

# Manitoba Geothermal Energy Incentive Program

## Grant Application Guide and Form for District Geothermal System Owners

### A Provincial Grant

A provincial grant for eligible new District Geothermal Systems installed after January 1, 2009 based on the designed district geothermal system’s delivered heating capacity, calculated as follows:

- \$120 per 1000 BTU for first 300,000 BTU/h threshold;
- \$70 per 1000 BTU for incremental BTUs.

**Note: The maximum incentive grant is \$150,000 per district geothermal system.**

### B Program Eligibility

**The Applicant must be:**

- the registered owner and the person named on the property tax roll for that property; and
- a resident in Manitoba at the end of the applicable taxation year; or
- a corporation that has a permanent establishment in Manitoba in the applicable taxation year.

**A District Geothermal System** must be *geographically separate and independent* and serve one or more of the following types of buildings:

- Commercial and institutional buildings; Municipal buildings; Multi-unit residential buildings; Mixed-use commercial/residential buildings; or Single detached homes.

and must meet the System Requirements in Part C System Requirements

### C System Requirements

To qualify, a District Geothermal System must meet these requirements:

**1 Location and completion:**

- Located in Manitoba and serve buildings that are situated on permanent foundations.
- Installation completed after January 1, 2009.

**2 Minimum Buildings Served/Capacity Provided:**

Designed and built to meet these requirements:

System Design	Homes	Other Buildings
# Detached Buildings Served (minimum number)	3	3
System Capacity (minimum BTU/h)	300,000 min	300,000 min
Demand per home or building (BTU/h)	50,000 max	100,000 min

**Homes** single family residences including attached and detached

**Other Buildings** commercial and industrial buildings, municipal buildings, multi-unit residential buildings, mixed use commercial residential buildings

### 3 Other technical:

- Sized for heating and cooling loads in accordance with CSA Standard CAN/CSA-C448 and/or ASHRAE for energy estimating methods and for heating, ventilation and air conditioning design practices for the occupancy and location. The applicant must submit a Manual J Calculation or equivalent calculation with the Application Form to document the system size and simultaneously to document the separate costs of the heat pumps and installation costs of the geothermal system.
- Technical design of the heat pump system design and/or its specifications, including the earth connection (i.e. loop), MUST be approved by a Professional Engineer as required per regulations and/or building code.
- Installer/contractor MUST be certified by the **Manitoba Geothermal Energy Alliance (MGEA)** at the time of the installation.
- Installation MUST meet building code and CSA Standard CAN/CSA-C448 – “Design and Installation of Earth Energy Systems.”

## D Program Terms

### 1 Eligibility

The District Geothermal System must meet the Program Eligibility and System Requirements and the Application must be submitted by the earlier of 3 months after commissioning the system, or 6 months after occupying the buildings.

### 2 Equipment/Property Schedule

#### **Qualifying District Geothermal System:**

To qualify, the District Geothermal System must be a new installed geothermal heat pump system that is formed from new equipment that meets the standards set by the Canadian Standards Association for design and installation of earth energy systems, and includes:

#### Includes the following equipment

- Underground piping,
- Energy conversion equipment,
- Control equipment,
- Equipment designed to interface with other heating equipment;

#### Does NOT include the following

- A building or part of a building,
- Equipment used to heat water for use in a swimming pool where more than 40% of the district geothermal system capacity is used to heat pool water.
- Energy equipment that backs up equipment,
- Equipment that distributes heated air or water in a building,
- A water-to-air heat pump with a full load coefficient of performance (COP), as rated in accordance with the International Standards Organization standard 13256-1 of less than 3.3 for closed loop design, or less than 3.6 for an open loop design.
- A water-to-water heat pump with a coefficient of performance (COP), as rated in accordance with the International Standards Organization standard 13256-2 of less than 3.0 for closed loop design, or less than 3.4 for an open loop design.

The above water-to-water specifications apply to single stage models. Multi-stage models may be qualified based on highest rated capacity COP + lowest rated capacity COP / 2.

### 3 **No warranty by Manitoba**

Manitoba does not provide any warranty for the installed District Geothermal System and is not liable for any damage or injury resulting from the installation or use of the District Geothermal System covered by the grant application.

Applicants should discuss warranty (against manufacturing defects affecting safety, system performance, etc.) with the manufacturer and installer/contractor.

### 4 **Inspection**

Applicant must provide all relevant documents requested by Manitoba.

Manitoba reserves the right to inspect and evaluate the newly installed geothermal heat pump equipment at the installed property at any reasonable time for verification of the purchase and installation prior to issuing a grant and/or within 12 months after receipt of the final application.

### 5 **Emissions Credits**

The Applicant agrees that Manitoba has the right to claim and to own any emission reduction (greenhouse gas) credits that may result from the geothermal heat pump system(s) installed.

### 6 **Repayment**

Any Applicant who fails to meet the Program Terms must repay the full grant amount.

### 7 **Supporting Documents**

**All applications must include the following documentation:**

- a fully completed and signed Grant Application form;
- an itemized invoice indicating the make and model of the installed heat pump, as well as the itemized cost of the heat pump and loop system;
- evidence that all project costs have been paid such as:
  - a copy of an itemized invoice with a signed statement of payment in full from the vendor; and/or
  - a signed receipt of payment; and/or an itemized invoice along with a processed cheque or
  - financial institution report indicating payment or proof of debit or credit card transaction; and/or
  - an itemized invoice along with a signed loan document from a utility or financial institution;
- evidence of heat pump coefficient of performance (COP) fulfillment:
  - For ISO Standard 13256-1 (water-to-air and brine-to-air heat pumps): An AHRI "Certificate of Product Ratings" that confirms fulfillment of the minimum COP requirement. This certificate can be found in the AHRI Directory of Certified Product Performance at the following AHRI web site: <http://www.ahridirectory.org/ahridirectory/pages/wbahp/defaultSearch.aspx>
  - For ISO Standard 13256-2 (water-to-water and brine-to-water heat pumps): An AHRI "Certificate of Product Ratings" that confirms fulfillment of the minimum COP requirement. Or third-party laboratory documentation and/or third-party testing documentation.
- technical design of the heat pump system design and/or its specifications, including the earth connection (i.e. loop), MUST be approved by a Professional Engineer as required per regulations and/or building code.
- a Manual J Calculation or equivalent calculation to document the system size and simultaneously to document the separate costs of the heat pumps and installation costs of the geothermal system.

## 8 Changes to Program

Manitoba may change the Program without notice. But, any change will not affect any Application (including all required documents) received by Manitoba before the change comes into effect.

## 9 Installation

The Applicant is responsible for selecting, purchasing and installing the equipment. All installations must comply with existing standards.

Equipment must be installed by a *certified MGEA contractor/installer* in accordance with the Building Code, applicable CSA standards and applicable ASHRAE guidelines for earth energy systems and the manufacturer's recommendations.

## 10 Restrictions

A geothermal grant is available only for complete new District Geothermal System (excludes repairs and/or component replacement of existing systems).

If a home or building is serviced by a District Geothermal System, the building owner is not eligible for other geothermal grants (excludes the Manitoba Green Energy Equipment Tax Credit) from Manitoba unless otherwise indicated.

If a building that is served by the district geothermal system is *connected to another structure*, there are special requirements:

- If the space is connected to another structure such as through a pedway, each building space must be clearly distinguishable as an *independent unit* including a separate utility meter and a detailed engineering analysis, approved by a licensed Professional Engineer, to support the current energy use and consumption profile.
- If a building has two wings with a *single common wall*, this will be considered as "one" building which will be eligible only if the combined area is below 20 000 square metres.

Only one accepted grant application will be allowed per individual, family, or eligible property.

No more than one geothermal district grant is available for each project.

The maximum incentive grant is \$150,000 per district geothermal system.

The corporate maximum grant over the life of the district geothermal grant is \$300,000.

## 11 What qualifies as a "commercial building"?

Commercial buildings are buildings designed, built, and operated for any use other than residential, and intensive service agriculture and/or livestock agriculture use (i.e. barns), including everything from schools to hospitals, offices to grocery stores. These buildings can be dedicated to a single, homogeneous use such as a corporate headquarters, or they can be a complex combination of rooms for public interaction, space for commercial activity, classrooms, workspaces, cooking and dining facilities, and even living quarters, such as those found in dormitories.

## 12 Environment Licenses and Approvals

The Applicant must obtain all licenses, approvals, certificates, orders and permits required for the installation and operation of the district geothermal systems by statute, regulation, bylaw or government policy.

The Applicant is responsible for recycling or disposing of any equipment or material replaced under this Program.

## E Processing Applications

### 1 Review and Approval

Manitoba will review each Application to confirm that:

- the District Geothermal System meets the Program Eligibility and System Requirements;
- the Applicant has met Program Terms; and
- the District Geothermal System has been completed as designed and meets the **Minimum buildings served/capacity provided** under **System Requirements** (see C2).

If the District Geothermal System meets these requirements, Manitoba will calculate the maximum District Geothermal Grant available.

### 2 Funding is subject to availability

Approved projects are funded first-come, first-served, based on the date of approval of a completed Application and subject to the availability of Program funds. It is anticipated that grants will be paid within 90 days of the date Manitoba receives a complete application for an eligible installation.

### 3 Progress and Final Payments

Manitoba may make progress payments to the Applicant on account of the District Geothermal Grant when the District Geothermal System is in use and operating at these levels:

System in Use	Homes		Other Buildings	
	Progress	Final	Progress	Final
# Detached Buildings Served (minimum #)	2	as designed	2	as designed
System Use (minimum BTU/h)	120,000	as designed	200,000	as designed

The accumulative progress payments will not exceed the lesser of:

- 50% of the maximum incentive grant for which the District Geothermal System is eligible, based on the terms identified in this Guide; and
- \$100,000.

The balance of the District Geothermal System Grant will be paid when the District Geothermal System has been completed as designed and/or at greater capacity and meets the **Minimum buildings served/capacity provided** under **System Requirements** (see C2).

### 4 Manitoba Green Energy Equipment Tax Credit

The Manitoba geothermal grant program complements the Manitoba Green Energy Equipment Tax Credit. For your reference, a copy of *The Green Energy Equipment Tax Credit* Regulation can be found at the following webpage: <http://web2.gov.mb.ca/laws/statutes/ccsm/i010e.php> The Manitoba Tax Assistance Office will assist on matters pertaining to the Manitoba Green Energy Equipment Tax Credit.

*Please submit your completed and signed Grant Application Form, along with the necessary supporting documentation (see "Supporting Documents").*

*For assistance in completing the Grant Application form, see your **Certified MGEA Installer**.*

**Mail to:**

*Manitoba Geothermal Energy Incentive Program  
Energy Division, Government of Manitoba  
1200-155 Carlton Street  
Winnipeg, MB. R3C 3H8*

