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## **Agenda**

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Today's webinar

- BERDO overview
- Renewable energy basics
- Using renewable energy for BERDO compliance
  - Reporting requirements
  - Q&A time for each renewable energy option
- Resources and reminders

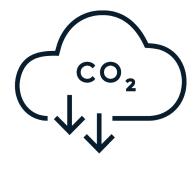


# What is Required from Building Owners?









ANNUAL REPORTING

THIRD-PARTY VERIFICATION

**EMISSIONS REDUCTIONS** 

Report total energy and water use from the previous calendar year

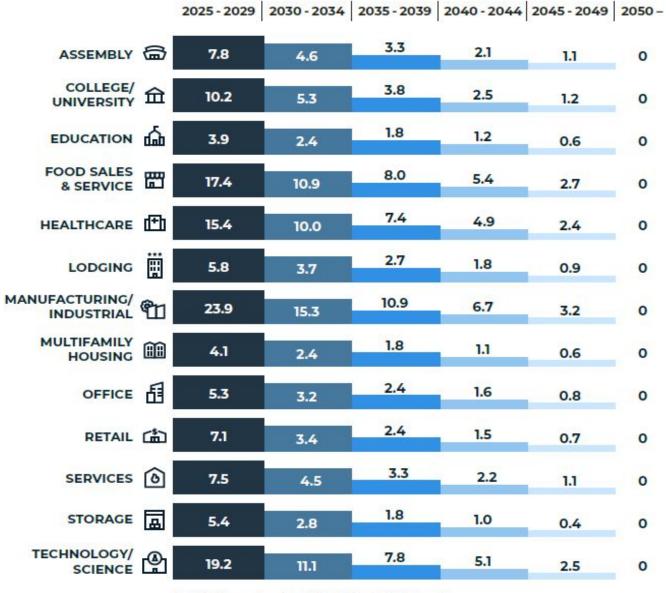
Third-party verify data for the first year of reporting and every "verification year" thereafter

Reduce annual emissions to stay under applicable emissions standard (emissions limit)



## **Emissions Standards**

Also known as emissions limits, refer to the regulated amount of climate polluting greenhouse gases BERDO building are allowed to release into the atmosphere.



Emissions standard (kgCO2e/ft2/year)

# When are Buildings Subject to Emissions Standards?



#### RESIDENTIAL

#### **NON-RESIDENTIAL**

35+ units **Starting emissions compliance in 2025** 



35,000 ft<sup>2</sup> + Starting emissions compliance in 2025



15-34 units

Starting emissions compliance in 2030



20,000 - 34,999 ft<sup>2</sup> **Starting emissions compliance in 2030** 



<sup>\*</sup>Buildings have been annually reporting energy use since 2022.

# It's 2025, What Now?



#### 2025 EMISSIONS COMPLIANCE STATUS IS DETERMINED IN 2026\*

You'll report your 2025 (Jan - Dec) energy usage by May 15, 2026

#### **JANUARY - DECEMBER 2025**

- This is the time to assess your options, <u>check your emissions projections</u>
- Take steps towards reducing building emissions and plan for compliance

#### **FEBRUARY - MAY 2026**

- Request and Report your building's 2025 energy and water data
- Purchase eligible renewable energy or make Alternative Compliance Payments if you are above your emissions limit

<sup>\*</sup>For residential buildings with 35+ units and non-residential buildings that are 35,000+ Sq Ft.

# **How Can Building Owners Comply?**





#### REDUCE EMISSIONS THROUGH BUILDING EFFICIENCY AND ELECTRIFICATION

Implement **building retrofits or improvements**. Examples include upgrading to high efficiency electric appliances and lighting, upgrading systems for heating, cooling, water heating, and cooking, improving insulation, tightening window seals, etc.



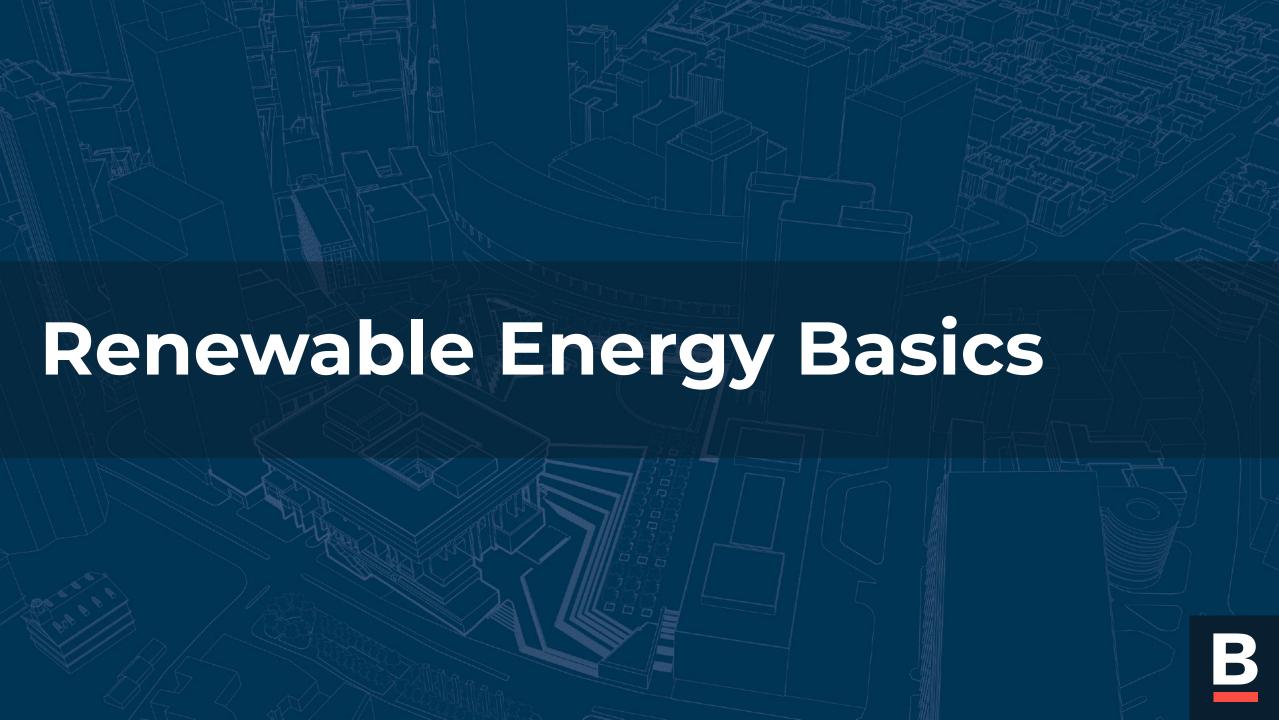
#### **ACCESS RENEWABLE ENERGY**

Use on-site or off-site local renewable generation or buy renewable energy from the market



#### INVEST IN THE COMMUNITY THROUGH ALTERNATIVE COMPLIANCE PAYMENTS

Make Alternative Compliance Payments (ACPs). ACPs are collected to mitigate emissions and fund the **Equitable Emissions Investment Fund** to support building decarbonization projects that prioritize benefits to Environmental Justice communities in Boston.



# How renewable energy is applied in BERDO

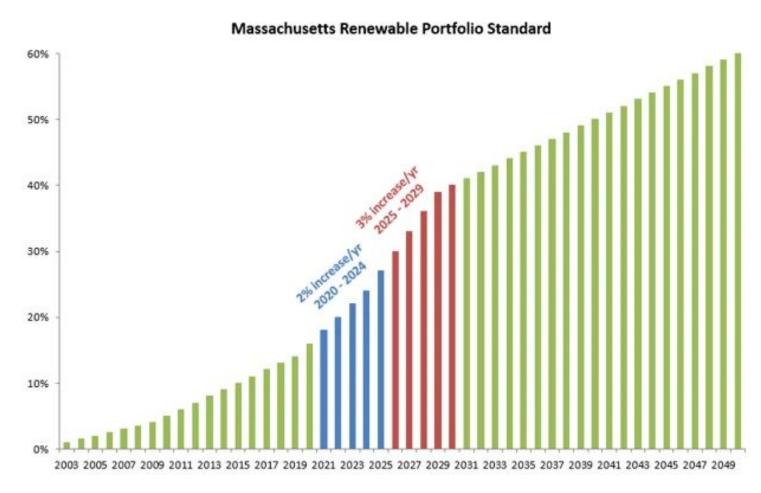


- Eligible non-emitting renewable energy can be used to reduce or mitigate emissions produced by **ELECTRICITY** use only.
- In most cases, using eligible renewable energy is demonstrated through the "retirement" of **Renewable Energy Certificates (RECs).** 
  - A REC is proof that 1 MWh of electricity was made from a renewable energy source.
  - When a REC is "retired" by a party, said party is claiming that they use that MWh of renewable energy and the REC is taken out of the market.
- All electricity use in BERDO is already credited with a percentage of renewable energy from the MA Renewable Portfolio Standard (RPS).

# All buildings in Boston are already getting some renewable energy

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- Massachusetts annually increases the amount of renewable energy we get in our state through the <u>Renewable Energy Portfolio</u> <u>Standard</u> (RPS).
- The RPS requires retail electricity suppliers to obtain a minimum percentage of their electricity from qualifying renewable energy facilities.
- Suppliers meet their annual RPS obligations by acquiring and "retiring" MA Class I Renewable Energy Certificates (RECs).



Source: Green Energy Consumers Alliance

## BERDO gives credit for the RPS to all building owners



Any amount of electricity you consume from the ISO New England grid that is matched by the <u>Massachusetts</u> <u>RPS Class I annual minimum requirement</u> is considered to have zero emissions under BERDO.

For example, if you consume 100 MWh of grid electricity in 2025, only 73 MWh will have a grid emissions factor applied to them:

100 MWh X (100% - 27%) X Grid Emissions Factor

= 73 MWh X Grid Emissions Factor





# BERDO has projected emissions factors to support planning, and a calculated annual emissions factor every year

Projected emissions factors help you understand your future emissions levels and plan for compliance efforts

Annual emissions factors make annual emissions calculations more accurate and reflective of our grid

To provide additional certainty to building owners, if the calculated annual grid emissions factor is higher than the projected grid emissions factor, then the projected grid emissions factor shall be used for calculating compliance.

You can see the projected and calculated grid emissions factors in the <u>BERDO Emissions Factors List</u>



#### How can building owners use renewable energy to comply with BERDO?



Building owners can mitigate their building's electricity emissions\* with non-emitting renewable energy by:

- Enrolling into Boston Community Choice Electricity (BCCE) and choosing the "Standard" or "Green 100" Plan
- Buying and retiring MA Class I RECs (unbundled or bundled as part of a PPA inside ISO New England)
- Entering a PPA outside ISO New England
- 4 Using local renewable energy generation (solar arrangements)

<sup>\*</sup> Renewable energy may not be used to mitigate emissions from fossil fuel use.







- <u>BCCE</u> is Boston's municipal aggregation program.
- BCCE offers two electricity products that exceed the Massachusetts RPS Class I requirements, enabling owners to reduce their emissions from electricity compared to the Eversource Basic Service.
- BERDO buildings that show BCCE Green 100 enrollment for a full calendar year for all electric accounts, would be considered to have **zero emissions** from their electricity usage.
- The BERDO Team will verify your building's BCCE enrollment and credit the additional renewable energy you get through BCCE to your building's emissions calculations.

This example shows how electricity emissions change across the different BCCE plans for a building that uses 100,000 kWh for the 2025 calendar year\*

	PLAN	ELECTRICITY USAGE (kWh)	% RENEWABLE ENERGY	ELECTRICITY EMISSIONS UNDER BERDO (kgCO <sub>2</sub> e)
	BASIC (Opt-down)	100,000	27%	18,177
	STANDARD (Default)	100,000	42%	14,442
	<b>GREEN 100</b> (Opt-up)	100,000	100%	0

<sup>\*</sup> Electricity Emissions were calculated using the methodology shown in the <u>BERDO Compliance Handbook</u>, using the 2025 <u>projected grid emissions factor</u> of 0.249 kgCO<sub>2</sub>e/kWh and the <u>2025 Renewable Energy Portfolio Standard (RPS)</u> of 27%.

# **Reporting BCCE Enrollment**



- 1. Energy Star Portfolio Manager No Reporting Required
- BERDO Reporting Form Optionally report the building's Eversource service address

BERDO staff will run the building-by-building emissions calculations and incorporate BCCE enrollment data for you

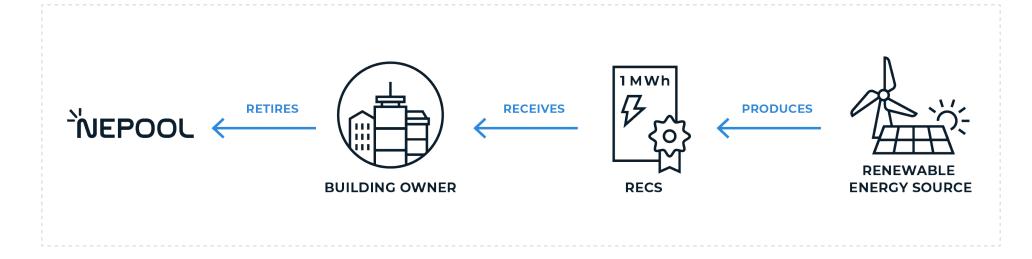
**Boston Community Choice Electricity** 





# Buying and retiring MA Class I RECs (unbundled or bundled as part of PPA inside New England)





#### Requirements for both unbundled and bundled MA Class I RECs:

- RECs must be generated within the compliance year or within the 12 months prior.
  - ° For example, to use a REC to comply in 2025, the REC must have been generated any time between Jan 2024 and Dec 2025.
- RECs must be retired within 6 months of the end of the compliance year.
  - ° For example, to use a REC to comply in 2025, the REC must have been retired by June 30, 2026.

For detailed methodology on calculating emissions compliance with REC purchases, please refer to our BERDO Compliance Guide

# **Reporting MA Class I RECs**



- 1. Energy Star Portfolio Manager No Reporting Required
- 2. **BERDO Reporting Form** Answer required questions on "Renewable Energy" section of the BERDO Reporting Form for each ID.
  - What type of MA Class I RECs were bought and retired?
    - Unbundled MA Class I RECs (RECs bought independent from a Power Purchase Agreement)
    - Bundled MA Class I RECs (RECs and electricity bought through a Power Purchase Agreement inside New England).
  - How many RECs did you buy and retire?
  - Upload supporting documentation for the retirement of RECs







### **Entering a Power Purchase Agreement (PPA) outside New England**



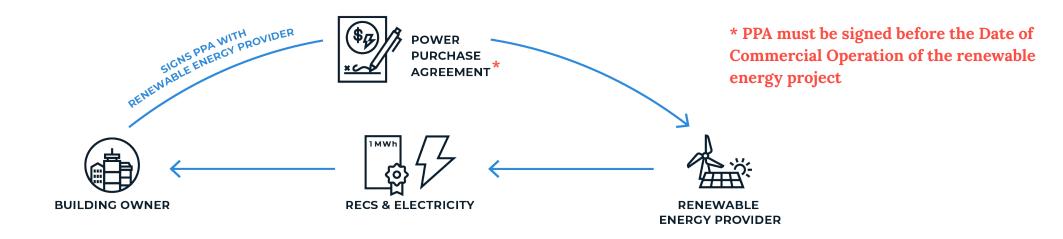
#### Requirements for any PPA outside New England:

- Renewable energy facility must be connected to any grid in the contiguous U.S. or Canada
- Building owners must buy both the electricity and its associated RECs.
  - Bundled PPA signed directly between the BERDO building owner and a renewable energy provider; or
  - Bundled PPA + retail agreement arrangement including a retail supplier.
- PPA must meet "additionality", i.e. PPA (and any associated retail agreement) must be signed before commercial operation of the renewable energy facility.
- RECs must be generated within the compliance year or within the 12 months prior.
- RECs must be retired within 6 months end of the compliance year for which they are used.
- RECs must meet MA Class I RECs requirements except for location and metering.

#### **Eligible bundled PPA arrangements**

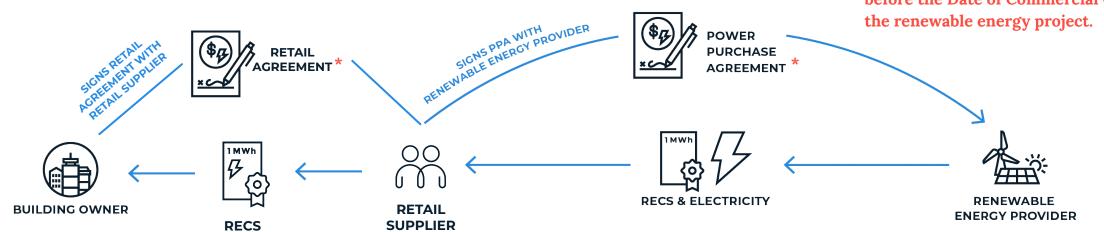


#### BUNDLED PPA BETWEEN BUILDING OWNER AND RENEWABLE ENERGY PROVIDER



#### **BUNDLED PPA + RETAIL AGREEMENT BETWEEN BUILDING OWNER AND RETAIL SUPPLIER**

\* PPA AND retail agreement must be signed before the Date of Commercial Operation of the renewable energy project.



#### **Approval of PPAs outside New England**



#### **Application form**

- Building owners or third-parties must request the Environment Department to **approve** PPAs outside New England (see <u>process and form questions in BERDO Compliance Guide</u>).
- Any PPA that is approved by the Environment Department is assigned a unique **PPA ID** number.
- **After PPA approval:** Following the approval of the PPA, Building Owners must simply reference the PPA ID in annual reporting and submit proof of retirement of the Renewable Energy Certificates associated with the PPA, including their date of generation and date of retirement.

#### Please note that:

- A PPA cannot be approved or assigned a PPA ID until signed by at least one BERDO building owner. Parties seeking advice on whether a prospective PPA meets the BERDO requirements may contact the Environment Department by emailing <a href="mailto:retrofit@boston.gov">retrofit@boston.gov</a>. Staff may provide guidance but will not officially approve a PPA until all required documentation is submitted via the application form.
- Based on extenuating circumstances, owners may request that the <u>Review Board</u> approve a PPA that does not meet the additionality criterion.
- PPAs that meet BERDO requirements when signed can be used for compliance throughout the contract, including any extensions.



# Reporting Power Purchase Agreements Outside of New England

- 1. Energy Star Portfolio Manager No Reporting Required
- 2. **BERDO Reporting Form** Answer required questions on "Renewable Energy" section of the BERDO Reporting Form for each ID.
  - Enter approved PPA ID <u>PPA Approval Request Form</u>
  - Enter the number of RECs associated with the PPA that were bought and retired
  - Upload supporting documentation for the retirement of qualified RECs

4. Did you buy and retire eligible Renewable Energy Certificates (RECs) outside New England in 2024 through a Power Purchase Agreement (PPA) approved by the Environment Department? If so, please enter the PPA ID assigned to your PPA. If you have not yet received a PPA approval, please click on the PPA approval request form below to complete and submit.*						
POWER PURCHASE AGREEMENTS APPROVAL REQUEST FORM						
O Yes						
○ No						
Enter the PPA ID (Format as PPA0000X):*						
How many RECs associated with the PPA did you buy and retire for this building? * Note: 1 REC equals 1 MWh of renewable electricity						
☐ I attest that all reported RECs associated with the PPA were generated between January 1, 2023 and December 31, 2024.*						
☐ I attest that all reported RECs associated with the PPA were or will be retired by June 30, 2025.*						
Please upload supporting documentation for the retirement of qualified RECs within their associated REC registry.*						
Supporting documentation must clearly show:						
<ul> <li>Proof that the REC was retired through an eligible GIS authority, including the retirement date.</li> <li>The serial numbers of the RECs that were retired.</li> </ul>						
The year of generation of the retired RECs.						
The quantity of RECs that were retired.						
Supporting documentation may include one of the following:						
A screenshot from the relevant REC registry showing that the RECs were retired in the building owner's name. This is generally only available to buyers of						
large amounts of RECs (bulk purchasing).						
An attestation from a third-party that retired RECs on behalf of the building owner. This is generally available to building owners that purchased RECs through a third-party who does bulk REC retirements, often on behalf of multiple parties.						
Upload files  Drop files or click here to upload						
Drop files of click fiele to upload						





### **Using Local Renewable Energy (Solar Arrangements)**





#### **OPTION 1: ON-SITE SOLAR LOCATED "BEHIND THE METER"**

**LOCATION:** The solar array is physically installed on your property and **directly connected to your building's electric system.** The most common example is rooftop solar.

**BILLING STRUCTURE:** When you use on-site solar located behind-the-meter, your building uses solar power first, and only pulls power from the electric grid when needed.

→ Your Eversource bill shows your net electricity usage in kWh. This means that on-site solar located behind-the-meter directly reduces the monthly kWh reported in your Eversource bill.



#### **OPTION 2: SOLAR NET-METERING CREDITS**

**LOCATION:** The solar array is physically installed **outside of your property** or it is located **on-site but is not directly connected to your building's electric system**.

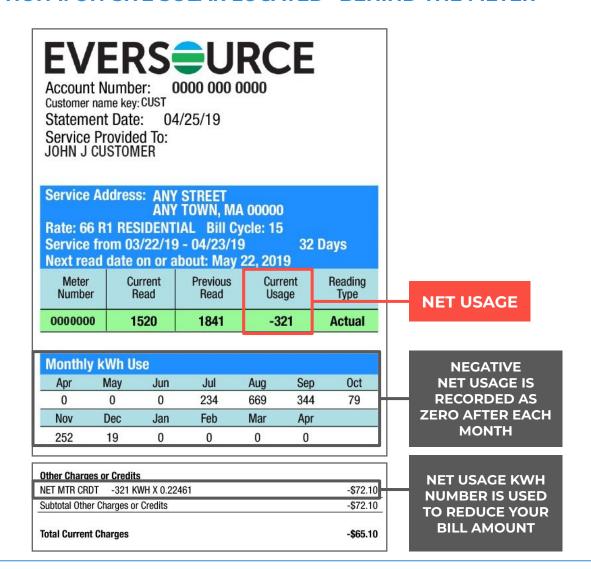
**BILLING STRUCTURE:** When you use solar net metering credits, your building does not physically consume solar power. The solar array is sending power directly into the grid, and you get **on-bill credits** for the share of solar power that you produced or purchased.

→ Your Eversource bill shows your total electricity usage from the grid in kWh. No solar usage is reported on the bill.

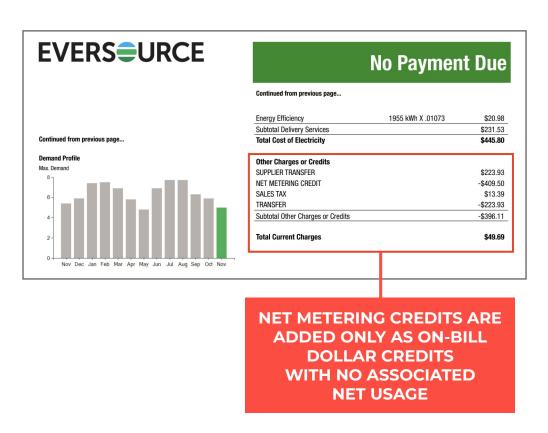
#### Identifying your solar arrangement

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#### **OPTION 1: ON-SITE SOLAR LOCATED "BEHIND THE METER"**



#### **OPTION 2: SOLAR NET-METERING CREDITS**



#### Determining if your solar arrangement requires MA Class I REC Retirement



You may use local solar power and/or solar net metering credits without retiring MA Class I RECs if your solar arrangement meets one of the following set of eligibility criteria:

- 1. The solar array is located in Boston; or
- 2. The solar array is located in Eversource Eastern MA (outside of Boston); the solar array began operation prior to 2024; and your building began receiving net metering credits from the solar array prior to 2024.



OPTION 1: ON-SITE SOLAR LOCATED "BEHIND THE METER"

Always eligible without MA Class I REC retirement



OPTION 2: SOLAR
NET-METERING CREDITS

Eligible without MA Class I REC retirement <u>ONLY IF</u> you meet the eligibility criteria above





Review our How To Report Solar Guidance - <u>Linked here</u> and on <u>boston.gov/berdo</u>

- 1. Energy Star Portfolio Manager Enter net electricity usage.

  Optional to enter solar use in kWh as an additional solar meter.
- 2. **BERDO Reporting Form** Answer required questions on "Renewable Energy" section of the BERDO Reporting Form for each ID.
  - How much solar electricity did this building receive in 2024? (kWh)





Review our How To Report Solar Guidance - <u>Linked here</u> and on <u>boston.gov/berdo</u>

- 1. Energy Star Portfolio Manager Enter total electricity usage. No reporting of solar use required.
- 2. **BERDO Reporting Form** Answer required questions on "Renewable Energy" section of the BERDO Reporting Form for each ID.
  - How much solar electricity did this building receive in 2024? (kWh)
  - Upload supporting documentation on solar usage, solar array location, Commercial Operation Date, and date solar was received

5. Did you use solar or other local renewable energy in 2024?* (Select all that apply)						
<ul> <li>Yes, my building has on-site solar located behind-the-meter, which reduces the monthly electricity consumption on my utility bill.</li> <li>✓ Yes, my building receives solar net-metering credits, which reduces the monthly cost of my utility bill through on-bill dollar credits. (This may include on-site and off-site sthe-meter, off-site net metering, virtual net-metering credits, community solar, leased rooftop solar, Alternative On-Bill Credits, or solar Power Purchase Agreements.)</li> <li>Yes, my building uses other local renewable energy located in Boston (e.g. wind)</li> <li>No</li> </ul>						
You may use solar net-metering credits without retiring MA Class I RECs if it meets one of the following criteria:						
(1) The solar array is located in Boston. (2) The solar array is located in Eversource Eastern MA (outside of Boston), provided that the solar array began operation prior to 2024, and your building began receiving solar system prior to 2024.	g net metering credits from the					
For all other scenarios, retirement of MA Class 1 RECs is also required for solar net-metering credits to be used for BERDO compliance.						
Please confirm that your solar net-metering credits fall under ONE of the following cases:*						
<ul> <li>I attest that the solar array from which I receive net metering credits is located within Boston, MA.</li> <li>I attest that I am using a solar array in Eastern MA that began operation prior to 2024 and that my building began receiving net metering credits from the solar array pri</li> <li>I retired the MA Class I RECs associated with the net metering credits and reported these RECs under Question 3 of this section.</li> </ul>	or to 2024.					
How much solar electricity did this building receive in 2024? (kWh)*  You must obtain this information from your solar provider.						
Please upload supporting documentation for the annual solar electricity usage.*  This may include bills or an allocation report						
from your solar provider that explicitly shows the kWh associated with the net-metering credits you received.						
&						
Upload files						
Drop files or click here to upload						

Location of the solar array*	
Street Address	
Street Address 2	
City	
State	
ZIP	
Commercial Operation Date (COD) of the solar array*	
Date when the building began receiving net metering or generation credits from the solar array*	
Please upload supporting documentation for the solar array.*	
Currenting decomposition must alegaly should	
Supporting documentation must clearly show:  The name and street address of the solar array.	
The Commercial Operation Date (COD) of the solar array.	
The date when the building first began receiving net metering or generation credits from the solar array.	
Supporting documentation may include one or more of the following:	
A redacted contract with your solar provider that shows the information above.	
An attestation from your solar provider that shows the information above.	
A billing or allocation report from your solar provider	
The relevant Schedule Z form submitted to Eversource.	
T.	
Upload files	
Drop files or click here to upload	





# **Start Taking Action on Emissions Reduction**



Plan for energy saving improvements and building electrification



### **UNDERSTAND YOUR BUILDING'S EMISSIONS**

✓ Visit the <u>BERDO Calculator</u> to view your emissions projections and identify your source of emissions



#### **GET A MASS SAVE ENERGY AUDIT**

- → Residential
- ✓ Eligible Income Based Assistance



#### ASSESS YOUR BUILDING'S ENERGY PERFORMANCE

- ✓ Seek the assistance of a <u>building professional</u> to create a plan over time (Zero-Over-Time Plan)
- ✓ Take account of your capital budget, equipment age, and condition and consider upgrading and electrifying your building energy systems over time

#### **Reminder: BERDO Reporting Deadline**





May 15, 2025 is the deadline to subject your 2025 BERDO reporting on 2024 data.



Building owners may begin entering energy and water data into **Energy Star Portfolio Manager** as soon as their complete 2024 data is available.



New BERDO reporting form has been released with new updates for 2025.

#### **Reminder: Application Deadlines for Flexibility Measures**



FLEXIBILITY MEASURE	DEADLINE	HOW TO APPLY	
Short-Term HCP for 2025	Rolling Basis*	1. Review the corresponding <u>Hardship</u> Compliance Plan application guide.	
Short-Term HCP for 2026	October 1, 2025		
Long-Term HCP for 2027 and later	April 1, 2026	BerdoReviewBoard@boston.gov.	
Building Portfolios and Individual Compliance Schedules	September 1, 2025	Submit an application form via the BERDO Application Page.	

<sup>\*</sup>For owners with unforeseen circumstances in 2025

#### **BERDO Webinar Series**



All webinars are available at <a href="mailto:boston.gov/berdo#events">boston.gov/berdo#events</a> (Registration required)

BERDO WEBINAR TITLE	DATE AND TIME	PAGE LINK
Hardship Compliance Plans for 2025 and 2026	Wednesday, March 5 2 - 3:30 pm	Recording available online
Launch of 2025 BERDO Reporting and Emissions Compliance	Wednesday, March 12 2 - 3:30 pm	Recording available online
Renewable Energy	Wednesday, April 2 2 - 3:30 pm	Recording will be available online
Condo Associations and BERDO Compliance	Tuesday, April 8 6 - 7:30pm	Register here
Building Portfolios and Individual Compliance Schedules for 2026	Wednesday, May 21 2 - 3:30pm	Register here

#### **Check out these BERDO Resources**



- 1. Project your building's emissions
  - Use the BERDO Emissions Calculator
- 2. Meet with a BERDO team member about emissions compliance
  - Schedule a one-on-one BERDO Building Consultation
  - Sign up for BERDO Office hours on <u>Zoom</u>
- 3. Apply for free BERDO reporting assistance\*
  - Apply for free reporting services and third-party verification
- 4. Apply to receive free decarbonization planning assistance\*
  - Application for cohort 2 open now!
- 5. Join one of our in-person BERDO Workshops!



## **Upcoming Event: BERDO In-Person Workshop**



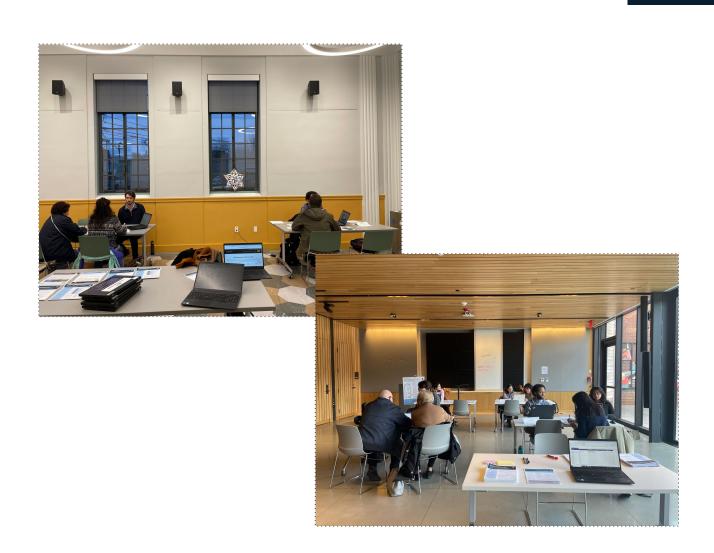
#### April 16, 2025, 3:00 - 7:00 PM

Bruce C. Bolling Municipal Building 2300 Washington St, Roxbury, MA 02119

#### Attend the event and:

- Find out if you are eligible for free reporting and verification services
- Get a consultation with BERDO staff to:
  - Complete annual reporting
  - Understand emissions projections + compliance options
  - Review flexibility measures

**RSVP HERE** 



### **More BERDO Resources!**



#### **Quick Guides**

- BERDO 101
- Emissions Compliance
- Renewable Energy
- BERDO Flexibility Measures
- BERDO Review Board
- Building Decarbonization

#### **In Depth Guides**

- BERDO Compliance Guide
- BERDO Condo Handbook
- BERDO Solar Reporting Guide
- <u>BERDO Emissions Factors List</u>



### **Helpful Links**



#### **BERDO Websites**

- boston.gov/berdo
- boston.gov/retrofithub
- boston.gov/berdo-review-board

**Mass Save**: No-cost Mass Save energy audits, engineering studies, rebates and incentives:

- Non-residential: <u>MassSave.com/Business</u>
- Residential: <u>MassSave.com/Multi-Family</u>
- Rebates: <u>MassSave.com/Rebates</u>



# **Thank You!**

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Please visit <u>boston.gov/berdo</u> and <u>boston.gov/berdo-review-board</u> for more information and updates.

