

## 820 05 Residential Green and Energy Efficient Addendum

**Detailed Instructions** 

## Introduction

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.

An XML dataset specification is available to digitally deliver the Green Addendum between parties that wish to communicate in data versus forms display mode. Contact the Appraisal Institute to obtain a copy of the specification.

## 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

**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: <a href="http://www.appraisalinstitute.org/residential-green-valuation-tools/">http://www.appraisalinstitute.org/residential-green-valuation-tools/</a>

REPORT SECTION: DATA ELEMENT	DESCRIPTION AND INSTRUCTIONAL DETAILS
Client File #	A unique identifier for a specific order for a vendor set by the vendor.
Appraisal File #	An identifier or number used by the appraiser to identify their reports. It is generally specific to the appraiser.
Client	The client name who ordered the service.
Subject Property Street Address	The number assigned to a building or land parcel along the street to identify location and ensure accurate mail delivery.
Subject Property City	The name of the city for the subject property.
Subject Property State	The name of the US state, US Territory, Canadian Province, Military APO FPO, or Territory for the subject property.
Subject Property Zip	The postal code (ZIP Code in the US) for the address. ZIP Code may be either 5 or 9 digits for the subject property.
GREEN CERTIFICATION: U.S. Environmental Protection Agency (EPA)	Indicates a Green Certification program defined by the US Environmental Protection Agency.
GREEN CERTIFICATION: Department of Energy Zero Energy Ready Home Indicator	Indicates the home is Zero Energy Ready according to the DOE criteria.
GREEN CERTIFICATION: Living Building Challenge (LBC)	Indicates a Green Certification program defined by the Living Building Challenge.
GREEN CERTIFICATION: Living Building Challenge (LBC) Living Building Certified   Petal Certification	Indicates the level of a Green Certification program defined by the Living Building Challenge.
GREEN CERTIFICATION: Passivhaus Standard	Indicates a Green Certification program defined by the Passivehaus Standard.
GREEN CERTIFICATION: Passivhaus Standard PHI Low Energy   EnerPhit   PassiveHouse	Indicates the level of a Green Certification program defined by the Passivhaus Standard.
GREEN CERTIFICATION: Passive House Institute US	Indicates a Green Certification program defined by the Passive House Institute US.

REPORT SECTION: DATA ELEMENT	DESCRIPTION AND INSTRUCTIONAL DETAILS
Passive House Institute USPHIUS+2015	Indicates the level of a Green Certification program defined by the Passive House Institute US.
GREEN CERTIFICATION: USGBC LEED	Indicates a Green Certification program defined by the USGBC LEED.
GREEN CERTIFICATION: USGBC LEED Certified Silver Gold Platinum	Indicates the level of a Green Certification program defined by the USGBC LEED.
GREEN CERTIFICATION: Other	A free form text description of a green certification not previously defined.
GREEN CERTIFICATION: Date Verified	The date the green certification was verified.
GREEN CERTIFICATION: Green Certification Version	The version of the Green Certification reported.
GREEN CERTIFICATION: Green Certification Association URL	The website address for association or program providing the Green certification such as National Association of Homebuilders or LEED.
GREEN CERTIFICATION: Verification Reviewed Onsite Indicator	Indicates if the author of the information viewed the certification on premise.
GREEN CERTIFICATION: Verification Attached to Report Indicator	Indicates if the author has attached certification evidence to the file.
ENERGY LABEL: RESNET HERS Rating	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.
ENERGY LABEL: RESNET HERS Rating Type Sampling Rating   Projected Rating   Confirmed Rating	The three rating types offered in the Home Energy Rating System (HERS). More information: http://www.resnet.us/hers-index

REPORT SECTION: DATA ELEMENT	DESCRIPTION AND INSTRUCTIONAL DETAILS
ENERGY LABEL: RESNET Estimated Energy Savings Per Year	Energy savings includes electricity, heating and cooling.
ENERGY LABEL: RESNET Cents Per Kilowatt	Cost per Kilowatt hour for this address as of date of rating
ENERGY LABEL: RESNET Cents Per Kilowatt As Of Date	Cost per kilowatt hour for this address as of date of value
ENERGY LABEL: Department of Energy Home Score	The value of the score assigned from the Department of Energy.
ENERGY LABEL: Department of Energy Home Score TypeOfficial Score   Unofficial Score	An indicator that defines the type of Department of Energy Score.
ENERGY LABEL: DOE Estimated Energy Savings Per Year	Energy savings includes electricity, heating and cooling.
ENERGY LABEL: DOE Cents Per Kilowatt	Cost per Kilowatt Hour used in DOE rating
ENERGY LABEL: DOE Cents Per Kilowatt As Of Date	Cost per Kilowatt Hour as of date of value
ENERGY LABEL: Other Energy Score Value Range Low	The starting value in a range for an energy score from a named source or defining body.
ENERGY LABEL: Other Energy Score Value Range High	The ending value in a range for an energy score from a named source or defining body.
ENERGY LABEL: Other Energy Score	A score from a source other than those defined in the Green addendum.
ENERGY LABEL: Other Estimated Energy Savings Per Year	Energy savings includes electricity, heating and cooling.
ENERGY LABEL: Other Cents Per Kilowatt	Cost per Kilowatt Hour used in DOE rating
ENERGY LABEL: Other Cents Per Kilowatt As Of Date	Cost per Kilowatt Hour as of date of value
ENERGY LABEL: Other Energy Score Label System Description	A description of the energy label for a source other than those defined in the Green addendum.
ENERGY LABEL: Date Verified	Date Rating was verified by person completing Addendum

REPORT SECTION: DATA ELEMENT	DESCRIPTION AND INSTRUCTIONAL DETAILS
ENERGY LABEL: Score Rating Version Description	Energy Rating Requirements increase as building codes increase; therefore, some Energy Ratings have a Version Identification.
ENERGY LABEL: Score Rating Organization URL Type	The web address for the agency providing the certification of efficiency improvements.
ENERGY LABEL: Score Rating Organization URL Type Other Description	A free-form description regarding the named efficiency organization web address when Other is selected.
ENERGY LABEL: Verification Reviewed On-site Indicator	An indicator that the verification was performed on premise of the home.
ENERGY LABEL: Verification Attached to Report Indicator	Indicates the verification evidence is attached to the energy addendum report.
VERIFIED ENERGY IMPROVEMENTS: Energy- related Improvements	A free-form description of the energy-related improvements for the home.
VERIFIED ENERGY IMPROVEMENTS: Energy- related Cost of Improvements	The costs associated with the specified energy-related improvements for the home.
VERIFIED ENERGY IMPROVEMENTS: Date Energy Score Label Verified	The date the energy label reported was verified.
VERIFIED ENERGY IMPROVEMENTS: Certificate of Efficiency Improvements Version	The version of the energy score reported.
VERIFIED ENERGY IMPROVEMENTS: Certificate of Efficiency Organization URL Type Other Description	A free-form description regarding the named efficiency organization web address when Other is selected.
VERIFIED ENERGY IMPROVEMENTS: Certificate of Efficiency Organization URL Type energystar.gov/homeperformance	The web address for the agency providing the certification of efficiency improvements.
VERIFIED ENERGY IMPROVEMENTS: Verification Reviewed OnSite Indicator	An indicator that the verification was performed on premise of the home.
VERIFIED ENERGY IMPROVEMENTS: Verification Attached to Report Indicator	Indicates the verification evidence is attached to the energy addendum report.

REPORT SECTION: DATA ELEMENT	DESCRIPTION AND INSTRUCTIONAL DETAILS
Section Type Third Party Verification   Efficiency Features   Solar Panels   Location Incentives	The name of the section of the green addendum. Repeats as needed throughout the form.
	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.
Section Completed By Name	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.  Enter the name of the person who completed the section of the addendum.
Section Completed By Title	Enter the title of the person who completed the section of the addendum.
Section Completed Date	Enter the date section of the addendum was completed.
EFFICIENCY FEATURES: Insulation Type	The material type of insulation used in the named location.
EFFICIENCY FEATURES: Insulation Location Wall   Ceiling   Other	The location of the named type of insulation.
EFFICIENCY FEATURES: Insulation Location Type Other Description	A free-form text description used with Insulation Location Type is set to Other.
EFFICIENCY FEATURES: Insulation R-Value	The R-Value for the insulation used in the named location. An insulating material's resistance to conductive heat flow is measured or rated in terms of its thermal resistance or R-value the higher the R-value, the greater the insulating effectiveness. The R-value depends on the type of insulation, its thickness, and its density.

REPORT SECTION: DATA ELEMENT	DESCRIPTION AND INSTRUCTIONAL DETAILS
EFFICIENCY FEATURES: Building Envelope Tightness Description	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. The lower the number the tighter the envelope.
EFFICIENCY FEATURES: Building Envelope Tightness Unit Type CFM25   CFM50   ACH50   ACHNatural	The unit of measure specifically defined for defining the level of resistance to inward or outward air leakage through unintentional leakage points or areas in the building envelope. This air leakage is driven by differential pressures across the building envelope due to the combined effects of stack, external wind and mechanical ventilation systems.  ACH = Air changes per hour CFM = Cubic feet per minute
EFFICIENCY FEATURES: Windows ENERGY STAR   Low E   High Impact   Storm   Double Pane   Triple Pane   Tinted   Solar Shades	Specifies the type of windows on the property.
EFFICIENCY FEATURES: Day Lighting Skylights   Solar Tubes   LED   Other	Specifies the type of day lighting present in the home.
EFFICIENCY FEATURES: Day Lighting Type Other Description	A free-form text field that specifies the enumeration when the value of Other is used for Day Lighting Efficient Item.
EFFICIENCY FEATURES: Number of Day Lighting Per Type	Number of Day Lighting Efficient Items in use.

REPORT SECTION: DATA ELEMENT	DESCRIPTION AND INSTRUCTIONAL DETAILS
EFFICIENCY FEATURES: Percentage of LED In Use	Percentage of Day Lighting Efficient Items in use.
EFFICIENCY FEATURES: ENERGY STAR Appliance Type Refridgerator Dishwasher Range  Range Hood  Washer   Dryer  Other	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 Environmental Protection Agency -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.
EFFICIENCY FEATURES: ENERGY STAR Appliance Type Other Description	A free-form text field used to collect additional information when Other is selected for EnergyStar Appliance Type.
EFFICIENCY FEATURES: ENERGY STAR Appliance Energy Source Type Propane   Electric   Natural Gas   Other	Identifies the power source for an indicated EnergyStar appliance.
EFFICIENCY FEATURES: ENERGY STAR Appliance Energy Source Type Other Description	A free-form text field used to collect additional information when Other is selected for EnergyStar Power Source Type.
EFFICIENCY FEATURES: Water Heater ENERGY STAR Indicator	Indicates if water heater is Energy Star certified.
EFFICIENCY FEATURES: Water Heater Number of Gallons	Indicates the size in gallons of the water heater.
EFFICENCY FEATURES: Tankless Indicator	Indicates if the water heater is tankless.
EFFICENCY FEATURES: Water Heater Power Type Solar   Heatpump   Coil	The energy type that powers the water heater.
EFFICIENCY FEATURES: High Efficiency HVAC	The seasonal energy efficiency ratio (SEER) measures the ratio of cooling capacity to power input, and the higher the rating, the more efficient the air conditioner. The higher the SEER rating, the more work you're getting out of the equipment for the same dollar amount of energy, the lower the SEER rating, the lower the production.

REPORT SECTION: DATA ELEMENT	DESCRIPTION AND INSTRUCTIONAL DETAILS
EFFICIENCY FEATURES: HVAC Efficiency SEER Rating	The SEER rating of a unit is the cooling output during a typical cooling-season divided by the total electric energy input during the same period. The higher the unit's SEER rating the more energy efficient it is.
EFFICIENCY FEATURES: HVAC Efficiency Rating %	A measure of efficiency expressed as a percentage ratio of heat generated to the energy consumed by the equipment.
EFFICIENCY FEATURES: HVAC Annual Fuel- Utilization Efficiency %	The annual fuel utilization efficiency (AFUE; pronounced 'A'-'Few' or 'A'-'F'-'U'-'E') is a thermal efficiency measure of combustion equipment like furnaces, boilers, and water heaters A higher AFUE means higher efficiency.
EFFICIENCY FEATURES: Heat Pump Efficiency Rating Type	Heating efficiency for air-source electric heat pumps is indicated by the heating season performance factor (HSPF), which is the total space heating required during the heating season, expressed in Btu, divided by the total electrical energy consumed by the heat pump system during the same season, expressed in watthours.
EFFICIENCY FEATURES: Heat Pump Efficiency Rating Number	The rating value of measurement type specified for the Heat Pump Efficiency rating.
EFFICIENCY FEATURES: Thermostat Controller Indicator	Indicates if an electronic controller for thermostat regulation is in use in the home.
EFFICIENCY FEATURES: Programmable Thermostat Indicator	Indicates if the thermostat installed in the home is programmable for automating temperature control settings and schedules.
EFFICIENCY FEATURES: Auxiliary Heat Source Indicator	Indicates if an additional heating source is in place in addition to the primary heating source.
EFFICIENCY FEATURES: Radian Floor Heat Indicator	Indicates if radian floor heating is installed somewhere in the home.
EFFICIENCY FEATURES: Geothermal Indicator	Indicates if a geothermal energy source is in use for the home.
EFFICIENCY FEATURES: Electric Vehicle Ready Indicator	Indicates if there is a charging station built-in to the home for supporting an electric vehicle.

REPORT SECTION: DATA ELEMENT	DESCRIPTION AND INSTRUCTIONAL DETAILS
EFFICIENCY FEATURES: Whole Building Indoor Environmental Air Quality System Type Energy Recovery Ventilator   Heat Recovery Ventilator   Both EVR HVR Humidity Monitoring Device	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). 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.
EFFICIENCY FEATURES: Indoor Environmental Air Quality Type Other Description	A free-form text field used to collect additional information when Other is selected for Indoor Environmental Air Quality.
EFFICIENCY FEATURES: Non-Toxic Pest Control Indicator	An indicator of non-toxic pest control mitigation in place in the home.
EFFICIENCY FEATURES: Radon System Type Active   Passive	The type of radon mitigation system in place in the home.
EFFICIENCY FEATURES: Reclaimed Water System Description	A free-form description pertaining to a reclaimed water system in use in the home.
EFFICIENCY FEATURES: Gray Water Reuse System Indicator	An indicator of a gray water reuse system is in place in the home.
EFFICIENCY FEATURES: Water Saving Fixtures Indicator	Indicates the presence of plumbing fixtures that are design specifically to promote water use efficiency.
EFFICIENCY FEATURES: Rain Barrels Used in Irrigation Indicator	An indicator regarding that water collected in rain barrels is used in irrigation.
EFFICIENCY FEATURES: Cistern Number of Gallons	Storage size in gallons for a rain catchment cistern in operation at the home.
EFFICIENCY FEATURES: Location of Cistern	The physical location of a rain catchment cistern in operation at the home.
EFFICIENCY FEATURES: Annual Utility Cost Per Year	The annualized costs expressed in dollars for energy services purchased to operate the home.
EFFICIENCY FEATURES: Annual Utility Cost Period Start Date	The start date in the period measured for the annual utility costs.
EFFICIENCY FEATURES: Annual Utility Cost Period End Date	The end date in the period measured for the annual utility costs.

REPORT SECTION: DATA ELEMENT	DESCRIPTION AND INSTRUCTIONAL DETAILS
EFFICIENCY FEATURES: Annual Utility Cost Type Electric   Heating   Water   Other	The type of utilities that are included in the estimated annual utility cost.
EFFICIENCY FEATURES: Annual Utility Cost Type Other Description	A free-form text field used to describe the utility type included in the annual utility cost when other is selected.
EFFICIENCY FEATURES: Number of Occupants	The number of occupants residing in the home at the time the Green Addendum report was prepared.
EFFICIENCY FEATURES: Efficiency Features Description	A free form text description of the energy efficient features of the home.
SOLAR PHOTOVOLATAIC (Electric) SYSTEM: Array Occurrence Number Type	Indicates the occurrence of the Solar Panel Array information in the Green Addendum.
SOLAR PHOTOVOLATAIC (Electric) SYSTEM: Array Type of Ownership	The specific type of ownership of the solar panel on the property.
SOLAR PHOTOVOLATAIC (Electric) SYSTEM: Kilowatt Size	A numeric value that identifies the maximum power output of the solar panel array measured in kilowatts.
SOLAR PHOTOVOLATAIC (Electric) SYSTEM: Age of Panels	A numeric value that specifies the age in years of the solar panels in the array.
SOLAR PHOTOVOLATAIC (Electric) SYSTEM: Energy Production	A free-form text field describing the source or service used to determine the estimated kilowatt hours per year produced by the solar panel array.
SOLAR PHOTOVOLATAIC (Electric) SYSTEM: Energy Production Estimate	A numeric value that identifies the estimated annual power output produced by the solar panel array measured in kilowatt hours per year.

REPORT SECTION: DATA ELEMENT	DESCRIPTION AND INSTRUCTIONAL DETAILS
SOLAR PHOTOVOLATAIC (Electric) SYSTEM: Manufacturer	An unstructured name that identifies the company that produced the solar panel.
SOLAR PHOTOVOLATAIC (Electric) SYSTEM: Warranty of Panels	A free-form text field describing information about any warranty terms that may exist on the solar panels in the array.
SOLAR PHOTOVOLATAIC (Electric) SYSTEM: Array Location Type Ground   Roof   Other	The area of structure or site where the subject solar panel array is located and affixed.
SOLAR PHOTOVOLATAIC (Electric) SYSTEM: Array Location Type Other Description	A free-form field that specifies the enumeration when the value of Other is used for Solar Panel Array Location Type.
SOLAR PHOTOVOLATAIC (Electric) SYSTEM: Array Mount Type Fixed Mount   Tracking Mount	The function of mounting brackets is to hold the panels in position. Mounting brackets may be fixed, meaning they do not move with the rotation of the sun. A tracking mount, however, moves to maximize the energy production by turning the panels toward the sun.
SOLAR PHOTOVOLATAIC (Electric) SYSTEM: Array Tilt Slope	A free-form text field that describes the details of the tilt and slope of a solar panel array in context of the location of placement such as a roof.
SOLAR PHOTOVOLATAIC (Electric) SYSTEM: Array Azimuth	A free-form text field that describes the angle of horizontal deviation, measured clockwise, of a bearing from a standard direction, as from north or south of the solar panel array.

REPORT SECTION: DATA ELEMENT	DESCRIPTION AND INSTRUCTIONAL DETAILS
SOLAR PHOTOVOLATAIC (Electric) SYSTEM:Array Number of Inverters Per Array	An array is a grouping of solar panels that point in the same direction. (Azimuth) The array must have an inverter to convert the DC power to AC power. The inverter may be a central inverter for the entire array or the array may have microinverters that are located on each solar panel.
SOLAR PHOTOVOLATAIC (Electric) SYSTEM: Array Inverters Age	A numeric value that defines the age of the inverter.
SOLAR PHOTOVOLATAIC (Electric) SYSTEM: Inverters Wattage	Inverters are sized based on the overall size of the solar photovoltaic system. Many inverters are undersized compared to the solar array's wattage.
SOLAR PHOTOVOLATAIC (Electric) SYSTEM: Array Inverters Manufacturer	The unstructured name that identifies the company that produced the electrical current inverter which converts the energy to kilowatts.
SOLAR PHOTOVOLATAIC (Electric) SYSTEM: Array Inverters Warranty Term	Information about any warranty terms that may exist on the inverter.
ENERGY STORING BATTERIES: Energy Storing Battery Type Lithium-ion   Lithium-ion Polymer   Lead Acid   Lead Calcium   AGM   GEL	Batteries are required for solar energy storage. At times when the sun is not shining or is cloudy the bimodal inverter can draw energy from the battery. When the system produces more than it uses, the excess energy goes to the battery.
ENERGY STORING BATTERIES: Energy Storing Battery Manufacturer	Energy Storing Batteries are manufactured by a number of companies. Knowing the name of the Manufacturer provides a resource for cost and warranty terms.
ENERGY STORING BATTERIES: Energy Storing Battery Capacity	Capacity in kilowatts.
ENERGY STORING BATTERIES: Energy Storing Battery Warranty Term	Energy Storing Battery Manufacturers offer warranties that are usually short compared to the useful life of the solar PV Array.

REPORT SECTION: DATA ELEMENT	DESCRIPTION AND INSTRUCTIONAL DETAILS
ENERGY STORING BATTERIES: Energy Storing Battery Age	As of the date of completing the Addendum and appraised value, the age of the energy storing battery should be identified to understand its remaining useful life and expected cost to replace in an income approach method.
UTILITY: Name of Utility Company	Utility Company name that services the property. Some properties have more than one choice for a utility company and their charges vary.
UTILITY: Charge Per Kilowatt from Utility	Cost charged by utility company for a kilowatt hour of electricity.
SOLAR THERMAL WATER HEATER: Solar Thermal Water Heating System Type Active Direct   Active InDirect Passive Integral Collector   Passive Thermosyphon	Solar Thermal Water Heating Systems convert solar radiation into heat energy. Active systems use mechanical equipment to circulate the fluids in the collector. Passive systems use convection to circulate the fluids in the collector.
SOLAR THERMAL WATER HEATER: Storage Tank Gallon Size	Solar Thermal Water Heaters have water storage tanks sized in gallons of water similar to conventional water heaters.

REPORT SECTION: DATA ELEMENT	DESCRIPTION AND INSTRUCTIONAL DETAILS
SOLAR THERMAL WATER HEATER: Solar Thermal Water Heating System Collector TypeFlat-Plat   Integral   Evacuated-Tube Solar	Integral collector-storage passive systems. These work best in areas where temperatures rarely fall below freezing. They also work well in households with significant daytime and evening hot-water needs.In Solar Thermal (Thermosyphon) systems,water flows through the system when warm water rises as cooler water sinks. The collector must be installed below the storage tank so that warm water will rise into the tank. These systems are reliable, but contractors must pay careful attention to the roof design because of the heavy storage tank. They are usually more expensive than integral collector-storage passive systems. https://www.energy.gov/energysaver/solar-water-heaters
SOLAR THERMAL WATER HEATER: Solar Thermal Water Heating System Collector Age	The age in years of the energy collector element for the thermal water heater.
SOLAR THERMAL WATER HEATER: Solar Thermal Water Heating System Backup System Type Conventional Water Heater   Tankless On Demand   Tankless Heat Pump	The type of water heating system that is in a backup position to the thermal water heater.
SOLAR THERMAL WATER HEATER: Solar Thermal Water Heating System Warranty Term	Solar Thermal Water Heating System Manufacturers offer warranties to cover limited system parts. Per EnergyStar the average life expectancy of a solar thermal water heating system is 20 years.
SOLAR THERMAL WATER HEATER: Solar Thermal Water Heating System Solar Energy Factor	The solar energy factor is defined as the energy delivered by the system divided by the electrical or gas energy put into the system. The higher the number, the more energy efficient. Solar energy factors range from 1.0 to 11. Systems with solar energy factors of 2 or 3 are the most common. https://energy.gov/energysaver/estimating-cost-and-energy-efficiency-solar-water-heater
SOLAR THERMAL WATER HEATER: Solar Thermal Water Heating System Manufacturer	Solar Thermal Water Heating System Manufacturer is the company producing the system and providing warranty information.
SOLAR: Comment	Comments on source of information and/or other renewable energy sources used on site.
LOCATION - SITE: Walk Score Value	The numeric value of the measured score representing walkability.

REPORT SECTION: DATA ELEMENT	DESCRIPTION AND INSTRUCTIONAL DETAILS
LOCATION - SITE: Walkscore Source Type	Indicate a walk score type.
LOCATION - SITE: Walkscore Source Type Other Description	A free-form text field used to describe the walkscore type if other is selected.
LOCATION - SITE: Public Transportation Distance Type Blocks to Bus   Blocks to Subway   Blocks to Train	Indicate the type of public transportation for this location.
LOCATION - SITE: Public Transportation Distance Number	Indicate the distance in blocks to the named available public transportation for this location.
LOCATION - SITE: Site Orientation Type East West   North South	Indicate the orientation of the site.
LOCATION - SITE: Landscaping Type Water Efficient   Natural   Pond/Lake on site   Rain Garden	Indicate any energy-conscious landscaping features.
LOCATION - SITE: Efficiency Feature Comments	A free form description of the energy efficient features of the home.
INCENTIVES: Incentives Type Federal   State   Local	Indicates the level of a governmental authority providing the financial incentive for an energy efficiency improvement or component.  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
INCENTIVES: Incentives Amount	The amount of the incentive for the named incentive type.

REPORT SECTION: DATA ELEMENT	DESCRIPTION AND INSTRUCTIONAL DETAILS
INCENTIVES: Incentives Comment Description	Free-form text comments describing the energy efficiency financial incentive.