

# ENERGY ACTION AND ASSESSMENT HOW-TO GUIDE

OCTOBER 2019



*A step-by-step guide to completing the five-year energy  
action and assessment compliance requirements*



Answers to Frequently Asked Questions are available on page 17

For questions on using Portfolio Manager, contact the Energy Star helpdesk at [buildings@energystar.gov](mailto:buildings@energystar.gov)

For questions on complying with Boston's reporting ordinance, email [EnergyReporting@Boston.gov](mailto:EnergyReporting@Boston.gov).

Additional resources and supplementary forms available at [boston.gov/BERDO](http://boston.gov/BERDO)

Reporting templates and further instructions for the Energy Action and Assessment Requirement can be found at [boston.gov/departments/environment/energy-action-and-assessment](http://boston.gov/departments/environment/energy-action-and-assessment)

## 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 considered highly efficient must complete an energy assessment or action.

Every five years buildings must also report the ways they are improving their energy performance, for example by lowering their energy usage, decreasing reliance on fossil fuels, or getting an energy assessment. This requirement is meant to help spur action in Boston's largest buildings, helping them to lower their greenhouse gas emissions, save money on their energy bills, and assist the City in meeting its Carbon Free by 2050 climate goal.

There are three main pathways to meet the energy action and assessment requirement.

1. Get your building certified as highly efficient, for example through LEED, Energy Star, or zero-net energy certified. Please see page 5.
2. Complete energy efficiency or renewable energy projects that reduce your building's energy consumption or greenhouse gas emissions by 15% in a five year term. Please see page 7.
3. Complete an energy assessment or audit by a qualified professional. The audit must provide specific recommendations to reduce the building's energy use and greenhouse gas emissions. Please see page 10.

Buildings only need to complete the requirements for one pathway in order to comply. Whichever pathway you choose, you must include supporting information as described below, as a part of your BERDO report due May 15th of your Action and Assessment compliance year.

This user's guide provides step-by-step instructions on how building owners can comply with the five-year Energy Action and Assessment requirement.

## WHO'S COVERED?

The energy action or energy assessment is due five years after a building's first required BERDO report. So if you first reported to BERDO through the Energy Star Portfolio Manager platform in 2014, in general that means it's a non-residential building greater than 50,000 sq ft, and your energy action or energy assessment is due in 2019. For most buildings, the due dates for this Energy Action and Assessment requirements are:

- May 15, 2019 – Non-residential buildings 50,000 sf or larger. First year of BERDO reporting in 2014.
- May 15, 2020 – Residential buildings 50,000 sf or 50 units or larger. First year of reporting to BERDO in 2015.
- May 15, 2021 – Non-residential buildings 35,000 sf or larger. First year of reporting to BERDO in 2016.
- May 15, 2022 – Residential buildings 35,000 sf or 35 units or larger. First year of reporting to BERDO in 2017.

New buildings must comply with the Energy Action and Assessment Requirement five years after their first BERDO data report. If your building was exempt from reporting for some period, then its Energy Action and Assessment due date follows the fifth year of its initial report. Square footage is determined per the gross floor area listed in the Assessing Department records.

Please follow this [link for the complete list of due dates](#) for this requirement.

### BERDO Action/Assessment Compliance Cycle

Data from the year:	2013	2014	2015	2016	2017	2018	2019	2020	2021
Reported in May of	2014	2015	2016	2017	2018	2019	2020	2021	2022
Non-Res 50k sf+	First reporting	Baseline	→	→	→	EAA Due	Cycle 2 Start	→	→
Res 50k sf+		First reporting	Baseline	→	→	→	EAA Due	Cycle 2 Start	→
Non-Res 35k sf+			First reporting	Baseline	→	→	→	EAA Due	Cycle 2 Start
Res 35k sf+				First reporting	Baseline	→	→	→	EAA Due

## BEFORE YOU BEGIN

Compliance with this Energy Action and Assessment requirement entails that your building must have also fully complied with the BERDO energy reporting and disclosure requirement in all prior years. This requirement involves uploading your building's energy and water data for each covered calendar year to Energy Star Portfolio Manager and sending it to the City.

Please ensure all prior 5 years of BERDO reporting have been submitted accurately before proceeding with any of the compliance pathways. If you believe there are any errors in your prior year's BERDO reporting please update your Energy Star Portfolio Manager and resubmit your data before proceeding with your Energy Action and Assessment requirement.

To resubmit your BERDO energy and water data please use the reporting templates found below:

- **[For Calendar Year 2013](#)**. Please ensure that all data has been uploaded for your building to Energy Star Portfolio Manager from January 1st to December 31st, 2013.
- **[For Calendar Year 2014](#)**. Please ensure that all data has been uploaded for your building to Energy Star Portfolio Manager from January 1st to December 31st, 2014.
- **[For Calendar Year 2015](#)**. Please ensure that all data has been uploaded for your building to Energy Star Portfolio Manager from January 1st to December 31st, 2015.
- **[For Calendar Year 2016](#)**. Please ensure that all data has been uploaded for your building to Energy Star Portfolio Manager from January 1st to December 31st, 2016.
- **[For Calendar Year 2017](#)**. Please ensure that all data has been uploaded for your building to Energy Star Portfolio Manager from January 1st to December 31st, 2017.
- **[For Calendar Year 2018](#)**. Please ensure that all data has been uploaded for your building to Energy Star Portfolio Manager from January 1st to December 31st, 2018.

If you have any further questions on how to submit or resubmit your prior years' BERDO report, please follow our [Boston Energy Reporting How-To Guide](#) or our [video tutorial](#). You can also contact us with your questions or email [energyreporting@boston.gov](mailto:energyreporting@boston.gov).

## HIGHLY EFFICIENT BUILDINGS

Buildings that are certified as “highly efficient” are exempt from the Energy Action and Assessment requirement. Such buildings include:

**EPA Energy Star Certification:** Buildings that have earned EPA Energy Star certification for 3 or more of the previous 5 years. The City of Boston confirms compliance using the Energy Star Portfolio Manager platform. To show compliance with this pathway the building must have submitted its BERDO energy data for the prior 5 years using the same account. If multiple accounts have been used for the building, this must be indicated to the City of Boston.



If you are interested in learning more about becoming Energy Star certified please read the [How to Apply for Energy Star Certification](#) document or this [PowerPoint presentation](#).

Please note that Energy Star Certification is not the same thing as reporting through the Energy Star Portfolio Manager platform which you do normally for BERDO. Energy Star rewards higher performing buildings Scores based on their sector. Energy Star Certification requires a minimum Energy Star Score of 75 points or higher and reviewed by a trained energy professional. Not all building types can get Energy Star scores.

**LEED Silver Certification with 15 points in Energy and Atmosphere:** Buildings that have received certification or recertification at the Silver level or higher under the Leadership in Energy and Environmental Design (LEED) rating system published by the United States Green Building Council. Such buildings must have achieved at least 15 points in the Energy and Atmosphere rating category.



To show compliance through this pathway, the building must provide the City with a copy of it’s LEED certification award and scorecard documentation.

**Zero-Net Energy or Carbon Certified:** A building is considered zero-net energy, zero-net carbon, or E+ when it generates or purchases an amount of renewable energy equal to or greater than it consumes in the course of a year. Buildings must supply documentation of renewable energy purchasing or other zero-carbon certification for the building. All energy consumption, including heating, must be accounted for in these calculations or documentation. Acceptable zero-net energy or carbon certification systems

include, but are not limited to [Living Building Challenge](#), [Zero-Net Energy](#), or [Passive House](#) certifications.

**High Efficient Buildings Unable to Receive an Energy Star Score:** Only specific building types qualify for receiving Energy Star scores. Those that don't can still comply with the Highly Efficient Buildings Pathway if they demonstrate they are highly efficient compared to those in their sector locally or nationally.

If you believe this is the case for your building please complete the [following form to request variances](#). You will be asked to supply the name, address, tax parcel, and Energy Star Portfolio Manager ID of your building, as well as a detailed description of the unique building characteristics that require it to receive a variance from existing compliance paths. **Note that a gmail account or a google account is required to access the form.** Google accounts can be [set up for free through any other existing email account service](#). The City of Boston reserves the right to approve or reject any and all variance requests.

### **Energy Action and Assessment Reporting**

To demonstrate that your building is compliant with the Energy Action and Assessment requirements, you must [complete this report in order to submit it to the City](#). Please include all requested supporting documentation. **Note that a gmail account or a google account is required to access the form.** Google accounts can be [set up for free through any other existing email account service](#). To confirm your exemption, choose the Highly Efficient Building Exemption pathway. Buildings will be required to supply third party verification as indicated above.

## ENERGY ACTION

The City of Boston measures energy improvement in many ways. Your building can display its performance improvement by one of the following measures:

- Over the prior 5 year period achieve a 15% reduction in total site energy consumption.
- Over the prior 5 year period achieve a 15% reduction in site energy use intensity.
- Over the prior 5 year period achieve a 15% reduction in total greenhouse gas emissions.
- Over the prior 5 year period achieve a 15 point increase in the Energy Star Score. Energy Star Scores measure a building's performance from 0 to 100 with 100 being the most efficient and 0 the least.

Measuring this performance improvement is completed through your BERDO reporting in Energy Star Portfolio Manager. Please ensure all prior 5 years of BERDO reporting have been submitted accurately before proceeding.

Please note for the greenhouse gas emissions calculations, changes to the electricity grid's energy mix is *excluded*. That means that as electricity is getting cleaner due to more off-site renewable energy generation contributing to the grid, this *will not* count towards your greenhouse gas calculations for BERDO. Only efficiency improvements, on-site renewable generation installation, or off-site renewable energy purchase can count towards the emissions reduction pathway. Because Energy Star Portfolio Manager alters the coefficients it uses to calculate greenhouse gas emissions overtime to reflect changes in the grid, it is recommended that emissions figures from Energy Star Portfolio Manager are ignored for purposes of compliance. Please only use total site energy and site energy use intensity from Energy Star Portfolio Manager.

The building must indicate which methods were used to achieve this performance goal. These pathways may include one or more of the following:

**On-Site Renewable Energy:** The building owner installs renewable energy on the building site such as photovoltaic solar panels, solar thermal heating, and micro-wind turbine systems.

To show compliance, please submit proof of purchase and installation of on-site renewable energy generation.

**Connection to District Steam or Cogeneration:** The building owner connects the building to a district steam or district cogeneration network.

To show compliance, please provide the date that the building was connected to the district network and the amount of energy it consumed.

**Off-Site Generated Renewable Electricity or Low Carbon Energy:** The building owner obtains off-site energy, such as off-site generated renewable electricity or lower carbon fuels. Changes in the regional electrical grid's emission factor are not included. Instead, it must be based on the building owner or manager purchasing renewable energy from an outside source.

To show compliance, buildings must provide documentation showing the purchase of renewable energy. This can include green power purchasing agreements or renewable energy credits (RECs). The supporting documentation for the REC purchases must include the REC tracking numbers and third-party certification agency. Acceptable RECs can include but are not limited to the Center for Resource Solutions' Green-e Energy program or the Massachusetts Renewable Energy Portfolio Class I or II RECs.

**Institution Wide Reduction in Greenhouse Gas Emissions or Total Energy Use of 15% or More:** The building is included in an institutional master plan and a corresponding energy management plan. These plans have reduced energy use or greenhouse gas emissions by at least 15% over a 5 year period for the whole portfolio of buildings.

To show compliance with this pathway, the building(s) must provide copies of the institutional master plan, institutional energy management plan, and the completed institution wide greenhouse gas inventory for the prior 5 years. If you don't have your own institutional greenhouse gas inventory, we recommend using the US EPA's Simplified Greenhouse Gas Emissions Calculator:

<https://www.epa.gov/climateleadership/center-corporate-climate-leadership-simplified-ghg-emissions-calculator>

**Other Energy Efficiency Measures:** The building completes any combination of energy efficiency projects such as building equipment upgrades, furnace replacements, improvements to the building's insulation and envelope, lighting retrofits, or fine-tuning of the building's operations that improve the building's performance.

### **Energy Action Reporting**

To demonstrate that your building is compliant with the Energy Action and Assessment requirements, **complete this report in order to submit it to the City**. Please include all requested supporting documentation. **Note that a gmail account or a google account is required to access the form.** Google accounts can be [set up for free through any other existing email account service](#). Choose the Energy Action pathway. Buildings will be required to supply third party verification as indicated above.



Compliance with this pathway is based on the total energy reduction calculations from a building's yearly BERDO report, according to Energy Star Portfolio Manager. [Please see this link](#) to learn more about how Energy Star calculates energy consumption.

Before reporting for the Energy Action and Assessment requirement, please confirm that the building's prior energy data is accurate and has been submitted correctly for the prior 5 years. The report must be signed by a qualified energy professional to confirm the accuracy of the energy data.

The energy professional must meet one of the following requirements:

- Have at least two years' experience performing building energy efficiency assessments and at least one of the following;
  - American Society of Heating, Refrigerating, and Air-conditioning Engineers (ASHRAE) Building Energy Assessment Professional.
  - ASHRAE High Performance Building Design Professional.
  - Association of Energy Engineers Certified Energy Manager.
  - Association of Energy Engineers Certified Energy Auditor.
- Or be a Licensed Professional Engineer and at least one of the following;
  - Two years experience performing building energy audits.
  - For the purposes of residential buildings only, Building Performance Institute Multifamily Building Analyst.

Buildings aiming to comply with the Energy Action path may fall short of the requirements. Whether a building achieved the Energy Action requirements is determined at the time of the 5th year BERDO submission. If at that time it is discovered that the building will not meet the Energy Action requirement, an extension can be requested. This extension can be no longer than 6 months past the May 15th deadline. At this point, the building must complete an Energy Assessment or another compliance pathway. Please email [energyreporting@boston.gov](mailto:energyreporting@boston.gov) to request an extension.

## ENERGY ASSESSMENT

Buildings that choose to comply through the energy assessment pathway must have performed an energy audit within 5 years before the due date. Buildings equal to or greater than 50,000 sf in size must complete an ASHRAE Level 2 Audit, as specified by the *Procedures for Commercial Building Energy Audits*, published by ASHRAE. Buildings under 50,000 sf in size may seek an ASHRAE Level 1 or other equivalent audit to fulfill this requirement.

The audit should be completed prior to the Energy Action and Assessment due date so as to supply the City with a list of the recommended energy conservation measures. If this is not possible before the due date, the City is willing to accept provisional compliance with the requirement so long as the building owner is able to provide a signed contract confirming the energy audit is to take place. The list of energy conservation measures can be supplied later in such cases. Buildings are not required to implement any of the audit's energy conservation measures for meeting the Energy Action and Assessment requirement (though they are encouraged to if they are deemed achievable for your building), only to supply the list of what was recommended.

Building owners are only required to include areas of their building that they have direct control over and access to in the energy assessment. If the owner does not have access to tenant spaces under present lease agreements than those spaces can be excluded from the energy assessment so long as their voluntary inclusion has been offered to the tenant. If the tenant consents to their spaces being included in the energy assessment than it must be included. Owners should strive to include as much as their building as possible to improve the scope and quality of the energy assessment without overstepping any lease agreements.

Alternative energy audits or assessments are allowed but must be approved by the City. **[Please complete this form with the details and specifications of any alternative building audits or assessments.](#)** Note that a gmail account or a google account is required to access the form. Google accounts can be [set up for free through any other existing email account service.](#) Please complete the form prior to the due date in order to give enough time for your request to be reviewed. Note that the alternative building audits or assessments will be compared against typical ASHRAE Level II audits in terms of scope and potential energy savings. Most lighting or other only partial system audits will likely not be accepted by the City. A list of all approved alternative audits or assessments will be made public by the City for other buildings to take advantage of if they so choose.

### Energy Assessment Reporting

To demonstrate that your building is compliant with the Energy Action and Assessment requirement, **[complete this report in order to submit it to the City.](#)** Please include all requested supporting documentation. Note that a gmail account or a google account is

**required to access the form.** Google accounts can be [set up for free through any other existing email account service](#). Choose the Energy Assessment pathway. The building must provide the date the assessment occurred, the identity of the qualified energy professional who performed the assessment, and a list of the energy conservation measures recommended by the assessment with the energy savings and payback period.

The audit must be performed or supervised by a qualified energy professional who meets one of the following qualifications:

- Have at least two years of experience performing building energy efficiency assessments and at least one of the following;
  - American Society of Heating, Refrigerating, and Air-conditioning Engineers (ASHRAE) Building Energy Assessment Professional.
  - ASHRAE High Performance Building Design Professional.
  - Association of Energy Engineers Certified Energy Manager.
  - Association of Energy Engineers Certified Energy Auditor.
- Or be a Licensed Professional Engineer and at least one of the following;
  - Two years experience performing building energy audits
  - For the purposes of residential buildings only, Building Performance Institute Multifamily Building Analyst.

### **How to Select a Good Energy Assessor or Auditor**

An energy assessment or audit can be a big financial investment, but one that can pay for itself once energy savings measures are implemented. When you are evaluating energy auditors, perform the same level of diligence you would when evaluating any other professional service:

1. Talk to multiple companies to compare prices and expertise.
2. Ask for resumes of whom will be onsite. Ensure that the lead auditor has a documented track record of experience.
3. Make sure that the energy auditors possess the required professional qualifications identified above and are performing the required level of audit.
4. Ask for sample energy audits from each prospective company.
5. Ask for references of some jobs they have done recently. Make sure the references include similar projects.

## EXEMPTIONS

Buildings or building owners that meet any of the below criteria are exempt from the assessment and action requirement. If you believe your building meets one of these criteria, please email [energyreporting@boston.gov](mailto:energyreporting@boston.gov) with your building's tax parcel number, its address, and the reason you believe it is exempt. You will be asked to provide a form of third-party verification to substantiate your exemption request.

Buildings that are exempt from the assessment and action requirement include:

- The building is to be fully demolished within six months of when the assessment or action would otherwise be due.
- The building is fully vacant for the prior five-year period.
- The building is otherwise not meant to be covered by the Building Energy Reporting and Disclosure Ordinance due to not meeting the size threshold.

If your building is presently going through a major renovation or is otherwise unoccupied when the Energy Action and Assessment is normally scheduled to be due, then it is not required to meet the requirement at this time. The due date skips forward, and your building will be required to meet the requirement at the next May 15th compliance due date following one full calendar year after the renovation being complete or the building otherwise occupied. For purposes of calculating the Energy Action 15% reduction in energy usage or emissions, the normal base year will be used and it will be compared to the first full calendar year post renovation or occupancy.

## EXTENSIONS

Owners of financially distressed buildings may apply for an extension of no more than one year beyond the assessment or action due date. If you believe your building meets one of these criteria, please email [energyreporting@boston.gov](mailto:energyreporting@boston.gov) with your building's tax parcel number, its address, and the reason you believe an extension should be given. You will be asked to provide a form of third-party verification to substantiate your exemption request. A building is considered in financial distress if it meets one of the following criteria:

- The building is qualified for sale at a public auction due to arrears of public taxes within two years of the energy action or assessment due date.
- The building is controlled by a court-appointed receiver due to financial distress.
- The building is owned by a financial institution through default by the borrower.
- The building has been acquired by deed in lieu of foreclosure.
- The building has a senior mortgage which is subject to a notice of default.

Buildings aiming for the Energy Action path may fall short of the requirements. Whether a building achieved the Energy Action requirements is determined at the time of the 5th year BERDO submission. If at that time it is discovered the building will not meet the Energy Action requirement, an extension can be requested. This extension can be no longer than 6 months past the May 15th deadline and will be for the building to complete a required

Energy Assessment. Please email [energyreporting@boston.gov](mailto:energyreporting@boston.gov) with your building's tax parcel number, its address, and the reason you believe an extension should be given.

### **Extraordinary Circumstances**

The BERDO Energy Action and Assessment requirement is critical for the City's efforts to reduce greenhouse gas emissions from buildings, but it is also a large commitment from the participating buildings. The City has done much to create a wide diversity of compliance pathways to meet the needs of any building covered by BERDO. Our goal is to ensure that all BERDO buildings have a reasonable pathway to comply with this requirement that will help to lower their emissions and energy bills.

To ensure that no building is left behind, if you feel your building has a unique characteristic that requires a customized pathway to ensure it's compliance, we wish to hear from you. Please complete the [following form to request variances](#). You will be asked to supply the name, address, tax parcel, and Energy Star Portfolio Manager ID of your building, as well as a detailed description of the unique building characteristics that require it to receive a variance from existing compliance paths. **Note that a gmail account or a google account is required to access the form.** Google accounts can be [set up for free through any other existing email account service](#). The City of Boston reserves the right to approve or reject any and all variance requests.

## COMPLETING THE ENERGY ACTION AND ASSESSMENT FORM

Follow this guide’s instructions to complete your Building Energy Action and Assessment form.

### STEP 1

**Login to or set up a Google account if you do not currently have one.**

Google accounts can be [set up for free through any other existing email account service](#).

- Note that Energy Action and Assessment compliance confirmation and additional important information will be sent to the gmail address that you register with so please check this account regularly.

### STEP 2

**Enter your contact and building information into the Energy Action and Assessment form.**

The form can be found by visiting [this link](#). Once you have set up or logged into your Google account and have accessed the form, please enter your name, email address and phone number (optional).

Building address: \*

Your answer

Boston Tax Assessor Parcel ID(s): \*

Your answer

Energy Star Portfolio Manager ID(s): \*

Your answer

After completing your contact information, please complete your building information, which includes your building’s address, its Boston Tax Assessor Parcel ID(s) and its Energy Star Portfolio Manager ID(s).

- If you are unsure of your building’s Tax Assessor Parcel ID(s) or its Energy Star Portfolio Manager ID(s), you can email [energyreporting@boston.gov](mailto:energyreporting@boston.gov) with the subject line “Requesting Building’s ID(s)”.

### STEP 3

**Select your building’s compliance pathway.**

Check the bubble of the compliance pathway that your building falls within to complete the rest of the form.

- If you are unsure of which compliance pathway is best suited to your building, please email [energyreporting@boston.gov](mailto:energyreporting@boston.gov) with the subject line “Selecting a Compliance Pathway” with your contact information and building information in the body of the email.

Indicate pathway for BERDO compliance: \*

- Energy Action
- Highly Efficient Building Exemption
- Energy Assessment

## ENERGY ACTION

The first step to complete the Energy Action compliance pathway form is to select the box(es) which indicate the measures that improved your building's energy and environmental performance over the prior five years.

- Note that multiple methods can be used to reach compliance with the Energy Action portion of BERDO.

Indicate by which measure the building(s) improved its energy and environmental performance over the prior five years (click all that apply): \*

- 15% or more Reduction in Total Energy Usage
- 15% or more Reduction in Site Energy Use Intensity
- 15% or more Reduction in Total Greenhouse Gas Emissions
- 15% or more Reduction in Greenhouse Gas Emissions Intensity
- Improvement in Energy Star score by 15 points or more

Energy actions completed in the last five years that resulted in improved building energy and environmental performance (click all that apply): \*

- Energy efficiency projects
- Connection to a district steam or district cogeneration network
- Installation of on-site renewable energy supply (Additional documentation is required)
- Purchase of off-site renewable energy (Additional documentation is required)
- Inclusion in an institutional and energy master plan (Additional documentation is required)

Next, select the box(es) indicating the completed actions over the past five years that resulted in your building's improved energy and environmental performance.

- Note that multiple actions can be used to reach compliance with the Energy Action portion of BERDO.

The next step to complete the Energy Action form is to upload all requested documentation that shows how your building improved its energy and environmental performance.

- If you have any questions on acceptable forms of documentation you can email [energyreporting@boston.gov](mailto:energyreporting@boston.gov)

After uploading your documents, confirm that your documents are

complete and accurate and then press the "Next" box.

To complete the "Energy Professional Verification" step of the Energy Action and Assessment form, you can enter the name of the energy professional, select the professional's qualifications, their qualification identification number, and the professional's years of experience. You can then upload your signed document from the energy professional which certifies that your building meets the requirements outlined by BERDO.

After completing this section of the form, you can click the box to certify that the information you have entered is accurate and press the "Submit" box.

## HIGHLY EFFICIENT BUILDING EXEMPTION

The first step to complete the Highly Efficient Building compliance pathway form is to select which Highly Efficient certification your building has received. These are either Energy Star certified, LEED Silver certified with 15 credits in Energy and Atmosphere, or certified zero-net energy or carbon.

After selecting the certification option that your building falls within, you can complete the additional questions and upload the supplemental documentation that is requested for compliance. After completing this portion of the form, press the “Submit” box.

## ENERGY ASSESSMENT

To complete the Energy Assessment portion of the form, select the type of energy assessment that your building underwent and the date that the assessment was completed.

When complying with the Energy Action and Assessment portion of BERDO through the Assessment pathway, the City of Boston requires that a list of energy conservation measures is completed by the energy professional. To access our spreadsheet to list your property’s energy conservation measures visit [this link](#). You may also elect to upload your full Energy Audit report as your supplemental documentation. Upload either of these forms of documentation and press the “Next” button to move forward.

The next step to complete the Energy Assessment portion of this form is to complete the Energy Professional Verification page. You can do this by recording the name of the energy professional that completed your building’s energy assessment. You can then select the

professional’s qualifications that pertain to BERDO.

Buildings that choose to comply through the energy assessment pathway must have performed an energy audit within the 5 years before the due date.

Type of Energy Assessment or Audit Performed: \*

- ASHRAE Level II
- ASHRAE Level I (Only Applicable for Buildings Under 50,000 sf in Size)
- Other: \_\_\_\_\_

If you chose "Other" and have performed a type of energy audit or assessment that isn't on the list above you can request the inclusion of an alternative energy assessment to fulfill this requirement. Please fill out this form with a description and details about the alternative energy assessment for your building: <https://goo.gl/forms/ORVLqt8AILsGLTle2>

Date energy assessment or Audit was carried out: \*

Your answer \_\_\_\_\_

You must record the professional’s qualification identification number and the years of experience that the professional has. After recording this information, you can upload the signed note from the energy professional that certifies that your building meets the requirements of BERDO’s Energy Action and Assessment portion. Please certify that the information above is accurate and select the “Submit” button.



## SPECIAL ISSUES & FAQ

The requirements discussed in this document can be complicated. To that end we have included answers to some questions building owners and managers may have. If you don't see an answer to your question in one of the FAQs below, please feel to reach out to us at any time [energyreporting@boston.gov](mailto:energyreporting@boston.gov) or by phone at (617) 635-3850 between 9am and 5pm Monday through Friday.

### HOW DO I KNOW HOW CLOSE I AM TO COMPLYING WITH THE ENERGY ACTION PATH?

Keeping track of your building performance improvement over time is important for

**Baselines**

Energy Baseline:  Select a baseline: 12/31/2013  Let Portfolio Manager automatically set my baselines

Baseline dates are only available for periods of 12 full months of energy consumption information entered in your meters.

Water Baseline: You must have at least one water meter to select water baselines. After you [add a meter](#), don't forget to [include your meter in your metrics](#) as well.

Waste Baseline: You must have at least one waste/material meter to select a waste baseline. After you [add a meter](#), don't forget to [include your meter in your metrics](#) as well.

lowering your energy bills and meeting your Energy Action goal. Energy Star Portfolio Manager, which you are already using for your yearly BERDO reporting, has many useful tools to do just that. You can confirm your building's energy reduction by visiting Energy Star Portfolio Manager and clicking on the "Goals" tab.

**Energy Target**

Energy Target Metric:

Energy Target Value:  % (0-100)

**Save & Calculate Other Metrics**

Select "Calculate Other Metrics" to refresh the table after making changes to "Target Metric" and "Target Value"

Metric	Dec 2013 (Energy Baseline)	Dec 2017 (Energy Current)	Target*	Median Property*
ENERGY STAR score (1-100)	3	11	Not Available	50
Source EUI (kBtu/ft <sup>2</sup> )	225.7	179.3	Not Available	119.2
Site EUI (kBtu/ft <sup>2</sup> )	126.5	96.6	Not Available	64.2
Source Energy Use (kBtu)	16,925,258.6	13,450,218.9	Not Available	8,937,626.8
Site Energy Use (kBtu)	9,485,573.4	7,243,965.7	Not Available	4,813,591.3
Energy Cost (\$)	Not Available	Not Available	Not Available	Not Available
Total GHG Emissions (Metric Tons CO <sub>2</sub> e)	582.3	450.6	Not Available	299.4

At this point, you are going to want to set the baseline year as 2014, or whichever is the second year of your BERDO reporting. You can do this by selecting "Set Baselines and Target" within the "Current Baseline & Target" box.

From here you will choose to select a baseline within the Baselines box. Choose the option listed in the Energy Baseline section as December 31st of that year.

After selecting your baseline, you will scroll down to the "Energy Target" box within the "Energy Target Metric" section. Enter 15% into the "Energy Target Value" box.

**Save Baselines & Target** [Cancel](#)

At this point, click the “Save Baselines and Target” box.

After setting your target, please go back to the “Goals” tab. From there you can select the “Progress and Goals Report” link within the “Generate & Download Performance Documents for this Property” box. From here, you will choose to generate and download your progress and goals report.

### **MY DATA IS INCOMPLETE OR THERE ARE MISTAKES FOR ANY OF THE PRIOR 5 YEARS**

If your past data contains errors or inaccuracies that could change your energy use intensity by more than 2% you are required to resubmit your data. If there are mistakes or missing data in your report you will be notified and provided time to make the necessary corrections. You can revise your data by entering your account in Portfolio Manager, resubmitting your report, and notifying the City of Boston by emailing [energyreporting@boston.gov](mailto:energyreporting@boston.gov).

The links to the prior year’s reporting templates can be found below:

- **[For Calendar Year 2013](#)**. Please ensure that all data has been uploaded for your building to Energy Star Portfolio Manager from January 1st to December 31st, 2013.
- **[For Calendar Year 2014](#)**. Please ensure that all data has been uploaded for your building to Energy Star Portfolio Manager from January 1st to December 31st, 2014.
- **[For Calendar Year 2015](#)**. Please ensure that all data has been uploaded for your building to Energy Star Portfolio Manager from January 1st to December 31st, 2015.
- **[For Calendar Year 2016](#)**. Please ensure that all data has been uploaded for your building to Energy Star Portfolio Manager from January 1st to December 31st, 2016.
- **[For Calendar Year 2017](#)**. Please ensure that all data has been uploaded for your building to Energy Star Portfolio Manager from January 1st to December 31st, 2017.
- **[For Calendar Year 2018](#)**. Please ensure that all data has been uploaded for your building to Energy Star Portfolio Manager from January 1st to December 31st, 2018.

If you have any further questions on how to submit or resubmit your prior year’s BERDO report please follow our [Boston Energy Reporting How-To Guide](#) or our [video tutorial](#).

### **HOW DOES THE REQUIREMENT RESPOND TO CHANGES IN ENERGY STAR SCORES?**

Energy Star scores are based on the average energy performance observed in buildings nationwide according to the Commercial Buildings Energy Consumption Survey. A score of 50 is roughly equivalent to the average performance for a building of a specific type while a 90 is roughly equivalent to top 10% of high performing buildings in that type. In order to ensure Energy Star scores are reflective of the current marketplace, the EPA periodically updates them, most recently on August 28, 2018. You can learn more about it here: [www.energystar.gov/scoreupdates](http://www.energystar.gov/scoreupdates)

As average building energy performance has improved nationwide in recent years, most buildings tracking their energy usage through Energy Star Portfolio Manager can expect their Energy Star scores to decrease overtime if they aren't making continuous improvements to keep up. This may harm a building's ability to achieve BERDO Energy Action and Assessment compliance.

Buildings that had hoped to comply with the Energy Action pathway through improving their Energy Star score 15 points or more, only to have their score decrease due to changes in the metric, may still be able to comply through 15% reduction in their greenhouse gas emissions or energy usage. If it will not meet this threshold either, the building may choose to pursue another compliance pathway.

The building may also choose to resubmit their BERDO data through Energy Star Portfolio Manager for prior years. Updates to the Energy Star score calculations work retroactively for prior years of data. So if your Energy Star score was lowered this year it was likely also lowered for all prior years. As such, while your overall Energy Star scores decreased, your relative improvement over the prior 5 years may still be 15 points or more. Please check to confirm that this improvement has carried over before resubmitting as there is no guarantee that the changes to Energy Star scores impacted your building evenly. The links to the prior year's BERDO reporting templates can be found below:

- [For Calendar Year 2013](#). Please ensure that all data has been uploaded for your building to Energy Star Portfolio Manager from January 1st to December 31st, 2013.
- [For Calendar Year 2014](#). Please ensure that all data has been uploaded for your building to Energy Star Portfolio Manager from January 1st to December 31st, 2014.
- [For Calendar Year 2015](#). Please ensure that all data has been uploaded for your building to Energy Star Portfolio Manager from January 1st to December 31st, 2015.
- [For Calendar Year 2016](#). Please ensure that all data has been uploaded for your building to Energy Star Portfolio Manager from January 1st to December 31st, 2016.
- [For Calendar Year 2017](#). Please ensure that all data has been uploaded for your building to Energy Star Portfolio Manager from January 1st to December 31st, 2017.
- [For Calendar Year 2018](#). Please ensure that all data has been uploaded for your building to Energy Star Portfolio Manager from January 1st to December 31st, 2018.

If the building was on track for achieving the Highly Energy Efficient compliance pathway through Energy Star Certification, but was unable to be certified in enough years due the changes in Energy Star score, the building may request a [unique compliance variance through this form](#).

### **I DO NOT HAVE ACCESS TO MY TENANT SPACES UNDER OUR LEASE AGREEMENT. DO I HAVE TO INCLUDE THEM IN THE ENERGY ASSESSMENT?**

No, there is no requirement to overstep existing lease agreements or contracts. Building owners should though offer inclusion of tenant spaces in the energy assessment to all tenants. If tenants wish to have their spaces included in the energy assessment then they

must be included, if they don't then they must not be included. Building owners should strive to have their energy assessments cover as much of their building as possible without interfering with existing contracts. The cost of the assessment is still expected to be the responsibility of the building owner or managing company.

### **I HAVE NOT COMPLIED WITH BERDO IN PREVIOUS YEARS. CAN I GET BACK ON TRACK?**

You can certainly get back on track with your BERDO reporting even if you have fallen behind. You can request the utility data from the entire time period in which your building was required to comply. You can obtain this data by requesting it from your utility company. Once you have received the data you can upload it into your Energy Star Portfolio Manager account.

The links to the prior year's BERDO reporting templates can be found below:

- [For Calendar Year 2013](#). Please ensure that all data has been uploaded for your building to Energy Star Portfolio Manager from January 1st to December 31st, 2013.
- [For Calendar Year 2014](#). Please ensure that all data has been uploaded for your building to Energy Star Portfolio Manager from January 1st to December 31st, 2014.
- [For Calendar Year 2015](#). Please ensure that all data has been uploaded for your building to Energy Star Portfolio Manager from January 1st to December 31st, 2015.
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- [For Calendar Year 2017](#). Please ensure that all data has been uploaded for your building to Energy Star Portfolio Manager from January 1st to December 31st, 2017.

If you have any further questions on how to submit or resubmit your prior year's BERDO report, please follow our [Boston Energy Reporting How-To Guide](#) or our [video tutorial](#).

### **MY BUILDING HAS REDUCED EMISSIONS BY LESS THAN 15% OVER THE PRIOR 5 YEARS. WHAT CAN I DO TO BE COMPLIANT?**

If your property is close to complying with the 15% reduction target you may consider purchasing off-site renewable energy credits (RECs) to ensure your compliance with the ordinance. In this case, you must include the documentation confirming your purchase of the RECs for your Energy Action and Assessment submission.

If you are interested in purchasing RECs to assist in reducing your property's greenhouse gas emissions you can contact your utility provider to request a recommendation for companies that provide RECs. Additionally, you can research various global clean energy providers to request a consultation to determine which company is right for your property. Acceptable RECs can include but are not limited to the Center for Resource Solutions' Green-e Energy program or the Massachusetts Renewable Energy Portfolio Class I or II RECs.

### **I RECENTLY PURCHASED A BUILDING AND DO NOT HAVE THE PREVIOUS OWNER'S UTILITY DATA. DO I NEED TO PROVIDE THAT INFORMATION IN MY REPORT?**

The entire prior five year's worth of data is required when submitting your utility information into Energy Star Portfolio Manager for BERDO. You can obtain this data by requesting it from your utility company even for years when you didn't own the building. Before doing so, reach out to the prior owners and request they share access to the Portfolio Manager account for the building.

### **HOW DO I KNOW IF MY REPORT HAS BEEN RECEIVED?**

If you would like to know if your report has been submitted successfully and received by the City of Boston you can send an email request to [energyreporting@boston.gov](mailto:energyreporting@boston.gov) with your name, your building's tax parcel ID, and its address. Please allow for up to two weeks for the City to review your submission.

### **WHEN WILL I RECEIVE MY ENERGY STAR SCORE?**

Only specific building types are eligible for Energy Star scores. These include data centers hospitals, hotels, K-12 schools, medical offices, multifamily housings, offices, parking, residence halls and dormitories, retail stores, senior care communities, supermarkets and grocery stores, swimming pools, warehouses, wastewater treatment plants, and worship facilities. If your building falls within one of these categories and has not received an Energy Star score check that all of your energy data is accurate and submitted. If the issue persist please contact [Energy Star](#). It is possible that your property may not receive a score or that your score has been delayed.

### **DOES THE CITY PROVIDE RECOMMENDATIONS OF PREFERRED VENDORS FOR PERFORMING ENERGY ASSESSMENTS, DOING ENERGY EFFICIENCY WORK, OR PURCHASING RENEWABLE ENERGY?**

The City of Boston does not maintain preferred vendor lists or provide recommendations for any of these services. There are a large number of vendors operating in Boston and the metro area that provide these services. We encourage you to do your due diligence of research and obtain at a minimum of three bids for these services as a best practice. You may also wish to contact the [Mass Save program](#) to see what of these services are covered by the rate payer incentive and rebate programs.

### **MY BUILDING IS GOING THROUGH A GUT REHAB OR RENOVATION AND IS UNOCCUPIED, DO I STILL NEED TO MEET THE ENERGY ACTION AND ASSESSMENT REQUIREMENT?**

Yes but not this year. While your building is unoccupied, due to renovation or otherwise, the BERDO requirements are suspended. The requirement comes back into effect one full calendar year following it receiving your Certificate of Occupancy or being otherwise occupied again.

**I AM PURCHASING RENEWABLE ENERGY CREDITS, DO I NEED THEM TO OFFSET THE ENERGY FOR ALL FIVE YEARS OF BERDO COVERAGE OR JUST THE LAST YEAR?**

Just the last. The Energy Action pathway measures improvement from your second year of BERDO reporting to your sixth. What matters is that the energy or emissions in that last, sixth year is 15% lower than in the base year. So RECs are only needed for covering the energy and emissions for that last year.

**I DON'T THINK I CAN HAVE AN ENERGY AUDIT COMPLETED BY THE MAY 15TH DUE DATE, WHAT DO I DO?**

First ask for an extension from the City. We are willing to provide up to a 6 month extensions on the due date upon request. If you still don't think the energy audit will be completed by the end of the extension, provide the City a copy of the signed contract with the auditor who is to perform the audit. This is to prove to the City that the audit will take place. If the contracted audit is expected to meet the requirements, the City will provide you a provisional notice of compliance. We will still need the list of recommended energy conservation measures when the audit is complete.

## COMPLIANCE EXAMPLES

The below represent hypothetical case examples on potential pathways for buildings seeking compliance with the BERDO Energy Action and Assessment requirement. These are not real case studies, but rather narratives meant to assist you in thinking through the best approach for your building.

### How do I know how close I am to compliance?

Ryan made a consistent effort to reduce his utility consumption since learning that his building was required to comply with BERDO. When it was nearing the five year point to reduce his property's consumption by 15% Ryan wanted to know his compliance status. Ryan visited his Energy Star Portfolio Manager account and visited the "Goals" tab. From there he clicked on the "Progress and Goals Report" link within the "Generate & Download Performance Documents for this Property" box. After generating and downloading his property's report he was able to confirm that his utility consumption had reduced 15% within the five year period.

### How do I choose which path to take?

Wilhemina was excited to learn that her building would be required to disclose its energy consumption with the goal of reducing her utility use by 15% in a five year period. She wanted to minimize her utility consumption for many years and now had concrete guidance on how to accomplish this goal. Wilhemina researched the various compliance pathways to choose the best option for her property. She realized that she could take the initiative to start making major modifications to her property with the hopes of becoming either LEED or Energy Star certified, which would allow her property to receive a highly efficient exemption. She could also move towards making less intensive modifications such as updating her building's equipment to energy efficient options, installing renewable energy on her property, or purchasing off-site renewable energy credits. These options

would all put Wilhemina on track to reduce her utility consumption by 15% within a five year period. She also considered disclosing her utility consumption annually with the intent of moving forward with the energy assessment pathway. She could hire a qualified energy professional to audit her property while gaining an experienced opinion on the best ways to reduce her building's costs and consumption for the following term. Wilhemina was also comforted by knowing that if she fell behind, she could contact [energyreporting@boston.gov](mailto:energyreporting@boston.gov) to request an extension to ensure her property's compliance with the ordinance.

### Newly LEED O+M Certified Building

John has always been fond of taking care of nature and when he found out he could save money by reducing his apartment building's energy consumption while mitigating climate change, he decided to fully commit to making his building become [LEED O+M Certified](#). After months of updates and preparations, John's building received LEED certification. John was thrilled about this good news and that his building was now considered highly efficient making it exempt from BERDO Energy Action and Assessment. He sent a copy of his building's LEED certification award and scorecard documentation to the City of Boston's Environment Department and was able to remain compliant with the ordinance.

### 14% reduction building that goes all of the way

Suzzanna had been making consistent strides with reducing her building's energy and water

consumption throughout the five year period in which she was required to submit her data to BERDO. At this point, her building had hit 14% reductions and she was very proud of her accomplishment but she also wanted to ensure her building's compliance with BERDO. She decided to purchase off-site renewable energy credits (RECs) which would allow her to hit the 15% reductions target. While submitting her BERDO report she attached the documentation confirming her purchase of the RECs and she successfully complied with the ordinance.

### **Building that hasn't done much work yet, but wants to, so opts to do an audit**

Jiayi has spent the past five years submitting her BERDO data successfully without putting much emphasis on reducing her office building's energy and water consumption. When her five-year compliance period approached she decided to pursue the energy assessment pathway. Jiayi contacted her utility company to request a recommendation for a qualified energy professional to conduct an ASHRAE Level II audit on her building. After selecting an auditor, Jiayi received recommendations on various energy conservation measures that would significantly reduce her building's energy consumption and cost. These recommendations included making improvements to the building's insulation through smart windows or thermal insulation, updating her light bulbs to LED, or by fine-tuning the building's operations. She plans to take the necessary steps provided by the energy professional to guarantee that after the next five year term her building will hit the 15% reduction target.

### **Over the prior 5 year period achieve a 15% reduction in total site energy consumption**

Michael has consistently worked towards reducing his hospital's utility consumption.

Through Michael's desire to comply with BERDO while making a positive impact on the local environment, he choose to undergo a variety of energy efficiency projects. For instance, Michael had replaced the hospital's furnace to a more efficient option, switched to LED lightbulbs and motion sensed light switches, as well as updated the hospital's faucets and toilets to a "low-flow" alternative. Michael shared his energy reduction goals with all of the hospital employees creating an energy reduction challenge for each department. With all of Michael's cost effective and innovative solutions he was able to reduce the hospital's utility consumption by over 15%.

### **Over the prior 5 year period achieve a 15% reduction in site energy use intensity**

Christina was very excited to reduce her apartment building's energy consumption after learning about her requirement through BERDO. She wanted to make a large impact in a short amount of time so she decided that her best option was to install photovoltaic solar panels on the roof of her building. Christina was able to utilize the various [incentives provided to Massachusetts residents](#) which made this a highly efficient option in terms of energy, time, and cost.

### **Exemption**

Rory was finalizing the plans to demolish her property to rebuild a highly efficient shopping center. During this period, she was notified about her building's requirement to comply with BERDO. She emailed [energyreporting@boston.gov](mailto:energyreporting@boston.gov) with her building's tax parcel ID and address. She then explained her plans for the upcoming months and how they conflicted with submitting utility data through Energy Star Portfolio Manager. The City of Boston chose to list her property as exempt from complying with the ordinance.



### Extension

Charlie was experiencing financial difficulties with maintaining his property. He emailed [energyreporting@boston.gov](mailto:energyreporting@boston.gov) with his building's tax parcel ID and address while explaining his experience. The City of Boston Environment Department considered his challenges and chose to offer Charlie a yearlong extension for his compliance with BERDO. Eventually he was able to get back on track and submit his building's data within the allotted time frame.

### Has not complied with the ordinance at all but does not want to get fined

Aarav has not consistently submitted his building's utility data through Energy Star Portfolio Manager. Nearing the end of the five year period, he wanted to get back on track with the ordinance. He emailed [energyreporting@boston.gov](mailto:energyreporting@boston.gov) requesting advice on how to comply. The city employee explained that he can submit all five years of his utility data and still successfully adhere to the ordinance. Aarav moved forward with this intention and successfully complied with the ordinance.