Office of Sustainability

Building Energy Disclosure Project

PROJECT GUIDE

Winnipeg

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1. Project Background and Overview

Buildings account for the second largest source of greenhouse gas (GHG) emissions in the City of Winnipeg (at 35% of total emissions[1]). Improving the energy efficiency of existing buildings is a crucial step in helping the City meet its GHG emissions reduction targets and climate action goals.

Building energy disclosure projects (BEDP) help organizations identify, develop, and implement energy efficiency improvements in their buildings and reduce their GHG emissions. BEDPs enable the review of building energy usage to better understand performance, allow for comparisons to be made between building types and to available national averages, and help building owners make informed energy improvement investment decisions. Energy labelling can help drive market awareness by improving public and investor energy use literacy and can help to increase energy efficiency implementation activities by enhancing the marketability and value of more energy-efficient properties.

Through its Office of Sustainability and in partnership with National Resources Canada (NRCAN), the City of Winnipeg (City) is launching a Building Energy Disclosure Project (BEDP) for commercial and institutional buildings in Winnipeg. The main objectives of the project include:

1. Demonstrate and showcase industry and institutional support for data transparency in Winnipeg, and for a centralized publicly available database;
2. Support the further development of industry disclosure and benchmarking knowledge and reporting capacity to help prepare organizations and building owners for likely future disclosure requirements;
3. Provide building owners and organizations with further insight into their building's performance to support energy efficiency improvements and GHG emissions reductions.

This BEDP will consist of recruitment, education, outreach and capacity building, project implementation and disclosure, and reporting and recognition. The focus of the project will be to have commercial and institutional buildings over 20,000 ft2 in size (although smaller sizes will be considered) disclose information on their buildings, energy use and GHG emissions through the ENERGY STAR Portfolio Manager® benchmarking platform.

The City will be the project administrator for this project, responsible for implementation and management as well as completing the benchmarking analysis and disclosure work. The Canada Green Building Council (CaGBC), a non-profit industry association, will be acting as the City's consultant and support administrator, responsible for facilitating participation and engagement activities, and supporting overall project management requirements.

[1] Winnipeg Climate Action Plan Report, May 2018 (https://winnipeg.ca/sustainability/PublicEngagement/ClimateActionPlan/default.stm#tab-documents)

2. Benchmarking and Disclosure Overview

2.1. What is Building Energy Benchmarking?

Energy benchmarking is the process through which a building's energy performance is tracked to assess changes in performance over time, and to allow for comparisons to be made within a portfolio or within a class of buildings. The need for energy benchmarking relates to the fundamental principle that for owners, managers, or regulators to effectively manage and reduce energy use and GHG emissions, they must first be able to measure it. To learn more about Building Energy Benchmarking processes, tools, and programs, please see a list of key resources in Section 7.

2.2. What is Data Transparency?

Once a benchmarking program has been implemented, its data is typically made publicly available through various means. When information on building energy performance is collected and publicly disclosed, it becomes a powerful tool that can help stakeholders in three main ways;

- It allows owners and operators to set a baseline of actual performance in comparison to actual industry best performance, which in turn helps them identify operational inefficiencies and improvement opportunities, reduce GHG emissions, and meet environmental targets;
- It enables policymakers and regulators to monitor how buildings across their jurisdictions are performing, assess the impacts of energy and emissions policies, identify effective ways to promote building performance improvements, and can help to determine the levels of performance that are achievable for different building types;
- Disclosure programs can also improve energy use literacy for the public. Having access to building performance data allows community members to make more informed choices about where to buy or lease properties and select a building or space that more closely aligns with the member's environmental values and utility cost expectations.

2.3. What is the status of building energy benchmarking and disclosure in Canada?

Mandatory and voluntary energy benchmarking and disclosure programs are one tool that many jurisdictions are looking to adopt to help guide policy and improve investments in energy efficiency. At present these programs and policies are not common in Canada, even though they are a crucial step in the pursuit of energy and GHG emission reductions in the built sector. Currently in Canada, only the Province of Ontario has a mandatory energy benchmarking and disclosure requirement. Other jurisdictions offer ongoing voluntary benchmarking programs, including Edmonton's Benchmarking Program and Building Benchmark BC.

Many European and American states and cities have required building energy benchmarking and disclosure for years, helping building owners, managers, and tenants improve their energy efficiency, lower operational costs and increase asset value. A recent report by the Institute for Market Transformation (IMT), a leading proponent of benchmarking initiatives based the United States, indicated that the market benefits that energy-efficient buildings can attain as compared to less efficient buildings include; 10% higher occupancy rates, 10% higher premiums on rents, and 25%

higher sales prices.

2.4. Why is the City of Winnipeg launching this project?

To help improve data transparency, performance awareness and reduce GHG emissions, the Pan Canadian Framework on Climate Change[2] identifies the need for benchmarking and disclosure to be a standard requirement in jurisdictions across the country. Understanding that requirements for benchmarking and disclosure will become common place in the near future, this project provides a great opportunity for the City of Winnipeg and local building owners to demonstrate leadership in preparation for any upcoming requirements and help to inform any future regulatory developments. To promote this project, the City will 'lead by example' by disclosing available ENERGY STAR scores, energy use intensity (EUI) and GHG emissions of City-owned buildings.

2.5. Why participate in the Building Energy Disclosure Project?

There are several benefits for project participants, including:

1. Benchmarking analysis and building performance insights;
2. An ability to participate in free educational workshops on disclosure and benchmarking;
3. Industry recognition of your commitment to data transparency and best management practices;
4. Potential opportunity to influence the direction and timing of future City and/or Provincial regulations;
5. Assistance with ENERGY STAR® Certification and Licensed Professional Services;
6. Additional preparation for any upcoming mandatory labelling or disclosure requirements.

3. Roles and Responsibilities

3.1. Ways to participate:

There are two ways building owners can participate in the project.

- **Preferred methods:**

If you already have an ENERGY STAR Portfolio Manager® account for the buildings you wish to have participate, simply share your building's *read only* access with the City of Winnipeg's Portfolio Manager account.

Or

If you don't already have a Portfolio Manager account, you can create one by completing the new account registration steps in Portfolio Manager, adding the buildings you want to have participate, and then sharing your building's *read only* access with the City of Winnipeg's Portfolio Manager account.

For instructions on how to register your building with Portfolio Manager, refer to section 4.3 of this document.

[2] http://publications.gc.ca/collections/collection_2017/eccc/En4-294-2016-eng.pdf

- **Alternate method:**

  Complete the online registration and authorization forms to give the City access to your Manitoba Hydro account, and the City will create a building(s) profile in the project's Portfolio Manager account on your behalf.

Please note: Buildings with multiple utility meters registered under separate owners will need to create a single building profile with merged utility performance data information. Please contact the City's benchmarking service for more information.

3.2. Stakeholder Requirements

Participants will be required to:

- Connect Portfolio Manager building profiles with the City of Winnipeg's Portfolio Manager account;
- Reconcile the Portfolio Manager data as needed;
- Submit a list of buildings to be included in the project through the appropriate forms;
- Identify buildings that may require additional profile information (e.g. occupancy changes, meter or account changes, retrofits, etc.) to better understand energy use and GHG emissions variability, and submit this information to the project administrator;
- Support the project administrator with final data reconciliation activities to ensure accuracy.

The City will be required to:

- Support participants with the submission of their building profile and performance information through Portfolio Manager;
- Collect participants' building profile information and Portfolio Manager performance data for disclosure on the City's open data portal, online project map and in the final project report;
- Establish data transparency tools and reporting systems, including the Energy Performance Scorecard and map-based data portal;
- Complete final data reconciliation requirements;
- Implement outreach and promotional activities, as well as oversee the project's educational activities;
- Host education workshops for participants;
- Present disclosure data online.

Table 1. On-boarding Activities Summary
Step 1: Complete the Participant Agreement form and register your building(s)
Step 2: Share portfolio data through ENERGY STAR Portfolio Manager® (preferred) **Or** **Submit required data through online forms and sign authorization form**
Step 3. Work with project administrators to clean and complete datasets
Step 4. Submit information on data outliers

4. Project Structure

This BEDP requires participating building owners and/or managers to share available energy and GHG performance data of their buildings for 2017 to 2019 inclusively. This data will be analyzed by the project administrator and will be sent to participants in the form of a personalized scorecard. Participants also commit to publicly disclosing their 2019 energy and GHG performance data on the project map and final report. In situations where multiple properties are owned or managed by one organization, the City encourages participants to provide information on all qualifying buildings if possible.

The major components of the project are outlined in the sections below.

4.1. Qualifying Buildings

For a building to be eligible to participate, it must meet the following criteria:

- Be located within the City of Winnipeg limits;
- Be at least 20,000 sq. ft. in size (some smaller buildings may be accepted. Contact the project administrator to learn more);
- Fall under a commercial[3] or institutional[4] building type (as defined in Table 2.);
- Share the building's full profile information through Portfolio Manager.

[3] Any privately owned building primarily used for business operations and activities. Commercial buildings usually refer to buildings that house businesses, as well as larger residential rental properties.
[4] Institutional buildings refer to any structure that fulfils a role related to education, government operations, healthcare and recreation.

Table 2. Accepted Commercial or Institutional Building Property Types

Building Category	Office Facilities	Educational Facilities	Entertainment / Public Assembly	Retail	Warehouse	Public Service	Lodging	Others
Building Type	Bank branch	Adult Education	Bowling Alley	Convenience Store with Gas Station	Distribution Center	Courthouse	Residence Hall/Dormitory	Laboratory
	Financial Office	Vocational School	Fitness Center/Health Club/Gym	Convenience Store w/o Gas Station	Non-Refrigerated Warehouse	Fire Station	Residential Care Facility	Refrigerated Warehouse
	Medical Office	K-12 School	Swimming Pool	Supermarket/ Grocery Store		Police Station	Multifamily Housing	Worship Facility
	Office		Ice/Curling Rink	Enclosed Mall		Library	Senior Care Community	Multi-Use Facility
			Indoor Arena	Strip Mall			Hotel	Hospitals
			Museum					
			Performing Arts					

Please note: Categorizations are based on building types that have a similar functional nature and/or close median energy use intensities as per Canadian Energy Use Intensity by Property Type guidance. This categorization is to be used for the personalized Energy Performance Scorecard only. Higher participation under each property type, e.g. K-12 Schools, may lead to further sub-categorization.

4.2. General Requirements

As outlined in the Participant Agreement, participants in the project agree to disclose available building energy and emissions performance data from their portfolios. Overall, the two main project requirements are as follows;

- Disclose all available data (as outlined in table 3) for buildings over 20,000ft^2 (1,858 m^2) in the participant's portfolio (data from smaller buildings may be accepted with prior approval);
- Share *read only* access of your building's historical energy data for 2017 to 2019 inclusively with the City of Winnipeg's Portfolio Manager account.

Table 3. Specific Building Profile and Performance Data Disclosure Requirements

Building Profile Information	Main Performance Indicators
• Property/building name and address • Owner name • Year of construction • Primary use type • Gross floor area (GFA) ft^2/m^2	• Weather Normalized Site EUI (GJ/m^2/year) • Greenhouse gas intensity ($tCO2e/m^2$/year) • ENERGY STAR® score (where applicable) • Any building certifications achieved (e.g. LEED, BOMA Best, Passive House, etc.) • Energy use by fuel type (kWh, m^3)

Participants are encouraged to disclose whatever data they have available. Incomplete data sets (e.g. where all meter use information for the building is not currently tracked) will be noted as "Not Available/Incomplete".

Participants will be offered the opportunity to submit additional information to explain any key reasons for performance variations, any past or planned efforts to improve building performance, and to celebrate exceptional achievements such as building certifications. Participants' related financial information will be kept confidential in all cases.

4.3. Using ENERGY STAR Portfolio Manager®

The project will make use of ENERGY STAR Portfolio Manager® as the key platform for data reporting. Portfolio Manager is an industry standard for building energy data management and is currently used by the Province of Ontario and a clear majority of U.S. jurisdictions for benchmarking and disclosure purposes. The tool is free, simple to access, and provides the necessary data fields and reporting to support decision-making among building owners and managers, governments, and utilities. Building data can be manually uploaded by building owners and/or managers, or directly uploaded by utilities.

Manitoba Hydro offers a free service that automatically uploads electricity and natural gas consumption data to an ENERGY STAR Portfolio Manager® account. All that is required is to create a Portfolio Manager account and complete the necessary connections and access requirements – more information on this can be found in Manitoba Hydro's setup guide.

The Province of Manitoba also provides a detailed guide on how to use ENERGY STAR Portfolio Manager®.

4.4. Collecting and Reporting Data

Each project participant should designate one or more team members to be responsible for data collection, upload to Portfolio Manager and coordination with the project administrator.

In addition, participants are required to clean and reconcile datasets in Portfolio Manager prior to the City reporting and disclosing the data. Occasionally, data-entry errors may prevent Portfolio Manager from calculating annual energy consumption.

Manitoba Hydro's Webservices function, which enables the automatic upload of your utility bills into Portfolio Manager, may register an error if Manitoba Hydro has made an adjustment to your utility bill. The most common errors are associated with meter overlaps and data gaps.

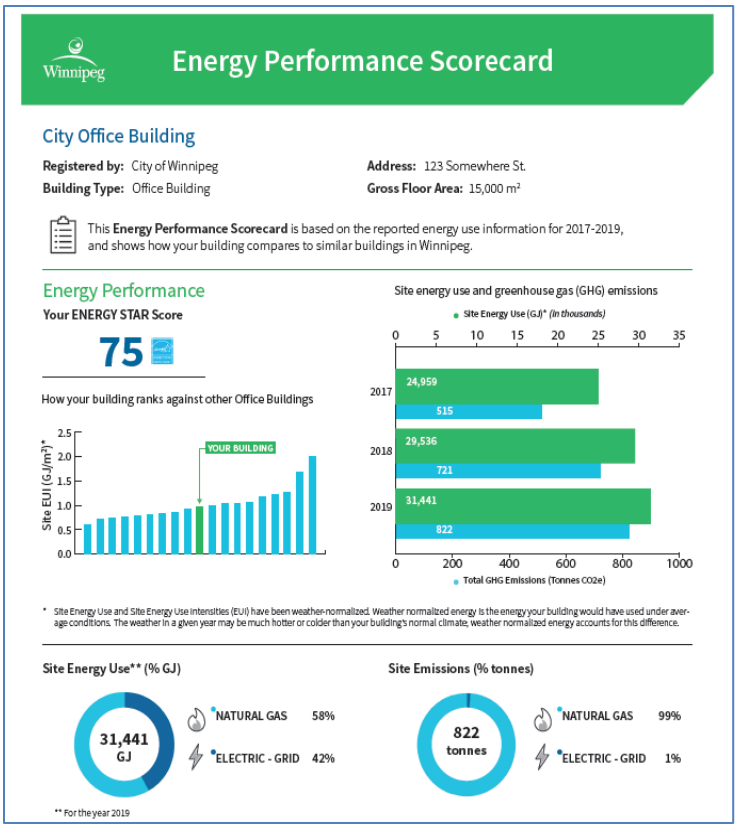
A step by step guide to locating and correcting the errors in Portfolio Manager can be found on pages 45 to 54 of the Government of Manitoba's Guide to Using Portfolio Manager in Manitoba. This includes screen shots of what to look for, how to find errors based on the size of your portfolio, a list of frequent issues and common fixes.

Table 4. Best Practices for Data Collection and Tracking in ENERGY STAR Portfolio Manager®

1) **Gathering your building data**
   - Be sure to follow Portfolio Manager's guidelines when completing your profile – use automatic upload connections with Manitoba Hydro (Webservices)
2) **Create a standard organizationalstructure for buildings/properties**
   - Be consistent when naming your buildings in Portfolio Manager and entering organizational information. This helps maintain clarity in record keeping
3) **Reconcile data and correct billing errors regularly**
   - If you are using Manitoba Hydro's Webservices to auto-upload your billing data, verify this information with different sources, including utility bills and financial records to ensure accuracy and minimize errors
   - Reconcile/resolve any differences
4) **Maintain inventory**
   - Establish a process for verifying and updating utility bill data regularly and correcting errors
   - Update building profile changes as required (e.g. changes to square footage, occupancy

Participants will receive a personal energy performance scorecard that will highlight their energy performance as compared to the same or similar building types of other participants. The scorecard will also graphically represent the building's historic energy consumption and emissions performance. Finally, it will list resources available to guide participants on what steps they can take to improve their energy efficiency and where information on project development and implementation support can be found. Scorecards will be sent directly to program participants and will not be made public.

Image 1: Energy Performance Scorecard



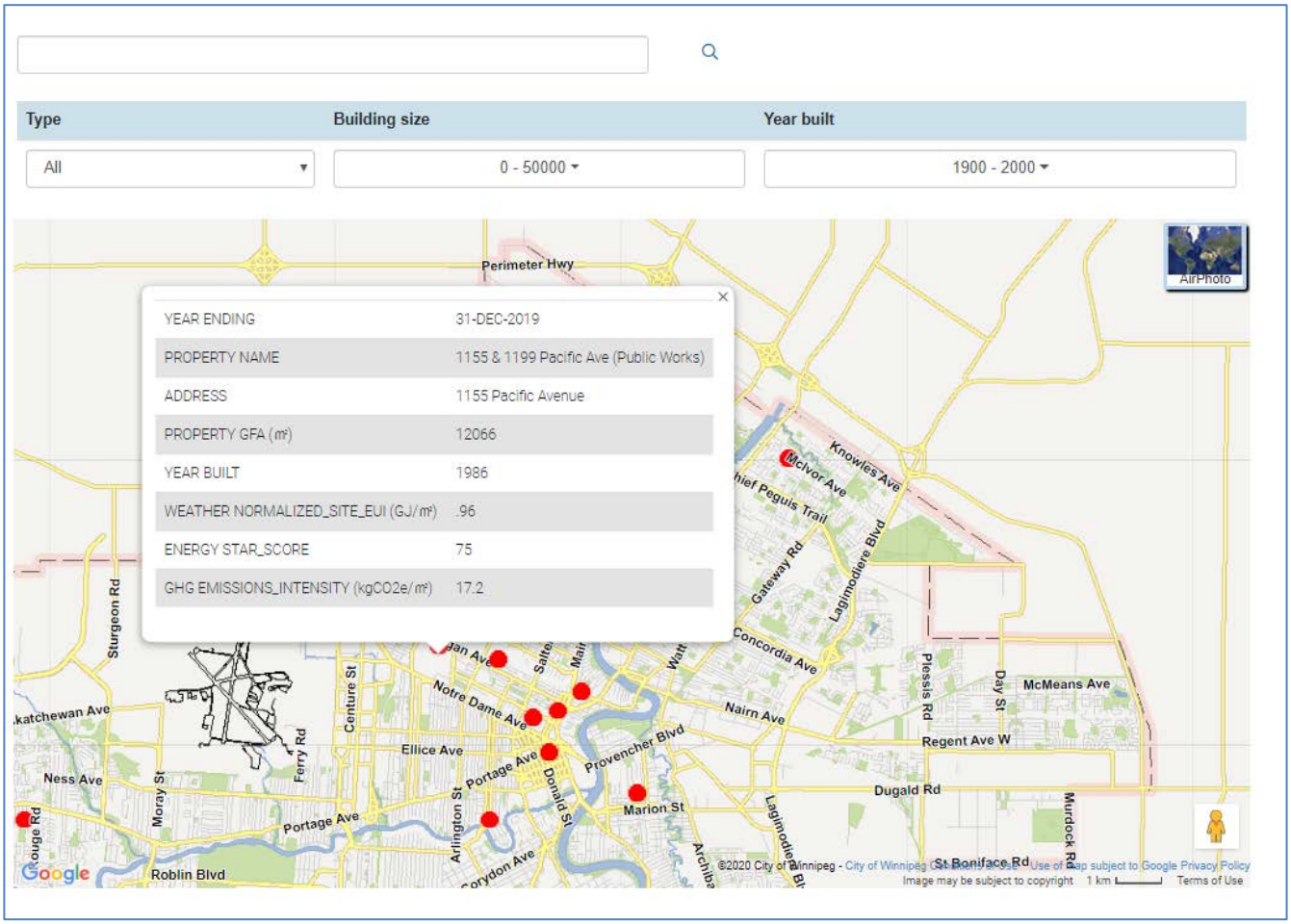
Sample of page 1

ENERGY STAR® scores are available for many, but not all Canadian building types. Collecting the full set of required and optional data as outlined by Portfolio Manager helps to improve the owner and operator's understanding of building energy and emissions performance. As such, participants are encouraged to submit all data whenever possible.

4.5. Data Disclosure

One of the key functions of this project is to make benchmarked data from participants available to the City, to other participants, and to the public. Data from 2019 submitted by participants will be shared via the City's Open Data Portal as well as through a searchable map on the City's website.

Image 2: Example Participant Map



The public map-based reporting platform and the energy performance scorecards for this project will provide all stakeholders with a greater understanding of the value of energy benchmarking, reporting and disclosure projects in general, and current energy use and GHG emissions in the region. Each participant will be given an opportunity to summarize the nature and extent of their building information; the efforts undertaken to improve energy efficiency and reduce GHG emission, and providing a greater level of data transparency.

4.6. Participant Support and Recognition

Participants will receive technical support from the City of Winnipeg in establishing and sharing their Portfolio Manager account if necessary, as well as collecting, submitting and verifying portfolio data. In addition, there will be education and capacity building support provided by the City and its consultant, CaGBC. Participants that are eligible to get their property ENERGY STAR® Certified, can get assistance from the City to review their application prior to scheduling the verification and site visit required by a Licensed Professional.

Participants will be recognized by the City via several industry events and publications, including but not limited to:

- An online map
- A final report highlighting participant successes

5. Project Steps (Detail)

Step 1: Complete the online registration forms for participating buildings

Visit the project website to complete the required registration and/or authorization forms. Include all eligible building addresses in the participant's portfolio that will be shared with the City through Portfolio Manager.

Step 2: Share benchmarked data with the project administrator

After the registration form has been received, the project administrator will send a request to the provided username to connect on Portfolio Manager and the participant will be required to share the building profile via a *read only* access.

*Please note: If a participant does not have or is unable to create their own Portfolio Manager account, they can submit the required data through online forms available on the project website once the initial registration forms have been completed. The project administrator will then create a building profile under the City's Portfolio Manager account. The participant will also have to authorize the City to access their Manitoba Hydro account through a "**Manitoba Hydro meter and account number release authorization form**". These steps are outlined on the website's registration page.*

Step 3: Work with the project administrator to reconcile and extract building performance data

Ideally, all performance data provided will be complete after the first submission. However, participants may have to spend some time supporting the project administrator with required reconciliation activities to help ensure that all submitted performance data is accurate and complete.

Step 4: Submit additional building information

Participants can submit information, if desired, on outlier buildings that have unique operational characteristics that affect performance or to highlight other achievements. This can be submitted during registration or later via email, and additionally can be entered to the building's specific Portfolio Manager 'Property Notes' under 'details tab'. Information that should be provided (where applicable) include:

- Any unique occupancy characteristics that explain outlier performance results;
- Any past retrofit programs, including details on what work was completed pre- and post-energy performance;
- Any retrofits that are planned, including details on work to be completed;
- Submitting information about additional building certifications or designations.

6. Project Schedule

Project participation will be ongoing until the end of the project and possibly into the following year. However, in order for prospective participants to receive an energy performance scorecard in Year 1 of the project, registration activities must be completed in accordance with the table below:

Table 5. Participant Submission Deadlines for BEDP Scorecard (Year 1)	
Completion of building registration forms	October 31, 2020
Submission and reconciliation of building data	November 30, 2020

7. Key Resources

ENERGY STAR Portfolio Manager®

ENERGY STAR – Use Portfolio Manager
ENERGY STAR – How to Set up Your Property
Government of Manitoba – Guide to using Portfolio Manager in Manitoba
Manitoba Hydro – Getting started in Portfolio Manager
Natural Resources Canada – Energy Star Portfolio Manager Access Page

Benchmarking

Canada Green Building Council – Energy Benchmarking, Reporting and Disclosure in Canada: A Guide to a Common Framework
Institute for Market Transformation – Putting Data to Work
Institute for Market Transformation – Sharing Data to Motivate Action
Institute for Market Transformation – Managing Benchmarking Data Quality
Natural Resources Canada – Energy Benchmarking: the basics

Energy Auditing Resources

ASHRAE Manitoba – www.ashraemanitoba.ca
Association of Consulting Engineering Companies Manitoba – www.acec-mb.ca
Building Energy Management Manitoba – www.bemm.ca
Engineers Geoscientists Manitoba – www.apegm.mb.ca
Natural Resources Canada – Conducting an Energy Audit

Training and Education

Canada Green Building Council – Benchmarking Course Information
ENERGY STAR – Live and Online Training and Webinars

Certifications

ENERGY STAR Certification for Commercial and Institutional Buildings in Canada
BOMA BEST®
BREEAM
LEED Certification