



# Eligible Residential CEIP Upgrades

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## HEATING, VENTILATION, AND AIR CONDITIONING

### Smart Thermostat

Upgrade ID: R-HC-001

#### Eligible Upgrade Description

- Smart thermostats are used to reduce home cooling and heating loads through a configurable schedule of temperature setpoints (like a programmable thermostat) and automatic scheduling to better match heating and cooling to meet occupant comfort needs. Learning smart thermostats with geofencing contain specialized artificial intelligence that “learns” heating and cooling preferences and can determine when the home is occupied.

**Effective Useful Life: 11 years**

#### Eligibility Requirements

- The smart thermostat must be ENERGY STAR certified to the most recently published version and must be a learning thermostat with geofencing. The upgrade is only eligible when installed with one or more eligible HVAC heating or cooling upgrades (e.g., high-efficiency gas furnace).
- Must have a manufacturer’s warranty for a period consistent with the industry standard and not less than one year.
- Must have a warranty provided by the Qualified Contractor for defects in materials and labour for a period of not less than one year.

#### Supporting documents required for Project Application Form

- A contractor quote itemizing the equipment to be installed, equipment make and model number(s), and costs of equipment and installation.

#### Supporting documents required for Upgrade Completion Form

- A contractor invoice itemizing the installed equipment, equipment make and model number(s), installation date, and costs of equipment and installation.
- A photo of the thermostat installed on the property.
- A photo of the equipment nameplate label (including model and serial number), with all information legible.

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### High-Efficiency Central Air Conditioner

Upgrade ID: R-HC-002

#### Eligible Upgrade Description

- Eligible air conditioning equipment is centrally installed in the home. High-efficiency technology uses less electricity to move indoor heat to the outside of the home.
- Air conditioning pipe insulation ensures minimal heat is lost before conditioned air is delivered to conditioned spaces. Pipe insulation (required for projects in the City of

Edmonton) is an eligible upgrade cost that can be combined with this upgrade to increase energy savings.

### **Effective Useful Life: 18 years**

#### **Eligibility Requirements**

- The central air conditioner must be ENERGY STAR certified to the most recently published version and be a ducted and split unit. SEER must be equal or greater than 15, or EER equal or greater than 12. The central air conditioner must replace existing air conditioning equipment.
- Must have a manufacturer's warranty for a period consistent with the industry standard and not less than one year.
- Must have a warranty provided by the Qualified Contractor for defects in materials and labour for a period of not less than one year.
- **City of Edmonton additional eligibility requirements:** The insulation of exposed pipe, as it relates to the operation of the system, must be installed with the air conditioner. If not already installed, the pipe insulation work must be completed by a Qualified Contractor if the cost of the insulation and installation is being financed. If the cost of the pipe insulation and installation is not being financed, it can be installed by the property owner.

#### **Supporting documents required for Project Application Form**

- A contractor quote itemizing the equipment to be installed, efficiency specifications, equipment make and model number(s), coil and condenser model numbers, size in tons, and costs of equipment and installation.
- Equipment specification sheet(s) confirming equipment details and ENERGY STAR certification.
- If pipe insulation is being financed, the contractor quote must include insulation type, location, amount (linear metres or feet), per cent of total area covered, costs of material and installation, and applicable material specification sheet(s)

#### **Supporting documents required for Upgrade Completion Form**

- A contractor invoice itemizing the installed equipment, equipment make and model number(s), coil and condenser model numbers, size in tons, installation date, and costs of equipment and installation.
- A photo of the equipment installed on the property.
- A photo of the equipment nameplate label (including model and serial number), with all information legible.
- If pipe insulation is being financed, the contractor invoice must include insulation type, location, amount (linear metres or feet), per cent of total area covered, costs of material and installation, and applicable material specification sheet(s). In addition, a photo of the pipe insulation installed on the HVAC or water heating upgrade is required.

## High-Efficiency Gas Furnace

Upgrade ID: R-HC-003

### Eligible Upgrade Description

- A high-efficiency furnace extracts the maximum amount of heat from burning natural gas.
- Duct insulation ensures minimal heat is lost before conditioned air is delivered to conditioned spaces. Duct insulation (required for projects in the City of Edmonton) is an eligible upgrade cost that can be combined with this upgrade to increase energy savings.

**Effective Useful Life: 16 years**

### Eligibility Requirements

- The residential furnace must be ENERGY STAR certified to the most recently published version. The product must be fueled by natural gas or propane gas. The gas furnace must replace existing, less-efficient primary space heating equipment.
- Must have a manufacturer's warranty for a period consistent with the industry standard and not less than one year.
- Must have a warranty provided by the Qualified Contractor for defects in materials and labour for a period of not less than one year.
- **City of Edmonton additional eligibility requirements:** Annual fuel utilization efficiency (AFUE) must be 97% or higher. The insulation of exposed duct, as it relates to the operation of the system, must be installed with the furnace. If not already installed, the duct insulation must be completed by the same Qualified Contractor completing the installation of the system.

### Supporting documents required for Project Application Form

- A contractor quote itemizing the equipment to be installed, efficiency specifications, equipment make and model number(s), size in kBTU/hour, and costs of equipment and installation.
- Equipment specification sheet(s) confirming equipment details and ENERGY STAR certification.
- If pipe insulation is being financed, the contractor quote must include insulation type, location, amount (linear metres or feet), per cent of total area covered, costs of material and installation, and applicable material specification sheet(s).

### Supporting documents required for Upgrade Completion Form

- A contractor invoice itemizing the installed equipment, equipment make and model number(s), size in kBTU/hour, installation date, and costs of equipment and installation.
- A photo of the equipment installed on the property.
- A photo of the equipment nameplate label (including model and serial number), with all information legible.
- If duct insulation is being financed, the contractor invoice must include insulation type, location, amount (linear metres or feet), per cent of total area covered, costs of material and installation, and applicable material specification sheet(s). In addition, a photo of the duct insulation installed on the HVAC or water heating upgrade is required.

## ECM Motor For Residential Furnace

Upgrade ID: R-HC-004

### Eligible Upgrade Description

- An efficient fan motor adjusts the rate at which furnace heat is delivered to the home. Efficient fan motors with variable speed control use significantly less electricity.

**Effective Useful Life: 6 years**

### Eligibility Requirements

- A brushless DC motor, also known as an electronically commutated motor or ECM, must replace a constant speed motor installed in a natural gas or propane furnace. The new motor must have a variable input.
- Must have a manufacturer's warranty for a period consistent with the industry standard and not less than one year.
- Must have a warranty provided by the Qualified Contractor for defects in materials and labour for a period of not less than one year.

### Supporting documents required for Project Application Form

- A contractor quote itemizing the equipment to be installed, efficiency specifications, equipment make and model number(s), size, and costs of equipment and installation.
- Specification sheet(s) confirming equipment details.

### Supporting documents required for Upgrade Completion Form

- A contractor invoice itemizing the installed equipment, equipment make and model number(s), size, installation date, and costs of equipment and installation.
- A photo of the equipment installed on the property.
- A photo of the equipment nameplate label (including model and serial number), with all information legible.

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## High-Efficiency Gas Boiler

Upgrade ID: R-HC-005

### Eligible Upgrade Description

- A high-efficiency boiler extracts the maximum amount of heat from natural gas by using condensing technology. This means heat from condensing water in the exhaust is extracted, in addition to regular combustion.
- Boiler pipe insulation ensures minimal heat is lost before heated water is delivered to conditioned spaces. Pipe insulation (required for projects in the City of Edmonton) is an eligible upgrade cost that can be combined with this upgrade to increase energy savings.

**Effective Useful Life: 25 years**

## Eligibility Requirements

- The residential boiler must be ENERGY STAR certified to the most recently published version. It must include outdoor reset control and have an AFUE (annual fuel utilization efficiency) equal to or greater than 95%. The product must be fueled by natural gas or propane gas. The high-efficiency gas boiler must replace existing, less-efficient primary space heating equipment.
- Must have a manufacturer's warranty for a period consistent with the industry standard and not less than one year.
- Must have a warranty provided by the Qualified Contractor for defects in materials and labour for a period of not less than one year.
- **City of Edmonton additional eligibility requirements:** The insulation of exposed pipe, as it relates to the operation of the system, must be installed with the boiler. If not already installed, the pipe insulation work must be completed by a Qualified Contractor if the cost of the insulation and installation is being financed. If the cost of the pipe insulation and installation is not being financed, it can be installed by the property owner.

## Supporting documents required for Project Application Form

- A contractor quote itemizing the equipment to be installed, efficiency specifications, equipment make and model number(s), size in kBTU/hour, and costs of equipment and installation.
- Equipment specification sheet(s) confirming equipment details and ENERGY STAR certification.
- If pipe insulation is being financed, the contractor quote must include insulation type, location, amount (linear metres or feet), per cent of the total area covered, costs of material and installation, and applicable material specification sheet(s).

## Supporting documents required for Upgrade Completion Form

- A contractor invoice itemizing the installed equipment, equipment make and model number(s), size in kBTU/hour, installation date, and costs of equipment and installation.
- A photo of the equipment installed on the property.
- A photo of the equipment nameplate label (including model and serial number), with all information legible.
- If pipe insulation is being financed, the contractor invoice must include insulation type, location, amount (linear metres or feet), per cent of total area covered, costs of material and installation, and applicable material specification sheet(s). In addition, a photo of the pipe insulation installed on the HVAC or water heating upgrade is required.

## Air-Source Heat Pump

Upgrade ID: R-HC-007

### Eligible Upgrade Description

- A heat pump is a year-round space conditioning system that provides heating and cooling. An air-source heat pump moves heat energy from inside to outside in the summer and outside to inside in the winter.
- Duct insulation ensures minimal heat is lost before conditioned air is delivered to conditioned spaces. Duct insulation (required for projects in the City of Edmonton) is an eligible upgrade cost that can be combined with this upgrade to increase energy savings.

### Effective Useful Life: 16 years

### Eligibility Requirements

- The air-source heat pump must be ENERGY STAR certified to the most recently published version. The air-source heat pump must replace or be supplemental to an existing less efficient heat source and satisfy at least 50% of the designed heating load for the conditioned space of the home.
- Must have a manufacturer's warranty for a period consistent with the industry standard and not less than one year.
- Must have a warranty provided by the Qualified Contractor for defects in materials and labour for a period of not less than one year.
- **City of Edmonton additional eligibility requirements:** The insulation of exposed duct, as it relates to the operation of the system, must be installed with the heat pump. If not already installed, the duct insulation work must be completed by a Qualified Contractor if the cost of the insulation and installation is being financed. If the cost of the duct insulation and installation is not being financed, it can be installed by the property owner.

### Supporting documents required for Project Application Form

- A contractor quote itemizing the equipment to be installed, efficiency specifications, equipment make and model number(s), capacity in kBTU/hour, and costs of equipment and installation.
- A copy of a completed NRCan ASHP Sizing and Selection Guide Key Specifications Summary Worksheet for the heat pump.
- Documentation demonstrating the per cent of heating load met.
- Equipment specification sheet(s) confirming equipment details and ENERGY STAR certification.
- The Air-Conditioning, Heating, & Refrigeration Institute (AHRI) Reference Number.
- If duct insulation is being financed, the contractor quote must include the insulation type, location, amount (linear metres or feet), and per cent of total area covered, costs of material and installation, and applicable material specification sheet(s).



## Supporting documents required for Completion Form

- A contractor invoice itemizing the installed equipment, equipment make and model number(s), capacity in kBTU/hour, installation date, and costs of equipment and installation.
- A photo of the equipment installed on the property.
- A photo of the equipment nameplate label (including model and serial number), with all information legible.
- If duct insulation is being financed, the contractor invoice must include insulation type, location, amount (linear metres or feet), per cent of total area covered, costs of material and installation, and applicable material specification sheet(s). In addition, a photo of the duct insulation installed on the HVAC or water heating upgrade is required.

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## Heat Recovery Ventilation Or Energy Recovery Ventilation

Upgrade ID: R-HC-008

### Eligible Upgrade Description

- Heat and energy recovery equipment extracts heat and/or energy from stale air exhausted to the outside of the home. The recovered energy is used to reduce the heating of fresh air delivered to the home.
- Duct insulation ensures minimal heat is lost before conditioned air is delivered to conditioned spaces. Duct insulation (required for the City of Edmonton) is an eligible upgrade cost that can be combined with this upgrade to increase energy savings.

**Effective Useful Life:** If replacing an existing system, 18 years. If installed with an upgrade that improves air tightness, the EUL is based on the air sealing upgrade that the heat and energy recovery ventilation system is combined with.

### Eligibility Requirements

- Heat or energy recovery ventilation systems must either replace a less efficient heat or energy recovery ventilation system, or be a required design element required in projects that improve air tightness (e.g., air sealing). The system must be a factory-assembled, packaged unit including fans or blowers that transfer heat between two isolated airstreams, and ENERGY STAR and Home Ventilating Institute (HVI) certified (must appear in section III of the HVI Certified Products Directory). Portable units are ineligible. If replacing, the efficiency of the new unit must be higher than the existing unit.
- If a heat or energy ventilation system is not already installed, heat and energy recovery ventilation systems are only eligible when combined with an eligible upgrade that decreases air leakage (e.g., house wrap, doors, windows, insulation and other air sealing). The pre-project EnerGuide Home Evaluation must include air sealing as a recommended upgrade.
- Must have a manufacturer's warranty for a period consistent with the industry standard and not less than one year.
- Must have a warranty provided by the Qualified Contractor for defects in materials and labour for a period of not less than one year.

- **City of Edmonton additional eligibility requirements:** The insulation of exposed duct, as it relates to the operation of the system, must be installed with the ventilation system. If not already installed, the duct insulation work must be completed by a Qualified Contractor if the cost of the insulation and installation is being financed. If the cost of the duct/pipe insulation and installation is not being financed, it can be installed by the property owner.

#### **Supporting documents required for Project Application Form**

- A contractor quote itemizing the equipment to be installed, efficiency specifications, equipment make and model number(s), capacity, and costs of equipment and installation.
- Equipment specification sheets confirming equipment details, and ENERGY STAR and HVI certification.
- If duct insulation is being financed, the contractor quote must include the insulation type, location, amount (linear metres or feet), and per cent of total area covered, costs of material and installation, and applicable material specification sheet(s).

#### **Supporting documents required for Upgrade Completion Form**

- A contractor invoice itemizing the installed equipment, equipment make and model number(s), capacity, installation date, and costs of equipment and installation.
- A photo of the equipment installed on the property.
- A photo of the equipment nameplate label (including model and serial number), with all information legible.
- If combined with an upgrade that can improve air tightness, in addition to what is listed here, refer to 'Supporting Documentation for the Upgrade Completion Form' for that upgrade's required documentation.
- If duct insulation is being financed, the contractor invoice must include insulation type, location, amount (linear metres or feet), per cent of total area covered, costs of material and installation, and applicable material specification sheet(s). In addition, a photo of the duct insulation installed on the HVAC or water heating upgrade is required.

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## **Ground Source Heat Pump**

Upgrade ID: R-HC-011

### **Eligible Upgrade Description**

- A ground source heat pump is a year-round space conditioning system that provides heating and cooling. The heat pump moves heat from the ground to inside air in the winter and from inside air to the ground in the summer.
- Duct insulation ensures minimal heat is lost before conditioned air is delivered to conditioned spaces. Duct insulation (required for the City of Edmonton) is an eligible upgrade cost that can be combined with this upgrade to increase energy savings.

**Effective Useful Life:** 16 years

## Eligibility Requirements

- The residential heat pump must be ENERGY STAR certified to the most recently published version, satisfy CSA Standard C448, and must be installed by an IGSHPA certified installer. The heat pump must replace or be supplemental to a less-efficient heat source and satisfy at least 50% of the designed heating load for the conditioned space of the home.
- Must have a manufacturer's warranty for a period consistent with the industry standard and not less than one year.
- Must have a warranty provided by the Qualified Contractor for defects in materials and labour for a period of not less than one year.
- **City of Edmonton additional eligibility requirements:** The insulation of exposed duct, as it relates to the operation of the system, must be installed with the heat pump. If not already installed, the pipe insulation work must be completed by a Qualified Contractor if the cost of the insulation and installation is being financed. If the cost of the duct insulation and installation is not being financed, it can be installed by the property owner.

## Supporting documents required for Project Application Form

- A contractor quote itemizing the equipment to be installed, efficiency specifications, equipment make and model number(s), size in kBTU/hour, and costs of equipment and installation.
- Equipment specification sheet(s) confirming equipment details and ENERGY STAR certification.
- Documentation from the Qualified Contractor confirming that the installer is IGSHPA certified, the system meets CSA Standard C448, and the required per cent of the heating load is met.
- If duct insulation is being financed, the contractor quote must include the insulation type, location, amount (linear metres or feet), and per cent of total area covered, costs of material and installation, and applicable material specification sheet(s).

## Supporting documents required for Upgrade Completion Form

- A contractor invoice itemizing the installed equipment, equipment make and model number(s), size in kBTU/hour, installation date, and costs of equipment and installation.
- A photo of the equipment installed on the property.
- A photo of the equipment nameplate label (including model and serial number), with all information legible.
- Documentation from the Qualified Contractor confirming the system meets at least 50% of the heating load.
- If duct insulation is being financed, the contractor invoice must include insulation type, location, amount (linear metres or feet), per cent of total area covered, costs of material and installation, and applicable material specification sheet(s). In addition, a photo of the duct insulation installed on the HVAC or water heating upgrade is required.

## RENEWABLE ENERGY, SOLAR PV & THERMAL

### Solar PV System

Upgrade ID: DER-001

#### Eligible Upgrade Description

- Solar photovoltaic (PV) systems convert solar energy into electricity for use by the building. The system components work together to optimize electricity generation from the sun, providing renewable electricity for both the building they are connected to and the grid.

**Effective Useful Life:** 25 years

#### Eligibility Requirements

- All modules/systems are grid-connected and compliant with the Government of Alberta's Micro-generation Regulation (AR27/2008) and amendments. All PV modules and components must be Canadian Standards Association (CSA) or UL certified. All components must be new and not previously used in an energized solar array. Projects sized greater than 150 KW or classified as a "large micro-generation" by the most recently published Alberta Micro-Generation Regulation require operating procedures at the time of installation. For purposes of sizing, the output is defined as the combined storage and microgeneration (e.g., solar PV system) outputs.
- Warranty periods, from the time of installation, must be, at minimum, the following: Modules: 25-year power performance and 10-year manufacturing warranties; Inverter(s) and/or micro-inverter(s): 10-year manufacturing warranty.
- Must have a warranty provided by the Qualified Contractor for defects in materials and labour for a period of not less than one year.
- City of Edmonton additional eligibility requirements: The PV system must be designed to produce a solar yield that is at least 70% of a system with optimal azimuth and tilt at that location. The solar yield is automatically calculated in the Part I application screen of the Edmonton Solar Rebate Program. Solar PV system expansions are not eligible for rebates through the Edmonton Solar Rebate program.

#### Supporting documents required for Project Application Form

- A contractor quote itemizing the equipment to be installed, make and model number(s), proposed system size (kW DC), proposed annual generation at meter (kWh), and costs of equipment and installation.
- Documentation that includes the name of the property's utility/service provider and site ID (13-digit number on the electricity bill).
- Equipment specification sheet(s) confirming equipment details and warranties.
- City of Edmonton additional supporting documentation: Confirmation of pre-Part I approval for Edmonton's Solar Rebate Program must be received with the CEIP Application.

## Supporting documents required for Upgrade Completion Form

- A contractor invoice itemizing the installed equipment, make and model number(s), installed system size (kW DC), installation date, and costs of equipment and installation.
  - A copy of the “Micro-generation Agreement” (also called the “Interconnection and Operating Agreement”).
  - A copy of the site plan and single line diagram.
  - If the system is greater than 150 KW in size (or classified as a “large micro-generation” by the most recently published Alberta Micro-Generation Regulation): a copy of the system’s operating procedures.
  - Photos of the fully installed solar PV array, with all modules visible and a photo of the inverter installed on the property.
  - Photos of the inverter and module nameplate labels, with all information legible.
  - City of Edmonton supporting documentation: Confirmation of Part 2 approval for Edmonton’s Solar Rebate Program must be received with the CEIP Upgrade Completion package.
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## Solar Thermal Water Heating

Upgrade ID: DER-002

### Eligible Upgrade Description

- Solar thermal water heating includes thermal tubes that capture solar energy and use it to heat water. This may be used for domestic hot water and space heating.
- Solar thermal pipe insulation ensures minimal heat is lost before heated water is delivered to fixtures. Pipe insulation (required for projects in the City of Edmonton) is an eligible upgrade cost that can be combined with this upgrade to increase energy savings.

**Effective Useful Life:** 12 years

### Eligibility Requirements

- All solar thermal collectors must be CSA or UL certified. A residential minimum of SRCC OG-100 rating; and solar thermal system components must have a minimum warranty period of 5 years. The system must replace or supplement an existing hot water heating system.
- Must have a warranty provided by the Qualified Contractor for defects in materials and labour for a period of not less than one year.
- **City of Edmonton additional eligibility requirements:** The insulation of exposed pipe, as it relates to the operation of the system, must be installed with the solar thermal system. If not already installed, the pipe insulation must be completed by the same Qualified Contractor completing the installation of the system.

## Supporting documents required for Project Application Form

- A contractor quote itemizing the equipment to be installed, type of collectors and system, make and model number(s), proposed system size, and proposed annual heat generation.
  - A copy of the proposed site plan and system design schematic.
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- Equipment specification sheet(s) confirming equipment details, SRCC OG-100 rating, and CSA Compliance.
- If pipe insulation is being installed, the contractor quote must include the insulation type, location, amount (linear metres or feet), and per cent of total area covered, costs of material and installation, and applicable material specification sheet(s).

### **Supporting documents required for Upgrade Completion Form**

- A contractor invoice itemizing the installed equipment, equipment make and model number(s), installed system size, installation date, and costs of equipment and installation.
- A copy of the final system schematic (P&ID).
- A photo of the equipment installed on the property.
- Photos of the equipment nameplate labels, with all information legible.
- If pipe insulation is being installed, the contractor invoice must include insulation type, location, amount (linear metres or feet), per cent of total area covered, costs of material and installation, and applicable material specification sheet(s). In addition, a photo of the pipe insulation installed as part of the solar thermal system is required.

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## **Battery Energy Storage**

Upgrade ID: DER-005

### **Eligible Upgrade Description**

- Battery energy storage systems enable the storage of renewable energy produced on the property, which may be used at a later point in time.

**Effective Useful Life:** 10 years

### **Eligibility Requirements**

- Battery energy storage is eligible only when installed with a new grid-tied solar PV array and used to store energy from the array. All components must be CSA certified, and warranty period(s) must be a minimum of 10 years, guaranteeing 60% or more of installed storage capacity during the period(s).
- The upgrade must be a new lithium-ion battery.
- Must have a warranty provided by the Qualified Contractor for defects in materials and labour for a period of not less than one year.

### **Supporting documents required for Project Application Form**

- A contractor quote itemizing the cost of equipment to be installed, equipment make and model number(s), size/capacity, and costs of equipment and installation.
- Specification sheet(s) confirming equipment details.
- A single line diagram for the project, demonstrating how the battery energy storage will be integrated into the solar PV array.

### **Supporting documents required for Completion Form**

- A contractor invoice itemizing the installed equipment, equipment make and model number(s), size/capacity, installation date, and costs of equipment and installation.
- A copy of the Interconnection and Operating Agreement signed between micro-generation owner and the wire service provider(s) for the solar PV system connected to the battery energy storage.
- A photo of the equipment installed on the property.
- A photo of the equipment nameplate label, with all information legible.

## LIGHTING

### Indoor Lighting Control

Upgrade ID: R-L-001

#### Eligible Upgrade Description

- Lighting controls use motion and daylight sensing to control indoor lighting. Multiple fixtures may be controlled through one sensor or each fixture may have its own. These sensors are an effective way to control lighting use in low occupancy areas.

**Effective Useful Life:** 10 years

#### Eligibility Requirements

- Lighting controls including timers, occupancy, and daylight sensors must be Design Lights Consortium (DLC) qualified. Sensors with "manual on override," stepped, and dimming controls are not eligible.
- Must have a manufacturer's warranty for a period consistent with the industry standard and not less than one year.
- Must have a warranty provided by the Qualified Contractor for defects in materials and labour for a period of not less than one year.

#### Supporting documents required for Project Application Form

- A contractor quote itemizing the control type to be installed, quantity, watts controlled, equipment make and model number(s), and costs of equipment and installation.
- Equipment specification sheet(s) confirming equipment details and DLC qualification.

#### Supporting documents required for Completion Form

- A contractor invoice itemizing the control type installed, quantity, watts controlled, equipment makes and model number(s), installation date, and costs of equipment and installation.
- Photo(s) of the controls installed on the property.

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### Lighting Fixture

Upgrade ID: R-L-002

#### Eligible Upgrade Description

- Eligible lighting fixtures are permanently installed and hardwired LED lighting fixture including downlight, track, ceiling and wall-mounted, or porchlight fixtures.

**Effective Useful Life:** 15 years

#### Eligibility Requirements

- The LED lighting fixture must be ENERGY STAR certified to the most recently published version. Plug-in fixtures such as table lamps and floor lamps are not eligible.



- Must have a manufacturer's warranty for a period consistent with the industry standard and not less than one year.
- Must have a warranty provided by the Qualified Contractor for defects in materials and labour for a period of not less than one year.

**Supporting documents required for Project Application Form**

- A contractor quote itemizing the fixture type to be installed, quantity, watts of the existing and new fixtures, equipment make and model number(s), and costs of equipment and installation.
- Equipment specification sheet(s) confirming equipment details and ENERGY STAR certification.

**Supporting documents required for Upgrade Completion Form**

- A contractor invoice itemizing the fixture type installed, quantity, watts of the previous and newly installed fixtures, equipment makes and model number(s), installation date, and costs of equipment and installation.
- Photo(s) of the fixtures installed on the property.

## WATER HEATING

### Drain Water Heat Recovery

Upgrade ID: R-W-001

#### Eligible Upgrade Description

- Drain water heat recovery transfers heat from the shower drain water to pre-warm the cold supply water before it goes into the water heater.

**Effective Useful Life:** 20 years

#### Eligibility Requirements

- The drain water heat recovery equipment must be listed in the [NRCAN approved list of drain-water heat recovery products](#).
- Must have a manufacturer's warranty for a period consistent with the industry standard and not less than one year.
- Must have a warranty provided by the Qualified Contractor for defects in materials and labour for a period of not less than one year.

#### Supporting documents required for Project Application Form

- A contractor quote itemizing the cost of equipment to be installed, efficiency specifications, equipment make and model number(s), size, and costs of equipment and installation.
- Specification sheet(s) confirming equipment details.

#### Supporting documents required for Upgrade Completion Form

- A contractor invoice itemizing the installed equipment, equipment make and model number(s), size, installation date, and costs of equipment and installation.
- A photo of the equipment installed on the property.
- A photo of the equipment nameplate label (including model and serial number), with all information legible.

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### Heat Pump Water Heater

Upgrade ID: R-W-003

#### Eligible Upgrade Description

- A heat pump water heater replaces a conventional storage tank water heater. Rather than the heat coming from burning gas or an electric coil in the tank, heat is sourced from the air around the tank. Heat pump water heaters deliver hot water at a much higher efficiency than conventional water heaters.
- Pipe insulation ensures minimal heat is lost before heated water is delivered to fixtures. Pipe insulation (required for the City of Edmonton) is an eligible upgrade cost that can be combined with this upgrade to increase energy savings.

**Effective Useful Life:** 15 years

### **Eligibility Requirements**

- The heat pump water heater must be ENERGY STAR certified to the most recently published version. The product must replace an existing water heater.
- Must have a manufacturer's warranty for a period consistent with the industry standard and not less than one year.
- Must have a warranty provided by the Qualified Contractor for defects in materials and labour for a period of not less than one year.
- **City of Edmonton additional eligibility requirements:** The insulation of exposed pipe, as it relates to the operation of the system, must be installed with the heat pump water heater. If not already installed, the pipe insulation must be completed by the same Qualified Contractor completing the installation of the system.

### **Supporting documents required for Project Application Form**

- A contractor quote itemizing the equipment to be installed, efficiency specifications, equipment make and model number(s), size/capacity, and costs of equipment and installation.
- Equipment specification sheet(s) confirming equipment details and ENERGY STAR certification.
- If pipe insulation is being installed, the contractor quote must include the insulation type, location, amount (linear metres or feet), and per cent of total area covered, costs of material and installation, and applicable material specification sheet(s).

### **Supporting documents required for Upgrade Completion Form**

- A contractor invoice itemizing the installed equipment, equipment make and model number(s), size/capacity, installation date, and costs of equipment and installation.
- A photo of the equipment installed on the property.
- A photo of the equipment nameplate label (including model and serial number), with all information legible.
- If pipe insulation is being installed, the contractor invoice must include insulation type, location, amount (linear metres or feet), per cent of total area covered, costs of material and installation, and applicable material specification sheet(s). In addition, a photo of the pipe insulation installed on the HVAC or water heating upgrade is required.

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## **High-Efficiency Storage Water Heater**

Upgrade ID: R-W-004

### **Eligible Upgrade Description**

- A high-efficiency storage water heater replaces a conventional gas or electric storage water heater.
- Pipe insulation ensures minimal heat is lost before heated water is delivered to fixtures. Pipe insulation (required for the City of Edmonton) is an eligible upgrade cost that can be combined with this upgrade to increase energy savings.

**Effective Useful Life:** 15 years

### **Eligibility Requirements**

- The storage water heater must be ENERGY STAR certified to the most recently published version. The product must be fueled by natural gas or propane gas.
- Must have a manufacturer's warranty for a period consistent with the industry standard and not less than one year.
- Must have a warranty provided by the Qualified Contractor for defects in materials and labour for a period of not less than one year.
- **City of Edmonton additional eligibility requirements:** Storage hot water energy factor (EF) must be 0.8 EF or higher. The insulation of exposed pipe, as it relates to the operation of the system, must be installed with the water heater. If not already installed, the pipe insulation must be completed by the same Qualified Contractor completing the installation of the system.

### **Supporting documents required for Project Application Form**

- A contractor quote itemizing the equipment to be installed, efficiency specifications, equipment make and model number(s), size, and costs of equipment and installation.
- Equipment specification sheet confirming equipment details and ENERGY STAR certification.
- If pipe insulation is being installed, the contractor quote must include the insulation type, location, amount (linear metres or feet), and per cent of total area covered, costs of material and installation, and applicable material specification sheet(s).

### **Supporting documents required for Completion Form**

- A contractor invoice itemizing the installed equipment, equipment make and model number(s), size, installation date, and costs of equipment and installation.
- A photo of the equipment installed on the property.
- A photo of the equipment nameplate label (including model and serial number), with all information legible.
- If pipe insulation is being installed, the contractor invoice must include insulation type, location, amount (linear metres or feet), per cent of total area covered, costs of material and installation, and applicable material specification sheet(s). In addition, a photo of the pipe insulation installed on the HVAC or water heating upgrade is required.

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## **Tankless Gas Water Heater**

Upgrade ID: R-W-002

### **Eligible Upgrade Description**

- Tankless (also called instantaneous or on-demand) water heaters supply domestic hot water to the home without using a storage tank. The tankless system avoids heat loss from water stored in a tank that must be regularly re-heated to maintain a safe water temperature.

- Pipe insulation ensures minimal heat is lost before heated water is delivered to fixtures. Pipe insulation (required for the City of Edmonton) is an eligible upgrade cost that can be combined with this upgrade to increase energy savings.

**Effective Useful Life:** 13 years

### **Eligibility Requirements**

- The tankless gas water heater must replace an existing primary water heater and must be ENERGY STAR certified to the most recently published version.
- Must have a manufacturer's warranty for a period consistent with the industry standard and not less than one year.
- Must have a warranty provided by the Qualified Contractor for defects in materials and labour for a period of not less than one year.
- **City of Edmonton additional eligibility requirements:** Storage hot water energy factor (EF) must be 0.9 or higher. The insulation of exposed pipe, as it relates to the operation of the system, must be installed with the water heater. If not already installed, the pipe insulation must be completed by the same Qualified Contractor completing the installation of the system.

### **Supporting documents required for Project Application Form**

- A contractor quote itemizing the equipment to be installed, efficiency specifications, equipment make and model number(s), efficiency, size/capacity, and costs of equipment and installation.
- Equipment specification sheet(s) confirming equipment details and ENERGY STAR certification.
- If pipe insulation is being installed, the contractor quote must include the insulation type, location, amount (linear metres or feet), and per cent of total area covered, costs of material and installation, and applicable material specification sheet(s).

### **Supporting documents required for Upgrade Completion Form**

- A contractor invoice itemizing the installed equipment, equipment make and model number(s), size/capacity, installation date, and costs of equipment and installation.
- A photo of the equipment installed on the property.
- A photo of the equipment nameplate label (including model and serial number), with all information legible.
- If pipe insulation is being installed, the contractor invoice must include insulation type, location, amount (linear metres or feet), per cent of total area covered, costs of material and installation, and applicable material specification sheet(s). In addition, a photo of the pipe insulation installed on the HVAC or water heating upgrade is required.

## DOORS, WINDOWS, INSULATION, & AIR SEALING

### Attic Insulation

Upgrade ID: R-WB-001

#### Eligible Upgrade Description

- Attic insulation reduces heat loss through the attic area of the building envelope. This reduces the load on the heating and/or cooling system. This upgrade can also improve airtightness.

**Effective Useful Life:** 20 years

#### Eligibility Requirements

- Final insulation, including existing and added insulation, must be equal to or greater than R-28, covering a minimum of 20 per cent of the total area.
- Must have a manufacturer's warranty for a period consistent with the industry standard and not less than one year.
- Must have a warranty provided by the Qualified Contractor for defects in materials and labour for a period of not less than one year.
- **City of Edmonton additional eligibility requirements:** A minimum of R-50 for the final insulation for attic spaces and R-28 for flat or cathedral ceilings.

#### Supporting documents required for Project Application Form

- A contractor quote itemizing the insulation brand and type, method of installation, location, amount (square metres or feet) and R-value of the existing and new insulation, per cent of the total area covered, and costs of material and installation.
- Material specification sheet(s) confirming product details.

#### Supporting documents required for Completion Form

- A contractor invoice itemizing the insulation brand and type, method of installation, location, amount (square metres or feet) and R-value added, per cent of the total area covered, installation date, and costs of material and installation.
- Photos of installed insulation, with R-value marking and thickness measurement clearly visible and before being sealed in behind sheeting.

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### Wall Insulation

Upgrade ID: R-WB-002

#### Eligible Upgrade Description

- Wall insulation (installed inside an exterior wall cavity or as part of an added structure on the outside of the building) reduces heat loss through the above-grade wall areas of the building envelope. This reduces the load on the heating and/or cooling system.

**Effective Useful Life:** 20 years

## Eligibility Requirements

- Final insulation, including existing and added insulation, must be equal to or greater than R-21, covering a minimum of 20 per cent of the total area. Insulation must be added to above-grade walls separating conditioned and unconditioned space. Both cavity and exterior wall insulation are eligible.
- Must have a manufacturer's warranty for a period consistent with the industry standard and not less than one year.
- Must have a warranty provided by the Qualified Contractor for defects in materials and labour for a period of not less than one year.

## Supporting documents required for Project Application Form

- A contractor quote itemizing the insulation brand and type, method of installation, location, amount (square metres or feet) and R-value of the existing and new insulation, per cent of the total area covered, and costs of material and installation.
- Material specification sheet(s) confirming product details.

## Supporting documents required for Upgrade Completion Form

- A contractor invoice itemizing the insulation brand and type, method of installation, location, amount (square metres or feet) and R-value added, per cent of the total area covered, installation date, and costs of material and installation.
- Photos of installed insulation, with R-value marking and thickness measurement, before being sealed in behind drywall or panelling.

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## Foundation Insulation

Upgrade ID: R-WB-003

### Eligible Upgrade Description

- Insulation added to the walls and/or ground of the basement or the floor of a crawlspace significantly reduces heat loss through the areas of the building envelope in contact with earth. This upgrade can also improve airtightness.

**Effective Useful Life:** 20 years

### Eligibility Requirements

- A minimum of R-12 of insulation must be added to basement or crawlspace walls and/or floor, covering a minimum of 20 per cent of the total area. Insulation must not be added to the ceiling of the crawlspace.
- Must have a manufacturer's warranty for a period consistent with the industry standard and not less than one year.
- Must have a warranty provided by the Qualified Contractor for defects in materials and labour for a period of not less than one year.

### **Supporting documents required for Project Application Form**

- A contractor quote itemizing the insulation brand and type, method of installation, location, amount (square metres or feet) and R-value of the existing and new insulation, per cent of the total area covered, and costs of material and installation.
- Material specification sheet(s) confirming product details.

### **Supporting documents required for Upgrade Completion Form**

- A contractor invoice itemizing the insulation brand and type, method of installation, location, amount (square metres or feet) and R-value added, per cent of the total area covered, installation date, and costs of material and installation.
  - Photos of installed insulation, with R-value marking clearly visible and thickness measurement, before being sealed in behind drywall or panelling.
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## **Rim Joist Insulation**

Upgrade ID: R-WB-004

### **Eligible Upgrade Description**

- Insulation added to the cavities around rim joists reduces heat loss through these areas of the building envelope. This reduces the load on the heating and/or cooling system. This upgrade can also improve airtightness.

**Effective Useful Life:** 20 years

### **Eligibility Requirements**

- Final insulation, including existing and added insulation, must be equal to or greater than R-12. The new insulation should be added to cavities around rim joists. All joints should be air sealed with caulk or spray foam.
- Must have a manufacturer's warranty for a period consistent with the industry standard and not less than one year.
- Must have a warranty provided by the Qualified Contractor for defects in materials and labour for a period of not less than one year.

### **Supporting documents required for Project Application Form**

- A contractor quote itemizing the insulation brand and type, method of installation, location, amount (square metres or feet) and R-value of the existing and new insulation, and costs of material and installation.
- Material specification sheet(s) confirming product details.

### **Supporting documents required for Upgrade Completion Form**

- A contractor invoice itemizing the insulation brand and type, method of installation, location, amount (square metres or feet) and R-value added, installation date, and costs of material and installation.



- Photos of installed insulation, with R-value marking clearly visible and thickness measurement, before being sealed in behind drywall or panelling.
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## Energy-Efficient Window

Upgrade ID: R-WB-005

### Eligible Upgrade Description

- Windows with low-e glazing increase airtightness and reduce heat loss and gain through the window. This reduces the load on the heating and/or cooling system and improves energy efficiency in both summer and winter. This upgrade can also improve airtightness.

**Effective Useful Life:** 15 years

### Eligibility Requirements

- The window must be ENERGY STAR certified to the most recently published version.
- Must have a manufacturer's warranty for a period consistent with the industry standard and not less than one year.
- Must have a warranty provided by the Qualified Contractor for defects in materials and labour for a period of not less than one year.
- City of Edmonton additional eligibility requirements: Window must be triple or more pane.

### Supporting documents required for Project Application Form

- A contractor quote itemizing the window type to be installed, quantity, size, U-factor, make and model number(s), and costs of equipment and installation.
- Window specification sheet(s) confirming equipment details and ENERGY STAR certification.

### Supporting documents required for Upgrade Completion Form

- A contractor invoice itemizing the window type installed, quantity, size, U-factor, make and model number(s), installation date, and costs of equipment and installation.
  - Photo(s) of the window(s) installed on the property with the original ENERGY STAR label still attached and clearly visible/legible in the photo(s).
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## Energy-Efficient Door

Upgrade ID: R-WB-008

### Eligible Upgrade Description

- Energy-efficient door replacements reduce energy loss through the door. This reduces the load on the heating and/or cooling system. This upgrade can also improve airtightness.

**Effective Useful Life:** 15 years

## Eligibility Requirements

- The door must be ENERGY STAR certified to the most recently published version.
- Must have a manufacturer's warranty for a period consistent with the industry standard and not less than one year.
- Must have a warranty provided by the Qualified Contractor for defects in materials and labour for a period of not less than one year.

## Supporting documents required for Project Application Form

- A contractor quote itemizing the door type to be installed, quantity, size, U-factor, make and model number(s), and costs of equipment and installation.
- Door specification sheet(s) confirming equipment details and ENERGY STAR certification.

## Supporting documents required for Upgrade Completion Form

- A contractor invoice itemizing the door type installed, quantity, size, U-factor, make and model number(s), installation date, and costs of equipment and installation.
- Photo(s) of the door(s) installed on the property with the original ENERGY STAR label still attached and clearly visible/legible in the photo(s).

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## Exterior Home Wrap

Upgrade ID: R-WB-006

### Eligible Upgrade Description

- Reducing air leakage is a cost-effective way to reduce heating and cooling energy consumption, increase comfort, and create a healthier indoor environment. Exterior home wrap goes over the sheathing and behind siding, is made of synthetic and lightweight material and be both an air and water barrier. This upgrade excludes exterior wall insulation. This upgrade can also improve airtightness.

**Effective Useful Life:** 15 years

### Eligibility Requirements

- The residential building must have 2" x 4" exterior walls and air sealing must be recommended in the pre-project EnerGuide Home Evaluation report.
- Must have a manufacturer's warranty for a period consistent with the industry standard and not less than one year.
- Must have a warranty provided by the Qualified Contractor for defects in materials and labour for a period of not less than one year.

### Supporting documents required for Project Application Form

- A contractor quote itemizing the type of house wrap to be installed, brand, material, quantity, size, make, and costs of equipment and installation.

### **Supporting documents required for Upgrade Completion Form**

- A contractor invoice itemizing the type of house wrap to be installed, brand, material, quantity, size, make, and costs of equipment and installation.
  - Photos of the installation.
- 

## **Other Air Sealing**

Upgrade ID: R-WB-009

### **Eligible Upgrade Description**

- Reducing air leakage is a cost-effective way to reduce heating and cooling energy consumption, increase comfort, and create a healthier indoor environment. A suite of air sealing upgrades, in addition to exterior home wrap, insulation, windows and doors, can improve airtightness.

**Effective Useful Life:** 3 years

### **Eligibility Requirements**

- The EnerGuide Home Evaluation must recommend that the property owner perform air sealing. Acceptable forms of “Other Air Sealing” include caulking, weather stripping, outlet plates, and the application of expanding foam applied only in areas identified in the EnerGuide Home Evaluation Renovation Upgrade Report under air sealing. Window, door, house wrap, and insulation are excluded from this upgrade.
- Must have a manufacturer’s warranty for a period consistent with the industry standard and not less than one year.
- Must have a warranty provided by the Qualified Contractor for defects in materials and labour for a period of not less than one year.

### **Supporting documents required for Project Application Form**

- A contractor quote itemizing the materials to be installed, the location they will be installed, quantity, size (if applicable), R- or U-value (if applicable), make and model number(s) (if applicable), and costs of materials and installation.

### **Supporting documents required for Upgrade Completion Form**

- A contractor invoice itemizing the materials installed, the location they are installed, quantity, size (if applicable), R- or U-value (if applicable), make and model number(s), and costs of materials and installation.
- Photos of the installation(s).