# AIR SOURCE HEAT PUMP REBATE RESIDENTIAL

PROGRAM GUIDE





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#### **PROGRAM GUIDE**

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This publication is subject to change.

Please visit **efficiencyMB.ca/ashp-home** for the most current information.



## **PROGRAM OVERVIEW**

The Residential Air Source Heat Pump Rebate provides a rebate to homeowners who retrofit an existing heating system with a cold climate air source heat pump (ccASHP).

#### Rebate

Your registered Efficiency Manitoba contractor will apply for the rebate on your behalf.

Rebate for installing a ccASHP:

- \$2,000 for centrally ducted systems
- \$1,500 for ductless systems

### Eligibility

Your home is eligible if:

- Your heat pump retrofit is supplementing an electric resistance or natural gas heating system. Homeowners who are converting from propane or fuel oil are also eligible for rebates.
- Your heat pump is being installed in a residential property.
- Your heat pump is being installed in your primary (not seasonal) residence.

New construction projects aren't eligible for an air source heat pump rebate. However, they may qualify for a rebate through the New Homes Program (efficiencyMB.ca/NewHomes).

The contractor must be a registered Efficiency Manitoba contractor and employ a residential refrigeration mechanic who is licensed in Manitoba.

The contractor must install a qualifying cold climate air source heat pump that is listed on Natural Resources Canada's **eligible product list.** 

#### Choosing a contractor

The contractor must be a registered Efficiency Manitoba contractor. You can use the **Find a Supplier** tool on our website to locate contractors in your area. We recommend that homeowners obtain multiple quotes and check references before choosing a contractor. Homeowners should ask the contractor about the proposed heat pump system design and how it will meet their specific goals and needs (such as energy or greenhouse gas emissions reduction).

Before installing a heat pump, a heat loss/gain calculation is necessary to ensure the system is properly sized. Your contractor will advise you on the most effective way to obtain this calculation.

If your contractor isn't already a registered Efficiency Manitoba contractor, they can still participate but must join our **supplier network** before an application can be submitted.



#### Disclaimer

It is recommended to consult a qualified heating, ventilation and air conditioning (HVAC) contractor or design professional to determine if an air source heat pump is right for you.

An ASHP typically has a higher up front cost compared to a conventional heating and air conditioning system. Operating costs depend on a number of factors, including but not limited to weather, utility rates, occupant behavior, system settings and maintenance. An ASHP can have lower operating costs when compared to traditional electric resistance heating.

It's important that an ASHP is correctly sized for its intended function to optimize efficiency and system performance. Some centrally-ducted ASHPs may require larger ducts to be installed to allow for proper air flow and optimal system performance.

Efficiency Manitoba has found the most important factors affecting the long term performance of the heat pump system is the proper design, installation, and maintenance of the systems. The location and mounting of the ASHP outdoor unit needs to be carefully considered to allow proper clearances and drainage as well as take into account other factors like noise and vibration.

An ASHP becomes less efficient with colder outdoor air temperatures and supplementary heat is required for extreme cold weather in Manitoba. When temperatures drop below freezing, ASHPs may periodically need to defrost their outdoor coils, further reducing their efficiency.

ASHP efficiency is reported using Seasonal Energy Efficiency Ratio (SEER) for cooling and Heating Seasonal Performance Factor (HSPH/HSPF2) for heating. Both ratings incorporate seasonal temperature variances of the cooling or heating season into an expression of the thermal energy out (BTU) provided for each unit of electrical energy input (Wh). A higher rating is an indicator of greater energy efficiency. While these are both valuable metrics for comparing different models of ASHPs, the testing procedure is completed in a controlled environment, and does not account for all factors encountered in a real world installation. For this reason, real energy consumption may vary substantially from calculated values using these performance metrics.

Seasonal Coefficient of Performance (sCOP) is a similar metric to SEER or HSPF and compares thermal energy out (BTU) to electrical energy in (Wh). Efficiency Manitoba expects that the average long term heating seasonal COP for an ccASHP system with electric resistance back-up installed in Manitoba operates around a COP of 1.5, but less than the rated heating COP because of the defrost cycle operation and the use of auxiliary heating energy in Manitoba's cold climate.



## **APPLICATION PROCESS**

#### Step 1: Contact a registered contractor

• Find out if your project is eligible, then choose a registered contractor. We recommend browsing our list of registered contractors, getting several quotes, and checking references before making your choice.

#### Step 2: Install a qualifying cold climate air source heat pump

• Your contractor is responsible for obtaining all necessary permits and licenses.

### Step 3: Get a rebate

- After your air source heat pump is installed and paid for, your contractor must submit the rebate application within 90 days of the installation date.
- Once we receive the required documents, we'll email you (the homeowner) a link to complete your part of the application. After you submit it, Efficiency Manitoba will review the application and may contact you to schedule a post-installation verification. Once the application is approved, we'll mail the rebate cheque to the address you provide.

## **APPENDIX 1 - ELIGIBILITY INFORMATION**

### Program eligibility criteria

- The homeowner must have a Manitoba Hydro electrical service.
- Only one rebate is available per home. If multiple heat pumps are installed, only the highest-value rebate will be issued. For example, if both a centrally ducted and a ductless system are installed, the rebate will be \$2,000.
- The Program applies only to retrofit projects, where the heat pump supplementing an existing heating system for an occupied space.
- If your home currently uses a heat pump for heating, your retrofit is not eligible for rebate.
- Supplementary (back-up) heating systems may not be converted from electric to natural gas.
- The home must be heated for the entire heating season (September to May) and use the installed heat pump system as the first stage of heating.
- The home must be occupied 12 months per year. Seasonal homes aren't eligible.
- Products, equipment, and their applications and installations must be new and meet or exceed energy efficiency regulatory requirements in Manitoba.
- Homeowners applying for financial assistance from any federal, provincial, Manitoba Hydro, or other program must disclose this information to Efficiency Manitoba at the time of application. The maximum payable from all funding sources cannot exceed the total equipment cost for the project.
- All rebates must not exceed the equipment cost paid by the homeowner, including taxes.
- Efficiency Manitoba's decisions relating to equipment or homeowner eligibility, energy savings potential of the projects, rebate amounts, or other related issues will be final and binding on all parties.

## Project eligibility

• Air source heat pump systems eligible for a rebate must provide the first stage of heating. Eligible heating systems must be designed to operate a minimum of 1,500 full load hours in one heating season (September to May).

• Efficiency Manitoba reserves the right to reject applications for installations which are deemed to be a significant risk of not producing predictable, sustainable savings or which would not meet Efficiency Manitoba's energy efficiency objectives.

#### New construction eligibility

- New construction projects may be eligible for a rebate through the New Homes Program. For more information about new construction rebates, visit: efficiencyMB.ca/NewHomes.
- Heat pumps installed solely to serve a new addition to an existing home are not eligible for a rebate.

### **Equipment eligibility**

- Equipment must be listed as a ccASHP on the Natural Resources Canada (NRCan) Canada Greener Homes eligible product list.
- Outdoor, indoor and furnace (as applicable) units must be part of an AHRI matched system. For "Coils Only" systems, the outdoor and indoor units can be paired with compatible furnaces.
- Equipment must be Energy Star<sup>®</sup> certified.
- HSPF2 Region V  $\geq$  6.6 AND SEER2  $\geq$  15.2.
- Coefficient of performance (COP) ≥ 1.8 at -15°C (5°F) (at maximum capacity operation).
- Heating capacity maintenance percentage must be ≥ 70% (Heating capacity at -15°C (5°F)/ Rated Heating capacity at 8.3°C (47°F)).
- Compressor must be of variable capacity with three or more distinct operating speeds, or continuously variable speed.
- Must have a performance rating certified to CSA Standard CAN/CSA-C656-14.
- Heat pump systems that are sized to provide up to 100% of the base building's unoccupied transmission and infiltration heating loads will be eligible.



### Heat loss/gain calculation

Efficiency Manitoba requires a summary report that outlines the heating and cooling loads, broken down into the major categories of transmission (conduction), infiltration (air leakage), and ventilation (if applicable). The report should detail these loads for each major component of the home's envelope, including the roof, above-grade walls, below-grade walls, windows, doors, and floor.

#### 1. Unoccupied transmission heat loss/gain

All unoccupied conductive and radiative components that contribute to the heat load of the area being conditioned by the heat pump must be included in the calculation. These components may include, but aren't limited to, roofs (ceilings), above-grade and below-grade walls, windows, doors, floors, and unconditioned spaces.

#### 2. Natural infiltration heat loss/gain

The natural infiltration rate must not exceed 0.3 air changes per hour (ACH) in the infiltration calculation.

#### 3. Continuous ventilation

Ventilation air heating with air-to-air heat recovery is considered the base case by the program. Continuous ventilation base loads, beyond what the heat recovery system can handle, will be evaluated on an individual basis.

## 4. Non-continuous or intermittent ventilation and infiltration heating loads

Non-continuous and intermittent heating loads, such as those from mechanical or passive ventilation and door openings, aren't eligible.

#### 5. Manual or spreadsheet methods

Manual or spreadsheet methods (such as Excel or equivalent) that follow the guidelines in the ASHRAE Handbooks, HRAI Digest (technical manuals), or CSA F280 for residential and small commercial buildings are acceptable.

#### 6. Software methods

Commercially available energy modelling software or heat load calculation software that uses ASHRAE, HRAI or CSA F280 methods are acceptable.

#### 7. Technical review

Efficiency Manitoba technical staff will review the results of the heat loss/gain calculations obtained through manual, spreadsheet, or software methods to ensure they're acceptable, realistic, and meet program requirements. Upon request, copies of model or spreadsheet files must be provided for review.



### Air Source Heat Pump Rebate Invoice Requirements

Your invoice needs to have all the information identified below in order to meet the program documentation requirements. Specific requirements for centrally ducted and ductless systems are outlined in point 6.

Equipment details, including the AHRI number, are available in the <u>searchable product list</u> from Natural Resources Canada.

INVOICE NO. 123			DATE: 01/01/2025				I  0	<ol> <li>Contractor name, address, and contact information</li> </ol>	
BILL TO IN Bill Smith 123 Second St., Seco		INSTALLATION ADDRESS	<b>INSTALLATION DATE</b> 01/01/2025		N DATE	QUOTE	2	Invoice date	
		Same as billing address			Q159 3		Customer's name		
							4	Installation address	
ITEM	DESCRIPTION		QUAN	ТІТҮ	UNIT PRICE	TOTAL	l 5	AHRI number	
Heat pump system install Outside	AHRI number: 1234 Brand: UltraHeat	456789	5	1	13,500.00	13,500.00	- 6	Brand, model, and quantity of	
unit	Model: ASHP36		6	1			-	Centrally ducted systems must	
Inside unit	Brand: UltraHeat Model: COIL36			1				Outside unit(s)	
Furnace	Brand: UltraHeat Model: FURN75			1			-	<ul> <li>Inside unit (coil or air hand)</li> </ul>	
Electrical	Permit number: 76	54321	7				-	<ul> <li>Furnace (new or existing)</li> </ul>	
permit		SUBTOTAL				17 500 00	-	Ductless systems must list:	
		GST (5%)				675.00	-	Outside unit	
		PST (7%)				945.00	-	<ul> <li>Inside head(s)</li> </ul>	
		TOTAL DUE			(	15,120.00	- 7	Electrical permit (including per number)	
		Thank you for yo	ur busines:	5!			8	Cost (including labour and taxe	
P	3						9	Proof of payment (e.g. PAID sta	



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