

**Edmonton's Building Energy
Benchmarking Program**

**ENERGY STAR Portfolio
Manager Toolkit**

March 2018

**CHANGE
BUILDINGS
FOR CLIMATE**



INTRODUCTION

This document provides step-by-step instructions to guide you through the process of using ENERGY STAR® Portfolio Manager® to participate in the City of Edmonton's Building Energy Benchmarking pilot program. For more information on the City's voluntary benchmarking program, please see the [Program Summary](#), the [Program Benefits Summary](#), and the Participation Guide (available at edmonton.ca/energybenchmarking).

GETTING STARTED



Program participants will share their building energy data with the City using ENERGY STAR Portfolio Manager, an online energy management tool that allows users to track and assess energy consumption across their entire portfolio of buildings. Portfolio Manager is free, easy to use, and is used by all other building energy reporting and disclosure programs in North America.

This toolkit outlines six steps for preparing and submitting a building data profile to the City. These steps will be necessary for each building you are submitting:

1. Collect your data
2. Create your Portfolio Manager Account
3. Create your Property and add use details
4. Add your energy meters and enter energy consumption from your bills
5. Check your data
6. Submit your data to the City of Edmonton

If you still have questions after following the instructions and accessing the online help resources linked within this guide, please contact the City of Edmonton benchmarking support service listed at the end of this document.

1. COLLECT YOUR DATA

Before entering data into Portfolio Manager, you will need to gather a few key pieces of information about your property. Portfolio Manager requires the following data for all properties:

- Property Name
- Property Address
- Total Gross Floor Area of Property/ Number of Buildings
 - See [glossary definition](#) for guidance on what to include in your GFA calculations
- Year Built
- Occupancy
- 12 consecutive months of whole-building energy data covering January 1, 2017 to December 31, 2017 (inclusive).
 - Whole-building energy data should include energy consumed in all common and tenant areas, for each fuel type (including electricity, natural gas, and any others)
 - Note that you may be eligible to receive aggregated energy data from EPCOR (electricity) or ATCO Gas for your buildings, depending on the number of tenants and your access to your tenants' utility meter data. Please refer to Page 4 of the program Participation Guide for more information

There are seven property types eligible to receive an ENERGY STAR Score in Canada (with more being added regularly), namely:

- K-12 School
- Hospital (General Medical and Surgical)
- Office – Covers office and financial office
- Medical office
- Supermarket/Grocery Store – Covers supermarket/grocery store, food sales, and convenience store with or without gas station
- Senior Care Community – Covers senior care community and residential care facility
- Ice/Curling Rink

If your property type is eligible for an ENERGY STAR Score in Canada, you may need to enter a few additional operational details for your property type. For example, the Property Use Details used to calculate the ENERGY STAR Score for Offices in Canada are:

- Building size
- Number of computers
- Number of workers
- Hours of operation per week
- Weather and climate (using heating and cooling degree days, retrieved based on postal code)
- Percent of the building that is heated and cooled

Each scored Property Type uses a distinct set of operational details to calculate the ENERGY STAR Score – please visit the [Portfolio Manager Data Collection Worksheet](#) to see exactly which details are required for your property.

Data Submission

You will now need to prepare and submit a building data profile within Portfolio Manager for every building that you registered in Step 1. A building data profile consists of building characteristics and energy use information that are used for benchmarking and calculating energy and GHG performance metrics. There are several steps required for you to set up each building within Portfolio Manager:

1. Sign into ENERGY STAR Portfolio Manager account
2. Configure the Property Set Up
3. Add Building Characteristics and Building Use Details
4. Add Energy Utility Meters

All data submissions should be prepared according to the instructions in Portfolio Manager. Guidance documents, definitions, and technical reference documents are available on [Natural Resources Canada's website](#) and within Portfolio Manager. The City will also provide assistance in preparing the data submission for any interested participant either with passive support (this Toolkit) or active support (a series of energy benchmarking workshops). For more information and to register to attend please see edmonton.ca/energybenchmarking.

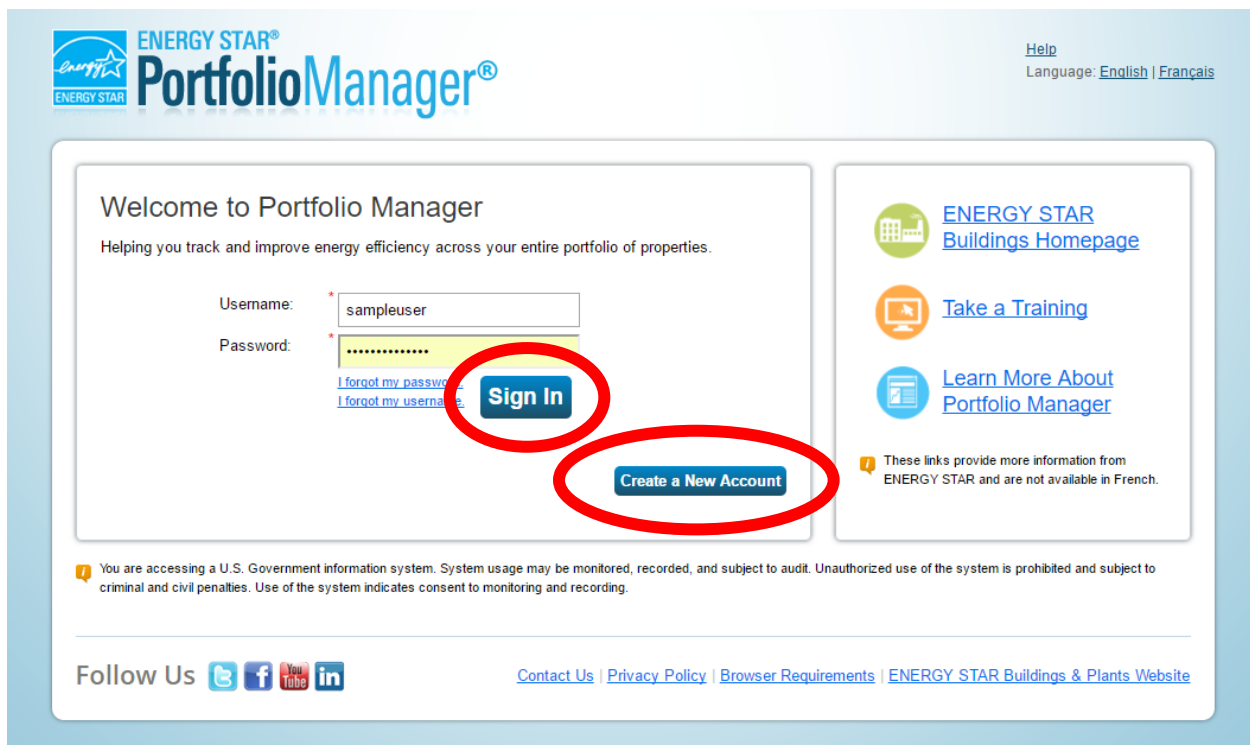
2. CREATE ACCOUNT

Once you have collected the necessary data, you will need to create a Portfolio Manager account, or login to your existing account, with the following link:

- <https://portfoliomanager.energystar.gov/pm/login.html>

You have the option to select metric or imperial units at the account creation step; however, you can change your preferred units at any time and all your building records will be automatically updated.

- Note that all correspondence from the City will be sent to the e-mail address you enter at the account creation screen.



ENERGY STAR® PortfolioManager®

Help
Language: [English](#) | [Français](#)

Welcome to Portfolio Manager
Helping you track and improve energy efficiency across your entire portfolio of properties.

Username: *

Password: *

[I forgot my password](#)
[I forgot my username](#)

Sign In

Create a New Account

[ENERGY STAR Buildings Homepage](#)

[Take a Training](#)

[Learn More About Portfolio Manager](#)

These links provide more information from ENERGY STAR and are not available in French.

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3. CREATE PROPERTY AND USE DETAILS

3.1 Add a Property

Once your account is set up, you may begin adding properties to your portfolio using the “Add a Property” button. Fill in your Property Type and characteristics on the first screen, then press “Get Started”.

On the second screen, fill in the basic building information collected in Step 1. Hover your mouse over any text in blue for a more detailed description of the input.

- **Gross Floor Area** – Include all finished areas inside the building, including supporting areas (e.g. lobbies, atriums), but excluding parking areas. See more information [here](#).

- If you have interior or exterior parking, be sure to indicate this in the check box at the bottom of the screen:

Do any of these apply?

- My property's energy consumption includes **parking** areas
- My property has a **Data Center** that requires a constant power load of 75 kW or more
- My property has one or more retail stores
- My property has one or more restaurants/cafeterias
- My property has a trading floor

[Cancel](#)

3.2 Add Property Uses & Details

Once you have finished creating a property, you can now begin adding Property Uses, which describe the business activity at your property. Refer to the list of [Property Types and definitions](#).

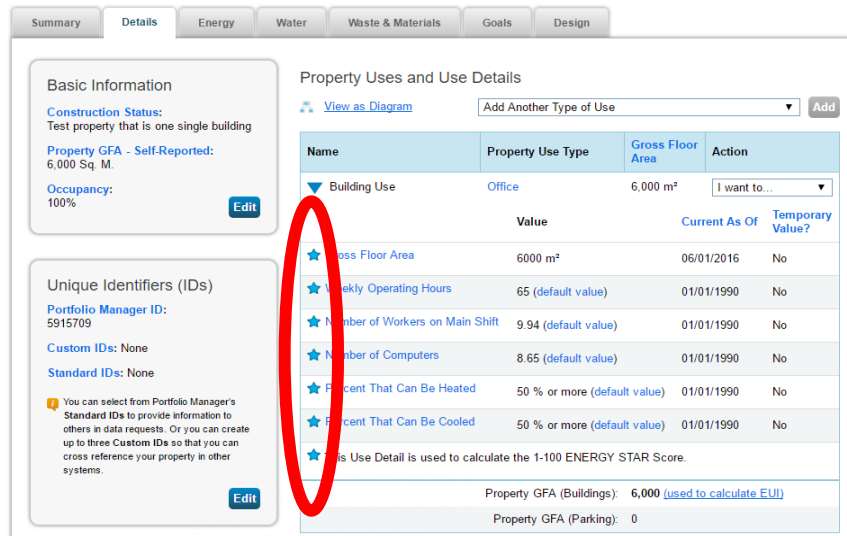
- In general, you should enter as **few** Property Uses as possible to describe the function of the building.
- For example, if you have a large office building with a small coffee shop on the ground floor, there is no need to enter a separate property use for the coffee shop, since that space supports the main property use (office). However, if a building has two distinct major functions (e.g. half office, half hotel), then those major Property Uses should be entered separately.

How-To Video

Check out ENERGY STAR's YouTube video on [How to Set Up a Property in Portfolio Manager](#)

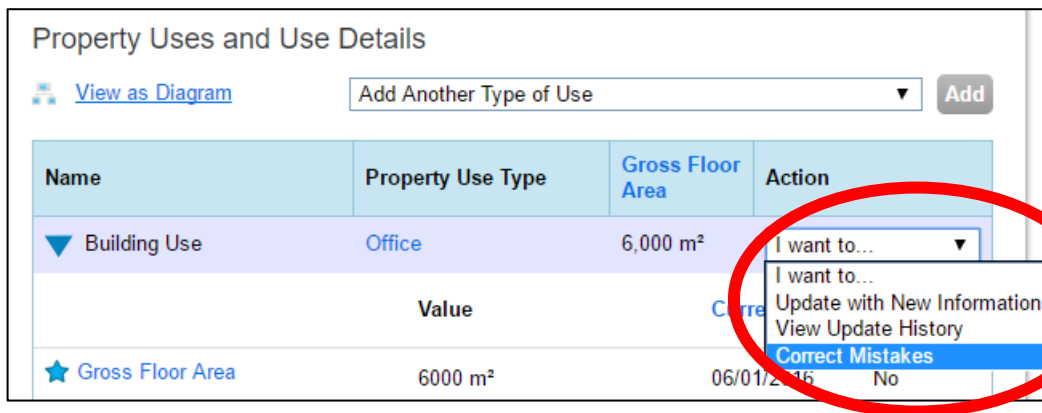
- While it may seem helpful to break out each Property Use separately, it does not increase the accuracy of your score (unless the secondary Property Use Type can also get a score)
- There are some exceptions to the above guidelines – please see the [Frequently Asked Question – When Should I Create Separate Property Uses](#) for more information

Portfolio Manager may collect different Property Use Details depending on the Property Use selected. Details used to calculate ENERGY STAR Scores are marked with a blue star if applicable for your property type, as shown in the example Office below:



You should collect and enter accurate data for as many Property Use Details as possible. If accurate data is not available, Portfolio Manager will assign default values. Any estimated values should be marked as such using the “Temporary Value” checkbox.

- Note that if you make a mistake entering one of your property use details, you can change it using the “Correct Mistakes” option, as shown on the next page.



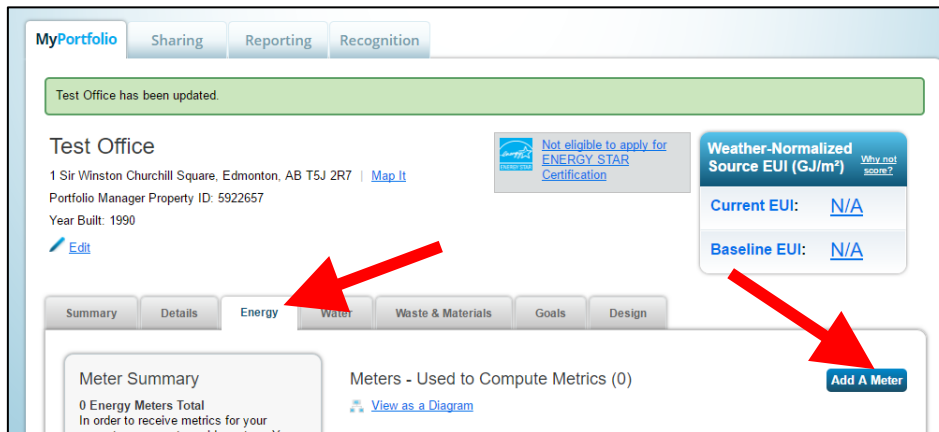
4. ADD METERS AND UPLOAD DATA

4.1 Create Meters

Once you have set up your property and use details, the next step is to enter your utility data. First, click on the “Energy” tab, then click the “Add a Meter” button, as pictured below.

How-To Video

Check out ENERGY STAR’s YouTube video on [How to Set Up Energy, Water, and Waste Meters in Portfolio Manager](#)



Next, enter the units and active date for your energy meters.

Selection of the correct billing units at this step is critical to data accuracy. Please double check that the units of measurement selected here match the units of measurement on your utility bills.

- Natural Gas – Natural gas is commonly billed in GJ (the [example bill](#) available on the ATCO website indicates that they bill in GJ, double check for your specific bills).
- Electricity is typically billed in kWh, but this should be confirmed on your actual bills.

4.2 Upload Data

Now that your meters have been created, you must enter your utility bill information. Bills can be entered for any time frame, and can reflect a monthly, quarterly, bi-annual, or even a single annual entry. However, we strongly recommend using billing periods that are as close as possible to monthly if they are available. There are two main reasons for this that you should consider and understand before proceeding, both are ultimately related to the overall accuracy of the resulting benchmarks:

1. **Weather normalized metrics need monthly data.** Weather normalization allows your information to take monthly weather variations into account, and generally improves the accuracy of your benchmark. You need meter bills at least every 65 days to get weather normalized data from Portfolio Manager, but even that isn't always a guarantee based on how portfolio manager performs weather normalization, and so more frequent data is desirable.
2. **If you are entering annual data, your metrics for any "Year Ending" dates that do not coincide with this year will not be as accurate.** In this case, Portfolio Manager will prorate the usage evenly among the 12 months. For example, say your total kWh for 2015 was 5000 due to a very cold winter, and your total kWh for 2016 was 4000. If you are looking at the metrics for the year ending June 2016 (July 2015 – June 2016), they will be slightly inflated because the 2nd half of 2015 is still carrying the increase from the first half of 2015 which had higher winter bills, even though that winter isn't in the year you are looking at.

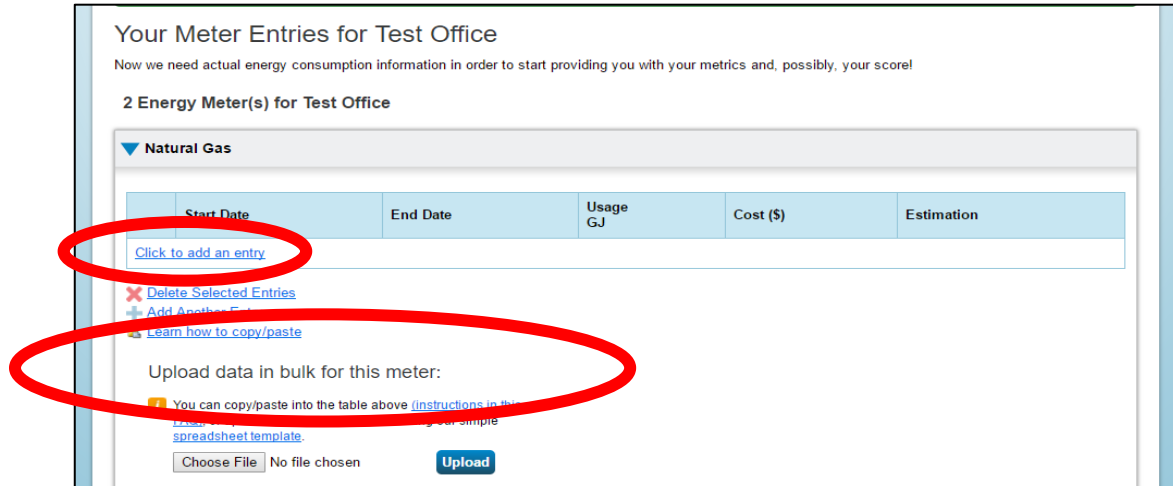
In short, although monthly information requires a bit more time to handle and enter, it results in more accurate results, and should be used wherever possible. The two simplest methods for entering utility bills are:

1. **Manual Entry** – Entering data one meter at a time is possible, but may be time consuming and can lead to data entry errors
2. **Spreadsheet Entry** – Allows for uploading a spreadsheet template where data has been gathered from external data sources

BUILDING ENERGY BENCHMARKING PROGRAM

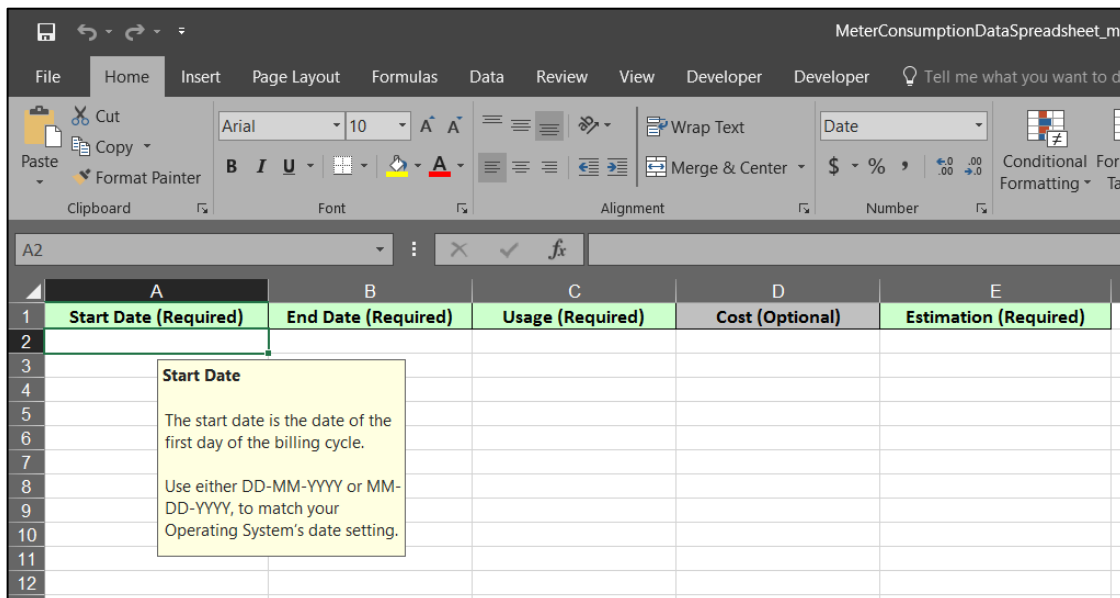


Manual data entry is done using the “Click to add an entry” link highlighted below, then manual entry of a bill’s start date, end date, usage (in the selected units of energy), energy cost (optional), and a tick box to indicate whether or not the bill is an estimation.



The spreadsheet option requires users to download the template from the bottom left corner of the Meter Entry Screen, as shown above. Once you have downloaded the spreadsheet template, you may populate the spreadsheet with your property’s utility data. The meter consumption data spreadsheet has four mandatory fields (headers marked in green), and one optional field (marked in grey).

- Ensure your data fully covers calendar year 2017 (January 1 to December 31, 2017 inclusive)
- Ensure there are no gaps or overlaps in the billing dates



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When you have finished populating your spreadsheet, save a copy to a convenient location. Press “Choose File” on the Portfolio Manager screen, select your saved sheet, and press “Upload”. Once your spreadsheet bills appear in the Portfolio Manager screen, press the “Continue” button (or “Save Bills” button if editing) to commit all changes.

When you have finished entering your bills, you will be asked to select which meters should be included in the calculation of your Energy Metrics, as shown below. Be sure to select the meters that account for the total energy consumption at your property.

Select Energy Meters to Include in Metrics

Tell us which meters to include when calculating the Energy metrics for [Test Office](#) so that we can provide you with the most accurate metrics possible.

Summary

2

Meters representing the total energy consumption for [Test Office](#) (a single building).

About Sub-meters

If you have sub-meters to measure energy or water consumption for a specific purpose, and you also have a master meter (which measures total consumption), counting both of

Energy Meters

Select all meters to be included in your Energy metrics. (Hint: All meters should be included unless they are [sub-meters](#).)

<input type="checkbox"/>	Name Meter ID	Type
<input checked="" type="checkbox"/>	Natural Gas 30045371	Natural Gas
<input checked="" type="checkbox"/>	Electric Grid Meter 30045372	Electric - Grid

Total of 2 meter(s). Tell us what this represents:

- These meter(s) account for the total energy consumption for [Test Office](#) (a single building).
- These meter(s) do not account for the total energy consumption for [Test Office](#) (a single building).

5. CHECK FOR POSSIBLE DATA ERRORS

The last step before submitting your data to the City is to check data quality by pressing on the button on the “Summary” tab, then the “Check for Possible Errors” button, as shown on the next page:

Summary Details Energy Water Waste & Materials Goals Design

Notifications (0)

You have no new notifications.

Property Profile [\(Changes coming Fall 2017\)](#)

This section will be deleted in the Fall of 2017, except for the property photos which will remain. [More information.](#)

[+ Create Profile](#)

Source EUI Trend (GJ/m²)

Year	Source EUI (GJ/m ²)
2014	~1.6
2016	~1.2

Metrics Summary [Change Time Period](#)

Metric	Dec 2014 (Energy Baseline)	Mar 2017 (Energy Current)	Change
ENERGY STAR score (1-100)	72	95	23(31.9%)
Source EUI (GJ/m ²)	1.59	1.07	-0.52(-32.7%)
Site EUI (GJ/m ²)	0.92	0.58	-0.34(-37.0%)
Energy Cost (\$)	Not Available	Not Available	N/A
Total GHG Emissions (Metric Tons CO ₂ e)	875.4	833.5	-41.9(-4.8%)
Water Use (All Water Sources) (m ³)	Not Available	Not Available	N/A
Total Waste (Disposed and Diverted) (Metric Tons)	Not Available	Not Available	N/A

Check for Possible Data Errors

Run a check for any 12-month time period to see if there are any possible errors found with your data.

[Check for Possible Errors](#)

Select a timeframe with year ending on December 31, 2017, to align with the City's intent to collect data for calendar year 2017.

- The most common errors identified are related to billing gaps or overlaps for the time period selected – to address these errors, return to the meter data entry screen and adjust the billing dates as required
- See the [Frequently Asked Question – How Can I Find And Fix Errors In My Data?](#) for more information on interpreting and addressing any problems identified in your data

Once you have addressed the issues identified in the data quality checker, re-run the checker to ensure all issues have been resolved.

- If you are still having trouble resolving all error messages, please refer to the Portfolio Manager help section (linked in the top-right corner of the Portfolio Manager screen), the [Online FAQ section](#), or contact the City of Edmonton support services (see contact information below)

6. SUBMIT YOUR DATA

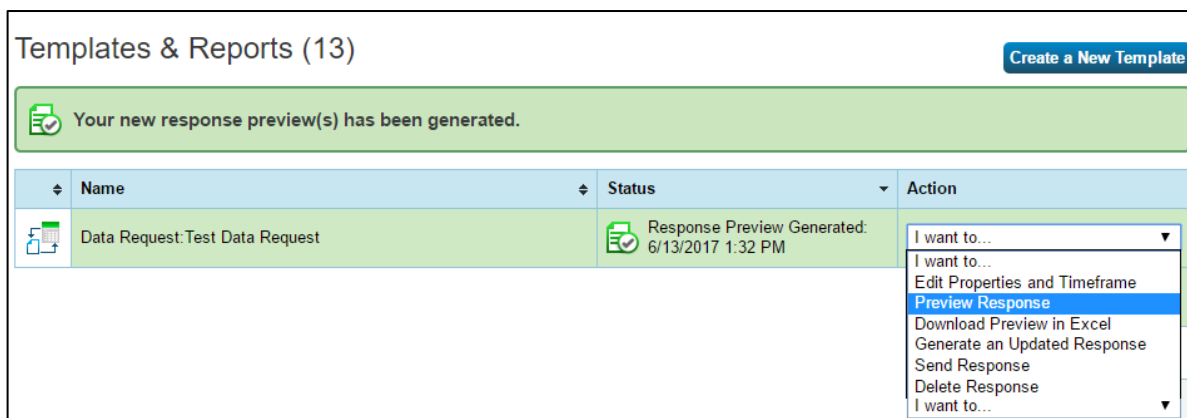
Now that your property has been set up and your metering data has been checked for errors, you may proceed with submitting your data to the City.

After [registering your building](#) you will receive an email from energystar@edmonton.ca with instructions as well as the data request link embedded within. To respond to the request, follow the link provided in the City of Edmonton's and your data will automatically be prepared to be shared. The customized data request link for Year 2 (2017 data) is also [here](#).

How-To Video

Check out ENERGY STAR's YouTube video on [How to Respond to a Data Request in Portfolio Manager](#)

In the Response to Data Request Screen, select the property (or properties) that you will be submitting to the City, and press "Generate Response Preview". In the next screen, you can select "Preview Response" to check your submission, or "Send Response".



The screenshot shows a web interface titled "Templates & Reports (13)" with a "Create a New Template" button. A green notification bar states "Your new response preview(s) has been generated." Below this is a table with columns: Name, Status, and Action. The table contains one row: "Data Request: Test Data Request" with a status of "Response Preview Generated: 6/13/2017 1:32 PM". An action dropdown menu is open, listing options: "I want to...", "I want to...", "Edit Properties and Timeframe", "Preview Response" (highlighted), "Download Preview in Excel", "Generate an Updated Response", "Send Response", "Delete Response", and "I want to..."

Once you are satisfied with your data, you may E-Sign the response and send it to the City. All data submission must be completed by the **October 31, 2018** deadline.

FREQUENTLY ASKED QUESTIONS

For more assistance with common issues experienced by Portfolio Manager users, please see the following helpful links:

- [When should I create separate property uses?](#)
- [What ENERGY STAR Scores are available for Canadian Buildings?](#)
- [Are there any planned changes to the Canadian ENERGY STAR Scores?](#)
- [How do I enter Mixed Use Property?](#)
- [What about indoor/outdoor parking lots?](#)

Related Resources

- [Natural Resources Canada – Benchmarking FAQs](#)
- [US EPA - ENERGY STAR FAQs](#)
- [ENERGY STAR Score Details by Property Type](#)
- [Natural Resources Canada – Benchmarking Updates](#)
- [US EPA – Portfolio Manager Training](#)
- [NRCan’s Canadian Adaptation of Portfolio Manager](#)
- [Institute for Market Transformation – Building Energy Reporting in Other Jurisdictions](#)

CONTACT INFORMATION

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