Benchmarking Guide

Step-by-Step Compliance Instructions for 2015

See www.CityofChicago.org/EnergyBenchmarking for free support and additional guidance:

- **Compliance Checklist:** Summary of required compliance actions
- **Fact Sheet:** Benchmarking overview to help buildings get started
- **Frequently Asked Questions (FAQs):** Information about the ordinance and policy
- **Free & Support Opportunities**:
  - Local in-person and web-based training
  - ENERGY STAR Portfolio Manager resources
  - Utility funding and other support

Chicago Energy Benchmarking Help Center

- Monday-Friday, 9:00am-5:00pm
- (855) 858-6878
- Info@ChicagoEnergyBenchmarking.org

December 15, 2014

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Introduction

What is "Chicago Energy Benchmarking"?

In September 2013, Mayor Emanuel and Chicago's City Council adopted the Chicago Energy Benchmarking ordinance to raise awareness of energy performance through information and transparency, with the goal of **unlocking energy and cost savings opportunities** for businesses and residents.

The ordinance calls on existing municipal, commercial, and residential buildings 50,000 square feet and larger to track whole-building energy use, report to the City annually, and verify data accuracy every three years. The law covers less than 1% of Chicago's buildings, which together account for roughly 20% of total energy used by all buildings, and focuses on creating information that will enable better decision-making around building energy use. It does not require buildings to make any mandatory investment.

Improving energy efficiency is a key element of *Sustainable Chicago 2015*, Mayor Emanuel's 3-year action agenda to make Chicago more livable, competitive, and sustainable. For more information on *Sustainable Chicago 2015* visit www.CityofChicago.org/city/en/progs/env/sustainable_chicago2015.html.

The full text of the ordinance can be found at www.CityofChicago.org/EnergyBenchmarking.

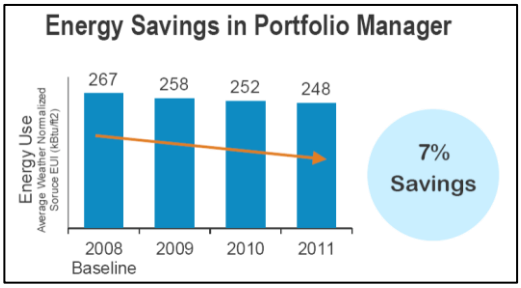
The ordinance has three parts. Owners of covered buildings must:

1. **Benchmark annually:** Owners of covered buildings will track energy consumption and basic building characteristics using ENERGY STAR Portfolio Manager®, a free online tool from the U.S. Environmental Protection Agency (US EPA).
2. **Report to the City annually:** Using Portfolio Manager, owners of covered buildings will report basic building and energy data to the City of Chicago, which will report annually on energy consumption and efficiency across the City. After a one year grace period following a building's first benchmarking deadline, the City will be authorized to make some building information publicly-available on the City website.
3. **Verify data every three years:** In the first year in which building owners benchmark their building energy use, and every third year thereafter, building owners will be required to have energy and building data reviewed by an in-house or third-party professional engineer, licensed architect, or other trained individual designated by the City to verify that data is being tracked and reported correctly. In most cases, data verification will take the form of a signed *ENERGY STAR Data Verification Checklist*, generated automatically by Portfolio Manager, which must be kept by the building owner and produced upon request by the City.

Why is benchmarking important?

By providing information about a building's energy use and comparing its performance to similar buildings, energy benchmarking empowers building owners, managers, and other stakeholders to make more informed decisions, identify opportunities to improve energy use in their buildings, and save money.

Evidence of these benefits is already available: by analyzing data from over 35,000 buildings that used Portfolio Manager and received an ENERGY STAR score from 2008 to 2011, US EPA found that **average energy use declined by 7%**. For more benchmarking trends, visit US EPA's DataTrends Series, found at www.EnergyStar.gov/DataTrends.



Source: Portfolio Manager DataTrends, US

What is Portfolio Manager?

Portfolio Manager (www.EnergyStar.gov/Benchmark) is a free online tool developed by the US EPA that allows you to track and assess energy and water use across your entire portfolio of buildings in a secure online environment. With Portfolio Manager, you can calculate the building's energy performance, compare it with similar buildings and monitor it over time.

When you benchmark the building in Portfolio Manager, one of the key metrics you'll see is energy use intensity, or **EUI**. Essentially, the EUI expresses a building's energy use as a function of its size or other characteristics. For most property types in Portfolio Manager, the EUI is expressed as energy per square foot per year. It's calculated by dividing the total energy consumed in the building in one year by its square footage.

For many building types, Portfolio Manager calculates the **ENERGY STAR rating**, which indicates how efficiently buildings use energy on a 1-100 scale, where a score of 50 indicates average energy performance. Buildings with a score of 75 or better are top performers and can apply for the ENERGY STAR certification. Some building types are currently not eligible to receive an ENERGY STAR rating, but can still benefit from benchmarking, as Portfolio Manager calculates other energy performance metrics such as weather-normalized energy-use intensity.

Portfolio Manager provides many user-friendly features and tips throughout the set-up process. For example, you can mouse over a field to see a definition. You may find the answer to any question you have in the 'Help' section of Portfolio Manager. Follow Portfolio Manager's instructions for anything that is not specifically addressed in this guide.

Where can I go for help?

City of Chicago Website

You can find **detailed information** about the ordinance and resources to help you comply at www.CityofChicago.org/EnergyBenchmarking.

Chicago Energy Benchmarking Help Center

The Chicago Energy Benchmarking Help Center provides **phone and email support** for all questions related to the ordinance, and it can be reached Monday-Friday, 9:00am-5:00pm at:

(855) 858-6878

Info@ChicagoEnergyBenchmarking.org

Free trainings

The City of Chicago and its partners will be offering **free in-person and web-based training** to support buildings covered by the Chicago Energy Benchmarking Ordinance. Schedules and registration details will be posted in early 2015 at www.CityofChicago.org/EnergyBenchmarking.

US EPA also offers **free online resources** to help you get started with Portfolio Manager at www.EnergyStar.gov/buildings/training.

1. Get Started

a. Determine if you are required to comply this year.

Covered **commercial and municipal buildings 50,000-250,000 square feet or larger** and **residential buildings 250,000 square feet or larger** are required to benchmark, verify data, and report by June 1, 2015. Commercial and municipal buildings that benchmarked, verified, and reported for the first time in 2014 are required only to benchmark and report in 2015. Others will begin in 2016, based on size and property use. For specific compliance dates, refer to "Benchmarking deadlines" below.

Covered buildings

The ordinance applies to existing municipal, commercial, and residential buildings 50,000 square feet or larger, with initial compliance deadlines based on size and building sector. For purposes of determining initial compliance timing, any covered building with 10% or more of its gross square footage classified as Class A residential occupancy use is considered a residential building. The ordinance does not cover buildings with more than 10% of gross floor area classified as Class D open air assembly units, Class G industrial units, Class H storage units, Class I hazardous use units, or Class J miscellaneous buildings and structure, as defined by Chapter 13-56 of the Chicago Municipal Code, which can be accessed at www.ChiCityClerk.com/Legislation-Records/Municipal-Code/.

The City will use multiple sources of information to identify covered buildings, and may make the list publicly available at www.CityofChicago.org/EnergyBenchmarking. The City may also notify covered buildings' owners and/or managers through a notification letter that includes the building information that the City has on file for benchmarking purposes. Lack of notification by the City, however, does not relieve the owner of a covered building of the obligation to comply if the building meets the size and sector criteria.

Building owners who believe their building is not required to comply but receive a notification letter from the City should submit the *Chicago Energy Benchmarking Information Update & Exemption Form*, found at www.CityofChicago.org/EnergyBenchmarking.

Benchmarking deadlines

Building owners are required to benchmark their buildings, verify, and report to the City by June 1 of the year unless deemed exempt from the requirement. Compliance will be phased in over three years based on building size and sector, according to the following timeline:

- **June 1, 2014**: Municipal and commercial buildings 250,000 square feet or larger
- **June 1, 2015**: Municipal and commercial buildings 50,000 square feet or larger and residential buildings 250,000 square feet or larger
- **June 1, 2016**: Municipal, commercial, and residential buildings 50,000 square feet or larger

Exemptions

Buildings may apply for exemption based on the following:

- Financial duress:
  - The building is the subject of a qualified tax lien sale or public auction due to property tax arrearages.
  - The building is controlled by a court appointed receiver.
  - The building has been acquired by a deed in lieu of foreclosure.
- Low Occupancy:
  - The building had average physical occupancy of less than 50 percent throughout the calendar year for which benchmarking is required.
- New Construction
  - The building is a new construction and the building's certificate of occupancy was issued during the calendar year for which benchmarking is required.

To apply for an exemption or to update building information, use the *Chicago Energy Benchmarking Information Update & Exemption Form* available at www.CityofChicago.org/EnergyBenchmarking.

b. Identify the building's benchmarking lead

The benchmarking lead will be responsible for gathering data, entering it into Portfolio Manager, ensuring data verification, and reporting to the City. This person could be the building owner or another designated party, for example back office staff, property manager or operator, leasing agent, or a 3rd party energy consultant. If a building already works with an energy service provider, they may offer benchmarking services.

The benchmarking lead will need access to information on building characteristics and operations, so collaboration with on-site staff is essential. This person will also need to know the building's Chicago Energy Benchmarking ID, which can be found on a notification letter or from the Help Center.

If the benchmarking lead is not already familiar with Portfolio Manager, training is strongly recommended. The US EPA offers free online training at www.EnergyStar.gov/Benchmarking. For information about free local training opportunities, visit www.CityofChicago.org/EnergyBenchmarking.

2. Benchmark the Building

a. Gather building information

The first step in the benchmarking process is to collect basic building data, including:

Property details

Basic building information, such as full address (including zip code), year of construction, and occupancy level (percent of building that is occupied).

Total gross floor area

Total square footage of the building, measured from the principal exterior surfaces and not including any exterior spaces such as balconies, exterior loading docks, open parking lots, or driveways. Gross square footage is not the same as rentable or leasable area, but rather includes all areas inside the building, such as: occupied tenant areas, common areas, meeting areas, break rooms, restrooms, elevator shafts, mechanical equipment areas, and storage rooms. Gross floor area should not include interstitial plenum space between floors, which may house pipes and ventilation. In the case where there is an atrium, gross square footage is counted at the base level only. If the building includes parking areas with energy consumption, their area must be included in total gross floor area.

Total gross floor area may be measured or obtained from architectural drawings or other building documents. It is crucial to have an accurate measure of gross floor area as it will impact benchmarking results.

Property use type(s)

Main function of the building, such as office, multifamily, hospital, school, retail, etc. If the building has multiple uses, both the primary function (the one that occupies the largest floor area) and all additional activities must be identified. Portfolio Manager has over 80 property use types to select from; a complete list with definitions is available at www.EnergyStar.gov/buildings/tools-and-resources/list-portfolio-manager-property-types-definitions-and-use-details.

Gross floor area per use type

If the building has multiple uses, total square footage must be broken down by use type, including parking areas. Some property types typically include multiple auxiliary activities, such as restaurants in hotels, salons in senior care communities, and cafeterias in hospitals. As a general rule, if a certain activity is commonly associated with the type of property being benchmarked, it can simply be included in the gross floor area of the building's primary use. Refer to Portfolio Manager guidance in this case.

Property use details

Depending on the use type, Portfolio Manager will ask for additional information on specific building attributes. Common examples include weekly operating hours, number of workers, number of computers, percent of area that can be heated/cooled, number of floors, number of rooms, etc. A list of all property use details for each use type in Portfolio Manager is available at www.EnergyStar.gov/buildings/tools-and-resources/list-portfolio-manager-property-types-definitions-and-use-details. While not all fields are mandatory in Portfolio Manager, the ordinance requires building owners to make a good-faith effort to obtain all applicable property use details, using all available information, including requesting information from tenants. When, despite good-faith efforts, such data is still unavailable, the default space attribute values offered by Portfolio Manager may be used.

Chicago Energy Benchmarking ID

A unique six-digit building identifier will be provided by the City of Chicago in early 2015 for the purpose of energy benchmarking. The Chicago Energy Benchmarking ID number can be found on the notification letter or by contacting the Help Center at (855) 858-6878 or Info@ChicagoEnergyBenchmarking.org. If you receive multiple ID numbers for the same building, please contact the Help Center.

b. Gather whole-building energy use data for January through December 2014

The other piece of information required for benchmarking is whole-building energy use data for the 12 months of the calendar year to be benchmarked. For example, if a building's reporting deadline is June 1, 2015, it will need monthly energy use data from January 1 through December 31 of 2014. Whole-building energy use includes energy used for heating, cooling, operating equipment, lighting, cooking, and all processes and operations carried out in the building, including by tenants. Energy used for parking areas should also be included. The only exception is energy used for broadcast antennas, cellular towers, electrical vehicle charging, emergency generators (if not used to power regular building operations), and fire pumps, which can be excluded from benchmarking if sub-metered or separately metered. All sources of energy must be reported, including electricity, natural gas, district energy and any other fuel type, as well as energy generated on-site that is used within the building such as wind, solar or geothermal energy.

There are several ways to obtain whole-building energy use data (see following page for links and additional detail):

i. Request whole-building data directly from utilities:
    1. ComEd Energy Usage Data System (EUDS)
    2. Peoples Gas Building Aggregation
ii. Compile energy data directly from utility bills: when the building is the accountholder.
iii. Request data from tenants: only in rare cases when other sources are not available.
iv. Default values: only after making a good-faith effort to obtain actual energy use data.

i. Request whole-building energy use data directly from utilities

1. ComEd Energy Usage Data System

If the building has more than four electric accounts, you can obtain whole-building electricity usage directly from ComEd through the Energy Usage Data System (EUDS). Please consult www.ComEd.com/EnergyUsageData for complete information on the program. Even if you use a 3rd party energy supplier, you can still use EUDS, as long as your bill comes from ComEd.

If you have a managed account, you can request access through your ComEd Account Manager.

If you do not have a managed account, the building owner or manager may fill out the *EUDS Enrollment Form* found at www.ComEd.com/Documents/business-savings/EUDS_EnrollmentForm.pdf. Email the completed enrollment form to ComEd at EnergyUsageData@ComEd.com to request access.

If the building has fewer than four electricity accounts, contact ComEd at EnergyUsageData@ComEd.com for assistance.

You will need to provide:

- Contact information for the account holder and site contact
- ComEd account manager (if you have one)
- Building address
- ComEd account number for your master building account: this consists of a 10 digit number found on each ComEd bill

Upon enrollment you will be emailed a username and password. For step-by-step guidance on how to use EUDS, consult the *EUDS Building Manager Guide*, found at: www.ComEd.com/business-savings/energy-tools/Documents/EUDS_BuildingManager_Guide.pdf.

Set up the building in the EUDS system, making sure to include all addresses. If the building's address has a range of street numbers, you need to enter the range as the primary address, and add each individual street number as secondary addresses. This will ensure that all meters in the buildings are aggregated.

Request data for January through December of the year you need to benchmark—in this case, 2014. EUDS will generate aggregate monthly usage data for all electric meters in the building. You can download a copy of the data or upload it directly into Portfolio Manager; refer to section "Add energy use data" on page 15 and to *EUDS Building Manager Guide* for instructions.

For ComEd EUDS support, contact EnergyUsageData@ComEd.com.

Usage Details

Month Year	Total Monthly Usage (kWh)
Jan 2013	9,771
Feb 2013	8,299
Mar 2013	8,082
Apr 2013	6,525
May 2013	7,402
Jun 2013	9,379
Jul 2013	10,525
Aug 2013	10,401
Sep 2013	7,307
Oct 2013	5,256
Nov 2013	7,346
Dec 2013	9,465
Total	99,758

Example EUDS Summary

2. Peoples Gas Building Aggregation

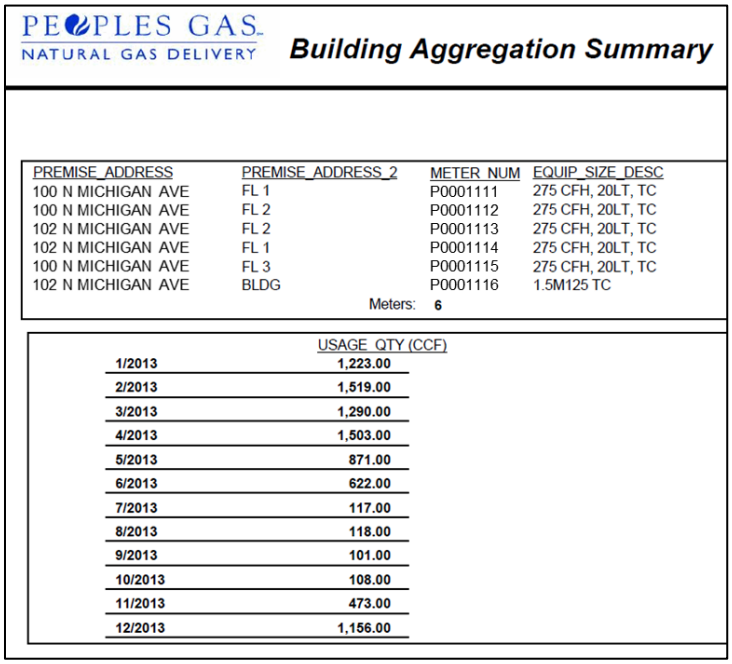
Peoples Gas offers services to help building owners gather whole-building energy data. Usage data will be available in early 2015. To enroll, visit http://www.PeoplesGasDelivery.com/Business/Aggregation.aspx and fill out the form.

You will need to provide:

- Your contact information
- Service address: this may be different than your mailing address
- Meter numbers: these consist of 7-digit numbers and can be found on the meters themselves or on a People's Gas bill. Enter only the 7 numbers

If the building has four or fewer gas accounts, you must obtain and submit a signed *Benchmarking Customer Information Release* form from each tenant in addition to filling out the online form. The release form is found at www.PeoplesGasDelivery.com/Business/pdf/Aggregation.pdf.

Within a few days of submitting the request, you will receive an email with an attached PDF displaying aggregate monthly usage data in CCF (hundred cubic feet) for the previous calendar year for all gas meters in the building. You will need to enter these data manually into Portfolio Manager; refer to section "Add energy use data" on page 15 for guidance.



PEOPLES GAS
NATURAL GAS DELIVERY

Building Aggregation Summary

PREMISE_ADDRESS	PREMISE_ADDRESS_2	METER_NUM	EQUIP_SIZE_DESC
100 N MICHIGAN AVE	FL 1	P0001111	275 CFH, 20LT, TC
100 N MICHIGAN AVE	FL 2	P0001112	275 CFH, 20LT, TC
102 N MICHIGAN AVE	FL 2	P0001113	275 CFH, 20LT, TC
102 N MICHIGAN AVE	FL 1	P0001114	275 CFH, 20LT, TC
100 N MICHIGAN AVE	FL 3	P0001115	275 CFH, 20LT, TC
102 N MICHIGAN AVE	BLDG	P0001116	1.5M125 TC
		Meters:	6

	USAGE_QTY (CCF)
1/2013	1,223.00
2/2013	1,519.00
3/2013	1,290.00
4/2013	1,503.00
5/2013	871.00
6/2013	622.00
7/2013	117.00
8/2013	118.00
9/2013	101.00
10/2013	108.00
11/2013	473.00
12/2013	1,156.00

Example Peoples Gas Building Aggregation

For Peoples Gas Building Aggregation support, contact:
PGLCityAggregationData@PeoplesGasDelivery.com

ii. Compile energy use data from utility bills

If you have energy usage data for all energy meters in the building for January 1 through December 31 of the year to be benchmarked, you will be able to enter this data directly into Portfolio Manager. You will need to know dates and usage for each billing period, which can be found on each utility bill. If your billing dates do not align with calendar months, you may need to also provide the last bill of 2013 and the first bill of 2015, to ensure that the profile has data for all of 2014.

iii. Request energy use data from tenants

In rare cases when other sources of whole-building energy data are unavailable, covered building owners or manager may have to request tenant energy data. When choosing this option, it may be useful to establish a timeline to request energy data in advance of the benchmarking reporting deadline. Building owners and managers should keep a record of the request as proof of a good-faith effort.

iv. Default values

When, despite good-faith efforts to obtain whole-building energy use data, such data is still unavailable, buildings may use default energy consumption values for designated occupancy uses. See “Appendix: Energy Use Default Values” on page 27 for additional instructions.

c. Set up the building profile in ENERGY STAR Portfolio Manager

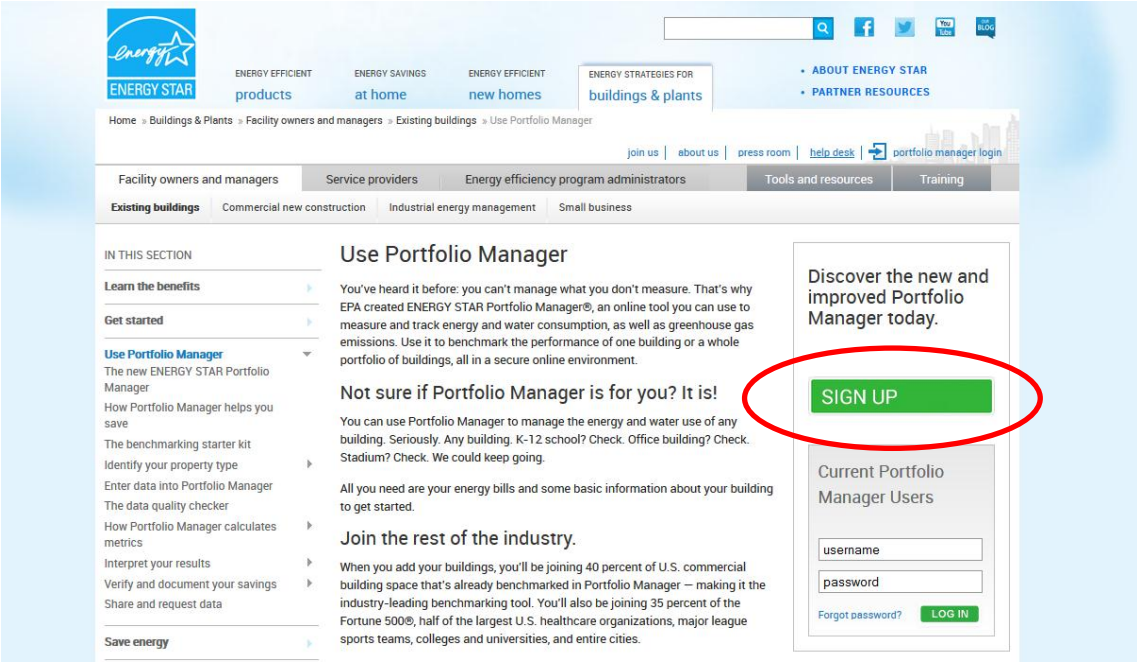
Once you have collected all the required information, the next step is to enter it into ENERGY STAR Portfolio Manager, found at www.EnergyStar.gov/Benchmark. This section will guide you through this process step by step. Portfolio Manager also provides many user-friendly features and tips throughout the set-up process. For example, you can mouse over a field to see a definition. You may find the answer to any question you have in the ‘Help’ section of Portfolio Manager. Follow Portfolio Manager’s instructions for anything that is not specifically addressed in this guide.

If you already have a Portfolio Manager account, you may use it. If the building has already been benchmarked in Portfolio Manager including energy data for January through December 2014, you can use the existing building profile, but make sure to add the building’s Chicago Energy Benchmarking ID. Refer to section “Add Chicago Energy Benchmarking ID” on page 17 for guidance.

The following instructions are adapted from the *ENERGY STAR Portfolio Manager Quick Start Guide*: www.EnergyStar.gov/buildings/tools-and-resources/portfolio-manager-quick-start-guide. Keep in mind that Portfolio Manager is periodically updated to improve functionality. Please consult the Portfolio Manager website for the most recent updates and changes.

Set up an account

1. Go to www.EnergyStar.gov/Benchmark.
2. Click on the green SIGN UP button on the right hand side of the page.



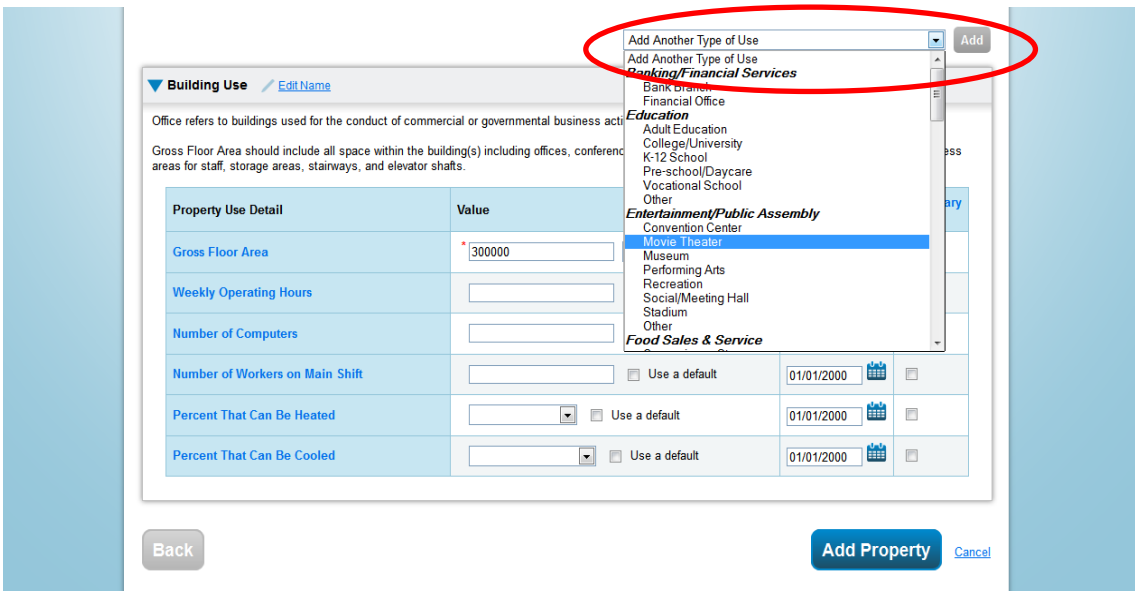
3. Enter the required account information. Be aware that the USERNAME is the one piece of information that cannot be changed once a Portfolio Manager account has been created. Consider a username based on your facility or portfolio, rather than individuals' names, as Portfolio Manager accounts may be passed from one user to another over time.
4. Choose your settings and click CREATE MY ACCOUNT.

Add a property

1. On the MYPORTFOLIO tab, click ADD A PROPERTY.
2. Answer basic questions about the property, then click GET STARTED!. If the property includes multiple buildings (either with shared or separate energy systems), select MORE THAN ONE and enter the number of buildings within the property that are subject to the benchmarking ordinance. Refer to "Appendix: Properties with multiple buildings" on page 29 for further instructions.
3. Enter basic property information (address, year built, total gross floor area, occupancy). Remember that any parking area that uses energy must be included in the total gross floor area, even if Portfolio Manager instructs you otherwise. Check the appropriate box to indicate the presence of parking. Select the boxes next to the statements that apply to the property, then click CONTINUE.
4. Enter other use details such as operating hours and number of workers for the main property use. Remember that you should always try to input actual values for all fields. If you have not

been able to obtain data for a specific field, the City currently allows covered buildings to use the default value provided by Portfolio Manager by selecting the USE A DEFAULT checkbox.

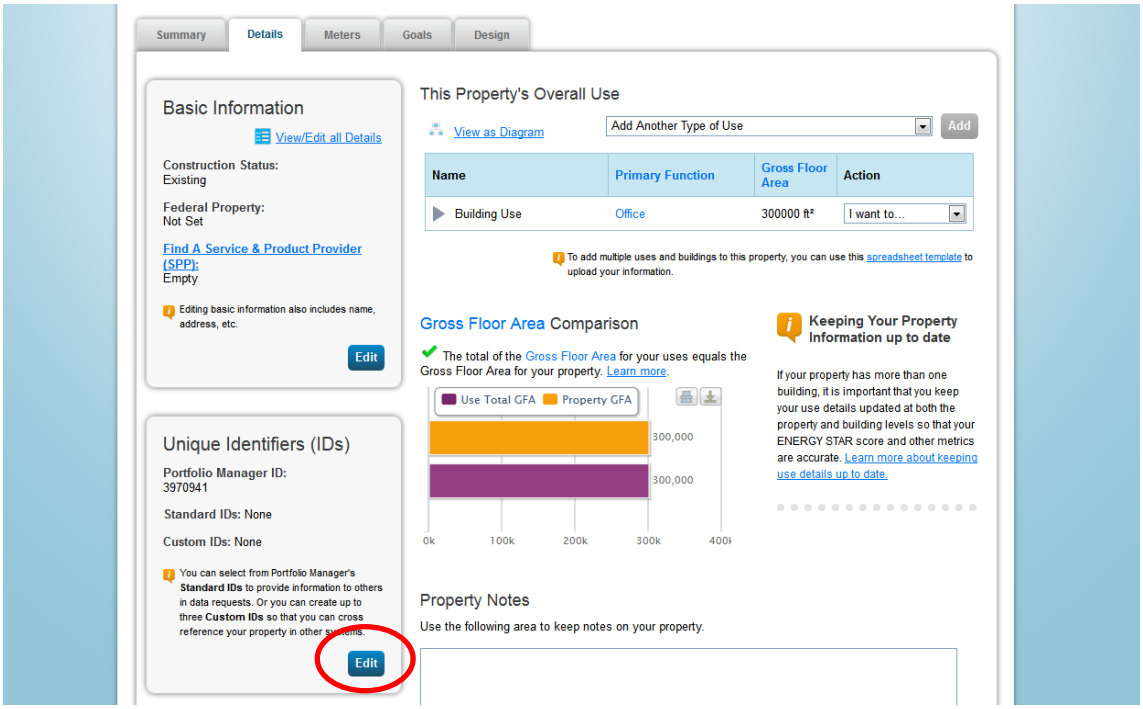
5. If the building has multiple uses, click on the ADD ANOTHER TYPE OF USE drop-down menu, select the appropriate function and click ADD. Enter all use details for each use type. Portfolio Manager recommends using as few use types as you need to accurately describe the building. For example, if the building has three floors of office space with roughly the same operating hours and similar use details, you may benchmark these floors as a single use. Similarly, remember that if a certain auxiliary activity commonly occurs in the type of property you are benchmarking (e.g. a cafeteria in a hospital), you do not need to add a separate use type. Simply include it in the square footage of the primary use. Follow Portfolio Manager's prompts and guidance on this.



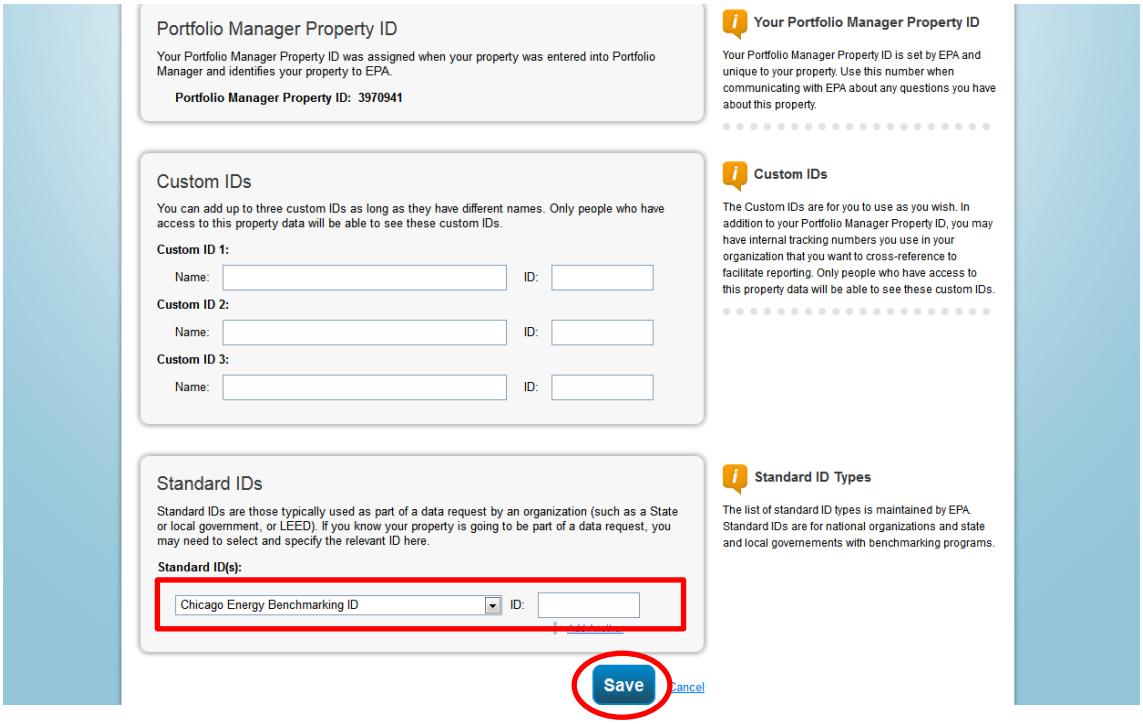
6. When you are finished adding the necessary information, click ADD PROPERTY. If you have entered parking areas, Portfolio Manager will generate a message alerting you that the property's total gross floor area does not equal the sum of gross floor area for all building uses. This is due to the fact that parking areas are ignored by Portfolio Manager; it does not affect the building's energy performance calculations. Click CONTINUE to dismiss the alert.
7. When you have successfully added the property, you will be directed to the property's SUMMARY tab.

Add Chicago Energy Benchmarking ID

1. On the property's DETAILS tab, find the UNIQUE IDENTIFIERS (IDs) box and click EDIT.



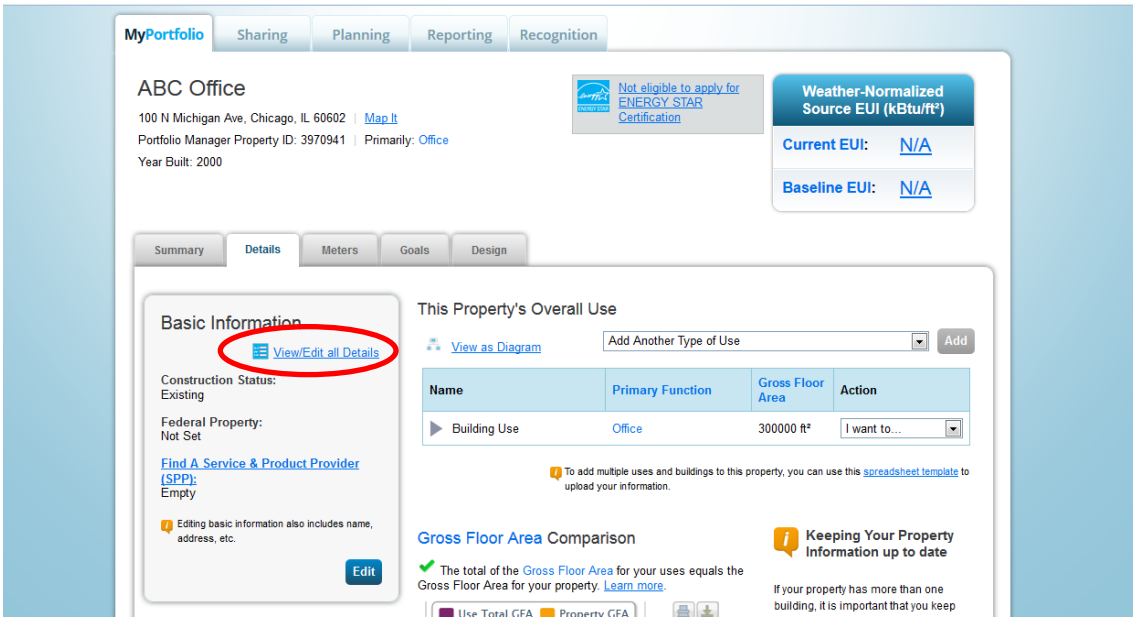
2. Under STANDARD IDs, select CHICAGO ENERGY BENCHMARKING ID from the drop-down list, and enter your unique six-digit Chicago Energy Benchmarking ID in the ID field. As a reminder, you can find this number on the notification letter or by contacting the Help Center at (855) 858-6878 or Info@ChicagoEnergyBenchmarking.org. Click SAVE.



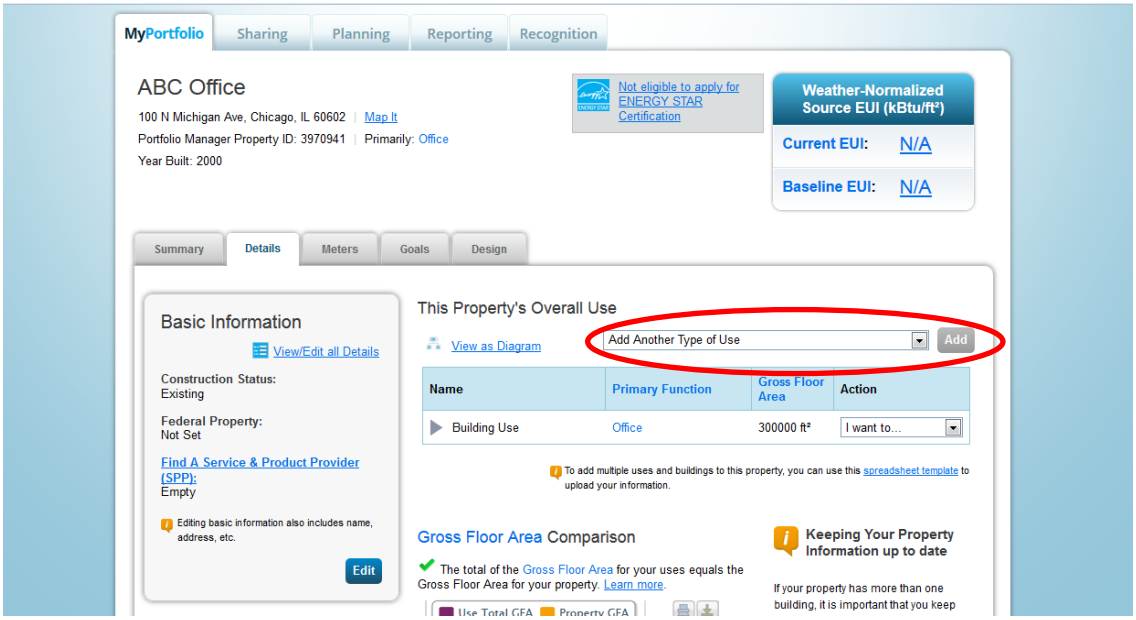
Add or edit property details

You can add or edit the property details at any time.

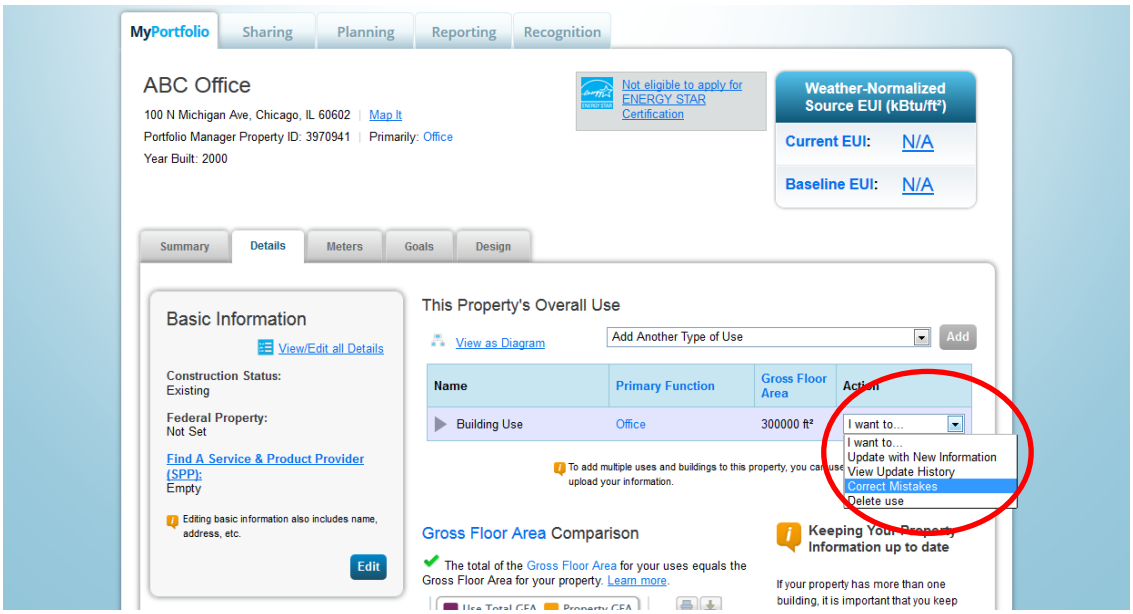
1. Click on the property's DETAILS tab.
2. To edit basic property details, click on VIEW/EDIT ALL DETAILS in the BASIC INFORMATION section.



3. To add a property use type, click on the ADD ANOTHER TYPE OF USE drop-down menu, select the appropriate function and click ADD. Enter all use details and click SAVE USE.

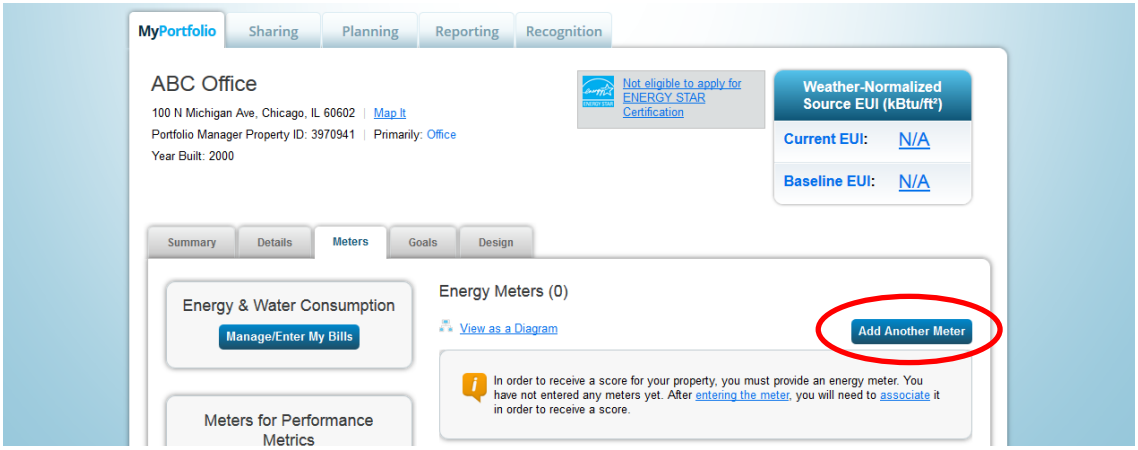


4. Use the ACTION drop-down menu next to each use type to correct mistakes (e.g. if you are replacing default values with actual values), update with new information (e.g. if there has been a change in the number of workers) or delete a use type.



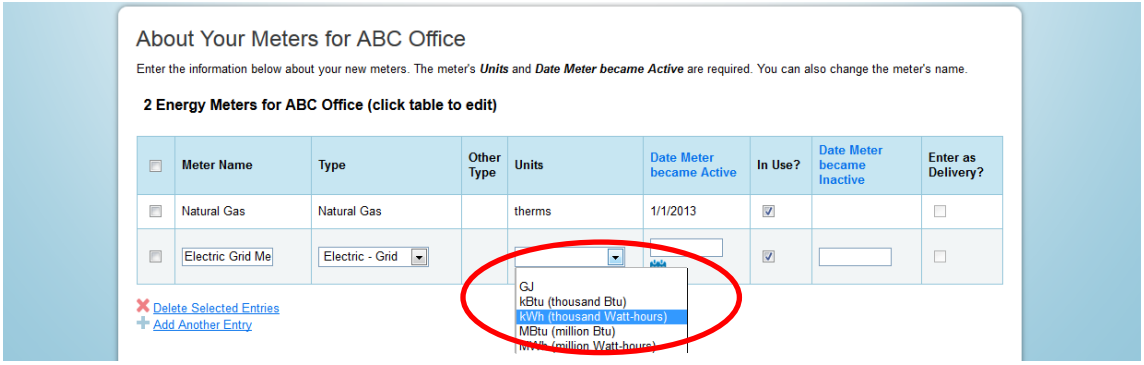
Add energy use data

1. Click on the property's METERS tab.
2. Under the ENERGY METERS section, click on ADD ANOTHER METER.



3. Select all energy sources for the property and enter the number of meters for each. If you are using ComEd EUDS or Peoples Gas Building Aggregation, enter only one meter, regardless of how many meters are physically in the building, as data will be provided in aggregated form. Scroll down and click the blue GET STARTED! button.

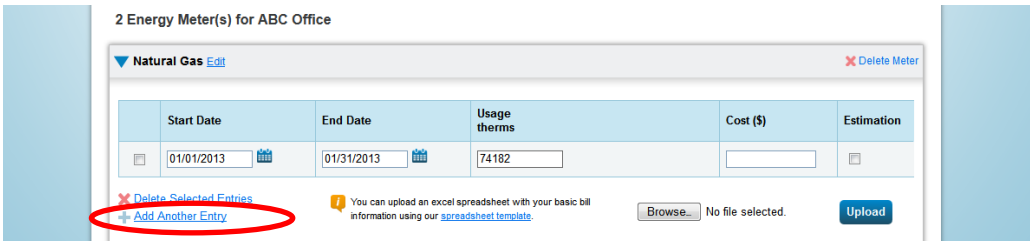
4. Click on each meter in the table to select the appropriate units (kWh for ComEd data, CCF for Peoples Gas aggregated data, therms for Peoples Gas individual bills) and enter the start date of your first bill. In order to comply with the ordinance, this cannot be later than January 1, 2014. You may also rename the meter to include the meter number or other descriptive information (recommended especially if you have many meters to keep track of). Then click CONTINUE.



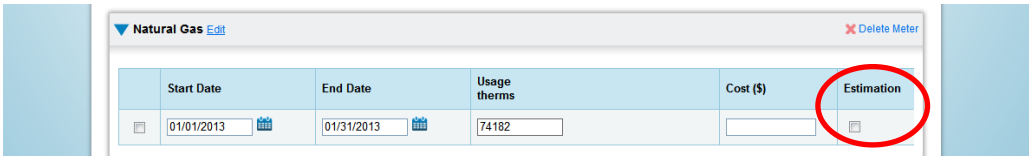
5. Add energy use data. There are two main ways to add energy use data to the meters:
   a. Enter data manually in the web browser
   b. Upload data from a spreadsheet

a. Enter data manually in the web browser

i. Click ADD ANOTHER ENTRY and enter the first bill's start date, end date, and usage. Cost information is optional and will not be reported to the City.



ii. Check the ESTIMATION check-box if you are using the default values listed in Appendix: Energy Use Default Values" on page 27 rather than actual values. When some utilities are unable to take a meter reading every month, they may bill based on estimate energy consumption, which is adjusted in subsequent months when the actual meter reading takes place. These utility estimates can be entered into Portfolio Manager as "actual" data and should not be flagged as ESTIMATION.



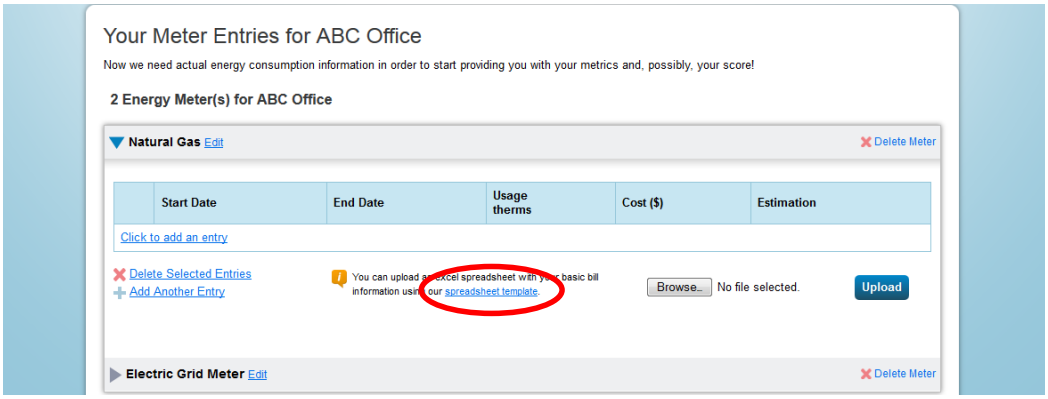
iii. Repeat for all bills that include the calendar year to be benchmarked.

iv. Repeat for all meters and energy sources. Click on the gray arrow next to each meter name to expand it and enter data.

v. Click FINISH METER SET UP to save. Continue to Step 6 on page 18.

b. Upload data from a spreadsheet

i. Click on the SPREADSHEET TEMPLATE hyperlink to download a standard template.



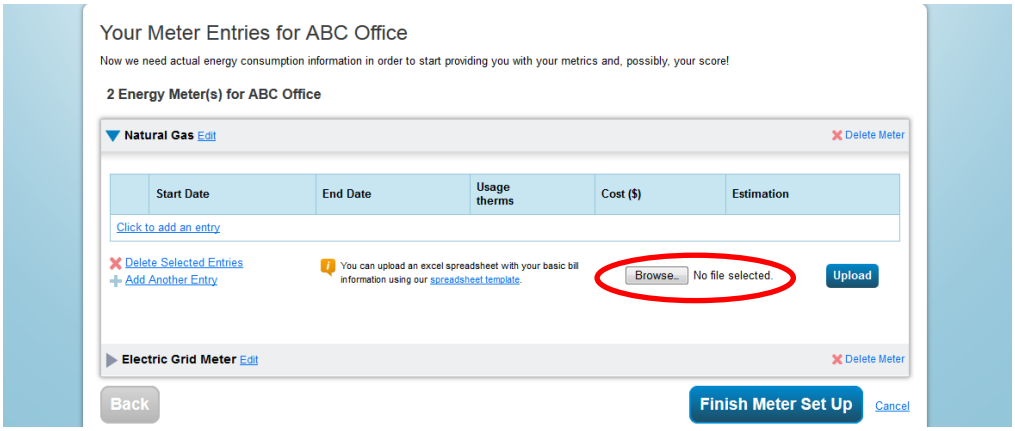
ii. Enter data from your bills (start date, end date and usage) into the template.

	A	B	C	D	E
1	Start Date	End Date	Usage	Cost	Estimated Value
2	1/1/2013	1/31/2013	74182		FALSE
3	2/1/2013	2/28/2013	66100		FALSE
4	3/1/2013	3/31/2013	59100		FALSE
5	4/1/2013	4/30/2013	23762		FALSE
6	5/1/2013	5/31/2013	14460		FALSE
7	6/1/2013	6/30/2013	13241		FALSE
8	7/1/2013	7/31/2013	13958		FALSE
9	8/1/2013	8/31/2013	15264		FALSE
10	9/1/2013	9/30/2013	10485		FALSE
11	10/1/2013	10/31/2013	17715		FALSE
12	11/1/2013	11/30/2013	38074		FALSE
13	12/1/2013	12/31/2013	48225		FALSE

iii. In the ESTIMATED VALUE column, enter TRUE if you are using the default values listed in "Appendix: Energy Use Default Values" on page 27 rather than actual values. When some utilities are unable to take a meter reading every month, they may bill based on estimate energy consumption, which is adjusted in subsequent months when the actual meter reading takes place. These utility estimates can be entered into Portfolio Manager as "actual" data and should not be flagged as ESTIMATION.

iv. Save the file on your computer with any name.

v. Go back to the meter setup page on Portfolio Manager, click BROWSE and select the file you just created.



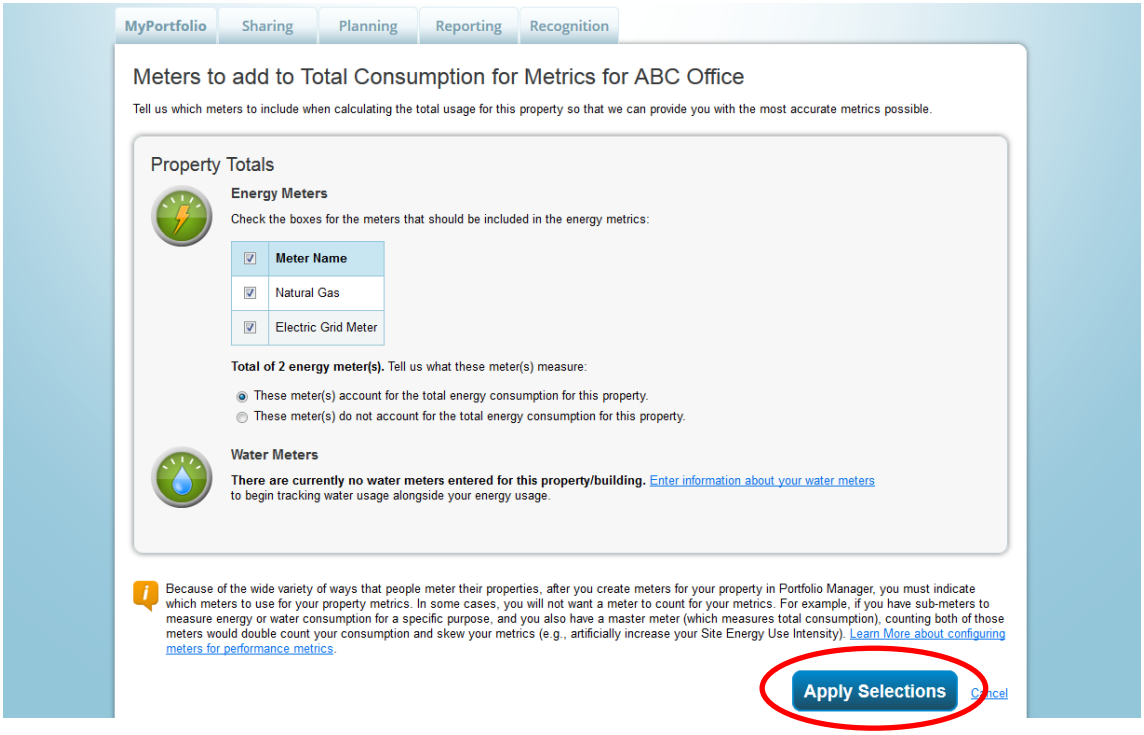
vi. Click UPLOAD and wait a few seconds.

vii. Portfolio Manager will upload the data directly into the table. Check for any issues.

viii. Repeat for all meters and energy sources. Click on the gray arrow next to each meter name to expand it and enter data.

ix. Click FINISH METER SET UP to save.

6. On the METERS TO ADD TO TOTAL CONSUMPTION screen, select the meters that make up the property's total energy use and select THESE METER(S) ACCOUNT FOR THE TOTAL ENERGY CONSUMPTION FOR THIS PROPERTY. If you are tracking usage from a sub-meter that is also included in the main meter's usage, be sure to exclude the sub-meter from the selection to avoid double counting. Click APPLY SELECTIONS to save.



Keep in mind that while Portfolio Manager allows you to benchmark partial energy consumption, the Chicago Energy Benchmarking Ordinance requires whole-building energy use data for all buildings.

Energy cost and water usage are not required by the ordinance. You may choose to track them in Portfolio Manager for your own benefit. The City of Chicago will not have access to this data.

3. Verify the Data

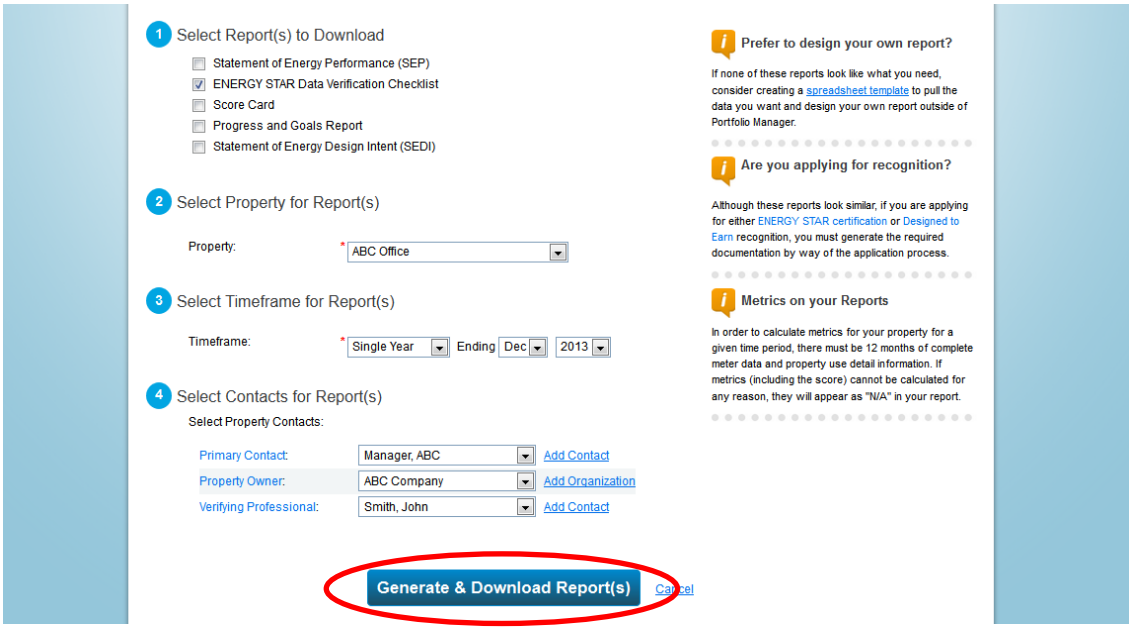
As required by the City of Chicago Benchmarking ordinance, your benchmarking data must be verified by an approved verifier ("licensed professional") in the first year of reporting and every third year thereafter.

a. Generate an *ENERGY STAR Data Verification Checklist*

To verify benchmarking data, the verifier must complete the *ENERGY STAR Portfolio Manager Data Verification Checklist* for each building. The checklist includes a snapshot of all data entered in Portfolio Manager and provides prompts to verify their accuracy.

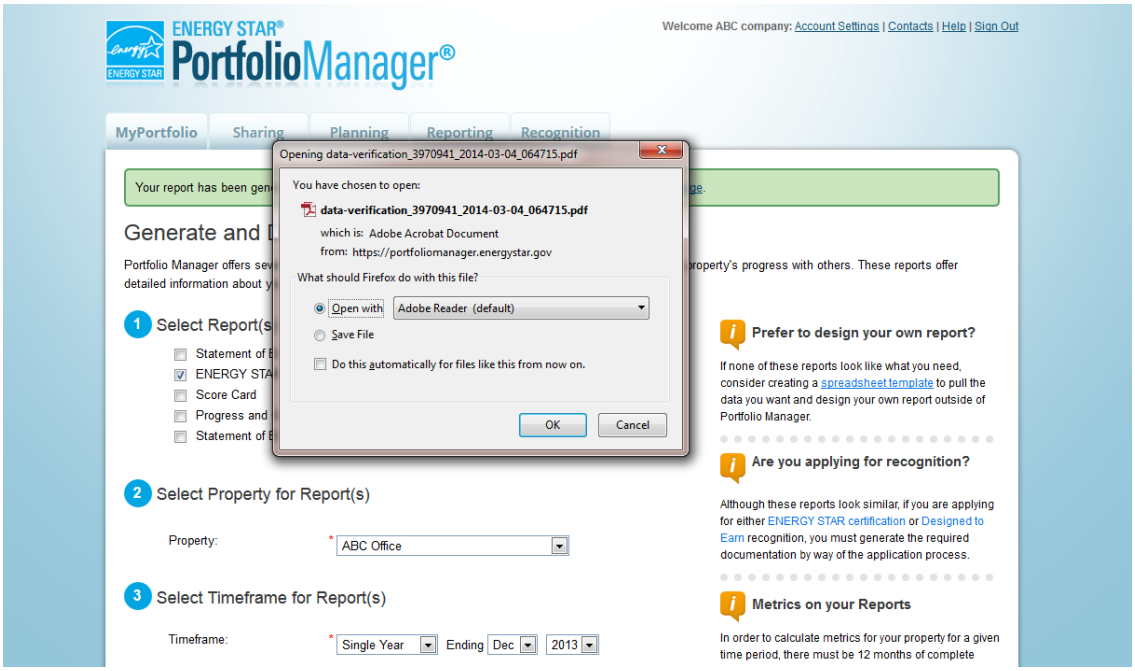
1. After you have entered all data into Portfolio Manager, navigate to the REPORTING tab. You will find the DATA VERIFICATION CHECKLIST on the right side of the page, under ENERGY STAR PERFORMANCE DOCUMENTS. Click on the PDF link.

2. Make sure ENERGY STAR DATA VERIFICATION CHECKLIST is checked. Select the building and choose SINGLE YEAR ending December of the year to be benchmarked. You can select the primary contact, property owner and verifying professional from your contacts (if they are not in your contact list, you can add them by clicking ADD CONTACT or ADD ORGANIZATION). You may also leave these fields blank – in this case, you will need to add contact information manually on the form. Click on GENERATE & DOWNLOAD REPORT(S).



If you have more than one building, you must generate a separate *ENERGY STAR Data Verification Checklist* for each building.

3. Download the report. You may need to disable your browser's pop-up blocker.



4. Save and provide a copy to the verifier.

b. Have a recognized professional sign your *ENERGY STAR Data Verification Checklist*

Currently, the City recognizes the following data verifier training programs and credentials:

- Professional Engineer (PE) licensed in the State of Illinois
- Architect licensed in the State of Illinois
- Building Operator Certification (BOC) certificate issued by the Midwest Energy Efficiency Alliance
- Building Energy Technology Certificate issued by the City Colleges of Chicago
- Certified Energy Manager (Association of Energy Engineers)
- Building Energy Assessment Professional (ASHRAE)

Additional training programs or credentials may be recognized by the City over time; all recognized programs and credentials will be posted to www.CityofChicago.org/EnergyBenchmarking.

The verifier can be a building staff member, an existing energy contractor, a tenant/occupant of the building, or an eligible third-party.

The verifier should review and complete the *ENERGY STAR Data Verification Checklist* and confer with the building owner, manager, or benchmarking lead to address any concerns. Once all data has been verified and is considered accurate, the verifier must sign in the space provided on the last page of the form. The verifier must include his or her name, email address, mailing address, the name of the recognized training program or credential, and any relevant unique identifiers, such as a Professional Engineer License Number, as well as his or her stamp (if applicable). Buildings must retain this form for three years, until the next time they are required to verify their benchmarking data. The signed *ENERGY STAR Data Verification Checklist* must be provided to the City, upon request.

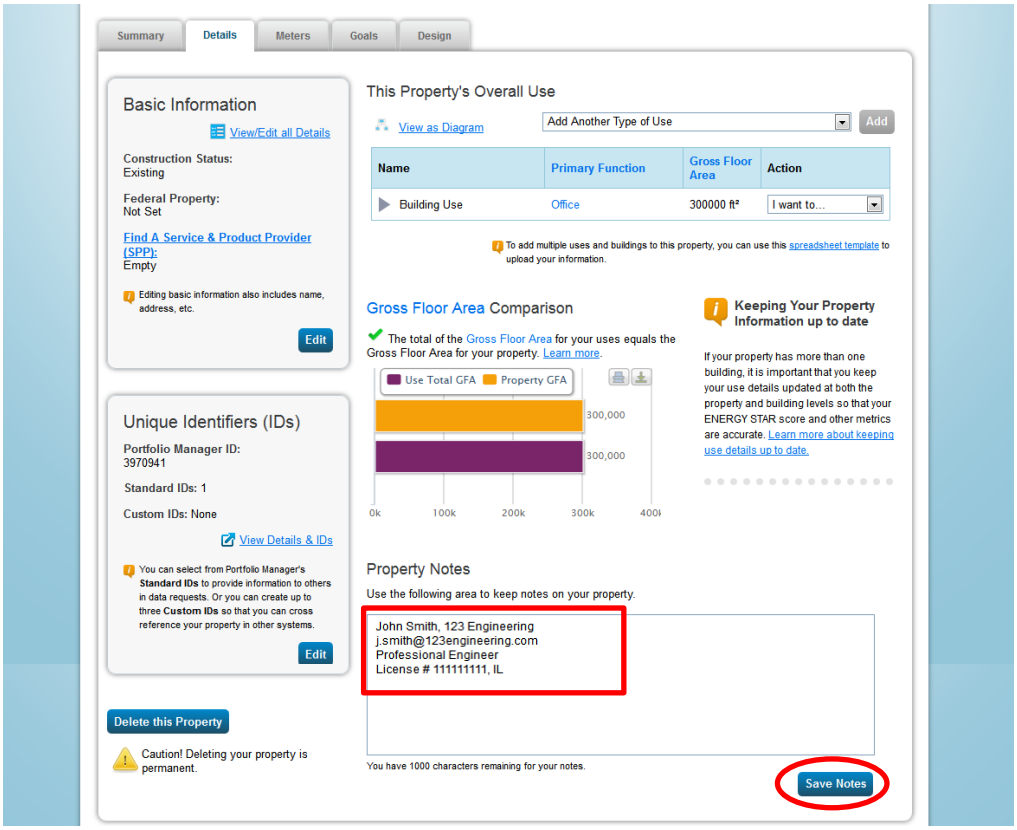
Alternative: Verification through ENERGY STAR building certification

Each year, the US Environmental Protection Agency recognizes buildings that are top energy efficiency performers as ENERGY STAR certified buildings. In some cases, the City will recognize ENERGY STAR certification by the US EPA as fulfilling the data verification requirement. This data verification option applies only if the data upon which ENERGY STAR certification was based includes at least six months of the calendar year for which Chicago Energy Benchmarking data verification is required. For example, a building that is required to verify calendar year 2014 data by June 1, 2015 may use ENERGY STAR certification in lieu of the signed *ENERGY STAR Data Verification Checklist* if the ENERGY STAR certification is based on data that covered at least six months of calendar year 2014 (i.e. January 1st – June 30th, 2014 or July 1st – December 31st, 2014).

c. Add your verifier's name and credential information to the building's profile

Once your data has been verified, you need to indicate it in your building's Portfolio Manager profile.

1. Log in to your Portfolio Manager account.
2. Select the building from the MyPortfolio tab.
3. In the Property Notes text field on the property's Details tab, enter: the name of the person who verified the building's data, their organization, email address, recognized license or training credential, and any unique identification number for the recognized license or training credential.



4. Click Save Notes.

Note: If your building's data was verified through ENERGY STAR Certification, please enter information for the professional who verified data for the ENERGY STAR certification, along with the date range of the data verified, in addition to the verifier's organization, email address, recognized license or training credential, and unique identification number for the recognized license or training credential.

Pro-bono verification services

The Pro Bono Data Verification Service provides building owners with limited financial resources a means to professionally verify the building. For more information and application materials for pro-bono data verification, please refer to www.CityofChicago.org/EnergyBenchmarking.

4. Report to the City

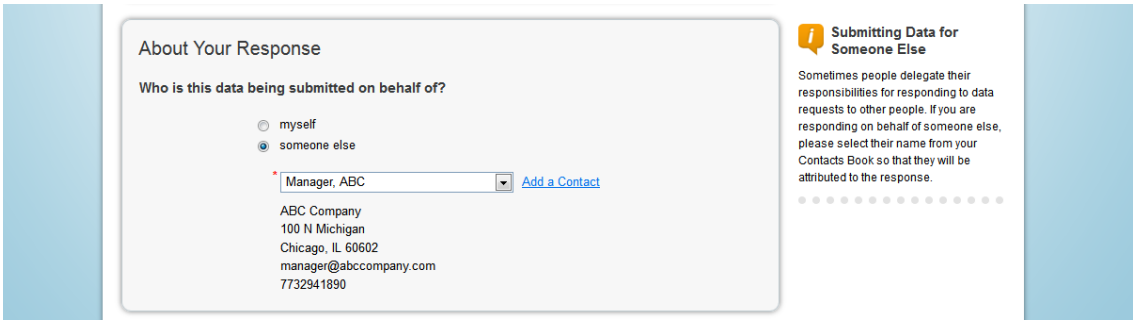
Please note: reporting will begin in early 2015.

After you enter all relevant building and energy data into Portfolio Manager and have it verified, the final step is to submit the benchmarking data to the City. Please note that you will not be sharing the entire building profile with the City; you will only release selected metrics for the designated time period.

Instructions are adapted from www.EnergyStar.gov/buildings/tools-and-resources/how-respond-data-requests-portfolio-manager.

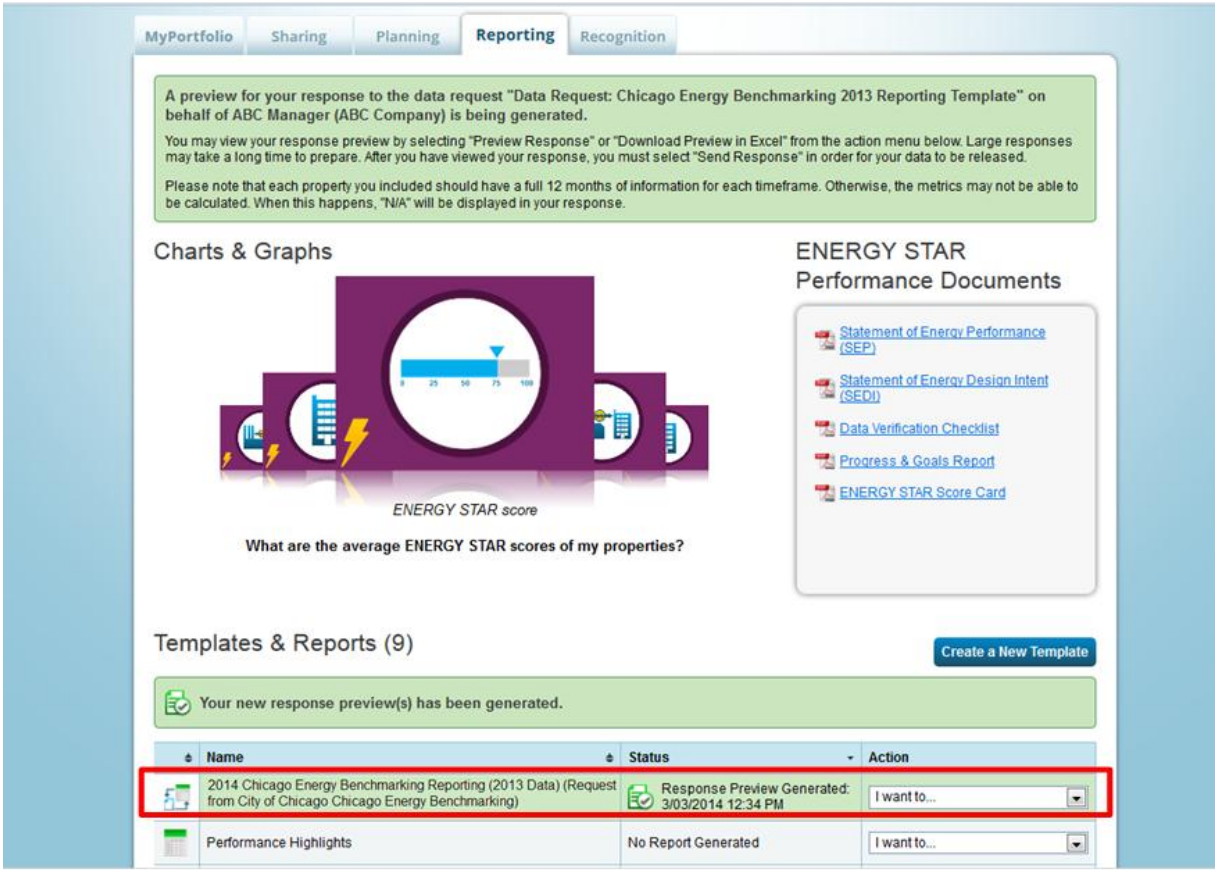
a. Generate and review the building's report

1. First, make sure that:
    a. All building information and energy data is in the building's Portfolio Manager profile;
    b. You have included the building's Chicago Energy Benchmarking ID in the STANDARD ID section of your profile (refer "Add Chicago Energy Benchmarking ID" on page 13 for instructions);
    c. The data has been verified; and
    d. You have included the verifier information on the building's Portfolio Manager profile.
2. The reporting link will be available on www.CityofChicago.org/EnergyBenchmarking in early 2015. You will be redirected to Portfolio Manager. If you are not already logged in you will have to enter your credentials. Once you are signed in, you will be taken to the RESPOND TO DATA REQUEST page. Review the instructions on the online form.
3. In the ABOUT YOUR RESPONSE section, select the user whose data is being submitted. Select MYSELF if you are submitting the report for your own building. If you are submitting the report on behalf of someone else, select SOMEONE ELSE and choose a contact with whom you are associated. You can pick the contact from the drop-down list or click ADD A CONTACT to add a new contact.



4. In the YOUR RESPONSE section, select from the drop-down menu which properties to include. If you have properties with multiple buildings that are benchmarked separately, make sure to include all individual buildings rather than the parent property. The timeframe has already been specified and cannot be changed. Click GENERATE RESPONSE PREVIEW.

5. The template should now be listed in your TEMPLATES & REPORTS table on the REPORTING tab. You will see a notification when the report preview is available (you may need to refresh the page).



6. Select DOWNLOAD PREVIEW IN EXCEL (recommended) or PREVIEW RESPONSE from the ACTION drop-down menu to review the data you are submitting. The preview shows the data that you will share with the City. Some fields may be blank if they do not apply to the building.

7. Review data for accuracy. Changes can be made by editing the building's profile in Portfolio Manager. Be aware that all changes must be made before submitting the report; any changes made after submitting will not be received by the City. If you make changes, you must also update your report by selecting GENERATE AN UPDATED RESPONSE from the ACTION drop-down menu.

2014 Chicago Energy Benchmarking Reporting (2013 Data)
Date Generated: 03/18/2014 10:37 AM EDT
Number of properties in report: 1

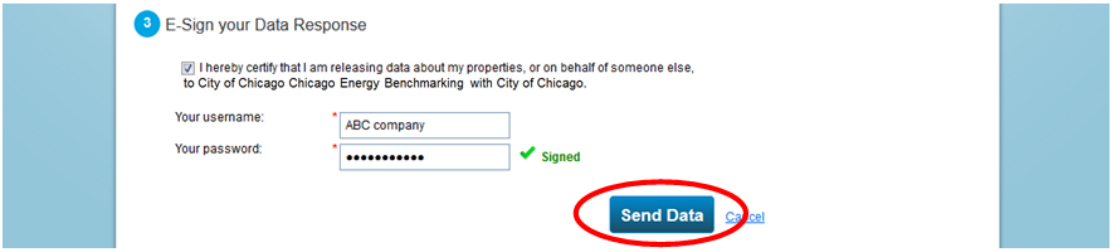
Property Id	Property Name	Year Ending	Address 1	Address 2	City	County	State/Province	Postal Code
3977259	ABC Office	12/31/2013	123 Benchmark Way	Not Available	Chicago	Not Available	Illinois	60647

b. Submit the report to the City

1. After you have reviewed and confirmed the data, go back to the REPORTING tab and find the report in the TEMPLATES & REPORTS table.
2. Select SEND RESPONSE from the ACTION drop-down menu.

3. You can choose to have the confirmation email sent to one or more of your contacts (in addition to yourself). Choose the format for the copy of the data you will receive (this does not affect reporting to the City, so choose your preferred format). Enter your Portfolio Manager username and password and click E-SIGN RESPONSE.

4. Once your e-signature has been verified, click SEND DATA. Click CONTINUE on the pop-up notification to confirm submission. The report will be automatically sent to the City.



c. Save the Portfolio Manager Confirmation email as proof of submission

You will receive a confirmation email with a receipt and a copy of the data submitted. This is your proof-of-submission. You must keep the following documentation for three years:

- Completed *ENERGY STAR Data Verification Checklist*, signed by a Licensed Professional;
- Confirmation email from the US Environmental Protection Agency containing proof-of-submission;
- Back-up information on energy use inputs, including, but not limited to, energy bills, calculations, and correspondence demonstrating good faith efforts to obtain actual energy data, space use attribute information, and other data requested by Portfolio Manager;
- A copy of energy data entered into Portfolio Manager.

If, after submitting your data to the City, you learn that any reported benchmarking information is inaccurate, you must make the appropriate changes to the building's Portfolio Manager profile, generate a new report and re-submit it to the City, through the same process described above, within 30 days of discovering the inaccuracy.

Moving Forward

What will the City do with the data?

The City will report annually on aggregate energy efficiency trends. No building-specific information will be publically disclosed for the first year that a building benchmarks and reports. The ordinance authorizes the City to share building-specific data with the public after an initial grace period of one year.

What can I do to make my building more efficient?

In 2007 and 2009, the State of Illinois passed legislation requiring energy utilities to set aside ratepayer funds to invest in energy efficiency. The resulting utility incentives expand opportunities for buildings to pursue subsidized energy efficiency improvements that save money and energy.

ComEd's Smart Ideas for Your Business® program can help reduce building energy use. Incentives and support programs help businesses drive energy savings and an improved bottom line. Please visit www.ComEd.com/Business-Savings for more information.

Peoples Gas Natural Gas Savings Program offers incentives to encourage business customers to make energy-efficient improvements to reduce energy use and enhance workplace comfort. Please visit www.PeoplesGasDelivery.com/business/rebates for more information.

Appendix: Energy Use Default Values

If you have not been able to obtain whole-building energy usage data from the utilities, your tenants, or any other suitable channel, you may estimate energy use by fuel type and square footage using the default values provided here. These values represent average energy use of buildings in our region, increased by 25%. Keep in mind that default data may be less accurate than data from other sources, and it should only be used as a last resort. You must report all known energy use data for common areas and centrally metered systems, as well as known tenant energy use data. Even if your building is electric only, you must enter both electricity and natural gas (this is because the default data values are based on average energy use for both fuel types).

To calculate estimate monthly electricity use, take the appropriate default value in Column 1 of Table 1 based on the building's activity, and multiply it by the gross floor area for which electricity use is unknown. To calculate monthly tenant heating energy use, take the appropriate default value in Column 2 of Table 1 based on the building's activity, regardless of which fuel is actually used for heating, and multiply it by the gross floor area for which heating energy use is unknown. These building activity categories are based on data from the U.S. Energy Information Administration and do not exactly match Portfolio Manager's property use types. Choose the category that most represents the building's activity.

IMPORTANT: In the MANAGE BILLS (METER ENTRIES) screen from the METERS tab, please make sure to place a tick mark in the "ESTIMATION" box next to any monthly energy data entries that are derived from the default values below (or indicate "TRUE" in the ESTIMATED VALUE column in the Excel spreadsheet if uploading data using a SPREADSHEET TEMPLATE). See "Add energy use data" on page 15.

TABLE 1: DEFAULT ENERGY USE VALUES - NON-RESIDENTIAL BUILDINGS

Principal Building Activity	Column 1 Monthly Usage: Electricity kWh/ft^2	Column 2 Monthly Usage: Natural Gas cubic ft/ft^2
Education	0.82	5.69
Food Sales	5.47	5.23
Food Service	4.01	15.93
Health Care	2.52	10.48
Inpatient	2.91	13.67
Outpatient	2.00	5.36
Lodging	1.53	8.07
Mercantile	1.63	5.45
Retail (Other Than Mall)	1.28	6.17
Enclosed and Strip Malls	1.86	5.00
Office	1.97	4.55
Public Assembly	1.28	6.69
Public Order and Safety	1.59	4.55
Religious Worship	0.45	4.82
Service	1.25	6.41
Warehouse and Storage	1.13	2.78
Other	1.74	7.04
Vacant	0.25	2.40

Source: U.S. Energy Information Administration's 2003 Commercial Buildings Energy Consumption Survey values for East North Central or Midwest buildings where available, national otherwise. Original values are multiplied by 125%.

Default Value Example

You are benchmarking a 300,000 ft^2 building. You have gathered energy use data for 200,000 ft^2. However, you have not been able to acquire energy use data directly from the utility or the tenant of a 100,000 ft^2 retail space. To calculate estimated monthly electricity using the default values, multiply 100,000 ft^2 by 1.28, the value for "Retail (Other Than Mall)" found in Table 1 Column 1. This equals 128,000 kWh. To calculate estimated monthly natural gas use using the default values, multiply 100,000 ft^2 by 6.17, the value for "Retail (Other Than Mall)" found in Table 1, Column 2. This equals 617,000 cubic feet. Note: you must enter energy consumption for both electricity and natural gas, since the default data values are based on average energy use for both fuel types.

When you are ready to add energy use data to the building Portfolio Manager profile, you would create a meter for your estimated monthly electricity use, enter 12 months of electricity use using 128,000 kWh per month, and check the 'Estimated' box. You would create a meter for your estimated monthly natural gas use, enter 12 months of natural gas use using 617,000 cubic feet, and check the 'Estimated' box. See "Add energy use data" on page 15.

Appendix: Properties with Multiple Buildings

If the property includes more than one building, please report according to the following guidelines. If the issue is not addressed here, use Portfolio Manager guidance.

Multiple buildings with shared systems

If you property includes multiple buildings that share one or more energy-consuming systems, where energy is not metered separately or sub-metered, you can benchmark them together.

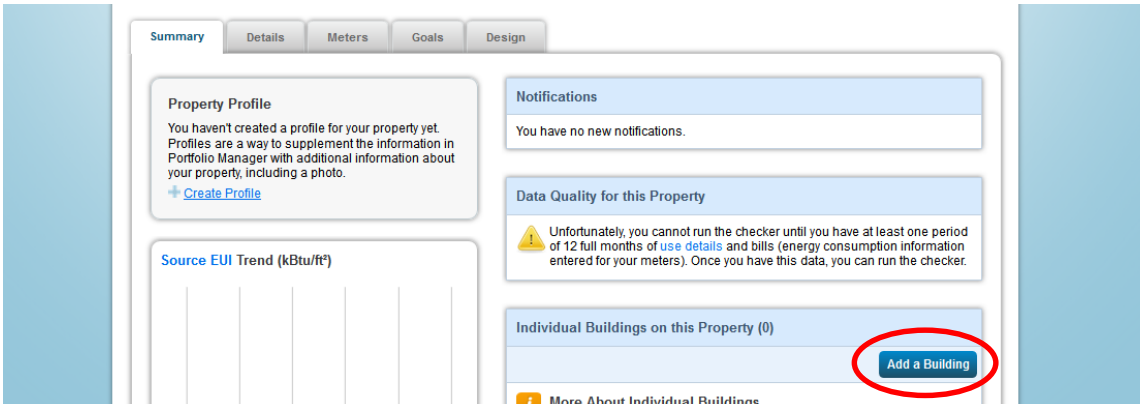
1. When you set up the property in Portfolio Manager, under YOUR PROPERTY'S BUILDINGS, indicate that there are MORE THAN ONE buildings and enter the number of buildings that are covered by the benchmarking ordinance.
2. Follow the rest of the set-up process and enter information and data (e.g. gross floor area, etc.) that refer to the property as a whole.
3. Enter the property's Chicago Energy Benchmarking ID. Refer to section "Add Chicago Energy Benchmarking ID" on page 13 for instructions.
4. Set up the shared energy meters and add the combined energy usage data for the property for all energy types.

Multiple buildings with the same Property Identification or Index Number (PIN) and separate systems

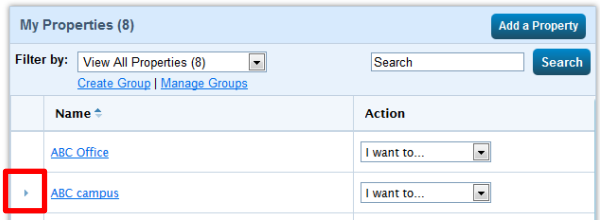
If the property includes multiple buildings that have separate energy-consuming systems and are metered separately or sub-metered for all energy types (such as university, corporate, medical, or residential campuses where multiple buildings of various sizes share the same PIN), you should set up a "parent property" profile and create a separate profile for each building in your Portfolio Manager account. According to the current Chicago Energy Benchmarking ordinance rules and regulations (available at www.CityofChicago.org/EnergyBenchmarking), you are not required to benchmark individual buildings within your covered property that are smaller than 50,000 square feet. Each building should have its own Chicago Energy Benchmarking ID; if you don't have a unique identifier for each building, contact the Help Center.

1. When you set up the property in Portfolio Manager, under "Your Property's Buildings", indicate that there are MORE THAN ONE buildings and enter the number of buildings that are covered by the benchmarking ordinance.
2. Follow the rest of the set-up process and enter information and data (e.g. gross floor area, etc.) that refer to the property as a whole.

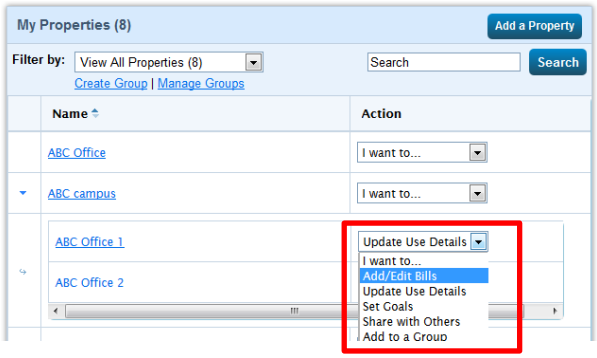
3. From the property's SUMMARY tab, click on ADD A BUILDING.



4. In the ENTER A NEW BUILDING section, provide the name, primary function and gross floor area of each building, then click CONTINUE. If you have existing profiles for individual buildings, you can also add them to the parent property from the ADD A BUILDING ALREADY IN PORTFOLIO MANAGER TO THIS PROPERTY section on the same page.
5. Follow Portfolio Manager's prompts and provide all basic information and property use details for each building. Click ADD BUILDING to save.
6. Once you have entered information for all the buildings in the property, you will be redirected to the MYPORTFOLIO tab. In the MY PROPERTIES table, click on the arrow next to the parent property to show a list of individual buildings.



7. Use the ACTION menu next to each individual building to add or edit use details and to add energy use data. Remember to enter the Chicago Energy Benchmarking ID on each building's profile. Refer to the previous sections for detailed guidance.



Questions?

Contact the **Chicago Energy Benchmarking Help Center**

Monday-Friday, 9:00am-5:00pm

(855) 858-6878

Info@ChicagoEnergyBenchmarking.org.

City of Chicago Energy Benchmarking Website

www.CityofChicago.org/EnergyBenchmarking.

- **Compliance Checklist:** Summary of required compliance actions
- **Fact Sheet:** Benchmarking overview to help buildings get started
- **Frequently Asked Questions (FAQs):** Information about the ordinance and policy
- **Free & Support Opportunities**:
    - Local in-person and web-based training
    - US EPA ENERGY STAR resources
    - Utility funding and other support

Chicago Energy Benchmarking Help Center

Monday-Friday, 9:00am-5:00pm

(855) 858-6878

email: Info@ChicagoEnergyBenchmarking.org.

ENERGY STAR Portfolio Manager

http://www.EnergyStar.gov/Benchmark

ComEd Energy Use Data System

www.ComEd.com/EnergyUsageData

email: EnergyUsageData@ComEd.com

People's Gas Building Aggregation

www.PeoplesGasDelivery.com/Business/Aggregation.aspx

email: PGLCityAggregationData@PeoplesGasDelivery.com