

INDIANA ENERGY

SAVER PROGRAM

Save Energy. Cut Costs.

Measure Specifications

Updated August 2025

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Version History

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Modifications adopted in subsequent revisions are listed in the following table and highlighted in yellow throughout the document.

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Item No.	Description of Modification	Location(s)
1	Various Modifications throughout based upon RGC review and feedback.	Multiple

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General Product Requirements for all Measure Categories

Measure: A measure is defined as a single technology or energy-use practice that, once installed or operational, results in a reduction of the energy required to provide the same or greater level of service at the residence.

This document provides the details of eligible measures and maximum allowable rebates for the Home Efficiency Rebate (HOMES) and Home Appliance Rebate (HEAR) programs. For additional program information, please visit the [Indiana Energy Saver Program](#) website.

The following requirements apply to all measures, as applicable.

- ENERGY STAR Certified (if available)¹ See: [List of ENERGY STAR Energy Efficient Products](#)
- Legal for distribution in the United States at the time of purchase.
- Equipment must be new and cannot be used or repurposed.
- To the greatest extent practical, all equipment and products should be American made.
- Equipment must be installed to meet minimum code requirements and follow manufacturer guidelines and requirements.
- Contractors must ensure compliance with Health and Safety regulatory standards pertaining to the measures being installed. Proper testing should be conducted before (as the contractor determines necessary), during and after installation as described below and the IESP Contractor Participation Manual.
- Installed equipment specifications shall be provided for each product installed to property owner (e.g. manufacture submittals)
- Photographic documentation of installed equipment shall be provided using IESP software.

¹ For Insulation and Air Sealing, products used are encouraged, but not required, to be ENERGY STAR certified.

Section 1: Measure Category: Heating and Cooling Equipment

- 1. Description:** Installation of a new efficient residential comfort heating and/or cooling system. To be eligible, the replacement system efficiency must be higher than that of the existing system and meet code minimums.

2. Eligible Measure Types

2.1. Electric Heat Pumps (HOMES/HEAR Eligible)

This measure relates to a unitary central heat pump (split or packaged) with conditioned air delivered to the home via ductwork or ductless systems.

In cold climates, ENERGY STAR Cold Climate certified heat pumps are encouraged so that the heat pump can function as the primary heat source

- 2.1.1.** Ducted Air Source Heat Pumps (ASHP) (split or mini-split)
- 2.1.2.** Ductless Heat Pump (split or mini-split)
- 2.1.3.** Packaged Terminal - Heat Pumps (PTHP)²

2.2. Natural Gas or Electric HVAC (HOMES):

- 2.2.1.** Ducted and ductless heat pumps (outlined above in Section 2.1)
- 2.2.2.** Air conditioners
- 2.2.3.** Boiler and steam boiler
- 2.2.4.** Forced-air furnace
- 2.2.5.** Vertical floor furnace

3. Ineligible Items:

- 3.1.** Room/portable space heaters and air conditioners (including Energy STAR room air conditioners) that are not permanently affixed, which are defined as a self-contained unit designed to heat or cool a single room or area without the need for additional components or ductwork, are not eligible for rebates at this time.
- 3.2.** Wood and/or pellet burning appliances like wood stove and masonry fireplace, which burn solid or compressed materials such as firewood, wood chips, wood pellets, and corn kernels to generate heat.
- 3.3.** A new system that is not used as the primary heating and cooling method and is instead used to supplement the existing system. A heat pump used to

² Only applicable to multifamily buildings when the rebate and equipment applies to multiple dwellings. PTHP systems currently do not have ENERGY STAR specifications that address their system-based efficiency. An alternative efficiency standard can be proposed for DOE review and approval.

supplement an existing electric appliance for space conditioning is not eligible for a rebate.

4. Eligible Application: Purchase and installation of a Heating and Cooling Equipment applications:

4.1. Replacement of non-electric heating unit

4.2. Higher efficiency than that of the existing system and meet code minimum

4.3. For Heat Pumps (HEAR): When the purchase is a first-time purchase of a heat pump for space conditioning and is installed to provide the primary heating and cooling for the household. That is, for a home with existing air conditioning and an existing electric furnace, boiler, or electric baseboard heating to be eligible for a rebate for a heat pump, the heat pump must replace the majority of the usage for both the air conditioner and the electric furnace, boiler, or electric baseboard heating to provide the majority of heating and cooling in the home. A home may continue to use its pre-existing heating and cooling systems as backup and/or to provide secondary heating or cooling services to the home. It is not allowable for the heat pump to replace an existing, electric heat pump.

4.4. For Heat Pumps: Where the pre-existing equipment is retained as a backup or auxiliary system, an integrated control system is required to be installed to optimize the operation of the heat pump subject to a switchover temperature of 32F or lower.

5. Installation requirements:

5.1. Properly sized. HVAC systems are properly sized to meet the heating and/or cooling load of the home. This measure covers the installation of a residential sized ($\leq 65,000$ Btu/hr.) heat pump. Manual J load calculation should be performed by the contractor to determine appropriate capacity for the specific home.

5.2. Properly selected equipment. HVAC equipment is ENERGY STAR certified and properly selected and matched. Proper selection includes ensuring that the specific equipment meets the design conditions of the home's load profile (e.g., latent loads and sensible loads). ENERGY STAR certificate or reference ID should be provided with application documentation.

5.2.1. An ENERGY STAR certified programmable or smart thermostat shall be installed with the equipment, if required to increase the efficiency of the equipment.

- 5.2.2.** If a programmable smart thermostat is present and compatible with the proposed measure, no replacement is required; however, smart thermostat should be programmed to customer desired set points.
- 5.2.3.** If an existing pad or riser is present and compatible with the proposed measure, no replacement is required, and the existing pad or riser shall be repurposed. If a new pad or riser is deemed necessary to accommodate the proposed installation, the cost of the removal and disposal of the existing pad or riser, and the installation of the new pad or riser shall be included in the cost of the item.
- 5.2.4.** If an existing security cage is present and compatible with the proposed measure, no replacement is required, and the existing security cage shall be repurposed. If a security cage is present and replacement is deemed necessary to accommodate the proposed installation, the cost of the removal and disposal of the existing security cage, and the installation of a new security cage shall be included in the cost of the item.

5.3. Properly Installed Equipment. HVAC equipment is properly installed and commissioned, including but not limited to, checking that the system's airflow, charge, and amperage draw meets design values and as per manufacturer specifications. Documentation of such shall be submitted via the IESP system of record.

Lock out back up heat when outdoor temps are above 45 degrees as the heat pump will be sufficient to heat the home at this temperature.

5.4. Properly functioning distribution system. The home's distribution (i.e., air duct) system meets minimum performance requirements so there is not excessive heat gain or heat loss from the equipment to the home's rooms. The contractor should assume that ducting within 3 feet of the heating equipment is expected to be replaced as needed as part of the installation of the equipment. Replacement of duct work beyond this limit will be evaluated for inclusion in the scope of work on an as needed basis.

6. Basis of Payment

6.1. Inclusions: All materials associated with the installation of the specified HVAC system, including, but not limited to, thermostats; back-up heating and controls as necessary to enable primary heat pump operation; line set; condensate line/condensate pump (if required); 1 air handler unit (additional units to be listed separately), electrical connections³; sheet metal for coil/air handler

³ Electrical connections referenced here cover connections to new unit when electrical components already exist. For electrical modifications, reference Section 6: Measure Category: Electric Upgrades

transition; pads/risers for outdoor units; refrigeration charge (if required); necessary ductwork and duct sealing; drywall, disconnect/safety switch, surge protection, p trap; filter drier; properly sized filter; or other DOE-approved materials.

All necessary incidental activities to complete the installations shall be included in the project cost including labor, professional services, permit fees, and taxes; documentation; pickup and delivery of new equipment; decommissioning and commissioning of equipment, removal/recycling and proper disposal of old equipment (if required).

6.2. Exclusions: Relocating new equipment is not included in the cost of installation.

Section 2: Measure Category: Water Heating Equipment

2.1: Heat Pump Water Heater

1. Description: Installation of a Heat Pump Water Heater (HPWH) that provides domestic water heating by moving heat between indoor air (conditioned or unconditioned) and a storage water tank. To be eligible, the replacement system efficiency must be higher than that of the existing system and meet code minimum code.

2. Eligible Measure Types

2.1. Electric Heat Pump Water Heater (HOMES/HEAR Eligible)

2.1.1. Residential 120-Volt “plug-in” HPWH⁴

2.1.2. Residential 240-Volt HPWH⁵

2.1.3. Central HPWH⁶

3. Ineligible Items:

3.1. Dual Fuel Replacement Models

3.2. Heat pump retrofitted to work with a conventional storage water heater

4. Eligible Application:

4.1. Replacement of an existing water heater with a new energy efficient water heater of the same fuel type (HOMES)

4.2. First-time purchase of a heat pump water heater (e.g., when upgrading an electric-resistance storage water heater to a heat pump water heater). If HPWH will be used in conjunction with an auxiliary water heater, the HPWH must be the primary water heating source able to handle most of the building’s water heating needs.

4.3. Replacement of a non-electric water heater. (HEAR only)

5. Installation Requirements:

5.1. Always follow manufacturer guidelines for installation

⁴ The retrofit ready, plug-in 120-volt HPWH is the ideal option for customers with natural gas or propane water heaters and would incur significant home electric upgrade costs from fuel switching.

⁵ 240V HPWH is the preferred technology for new construction or electric resistance water heater replacements.

⁶ Only applicable to multifamily buildings when the rebate and equipment applies to multiple dwellings. Central systems currently do not have ENERGY STAR specifications that address their system-based efficiency. An alternative efficiency standard can be proposed for DOE review and approval.

5.2. Properly sized. Equipment must be properly sized to meet household hot water demand. Use the Department of Energy (DOE) [Domestic Hot Water First Hour Rating Calculator](#) to estimate peak usage.

5.3. Properly selected equipment. Heat pump water heaters must comply with the standards outlined in the [Advanced Water Heating Specification](#). These standards include meeting specific efficiency and performance criteria as defined by ENERGY STAR and other regulatory bodies. ENERGY STAR certificate or reference ID should be provided with application documentation.

5.4. Properly located: Equipment must be installed in locations that maintain temperature between 40°–90°F range year-round and with measures to prevent freezing in cold temperatures without power.

Note: Contractors should inform customers that HPWH can be loud, and it is highly recommended that the equipment is most suitably located in non-living spaces like garages or basements to minimize disruption and maintain comfort.

5.5. Properly installed equipment. Equipment is properly installed and commissioned, following manufacturer guidelines regarding the required air space around the water heater, airflow, drainage, and ducting/ventilation. If the installation location has inadequate air space, additional air flow must be facilitated through louvered door, vent, and/or other means. Insulate hot water piping to at least the minimum requirements in IECC R403.5.3 or in accordance with local codes—whichever is greater. To improve overall system performance, insulate all hot water piping.

5.6. Properly insulated: The equipment shall have insulation added to the first 6 feet of both hot- and cold- water uninsulated pipes. Insulation value must be a minimum of R3 and ENERGY STAR certified if available.

5.7. Properly set settings. Equipment should be set to the recommended mode; water temperature set point to 120°F.

Additional resources:

- [Energy.Gov HPWH](#)
- [ENERGY STAR Installation best practices](#)
- [Advanced Water Heating Specification](#)
- [Advanced Water Heating Initiative](#)

6. Basis of Payment

6.1. Inclusions: Flexible piping connections; check valve or heat trap; drain pan; pipe insulation; T&P relief valve; Supply line connections; Condensate line/condensate pump (if required); all ancillary equipment i.e. fans, blowers, pumps, storage tanks, piping, and controls.

All necessary incidental activities to complete the installations shall be included in the project cost including labor, permit fees, and taxes; documentation; pickup and delivery of new equipment; decommissioning and commissioning of equipment, removal/recycling and proper disposal of old equipment (if required).

6.2. Exclusions: Relocating new equipment or adding recirculation pumps shall not be included in the installation costs.

2.2: Water Heater (Natural Gas or Electric)

1. Description: Installation of a new, efficient water heating system. To be eligible, the replacement system efficiency must be higher than that of the existing system and meet code minimum code. Water heaters heat and store water at a thermostatically controlled temperature, storage tank water heater, or to heat water but contain no more than one gallon of water per 4,000 BTU per hour of input, instantaneous water heater.

2. Eligible Measure Types

2.1. Storage Tank Water Heater (HOMES only)

2.2. Tankless Water Heater (HOMES only)

3. Ineligible Items:

3.1. N/A

4. Eligible Application:

4.1. Replacement of an existing water heater with higher efficiency system than the existing system.

5. Installation Requirements

5.1. Properly sized. Equipment must be properly sized to meet household hot water demand. Use the Department of Energy (DOE) [Domestic Hot Water First Hour Rating Calculator](#) to estimate peak usage.

5.2. Properly meet standards. Natural Gas systems must comply with the standards outlined in the Advanced Water Heating Specification for Gas-Fueled Residential Storage Water Heaters. These standards include meeting specific efficiency and performance criteria as defined by ENERGY STAR and other regulatory bodies. ENERGY STAR certificate or reference ID should be

provided with application documentation. Consumer water heaters as defined by 42 U.S.C. 6291(16), must meet the energy conservation standards specified in the Code of Federal Regulations at 10 CFR 430.32(d).

- 5.3. Properly selected equipment.** The equipment must be designed to heat water to a temperature no greater than 180°F and must use a single-phase external power supply. Storage type units are electric storage water heaters with an input of 12 kilowatts or less and a rated storage capacity between 20 and 120 gallons. Instantaneous (tankless) type water heaters are units with an input of 12 kilowatts or less and a manufacturer's specified storage capacity of less than 2 gallons.
- 5.4. Properly located.** Local building codes will dictate specific requirements for water heater placement, including proximity to walls, ventilation, and distance from potential ignition sources.
- 5.5. Properly installed equipment.** Equipment is properly installed and commissioned, following manufacturer guidelines regarding the required air space around the water heater, airflow, drainage, and ducting/ventilation. Insulate hot water piping to at least the minimum requirements in [IECC R403.5.3](#) or in accordance with local codes—whichever is greater. To improve overall system performance, insulate all hot water piping.
- 5.6. Properly insulated:** The equipment shall have insulation added to the first 6 feet of both hot- and cold-water uninsulated pipes. Insulation value must be a minimum of R-3 and ENERGY STAR certified if available.
- 5.7. Proper settings.** Equipment should be set to the recommended mode, with the water temperature set point at 120°F.

6. Basis of Payment

- 6.1. Inclusions:** Flexible piping connections; check valve or heat trap; drain pan; pipe insulation; T&P relief valve; Supply line connections; Condensate line/condensate pump (if required); all ancillary equipment i.e. fans, blowers, pumps, storage tanks, piping, and controls.

All necessary incidental activities to complete the installations shall be included in the project cost including labor, permit fees, and taxes; documentation; pickup and delivery of new equipment; decommissioning and commissioning of equipment, removal/recycling and proper disposal of old equipment (if required).

- 6.2. Exclusions:** Relocating new equipment or adding recirculation pumps shall not be included in the installation costs.

Section 3: Measure Category: Laundry Equipment

- 1. Description:** Installation of a new efficient ENERGY STAR® certified appliance. To be eligible, the replacement system efficiency must be higher than that of the existing system and meet minimum code.

- 2. Eligible Measure Types**
 - 2.1.** Electric Heat Pump Clothes Dryer (**/HEAR**)
 - 2.2.** Electric Clothes Washer (**HOMES only**)
 - 2.3.** Heat Pump Washer-Dryer combination (**HOMES/HEAR**)

- 3. Ineligible Items:**
 - 3.1.** N/A

- 4. Eligible Application:**
 - 4.1.** Replacement of a non-electric appliance (HEAR only)
 - 4.2.** When the purchase is a first-time purchase of a heat pump clothes dryer for the dwelling unit. This includes upgrading an electric clothes dryer to a heat pump dryer. (HEAR only)
 - 4.3.** Installation of efficient clothes washer to replace existing standard equipment

- 5. Installation Requirements:**
 - 5.1.** Follow manufacturer guidelines for installation.

- 6. Basis of Payment**
 - 6.1. Inclusions:** Required water supply hoses/drain hoses, pipe connections, and wiring; drain pan; sealing of ventilation duct (if required); Supply line connections; all necessary incidental activities to complete the installation shall be included in the project cost including labor, permit fees, and taxes; pickup and delivery of new equipment; removal/recycling of old equipment (if required).
 - 6.2. Exclusions:** Relocating new equipment is not included in the cost of the installation.

Section 4: Measure Category: Kitchen Equipment

1. Description: Installation of ENERGY STAR® certified appliance to replace existing standard equipment.

2. Eligible Measure Types

2.1. Electric Cooktop, Range, or Oven (HOMES/HEAR Eligible)

This measure replaces cooking appliances that use natural gas with an electric alternative to reduce natural gas use, save energy needed for cooking, and improve indoor air quality associated with cooking activities.

- 2.1.1. Electric cooktop
- 2.1.2. Electric range
- 2.1.3. Electric oven
- 2.1.4. Induction cooktop
- 2.1.5. Induction cooktop and oven (range)
- 2.1.6. Induction oven

2.2. Dishwasher, Refrigerator or Freezer (HOMES only)

- 2.2.1. Dishwasher
- 2.2.2. Refrigerator
- 2.2.3. Freezer

3. Ineligible Items:

3.1. Dual-fuel appliances

3.2. Replacement of existing electric appliance for an induction appliance (HEAR only)

4. Eligible Application:

4.1. Replacement for a non-electric appliance

4.2. When the purchase is a first-time purchase of an electric cooktop, range, or oven for the dwelling unit. (HEAR only)

4.3. Installation of efficient appliance to replace existing standard equipment

5. Installation Requirements: Follow manufacturer guidelines for installation.

6. Basis of Payment:

- 6.1. Inclusions:** Required water supply hoses/drain hoses, pipe connections, and wiring; supply line connections and disconnections; all necessary incidental activities to complete the installations shall be included in the project cost including labor, permit fees, and taxes; documentation; pickup and delivery of new equipment; decommissioning and commissioning of equipment, removal/recycling and proper disposal of old equipment (if required).
- 6.2. Exclusions:** Relocating new equipment is not included in the cost of the installation.

Section 5: Measure Category: Insulation and Air Sealing

5.1: Air Sealing

- 1. Description:** Thermal shell air leaks are sealed through strategic use and location of airtight materials. This may include sealing in the attic, crawlspace, chases, electrical and plumbing penetrations, and along the exterior walls.
- 2. Eligible Measure types:**
 - 2.1. Door Sweeps (HOMES/HEAR)**
 - 2.2. Weatherstripping (HOMES/HEAR)**
 - 2.3. Sealing (HOMES/HEAR)**
 - 2.4. Ventilation (HOMES/HEAR)**
- 3. Eligible applications:** Sealing products properly installed in an existing home.
- 4. Installation Requirements:**
 - 4.1. Door Sweeps** must be made of resilient materials and be properly fitted to completely seal to the threshold of the door. Door sweep shall be installed along the bottom of the unit entry doorway(s).
 - 4.2. Weatherstripping** should be applied to door frames and windows between conditioned and unconditioned spaces.
 - 4.3. Sealing** gaps, cracks, seams, and penetrations between conditioned and unconditioned space (such as gaps around lighting fixtures, HVAC duct boots, electric wiring, plumbing pipes, and flues) should be sealed with sealants (e.g., caulk, foam, aerosol sealant)
 - 4.4. Ventilation (**Must be combined with Air Sealing or achieve 3 ACH50):** This measure applies to the installation of new exhaust fans. These exhaust fans are needed for continuous ventilation due to a home not having adequate ventilation. The existing home may not meet current ventilation standards in its unaltered state, or it may not meet current ventilation standards due to the installation of measures that reduce outside air entering the home (i.e. air sealing). The benefit of this measure is improved indoor air quality, and when combined with air sealing, the measure enables the transition to electrification of the home. Types include: Range hoods and in-line fans, Utility room fans and Bathroom fans.

5. Basis of Payment

5.1. Inclusions: Required materials such as door sweeps, weatherstripping, and sealing materials. All necessary incidental activities to complete the installations shall be included in the project cost including labor, permit fees, and taxes; documentation; pickup and delivery; removal/recycling and proper disposal of old equipment (if required).

5.2: Insulation

1. **Description:** Insulation is installed to maintain the temperature of the home and reduce load on the heating and cooling systems. Insulation is applied in walls, ceilings, floors above unconditioned or conditioned spaces, and/or to the foundation to create a thermal barrier for the home.
2. **Eligible Measure Types**
 - 2.1. Attic, Ceiling, Vault Insulation (**HOMES/HEAR**)
 - 2.2. Foundation Insulation (**HOMES/HEAR**)
 - 2.3. Floor and Frame Floor Insulation (**HOMES/HEAR**)
 - 2.4. Wall Insulation (**HOMES/HEAR**)
 - 2.5. Wall Insulation (above the ground)
 - 2.5.1. Uninsulated wood frame wall (**HOMES/HEAR**)
 - 2.5.2. Insulated 2x4 wood frame wall (**HOMES/HEAR**)
 - 2.6. Crawlspace encapsulation (**HOMES/HEAR**)
3. **Ineligible Items**
 - 3.1. Blown insulation removal
4. **Eligible Applications**
 - 4.1. Must meet minimum program R-value requirements as described below.
5. **Installation Requirements**
 - 5.1. Attic, Ceiling, Vault Insulation
 - 5.1.1. Attics should be insulated to the ENERGY STAR recommended levels. If no insulation is present, R-49 insulation should be added, or the maximum allowable by the space being insulated. If insulation is present, additional insulation should be added until R49 insulation levels are achieved, or the maximum allowable by the space being insulated.
 - 5.2. Foundation Insulation
 - 5.2.1. Spaces below ground level such as basement or crawl spaces shall be insulated to the ENERGY STAR recommended levels.

5.2.1.1. Zones 4A and 4B: Add R10 insulative wall sheathing or R13 batt

5.2.1.2. Zones 4C and 5-8: Add R15 insulative wall sheathing or R19 batt

5.3. Floor and Frame Floor Insulation

5.3.1. Floor insulation should be improved if the floor is located above a vented crawl space that does not contain pipes or HVAC. Floor insulation should not be installed above a basement or if there is anything in the crawlspace that could freeze or operate less efficiently in an environment resembling the outdoors. In such an instance, it is recommended to insulate the crawl space/ basement walls and ground to keep the equipment within the conditioned space.

5.3.2. Insulation should be added to the floor to meet the ENERGY STAR recommended insulation value of R19 in climate zones 4, and R30 in climate zones 5

5.4. Wall Insulation

5.4.1. Insulation should be added to the wall to meet ENERGY STAR recommendations.

5.5. Wall Insulation (above the ground)

5.5.1. Uninsulated wood frame wall)

5.5.1.1. Drill holes in the sheathing and blow insulation into the empty wall cavity before installing the new siding, and

5.5.1.2. Zones 4–8: Add R5 to R10 insulative wall sheathing beneath the new siding.

5.5.2. Insulated 2x4 Wood Frame Wall

5.5.2.1. Zones 4–8: Add R5 to R10 insulative wall sheathing beneath the new siding.

5.6. Access Points

5.6.1. If an additional access point is deemed necessary to accommodate the proposed installation, the access point shall be made in an inconspicuous area and be an opening of no less than 144 square inches. Any access points created to facilitate insulation installation shall be restored to their original or an improved condition upon completion of the work. Restoration includes, but is not limited to, the repair or replacement of removed materials, sealing of openings, and finishing to match surrounding surfaces. All associated costs for

removal, disposal, and restoration shall be included in the cost of the item and comply with applicable building codes.

6. Basis of Payment

- 6.1. Inclusions:** Batt or rolled insulation, loose-fill insulation, blown-in insulation, rigid board insulation, spray foam insulation, interior or exterior drill plugs, baffles, blocking materials, access points, depth markers, electrical junction box markers, damming materials, patching/painting where insulation is installed, and house wrap. All necessary incidental activities to complete the installations shall be included in the project cost including labor, permit fees, and taxes; documentation; pickup and delivery of new equipment; restoration; removal/recycling and proper disposal of old equipment (if required).
- 6.2. Exclusions:** Remediation work, patching/painting from damages not directly created from the installation, relocating access points, exhaust fan terminations, removal of blown-in insulation.

5.3: Duct Insulation and Sealing

- 1. Description:** This measure describes evaluating the savings associated with performing duct sealing using mastic sealant, Aroseal, or injection of UL certified and low VOC for sealant to the distribution system of homes with either central air conditioning or a ducted heating system. It also includes adding insulation to uninsulated or poorly insulated ducts located in unconditioned or semi conditioned spaces.
- 2. Eligible Measure Types**
 - 2.1.** Duct insulation (**HOMES/HEAR**)
 - 2.2.** Duct sealing (**HOMES/HEAR**)
- 3. Eligible Applications**
 - 3.1.** Duct insulation and sealing shall be performed to program standards on an existing home.
- 4. Installation Requirements**
 - 4.1. Duct sealing:** Seal all structural and mechanical penetrations in unconditioned spaces. Duct system seal should be “tight” upon completion of measure implementation.

- 4.1.1. Flexible ducts with excessive length shall be cut to proper length and sharp bends shall be corrected so bends are greater than or equal to one duct diameter radius.
- 4.1.2. All duct leaks, connections, and plenums shall be sealed with UL-approved mastic, UL 181 tape, or equivalent (e.g., aerosol sealant) used in strict accordance with manufacturer's instructions.
- 4.1.3. If the air filter is installed in a filter box attached to the air handler, the filter access panel should be fitted with an air-tight gasket.
- 4.1.4. Duct boots in unconditioned spaces shall be sealed to finished surfaces with caulk, spray foam, or other approved sealants.
- 4.1.5. Upon installation complete, a pressure fan test shall be conducted. Pressure fan testing of sealed ducts shall read at or below 4. Results of the pressure fan testing shall be recorded within IESP software.

4.2. Duct insulation: ducts in unconditioned and semi conditioned spaces with R4 or less insulation should be insulated to R8.

4.3. Combine: When possible, duct sealing and duct insulation should be combined for maximum efficiency, duct insulation should be performed after duct sealing if both measures are being performed.

5. Basis for Payment

5.1. Inclusions Required materials such as insulation, mastic sealant, or other sealants. All necessary incidental activities to complete the installations shall be included in the project cost including labor, permit fees, and taxes; documentation; pickup and delivery of new equipment; restoration; removal/recycling and proper disposal of old equipment (if required).

Section 6: Measure Category: Electric Upgrades

6.1 Electric Load Service Center (Electrical Panel)

- 1. Description:** Any improvement, upgrade, or replacement to the capacity of the electrical load service center.
- 2. Eligible Measure Type:**
 - 2.1.** Electrical Panel (200 amp) (**HEAR only**)
- 3. Eligible Application:**
 - 3.1.** Upgrades to the electric load service center are required to allow for home electrification upgrades when the existing system is at capacity.
- 4. Installation Requirements:**
 - 4.1.** All electric wiring installation must be completed by a licensed electrician with a valid license number provided with application documentation.
 - 4.2.** Electric load service center upgrades must comply with the National Electric Code (NEC).
 - 4.3.** UL listed cables which have been tested to the appropriate standards in the NEC should be used in all installations.
 - 4.4.** All required permits must be obtained prior to installation or upgrade of electric wiring systems and panel upgrades.
 - 4.5.** All conduit and wire molding shall be firmly mounted to the interior walls and ceiling, and paint matched to the room.
- 5. Basis of Payment**
 - 5.1.** Electrical panel upgrades will be paid for at the contract lump sum price for electrical panel upgrades. The cost of all submittals of reporting documentation as required by the US DOE in the PNNL, professional services, materials, equipment and labor required for the installation of breakers, conduit, conductors, and any other necessary incidentals required for to perform this work shall be included in the cost of the pay item including labor, permit fees, and taxes; drywall and additional materials for restoration – inclusive of paint in all finished spaces; pickup and delivery of new equipment; utility disconnect/connect costs; removal/recycling of old equipment (if required). The cost of any electrical wiring shall be included in the cost of other items.

6.2 Electric Wiring

- 1. Description:** Home electrical wiring may need to be upgraded before qualified energy efficiency improvements projects can be installed.
- 2. Eligible Measure Type:**
 - 2.1. Electrical Wiring (HEAR only)**
- 3. Eligible Application:**
 - 3.1.** Upgrades to the electric wiring are required to allow for home electrification upgrades when the existing system is at capacity or when electrical wiring is required to facilitate the installation of another eligible program measure.
- 4. Installation Requirements:**
 - 4.1.** All electric wiring installations must be completed by a licensed electrician with a valid license number provided with application documentation.
 - 4.2.** Electric wiring upgrades must comply with the National Electric Code (NEC).
 - 4.3.** UL listed cables which have been tested to the appropriate standards in the NEC should be used in all installations.
 - 4.4.** All required permits must be obtained prior to installation or upgrade of electric wiring systems and panel upgrades.
 - 4.5.** All conduit and wire molding shall be firmly mounted to the interior walls and ceiling, and paint matched to the room, applied wall-to-wall in all finished spaces.
- 5. Basis of Payment**
 - 5.1.** Cost of electrical wiring upgrades will be paid for at a unit price per linear foot, complete in place. The cost of the materials, equipment, and labor required for the installation of the electrical wiring for the equipment, low voltage electrical wiring for the thermostats, and conduit and/or wire molding, and any other necessary incidentals required for installation including but not limited to conduit, wire molding, mounting, hardware, and paint as required, shall be included in the cost of the wiring upgrades.
 - 5.2. Inclusions:** Required wiring and connections. All necessary incidental activities to complete the installations shall be included in the project cost including labor, permit fees, and taxes; drywall and additional materials for restoration – inclusive of paint in all finished spaces; documentation; pickup and delivery of

new equipment; removal/recycling and proper disposal of old equipment (if required).

Section 7: Measure Category: Lighting

- 1. Description:** Installation of energy efficient Light Emitting Diode (LED) lighting to replace existing incandescent or fluorescent bulbs.
- 2. Eligible Measure Types**
 - 2.1. LED Bulbs – Indoor/Outdoor (HOMES)**
 - 2.1.1. LED A-19 Bulb
 - 2.1.2. LED Globe Bulb
 - 2.1.3. LED PAR Bulb
 - 2.1.4. LED BR Bulb
 - 2.1.5. LED MR16 Bulb
- 3. Ineligible Items**
 - 3.1.** Replacement of existing LED products.
- 4. Eligible Application:**
 - 4.1.** Replacement of existing incandescent lamps with LED bulbs or retrofit kits.
 - 4.2.** Eligible cases for consideration of upgrades to outdoor lighting shall only include the replacement of bulbs in existing lighting fixtures that are affixed to the exterior of the dwelling and found to be contributing to the dwelling energy consumption.
- 5. Installation Requirements:** Follow manufacturer guidelines for installation.
 - 5.1.** Replacement lamps or retrofit kits shall be installed according to manufacturer specifications.
 - 5.2.** Replacement bulbs must be ENERGY STAR labeled based upon the v2.1 ENERGY STAR specification for luminaires or equivalent to the most recent version of ENERGY STAR specifications.
 - 5.3.** Lamp replacements shall meet or exceed existing lumen output or better.
 - 5.4.** All lamps installed in a space must have consistent color temperature (e.g. 3500K)
- 6. Basis of Payment**
 - 6.1.** Inclusions: All required wiring. All necessary incidental activities to complete the installations shall be included in the project cost including labor, permit fees, and taxes; pickup and delivery of new equipment; Removal/recycling of old equipment (if required).

Section 8: Measure Category: Miscellaneous

8.1 Pool Pump

- 1. Description:** Installation of an ENERGY STAR variable speed pool pump.
- 2. Eligible Measure Types**
 - 2.1.** Pool Pump (3/4 HP) (**HOMES**)
 - 2.2.** Pool Pump (2 HP) (**HOMES**)
- 3. Eligible Application:**
 - 3.1.** Replacement for existing single-speed pool pump.
 - 3.2.** Residential in-ground or above ground pool.
- 4. Installation Requirements:**
 - 4.1.** Follow manufacturer guidelines for installation.
 - 4.2.** Calculate and program equipment for adequate circulation at the lowest possible motor speed.
 - 4.3.** Must be electronically commutated motor (ECM).
 - 4.4.** Must be ENERGY STAR certified variable speed pump or ENERGY STAR certified multi-speed pool pump.
 - 4.5.** Must come equipped with a built-in timer and control panel that allows for scheduling and programming of different speeds at various times throughout the day.
 - 4.6.** Electrical components and bonding must meet the requirements of the National Electrical Code (NEC).
- 5. Basis of Payment**
 - 5.1. Inclusions:** Required water supply hoses/drain hoses, pipe connections, and wiring; drain pan; sealing of ventilation duct (if required); Supply line connections. All necessary incidental activities to complete the installations shall be included in the project cost including labor, permit fees, and taxes; Pickup and delivery of new equipment; removal/recycling of old equipment (if required)