

## Residential Eligible Improvements

Financing is available to Indiana homeowners, including low- to moderate-income and credit-challenged borrowers, through approved lenders and contractors participating in the Smart-E Loan program. Eligible improvements include the home energy efficiency, renewable energy and resiliency projects listed below. This list is subject to change, and improvements are subject to the minimum efficiency ratings and the specified additional requirements.

High-Efficiency HVAC		
Measure	Minimum Efficiency Rating	Additional Requirements
Air source heat pump	SEER2 ≥ 14.2	
Boiler: combination	AFUE $\geq$ 95%, water heating $\geq$ 0.87 UEF	
Boiler: steam	AFUE ≥ 82%	
Central air conditioning	SEER2 ≥ 15.2	
Combined heat & power (micro CHP)		
Controls: zone heating		Limited to 25% of total amount financed
Ductless mini-split heat pump	SEER2 ≥ 14.2	
Electric heat pump water heater	FHR 45, UEF ≥ 2.8	
Hot water boiler: natural gas or propane	AFUE ≥ 95%	
Indirect water heater: natural gas		
Natural gas storage or condensing water heater	UEF for tanks < 55 gallons ≥ 0.81 UEF for tanks > 55 gallons ≥ 0.86	
Oil tank removal		Financing can be used for oil tank removal when coupled with a qualifying boiler, furnace, or water heater. Limited to 25% of total amount financed
On-demand tankless water heater: natural gas	Energy factor (EF) ≥ 0.90	
On-demand tankless water heater: propane	Energy factor (EF) ≥ 0.90	
Smart meter		Limited to 25% of total amount financed
Thermostat: programmable or Wi-Fi enabled		Limited to 25% of total amount financed
Warm air furnace: natural gas or propane	AFUE ≥ 97%	
Water heater: solar thermal		
Geothermal: Water-to-air heat pump: closed loop	COP ≥ 3.6, EER ≥ 17.1	
Geothermal: Water-to-air heat pump: open loop	COP ≥ 4.1, EER ≥ 21.1	







High-Efficiency HVAC		
Measure	Minimum Efficiency Rating	Additional Requirements
Geothermal: Water-to-water heat pump: closed loop	COP ≥ 3.1, EER ≥ 16.1	
Geothermal: Water-to-water heat pump: open loop	COP ≥ 3.5, EER ≥ 20.1	
Geothermal: Weather-responsive controls		

Insulation		
Measure	Minimum Efficiency Rating	Additional Requirements
Air sealing	Pre- and post-blower door 5 ACH50	Requires pre- and post- installation blower door test for air sealing work
Duct insulation	R-value ≥ R8	
Duct sealing	Post-CFM values, CFM 25/100ft = 4	
Exterior doors	ENERGY STAR®	
Green roofing (living roof)		
Insulated mobile home skirting	R-Value ≥ R7	
Insulated vinyl siding	R-value ≥ R3	Insulation and siding should be a single, integrated unit. Limited to 25% of total amount financed
Insulation: attic	R-value ≥ R38	
Insulation: floor	R-Value ≥ R13	
Insulation: wall	R-Value ≥ R15	
Skylights	U-Factor ≤ 0.60	
Windows	U-factor 0.35	

Lighting and Electrical		
Measure	Minimum Efficiency Rating	Additional Requirements
Electrical System Upgrades or other repairs needed for building electrification or solar		Limited to 25% of total amount financed
Electric vehicle (EV) charging station	Level 2	
LED Lighting and Controls		Limited to 25% of total amount financed







Renewable Energy		
Measure	Minimum Efficiency Rating	Additional Requirements
Battery storage		
Direct geoexchange	COP ≥ 3.6, EER ≥ 16	
Solar photovoltaic (PV)		The panels, inverter, and meter should be approved by the local utility
Wind turbine		

ENERGY STAR® Appliances		
Measure	Minimum Efficiency Rating	Additional Requirements
ENERGY STAR® appliances: dishwasher, freezer (chest or upright), heat pump dryer, refrigerator, washer	ENERGY STAR®	Appliances can only be financed when there are \$1,000 or more in other qualifying measures

Health and Safety		
Measure	Minimum Efficiency Rating	Additional Requirements
Air filtration for air quality	ENERGY STAR®	Limited to 25% of total amount financed
Asbestos abatement (including vermiculite)		Financing can be used for asbestos remediation when coupled with a qualifying boiler, furnace, or water heater
Lead abatement		Limited to 25% of total amount financed
Mold and mildew removal		Financing can be used for lead abatement when coupled with a qualifying building shell improvement
Radon abatement	Minimum Efficiency Rating	Financing can be used for radon abatement when coupled with a qualifying building shell improvement. Limited to 25% of total amount financed
Structural remediation		Limited to 25% of total amount financed
Wiring: knob and tube upgrade		Financing can be used for rewiring a home to meet building code when it prevents the installation of insulation. Limited to 25% of total amount financed







Other Possible Measures: "Other" measures are limited to 25% financing		Additional Descriptions
Measure	Minimum Efficiency Rating	Additional Requirements
Low flow fixtures: bathroom faucet, kitchen faucet, showerhead, toilet		Limited to 25% of total amount financed
Roofing: asphalt, metal, or membrane		Roofing can be financed when coupled with solar. Limited to 25% of total amount financed
Tree removal		Tree Removal can be financed when coupled with Solar. Limited to 25% of total amount financed
Unlisted but relevant to improving the energy performance, safety, or resiliency of a home		
Whole home generator		A generator can only be financed when there is \$1,000 or more in other qualifying measures







## Legend

**AFUE** 

The annual fuel utilization efficiency is a thermal efficiency measure of space-heating furnaces and boilers. Furnaces are rated by the AFUE ratio, the percentage of heat produced for every dollar of fuel consumed. The higher the AFUE rating, the lower the fuel costs. Any furnace with an efficiency of 90 percent or higher is considered high efficiency and carries the ENERGY STAR® label.

Btu

The British thermal unit is a traditional unit of heat, defined as the amount of heat required to raise the temperature of one pound of water by one degree Fahrenheit.

CEE

The Consortium for Energy Efficiency creates product specifications for advanced levels of energy performance. A CEE tier-one label is the equivalent of the ENERGY STAR® label. Products with CEE tier-two, three, or four labels would represent products that achieve energy savings above and beyond the ENERGY STAR® label.

COP

The coefficient of performance of a heat pump, refrigerator, or air conditioning system is a ratio of useful heating or cooling provided to the work required. Higher COPs equate to lower operating costs.

**EER** 

The energy efficiency ratio measures how much cooling a system puts out for each unit of energy it consumes. EER is calculated by dividing an air conditioning unit's Btu rating by its wattage. The higher the EER rating, the more efficiently the air conditioner operates. Any air conditioning unit with an efficiency of 12 EER or higher is considered a high-efficiency unit and carries the ENERGY STAR® label.

**EF** 

The energy factor indicates a water heater's overall energy efficiency based on the amount of hot water produced per unit of fuel consumed over a typical day. The higher the energy factor, the more efficient the water heater.

**ENERGY STAR®** 

ENERGY STAR® is a government program promoting energy-saving improvements by providing consumers with objective product information. The ENERGY STAR® label indicates that a product uses less energy than other products in that category.

**GPM** 

Gallons per flush measures the flow from a showerhead or faucet. The lower the GPM, the greater the water savings.







## Legend

- Light-emitting diodes are up to 80 percent more efficient than traditional lighting, such as **LED** fluorescent and incandescent lights. 95 percent of the energy in LEDs is converted into light, and only 5 percent is wasted as heat.
- Level 2 Level 2 charging refers to the voltage the electric vehicle charger uses (240 volts). Level 2 chargers come in various amperages, typically ranging from 16 amps to 40 amps. The most common level 2 chargers are 16 and 30 amps, which also may be referred to as 3.3 kilowatt (kW) and 7.2 kW, respectively. These two amperages are the most common because they match the onboard charger on many current electric vehicles.
- **LPW** Lumens per watt measures the efficacy of a light source. LED bulbs and fixtures have higher LPW values than other lighting technologies.
- An insulating material's resistance to conductive heat flow is measured or rated in terms of its R-value thermal resistance or R-value. The higher the R-value, the greater the insulations effectiveness.
- **SEER** The seasonal energy efficiency ratio measures how much cooling a system puts out for each unit of energy it consumes. The higher the SEER rating, the more efficiently the air conditioner operates. Any air conditioning unit with an efficiency of 15 SEER or higher is considered a high-efficiency unit and carries the ENERGY STAR® label.
- SF The solar factor measures the percentage of heat that passes through a solar panel's glass. The higher the solar factor, the greater the solar gain for solar-thermal water heating units.
- SHGC The solar heat gain coefficient is the fraction of incident solar radiation admitted through a window, both directly transmitted and absorbed and subsequently released inward. SHGC is expressed as a number between zero and one. The lower a window's solar heat gain coefficient, the less solar heat it transmits.
- TE Thermal efficiency is an efficiency measure for space-heating boilers that exceed 300,000 Btu per hour, in lieu of the AFUE rating. TE is also used to measure the efficiency of gas-fired water heaters that exceed 75,000 Btu per hour.
- **U-factor** The rate of heat loss of a window assembly is indicated in terms of the U-factor (U-value). The lower the U-factor, the greater a window's resistance to heat flow and the better its insulating properties.
- **UEF** The Uniform Energy Factor (UEF) is the standard measure of a water heater's overall efficiency. The higher the UEF rating, the more efficient the water heater.



