification/remodel_home_certification_process

**Passivhaus Standard:** German standard for low energy homes that began in the 1980s. Passivhaus is a rigorous, voluntary standard for energy efficiency in a building, reducing its ecological footprint. It results in ultra-low energy buildings that require little energy for space heating or cooling. The Passive House Institute (PHI) is an independent research institute that has played an especially crucial role in the development of the Passive House concept - the only internationally recognized, performance-based energy standard in construction. http://passiv.de/en/

**Passive House Institute US (PHIUS):** Buildings designed and built to the PHIUS+ 2015 Passive Building Standard consume 86% less energy for heating and 46% less energy for cooling (depending on climate zone and building type) when compared to a code-compliant building. PHIUS+ 2015 is the first and only passive building standard based upon climate-specific comfort and performance criteria aimed at presenting a cost-optimized solution to achieving the most durable, resilient, and energy-efficient building possible for a specific location. http://www.phius.org/home-page

**Passive Solar:** Passive solar is technology for using sunlight to light and heat buildings with no circulating fluid or energy conversion system. http://rredc.nrel.gov/solar/glossary. A complete passive solar building design has the following five elements: (1) aperture (collector) (2) absorber (3) thermal mass (4) distribution (5) control. http://www.nrel.gov/docs/fy01osti/27954.pdf

**Rain Garden:** A rain garden is a depressed area in the landscape that collects rain water from a roof, driveway or street and allows it to soak into the ground. Planted with grasses and flowering perennials, rain gardens can be a cost effective and beautiful way to reduce runoff from your property. Rain gardens can also help filter out pollutants in runoff and provide food and shelter for butterflies, songbirds and other wildlife. More complex rain gardens with drainage systems and amended soils are referred to as bio-retention. https://www.epa.gov/soakuptherain/rain-gardens

**SEER:** Seasonal energy efficiency ratio - The higher the SEER rating, the more energy efficient the equipment is. A higher SEER can result in lower energy costs. https://energystar.zendesk.com/hc/en-us/articles/212111387-What-is-SEER-EER-HSPF-

**Smart House:** A smart house is a home that has highly advanced, automated systems to control and monitor any function of a house – lighting, temperature control, multi-media, security, window and door operations, air quality, or any other task of necessity or comfort performed by a home's resident. http://architecture.about.com/od/buildyourhous1/g/smarthouse.htm

**Water Heaters:** Types are described here: http://energy.gov/energysaver/articles/solar-water-heaters.

**WaterSense:** EPA released its Final Version 1.1 WaterSense New Home Specification. This specification will be effective January 1, 2013 and establishes the criteria for new homes labeled under the WaterSense program and is applicable to newly constructed single-family and multi-family homes. http://www.epa.gov/watersense/new_homes/homes_final.html

**Whole Building Ventilation System:** A whole building ventilation system assists in a controlled movement of air in tight envelope construction. Whole building ventilation equipment is often a part of the forced air heating or cooling systems. There are various methods of providing whole home ventilation including a heat recovery ventilator (HRV) or an energy recovery ventilator (ERV). Four primary types of systems here: https://energy.gov/energysaver/whole-house-ventilation

**Zero Energy Ready Home (ZERH):** To qualify as a DOE Zero Energy Ready Home, a home shall meet certain minimum requirements, be verified and field-tested in accordance with HERS Standards by an approved verifier, and meet all applicable codes. Builders may meet the requirements of either the Performance Path or the Prescriptive path to qualify a home.
http://energy.gov/eere/buildings/zero-energy-ready-home