

The Boston Energy Reporting How-To Guide

March 2017

A step-by-step guide to completing an annual energy and water report through Portfolio Manager

Answers to Frequently Asked Questions are available on page 12.

For questions on using Portfolio Manager, contact the Energy Star helpdesk at buildings@energystar.gov.

For questions on complying with Boston's reporting ordinance, email EnergyReporting@Boston.gov.

Portfolio Manager help, training webinars, and office hours are also available, at portfoliomanager.energystar.gov/pm/help.

Additional resources and supplementary forms are available at boston.gov/environment-and-energy/building-energy-reporting-and-disclosure-ordinance.

Reporting Checklist

- ☐ 1 Collect data on water use and all types of energy used by the building
- ☐ 2 Create an account in EPA's Portfolio Manager
- ☐ 3 Add your property to your account
- ☐ 4 Enter the size and details of the building's uses
- ☐ 5 Set up your energy and water meters in Portfolio Manager with the correct units
- ☐ 6 Enter your energy and water use data
- ☐ 7 Run a data quality check
- ☐ 8 Add any contextual information
- ☐ 9 Add your Boston Assessing Parcel ID
- ☐ 10 Generate and submit your energy and water report using the reporting template.



Intro

In 2013, the City of Boston enacted the Building Energy Reporting and Disclosure Ordinance. The ordinance requires large buildings to report their annual energy and water performance and greenhouse gas emissions to the City, which then makes the information publicly available. Additionally, every five years, buildings that are not already efficient must complete an energy assessment or action.

Tracking building energy use helps to reduce energy consumption and greenhouse gas emissions. As a result, the energy reporting ordinance is helping Boston's building owners connect to opportunities for energy efficiency, helping cut energy costs and keeping Boston on track towards its climate action goals.

This user's guide provides step-by-step instructions on how building owners can comply with the annual energy reporting requirement. Reporting makes use of the Portfolio Manager tool, which allows building owners to track their energy and water use and electronically submit the required report.

Who's Covered?

Starting in 2017 and every year thereafter, the following properties must report their energy and water use by May 15:

- Nonresidential buildings over 35,000 ft²
- Residential buildings that are 35,000 ft² or larger or have 35 or more units.
- Any parcel with multiple buildings that sum to 100,000 ft² or 100 units must report on all buildings.

Square footage is determined per the gross floor area listed in Assessing Department records.

Who's Responsible?

The building owner or condominium association is responsible for reporting. Non-residential tenants must, if asked, supply necessary information to the owner or association.

What Are the Deadlines?

Building owners must submit their report through EPA Portfolio Manager by May 15 for each year. The reports encompass the previous calendar year. So if you are reporting your energy usage on May 15, 2017, then the data should be for the calendar year 2016.

If you need an extension, you must apply with good reason by April 15, using the form available on the City's website, listed below.

Support

For resources, guidance, and further information on Boston's energy reporting requirements, go to boston.gov/environment-and-energy/building-energy-reporting-and-disclosure-ordinance. Help on using Portfolio Manager, including YouTube videos about getting started, is available at energystar.gov/buildings/training.

For questions on using Portfolio Manager, contact the Energy Star helpdesk at buildings@energystar.gov. Questions about complying with the ordinance can be sent to EnergyReporting@Boston.gov.

Get Started

Follow this guide's instructions to complete your energy and water report. As long as your data are complete before you submit your report, the order in which you enter data is flexible.

STEP 1

Collect data on water use and all types of energy used by the building. This can include electricity, natural gas, steam, chilled water, fuel oil, on-site solar, diesel, or any other energy source.

Eversource, National Grid, and Veolia are making whole-building energy use data available to building owners. As a result, you can request gas, electric, and steam data for your building, without having to obtain usage information from individual tenants. Each utility is providing data in an Excel file format that can be directly uploaded into Portfolio Manager.

→ Visit eversource.com. Under the “Business” tab, go to “Programs & Services” and click on “Energy Reporting & Disclosure Portal.” (Or click on [this link](#).) Contact EnergyDisclosure@eversource.com for help

→ National Grid: Email BERDOSupport@nationalgrid.com with “BERDO Usage Request” as the subject, and include the service address, your gas account number, and contact information.

→ Veolia: Email us.energy.boston.berdo@veolia.com with your address and account info.

→ Boston Water and Sewer Commission: Building owners can access their account history at www.bwsc.org/accounts/accounts.asp.

Entering bills on your own: If you pay an energy or water bills for the whole building, you can access consumption data through your utility account or past bills. The data must encompass all of January 1 to December 31 of the reporting year, so you may need 13 months of bills to fully cover the calendar year.

Eversource and National Grid: Buildings with three or fewer tenants, or buildings where one tenant uses over 50 percent of the energy, will need authorization from their tenants in order to use the data services. Non-residential tenants are required by the ordinance to provide this data upon request. The tenant authorization forms can be used for both Eversource’s and National Grid’s services and are available at boston.gov/eeos/reporting and from the utilities. (If you have two or three electric meters that are paid for by the building owner, the Eversource data service may inadvertently flag the building as having three or fewer tenants. In this case, contact Eversource with your account and meter numbers.)

STEP 2

Create an account in EPA’s Portfolio Manager, a free, online energy tracking tool. (If you already have an account with your buildings and meters set up, you can skip to Step 6.) Go to portfoliomanager.energystar.gov/. Click “Sign Up” and fill in the required information.

- Note that compliance confirmations and other important emails will be sent to the email address that you register with.
- Be sure to save your data regularly, especially before you click on a help or definition link. Portfolio Manager does not automatically save your data.
- Help for Portfolio Manager, including a glossary, is always available via the ‘Help’ link in the

upper right. You may need to enable pop-ups in your browser to access help files.

STEP 3

Add your property. Once you've created an account, click on the "Add a Property" button. Enter the primary use and building characteristics, and click "Get Started." You'll then need to enter additional information about your building. Carefully read and select any checkboxes that apply – such as having retail stores, commercial restaurants, data centers – and click "Continue." The more information you supply about your building the easier it is for Energy Star and the City to fairly compare your energy consumption to similar peer buildings.

Energy Star video on setting up your property:

<http://youtu.be/-lob65wkVNM>

- Gross floor area in Portfolio Manager excludes parking. See the box below for what else is included and excluded in gross floor area. This value in Portfolio Manager may be different than what's listed in the Boston Assessing records.
- If you must estimate your total square footage, you must denote this in the "Property Notes" section, in Step 7.
- For guidance on parking areas, buildings that share systems, estimation of square footage, or other property setup, see the "Special Issues & FAQ" on page 11.

Gross floor area is measured as the space between the exterior surfaces of the building's enclosing fixed walls, subject to the inclusions and exclusions below.

INCLUDE tenant areas, common areas, meeting areas, restrooms, elevator shafts, stairways, basement space, mechanical equipment areas, and storage rooms.

EXCLUDE all parking areas, exterior loading docks, exterior balconies, driveways, unroofed light wells, and plenums between floors.

STEP 4

Enter the gross floor area and details for each type of property use in the building.

An information box is provided for the primary use of the building. If you have additional types of property use in the building – for example, Office, Restaurant, etc. – find each one in the "Add Another Type of Use" dropdown box and click "Add." Be as specific as possible in including additional building usages and types as this will aid in comparing your building's energy usage to similar peers.

Once you have added all of the building's property uses, enter the gross floor area of each use and its details, such as the number of employees and operating hours. Once

Property Use Detail	Value	Current As Of	Temporary Value
Gross Floor Area	50000 Sq. Ft.	01/01/2004	<input type="checkbox"/>
Weekly Operating Hours	<input type="text"/> Use a default	01/01/2004	<input type="checkbox"/>
Number of Computers	<input type="text"/> Use a default	01/01/2004	<input type="checkbox"/>
Number of Workers on Main Shift	<input type="text"/> Use a default	01/01/2004	<input type="checkbox"/>
Percent That Can Be Heated	<input type="text"/> Use a default	01/01/2004	<input type="checkbox"/>
Percent That Can Be Cooled	<input type="text"/> Use a default	01/01/2004	<input type="checkbox"/>

all of the information is complete, click on “Add Property.”

→ If you don’t have accurate information, you must request it from the tenant. Use the “Property Information Request” form, available at boston.gov/environment-and-energy/building-energy-reporting-and-disclosure-ordinance under “Compliance.”

→ If you are unable to get this information from the tenant, you can select “Use a default” in Portfolio Manager. If there isn’t a default value provided, you may estimate.

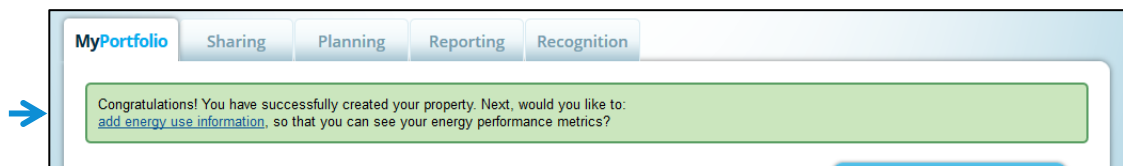
- If you estimate either the square footage or use detail for any property use, this must be noted in the “Property Notes” section. See Step 7.
- Even though parking doesn’t count towards your gross floor area, enter any information about it if prompted by Portfolio Manager.

STEP 5

Set up your energy and water sources in Portfolio Manager with the correct units. Click on “Add Energy Use Information” or on the “Meters” tab. Select each type of energy and water that your building uses. Note that a ‘meter’ in Portfolio Manager is simply a way to represent an energy source or water source. Accordingly, if you have received whole-building data, you can create just one ‘meter’ to represent the building’s total natural gas use, for example.

Energy Star video on setting up meters:

<https://youtu.be/gRV2fERAQ38>



Click “Get Started” to enter units and dates for each meter.

- The “Date Meter Became Active” is the start date of the energy data you collected.
- Double-check the units to make sure they align with your data. If you used whole-building data services, gas data from National Grid is in therms, and electricity data from Eversource is in kilowatt-hours (kWh). Veolia typically bills in ‘thousand lbs.’ units.

Click “Create Meters.”


STEP 6

Enter your monthly energy use data. Note that entering costs is not required. Always check to make sure your units are correct, and click “Continue” when you’re done.

- If you’ve received whole-building data from Eversource, National Grid, or Veolia, these utilities are providing data in a format that can be uploaded into Portfolio Manager in one easy step. Click on the “Browse” button for the meter, find the appropriate Excel file, and click “Upload.”

- If you're entering data manually, click to add entries, one for each billing period. Remember that the data must encompass the 2016 calendar year, without gaps. You can also enter any green power that you purchased, by checking the "Green Power" box and entering sourcing details.

Upload data in bulk for this meter:

 You can copy/paste into the table above ([instructions in this FAQ](#)), or upload an Excel spreadsheet using our simple [spreadsheet template](#).

No file selected.

Once you've clicked "Continue," you'll need to identify which meters should be included in the building's consumption metrics. Most buildings should check off all meters, and select the options indicating that these meters account for the total consumption of the property. Click "Apply Selections."

Select Energy Meters to Include in Metrics

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

Summary

2

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

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 6627121	Natural Gas
<input checked="" type="checkbox"/>	Electric Grid Meter 6627122	Electric - Grid

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

☒ These meter(s) account for the total energy consumption for [Acme Corp](#) (a single building).

☐ These meter(s) do not account for the total energy consumption for [Acme Corp](#) (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 those meters

STEP 7 **Run a data quality check.** Click on the "Summary" tab for your property. Under "Check for Possible Data Errors", click on the button to start the check. Run a check for the year ending December 31, 2016.

- A common first-time error is "Less than 12 Full Calendar Months of Bills." Revisit the identified meter and make sure all of 2016 is covered, with no gaps.
- For other common errors, you can check the Portfolio Manager FAQ at portfoliomanager.energystar.gov/pm/help.
- You can re-run the checker once you have made any necessary corrections.

Once you are satisfied that you have addressed any errors, proceed to Step 8.

STEP 8

Enter any contextual information about your building's energy performance. Click on the “Details” tab and scroll down to “Property Notes.” You should enter here any relevant contextual information about your building that you want to be included when metrics are publicly disclosed.

You must also record here if:

- You used any default energy values
- You estimated floor area or a property use detail
- If you chose to use self-metered energy data instead of utility-provided data, and what the difference is
- Reporting was completed by a tenant who leases the whole building.

Click “Save Notes” when you’re done.

The top of this same page provides information on your building's energy performance.

Need more space for contextual information? If your information does not fit into the 1000-character limit, you may provide it by emailing it to energyreporting@boston.gov.

- Many buildings will receive an Energy Star rating, which is a percentile score for energy performance as compared to similar buildings in the U.S., after normalizing for operating hours, size, climate, etc. A score above 75 indicates a highly efficient building. However, this comparative dataset is not available for all building types.
- Other users will see the building's *weather normalized source energy use intensity*, which is the energy consumption per square foot adjusted for weather. This estimates what energy use intensity would have been in a year with normal weather conditions.

STEP 9

Add your Boston Assessing Parcel ID. This identifier helps ensure that your energy and water report is attributed to the right building during compliance checks.

Stay on the “Details” tab, and scroll to the Unique Identifiers box. Click on “Edit.”

Under “Standard IDs,” select “Boston Energy Reporting ID.” Enter your ten-digit Assessing Database Parcel ID and click “Save.”

- Parcel IDs can be found in any notification letters that you may have received, at Assessing Online (cityofboston.gov/assessing/search/), or on your property tax bill.
- For buildings that span more than one parcel, enter all parcel numbers, separated by a space. If you have multiple buildings on one parcel, each can be reported using that same Parcel ID; this will not affect their reporting.
- Condo buildings should enter the master condominium ID (CMID).

STEP 10

Preview and submit your energy and water report to the City of Boston. When you have entered all of your data, the Boston reporting template will allow you to generate, preview, and submit your report, all through Portfolio Manager.

Once all data is complete, click on the following link for the 2017 reporting year: [Reporting Template for Calendar Year 2016 Data](#)

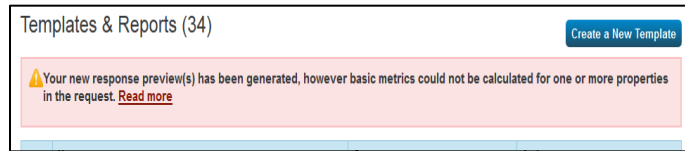
Or you can go to the Boston energy reporting website, at boston.gov/environment-and-energy/building-energy-reporting-and-disclosure-ordinance and click on the link for “Reporting Template.”

This will import the reporting template into your Portfolio Manager account, and launches a page titled “Respond to Data Request: Boston Energy Reporting Template for Calendar Year 2016 Data.”

- In the “About Your Response” box, select “myself,” unless you believe contact information for another party should be attached to your report.
- Under “Your Response,” choose the properties to report. If you have several properties to report, click “Multiple Properties” and select the appropriate buildings.

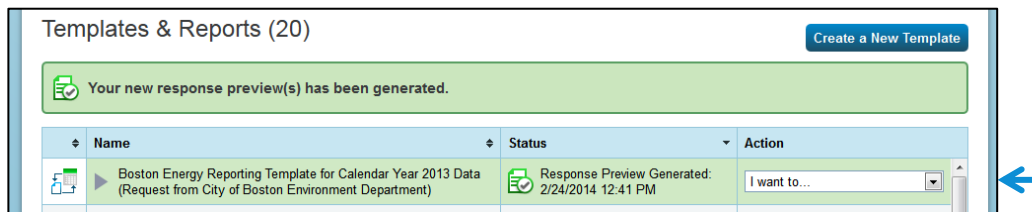
Click “Generate Response Preview.” This produces your report and returns you to the main Reporting page, where your report is highlighted in green.

- If you see a pink alert box, it means that there are incomplete energy metrics. Use the “Read More” link to check on these issues. Common mistakes include bills that don’t cover all of 2016 (i.e., starting in mid-January or ending in mid-December) and blank square footage values.



An error alert – use the “Read More” link to check on the issue.

- If you see a green box saying your response preview has been generated, you are ready to submit. If you want to preview it, use the dropdown box in the “Action” column and click on “Preview Response.”



To submit your report to the City of Boston, stay on the Reporting page and use the same dropdown box to click on "Send Response."

On the page that appears, confirm and e-sign your report.

- Select any other contacts who should receive a confirmation email.
- You can also select which format your report should be emailed to you in – most users will choose Excel. This does not affect your submission to the City.

To e-sign your submission, check the box to certify that you are releasing data, and then enter your Portfolio Manager username and password. Click on “E-Sign Response,” and the word “Signed” will appear.

Click on "Send Data," and, in the box that pops up, confirm by clicking on “Continue.” Your report has now been submitted to the City.

You’ll receive a confirmation email from EPA, and you can also see a “Response Receipt” on the Reporting page. Retain a copy of the confirmation email, as well as any requests made to tenants and your original energy and water data.

This completes the 2017 reporting requirements. You’re all set! Thank you.

See the Results

You can go to the City's energy reporting website and see the compliance status as well as the energy and water performance of covered buildings.

Follow-Up

- **Revisions.** If you obtain updated or corrected information that would change your energy use intensity by more than 2%, you need to revise your data in Portfolio Manager, re-submit your report, and notify the City at energyreporting@boston.gov of your updated report, within 30 days of obtaining the information. You can submit other updates at any time you wish.
- **Errors.** If any errors or missing data are found in your report, you will be notified and provided 30 days to make the necessary corrections, per the revision procedure above.
- **Tenant non-compliance.** You may report any non-residential tenants that have failed to comply with a data request, for follow-up and potential enforcement action by the City. Contact energyreporting@boston.gov

Additionally, buildings will need to complete an energy assessment or action every five years, with exemptions provided for efficient buildings and those making significant progress on efficiency. The approved energy reporting regulations provided further detail. Additional guidance will be released in the near future.

Enforcement

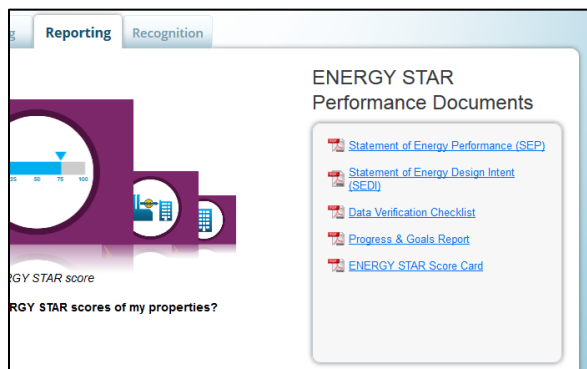
Failure to comply with the Building Energy Reporting and Disclosure Ordinance can be subject to a Notice of Violation and subsequent fines.

ENERGY STAR Certification

If your building scores an Energy Star rating of over 75, you may be eligible for Energy Star Certification, awarded by EPA. Buildings may be required to meet additional criteria and data quality standards. Find out more at <http://www.energystar.gov/buildings/about-us/how-can-we-help-you/recognition/earn-recognition-your-building-or-plant>.

Sharing Information on Building Energy Performance

If you would like to communicate information on building energy performance with potential tenants or other interested parties, Portfolio Manager can generate a user-friendly Statement of Energy Performance. Click on the "Reporting" tab and, on the right side, select "Statement of Energy Performance" to generate a summary PDF.



Making Improvements to Your Building

Tracking energy and water use is the first step in cutting energy use and saving on energy costs. The City of Boston, the Commonwealth of Massachusetts, and the region's gas and electric utilities have partnered together to offer incentives and technical expertise for building energy improvements. Find out more at www.renewboston.org.

Special Issues & FAQ

▪ Which property uses should I select to represent my building?

Portfolio Manager has approximately 80 different property use categories. You should accurately represent all uses that are found within your building. A list of definitions is available at:

www.energystar.gov/buildings/sites/default/uploads/tools/PropertyUseDetailsandDefinition.pdf

▪ How is parking reported? How do I report standalone parking garages?

We recommend reading the ENERGY STAR guidance here: <https://portfoliomanager.zendesk.com/hc/en-us/articles/211696747-How-do-I-enter-parking->

When parking is part of a building, it does not count towards gross floor area, since Portfolio Manager focuses on the energy use of the actual building interior. For example, if you have a building with 100,000 square feet of office space and 20,000 square feet of parking, you should enter a gross floor area of 100,000 square feet into Portfolio Manager. You may be prompted to enter information on parking area, but it will not count towards your gross floor area.

If you are submetering your parking areas and able to exclude their energy use, you may do so in your reporting.

Standalone parking garages: If you are reporting a standalone parking garage, EPA recommends that you select the “Other” building type when creating the building. Do *not* check off “My building’s energy use includes parking areas.” Instead, just enter the total area of the garage (i.e., including parking) as the area of the building. This will prevent any error messages from coming up as you continue.

▪ What if I don’t use the data available from my utility?

If whole-building data is available from a utility, you must use either the utility data or use actual, whole-building data from your own source (such as data obtained from all tenants or from a building management system). Use of defaults or extrapolation is not permitted. If you choose to use whole-building data from your source, i.e. foregoing utility-provided data, an explanation of the difference must be noted in the “Property Notes” section.

▪ How do I determine the gross floor area for a building or for a property use within the building?

Many building owners will have information on gross floor area from leasing, sale, or other transactional documents, or can consult Assessing Online (cityofboston.gov/assessing/search/). Inspectional Services may also have records of square footage in its permit database (boston.gov/departments/inspectional-services/how-find-historical-permit-records). In conjunction, gross floor area of common spaces and commercial condos can be estimated from building plans or measured. If none of these sources provide the needed information, please contact us at energyreporting@boston.gov.

The calculation of gross floor area is a one-time step, necessary only in the first year of reporting. Any estimation of floor area must be noted in “Property Notes.”

- **What if my whole building is rented by a single tenant?**

If your building has a single tenant who has assumed management of the entire building, you and your tenant can agree to delegate reporting duties to the tenant. This delegation must be noted in the “Property Notes” section of Portfolio Manager.

- **Are there any energy uses that are not part of my building’s energy use?**

Cell phone towers, radio masts, and any external billboards used for leased advertising space are not part of building energy use, and may be excluded if submetered. If you are submetering your parking areas and can exclude them from your energy totals, you may do so since parking doesn’t count towards your gross floor area.

- **Are there any water uses that are not part of my building’s water use?**

Only fire pipe/emergency water usage may be excluded from your building’s water consumption.

- **What if I have multiple buildings on one lot, or multiple buildings that share meters?**

Some parcels in Boston have multiple buildings on them; other owners may have buildings in close proximity that share meters or systems. The metering set up will help you determine how to report these buildings:

All the energy sources and water are separately metered by building. Each building needs to be reported as a separate building.

One or more energy sources or water is not separately metered by building. For each type of energy or water use where this is the case, you need to apportion by square footage, as long as:

- The uses of the buildings are generally similar
- The vacancy rates of the buildings are generally similar

If these conditions are met, then apportion any shared usage by the square footage of the buildings, and mark the data as an “Estimation” when you enter the values into Portfolio Manager.

It isn’t appropriate to apportion shared energy or water use. If the buildings don’t meet the criteria for apportionment, report them in Portfolio Manager as a multi-building property. Or, if they’re on one lot and have similar uses, report them as a single building in Portfolio Manager.

City staff can assist in this determination – email EnergyReporting@Boston.gov. When multiple buildings are on one parcel, each one can be reported using that same Parcel ID; this will not affect reporting.

- **What if there is split ownership of the building?**

The primary owner listed in the records of the Boston Assessing Department is responsible for compliance with all aspects of the ordinance.

- **What is Source EUI? What is an Energy Star score? How are they calculated?**

Energy use intensity (EUI) is the building’s energy use per square foot. Portfolio Manager typically shows a building’s Source EUI, which is a complete assessment of the fuel required for operating the building, accounting for any losses during electricity transmission and distribution. When you see Weather Normalized Source EUI, this is an estimate of what the Source EUI would have been in a year with

“normal” weather conditions. For example, in a very hot year, Portfolio Manager might estimate your Weather Normalized Source EUI to be lower than your actual Source EUI.

Energy Star score, or rating, is a percentile score, on a scale of 1-100, comparing your building’s energy performance with that of similar buildings in the U.S. The score normalizes for climate, weather, building size, number of employees, and other operational factors. A score close to 100 indicates a very high-performing building.

- **What if my building doesn’t receive an Energy Star score?**
Only some building types will receive an Energy Star score, due to limitations in the national comparative dataset. Thus, many buildings will submit their energy reports to the City without an Energy Star score.
- **How are data centers reported in Portfolio Manager?**
Portfolio Manager defines a data center as a space “specifically designed and equipped to meet the needs of high density computing equipment such as server racks.” You can add a data center as a property use type. To receive an Energy Star score for a data center, energy use must be measured at the output of the uninterruptible power supply. Data center energy use is reported as separate value in your energy and water report, so the data center does not affect your building’s energy use intensity.
- **Can I use data from an energy or building management system?**
Yes, if the system provides accurate whole-building data. Many such EEMS or BMS can upload energy and water data directly into Portfolio Manager. As discussed in Step 7, you must note in “Property Notes” if you do not use utility-provided data, and an explanation of any difference.
- **What if I generate electricity through on-site solar panels?**
You can enter this into Portfolio Manager when setting up your meters. Obtain data from your installer on the energy used, any energy exported out to the grid, and about any renewable energy certificates generated. If you report your renewable energy generation and use accurately, it will be reflected in your building’s greenhouse gas emissions.
- **What if the building is under construction or newly built?**
A newly constructed building, if it meets the threshold for being covered by this ordinance, is required to report its energy use for the first full calendar year after receiving a Certificate of Occupancy.
- **What if I purchased the building in the past year?**
Buildings that have transferred ownership are not exempt from reporting requirements. The reporting regulations require the seller to transfer to the new owner any information that has been collected for completing the next energy and water report.