

BERDO 2.0 101

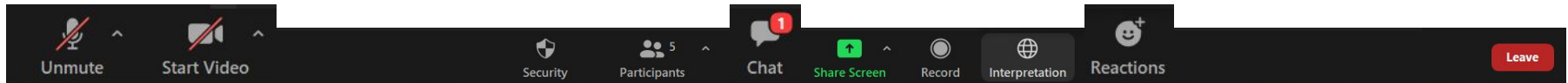
Building Emissions Reduction and Disclosure Ordinance



WELCOME



- **This meeting is being recorded.** Please turn off your camera and stay on mute if you do not wish to be recorded.
- Your microphones are turned off to start. You will need to unmute to speak. Joining via phone? Press ***6** to unmute.
- You can use non-verbal feedback options. Raise your hand or leave a message in the chat box if you would like to contribute to the discussion. If you called into the meeting, use ***9** to raise your hand.
 - When speaking, please make sure to introduce yourself.



Agenda

- **Why BERDO 2.0**
- **Overview of BERDO 2.0**
- **Regulations**
- **Reporting and Verification in 2022**
- **Next Steps**
- **Q&A**

*Please put your questions in
the chat.*

TEAM MEMBERS



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Poll

Who is in the Zoom room?



- **What best describes your interest in BERDO?**
- **What are you most interested in learning about today?**

An aerial view of a city grid rendered as a white wireframe on a dark blue background. The buildings are represented by simple rectangular outlines, creating a sense of depth and perspective. A semi-transparent dark blue horizontal band runs across the middle of the image, serving as a background for the main text.

WHY BERDO 2.0?

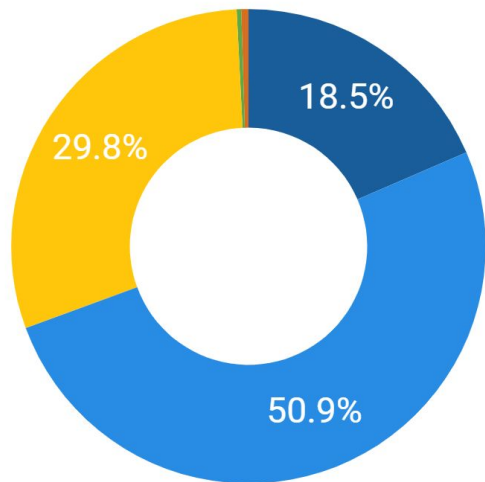


CITY OF BOSTON

BOSTON'S CARBON FOOTPRINT

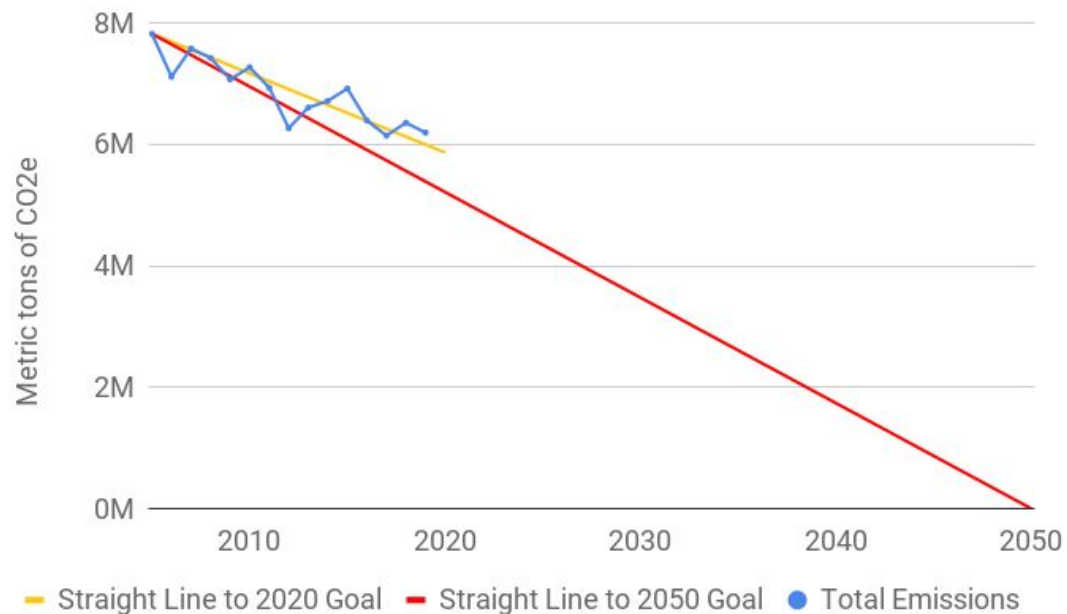


2019 EMISSIONS BY SECTOR



- Small Residential
- Commercial, Industrial, and Transportation
- Transportation
- Wastewater Treatment...
- Fugitive emissions

BOSTON COMMUNITY GREENHOUSE GAS EMISSIONS



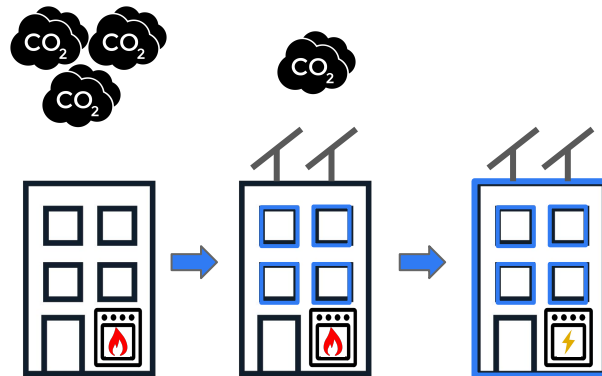
Creating a Building Performance Standard

Setting a pathway for building decarbonization

A building performance standard sets carbon targets for existing large buildings that decrease over time.

A performance standard:

- Directly targets our largest source of emissions
- Sets long planning horizons
- Provides flexibility in how buildings meet targets and when they make investments.



An aerial wireframe illustration of a city grid, showing various building footprints and street layouts in a light blue color against a darker blue background. The perspective is from an elevated angle, looking down on the city.

OVERVIEW OF BERDO 2.0

BERDO 2.0 Key Features

Building Emissions Reduction and Disclosure Ordinance

- **Annual energy and water use reporting continues**
 - *In 2022, Building Owners may apply for a one-time six-month extension on their reporting deadline.*
- **Buildings greater than 20,000 SF or 15+ units are now subject to BERDO**
- **Buildings have multiple pathways to meet emissions standards**
 - *Starting in 2025, buildings will need to meet declining emissions standards. Buildings can reduce their emissions by investing in energy efficiency and fuel switching, installing or purchasing renewable energy, and/or by making alternative compliance payments.*
- **BERDO will be overseen by a new Review Board**
 - *The Review Board will have oversight over BERDO including over a newly established Equitable Emissions Investment Fund, which will fund building emissions reduction projects that prioritize environmental justice.*

EMISSIONS STANDARDS

- Developed through the technical analysis process
- Based on existing buildings in Boston
- Aligned with citywide climate goals
- Multi-use buildings can adopt a blended emissions standard

Building use	Emissions standard (kgCO ₂ e/SF/yr.)					
	2025-2029	2030-2034	2035-2039	2040-2044	2045-2049	2050-
Assembly	7.8	4.6	3.3	2.1	1.1	0
College/ University	10.2	5.3	3.8	2.5	1.2	0
Education	3.9	2.4	1.8	1.2	0.6	0
Food Sales & Service	17.4	10.9	8.0	5.4	2.7	0
Healthcare	15.4	10.0	7.4	4.9	2.4	0
Lodging	5.8	3.7	2.7	1.8	0.9	0
Manufacturing/ Industrial	23.9	15.3	10.9	6.7	3.2	0
Multifamily housing	4.1	2.4	1.8	1.1	0.6	0
Office	5.3	3.2	2.4	1.6	0.8	0
Retail	7.1	3.4	2.4	1.5	0.7	0
Services	7.5	4.5	3.3	2.2	1.1	0
Storage	5.4	2.8	1.8	1.0	0.4	0
Technology/Science	19.2	11.1	7.8	5.1	2.5	0

FLEXIBILITY MEASURES

- **Portfolios:** owners with more than one covered building may apply to comply across their portfolio.
- **Individual compliance schedules:** buildings or portfolios may submit their own individual compliance plan for approval, which must be aligned with citywide emissions goals.
- **Hardship compliance plans:** buildings or portfolios with unique building characteristics or circumstances that present a hardship in complying with the standard (e.g., affordable housing refinancing timelines, historic designation, financial hardship, existing long-term energy contracts) would be eligible to apply for a hardship compliance plan.

OPTIONS TO RETROFIT AND FUEL SWITCH

- Building owners may undertake measures to improve energy performance and reduce fossil fuel consumption within the building
 - *Envelope improvements*
 - *Appliance and mechanical upgrades and switches (heat pumps, solar, geothermal)*
 - *Building operations and controls*
- The City is expanding a [Retrofit Resource Hub](#) to connect building owners with appropriate technical assistance and financial resources.

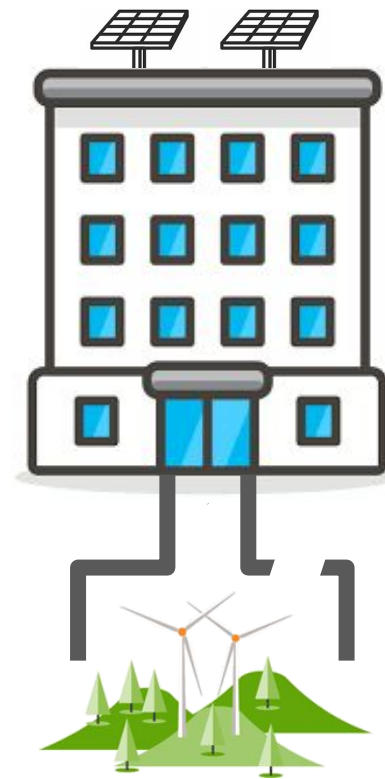


Credit: Indiana Public Media

OPTIONS TO PURCHASE RENEWABLE ELECTRICITY

Renewable energy can be used to reduce emissions from a building's electricity use.

1. Deploy renewable energy onsite;
2. Purchase renewable electricity that is generated offsite.
 - Boston community choice electricity (cityofbostoncce.com)
 - MA Class I Renewable Energy Certificates from non-emitting renewable sources
 - Power purchase agreements, including virtual PPAs, for RECs from non-emitting renewable sources



ALTERNATIVE COMPLIANCE PAYMENT



- Additional option to meet emissions standards
- Tied to average retrofit cost per metric ton of CO₂e, estimated at \$234/mtCO₂e
- Paid into a new Equitable Emissions Investment Fund

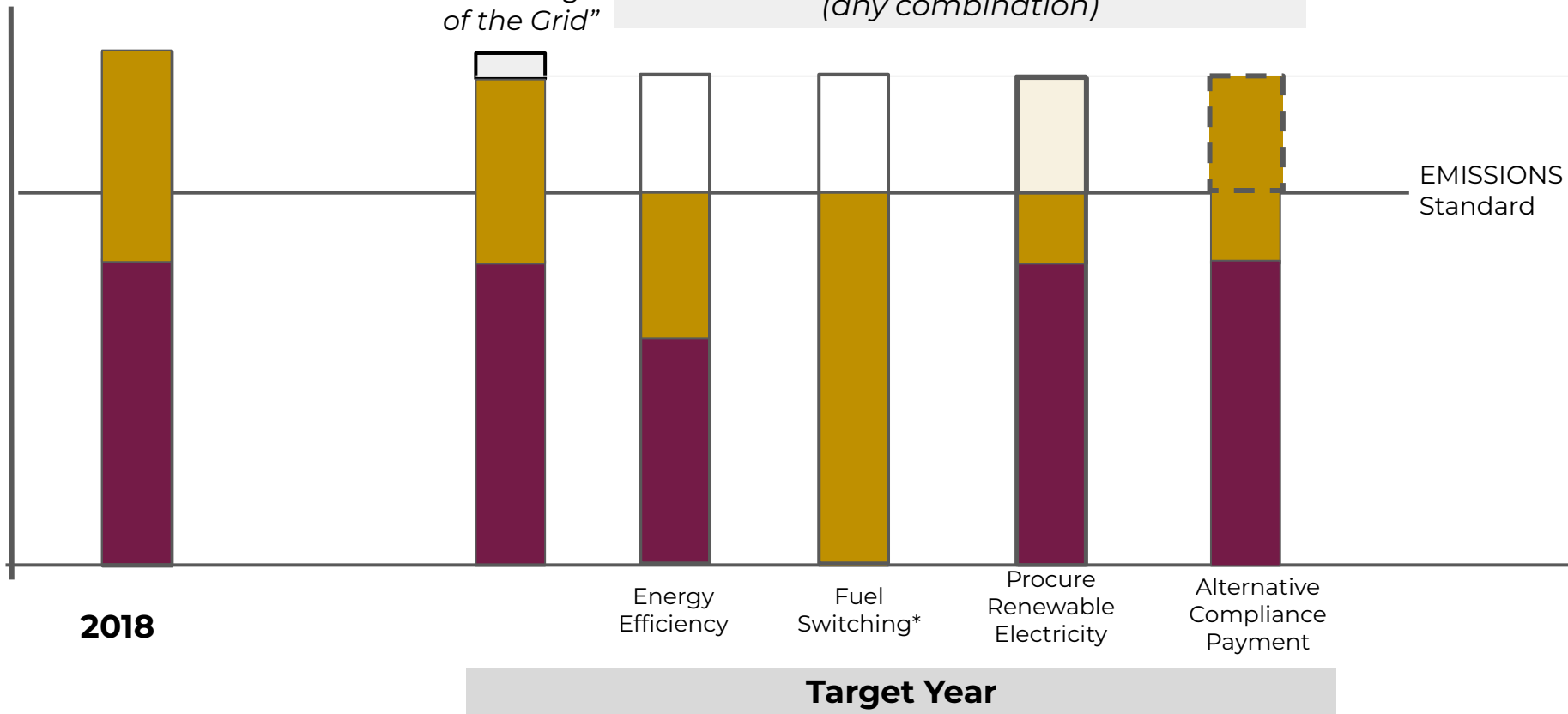


Jeffrey Blackwell

INDIVIDUAL BUILDING

"Greening of the Grid"

Options
(any combination)



EMISSIONS Standard

2018

Energy Efficiency Fuel Switching* Procure Renewable Electricity Alternative Compliance Payment

Target Year

Electricity Natural Gas

* Fuel switching often best when combined with efficiency **For illustrative purposes only

EQUITABLE EMISSIONS INVESTMENT FUND

New fund dedicated to building emissions reduction projects that prioritize environmental justice populations and benefits including:

- Affordable housing preservation and rent stabilization
- Air quality improvements
- Training and access to green jobs for residents, women and people of color
- Clean energy deployment

Funds to be allocated by a newly created Review Board.

An aerial view of a cityscape rendered in a white wireframe style against a dark blue background. The buildings are represented by simple lines and rectangles, creating a geometric and architectural feel. The perspective is from a high angle, looking down on the city.

REGULATIONS

Regulations Process

Phased approach

- **Phase 1: Adopted in March 2022**
 - Reporting and data verification requirements
 - Enables reporting and disclosure in 2022
- **Phase 2: Starting spring 2022**
 - Review Board regulations
- **Phase 3**
 - Emissions Standards regulations (hardship compliance plans, individual compliance schedules, custom emissions factors, etc.)
 - Equitable Emissions Investment Fund regulations
 - Additional regulations as needed to implement and enforce the ordinance
- boston.gov/departments/environment/berdo-regulations-development

The background of the slide is a dark blue aerial view of a city, rendered as a white wireframe. The buildings are represented by simple rectangular outlines, creating a complex, geometric pattern. The perspective is from a high angle, looking down on the city blocks.

REPORTING AND VERIFICATION IN 2022

Reporting steps in 2022

Reporting has changed to respond to new BERDO 2.0 requirements

Task 1: Find your Parcel ID, BERDO ID, and Building Address

Task 2: Request an Extension (optional)

Task 3: Report Data through Energy Star Portfolio Manager

Task 4: Report Supplemental Data through BERDO Reporting Form

Task 5: Third-Party Verification

Task 6: Preserve Records



Task 1: Find your Parcel ID, BERDO ID, and Building Address

Go to the Covered Buildings List through boston.gov/berdo

Properties Required to Report by June 15, 2022

In 2022, the following buildings are required to report: non-residential buildings over 20,000 sq. ft., residential buildings with 15 or more units, and any parcel with multiple buildings that add up to 20,000 sq. ft. or 15 units. This list identifies all properties required to report, including those that began reporting in previous years. This is a draft list subject to removals and additions based on additional information. Exclusion from this draft list does not necessarily mean that a building is not required to report. If you believe your building is on this list by mistake - such as being too small to be covered or may qualify for an exception due to construction work - contact the City at: energyreporting@boston.gov

Parcel ID	Parcel Address	Parcel Owner	Street Address	BERDO ID	Zip Code	Link to Property Assessment Map
303060001	160 170 N WASHINGTON ST	1 LOVEJOY WHARF BOSTON REALTY LLC		100001	02114	https://app01.cityofboston.gov/AssessingMap/?find=303060001
304794000	24 2 TEMPLE PL	10 TEMPLE PLACE LP	2-24 Temple Pl	100002	02111	https://app01.cityofboston.gov/AssessingMap/?find=304794000
602757045	20 30 CHANNEL CENTER ST	10-20 CHANNEL CENTER	20 Channel Center St	100003	02127	https://app01.cityofboston.gov/AssessingMap/?find=602757045
602757045	20 30 CHANNEL CENTER ST	10-20 CHANNEL CENTER	24-38 Channel Center St	100004	02127	https://app01.cityofboston.gov/AssessingMap/?find=602757045
304718000	12 PROVINCE ST	10-24 SCHOOL STREET	24 School St	100005	02108	https://app01.cityofboston.gov/AssessingMap/?find=304718000
601192000	100 A ST	100 A STREET CONDOMINIUM TRUST	100 A St	100006	02127	https://app01.cityofboston.gov/AssessingMap/?find=601192000
304408000	100 HIGH ST	100 HIGH OWNER LLC	100 High St	100007	02110	https://app01.cityofboston.gov/AssessingMap/?find=304408000
602671039	90 110 NORTHERN AV	100 NORTHERN AVENUE LLC		100008	02210	https://app01.cityofboston.gov/AssessingMap/?find=602671039
304220000	100 SUMMER ST	100 SUMMER OWNER LLC	100 Summer St	100009	02110	https://app01.cityofboston.gov/AssessingMap/?find=304220000
304220000	100 SUMMER ST	100 SUMMER OWNER LLC	100 Summer St #1401	100010	02110	https://app01.cityofboston.gov/AssessingMap/?find=304220000

Task 2: Request an Extension (optional)

One-time six-month extension available to all

- **June 15, 2022** reporting and verification deadline without extension
- **December 15, 2022** reporting and verification deadline with extension

1. **Go to the BERDO Reporting Form**
2. **Create a Username**
3. **Claim your Properties**
4. **Request an Extension**

Task 3: Report Data through Energy Star Portfolio Manager

Energy Star Portfolio Manager

- 1. Collect Energy and Water Data**
 - Request energy and water data from the utility companies or from historical bill copies.
- 2. Create a Portfolio Manager Account**
- 3. Add your Property and Utility Data to Portfolio Manager**
- 4. Add your BERDO ID to each building.**
- 5. Share your Data with the City of Boston**

Task 3: Report Data through Energy Star Portfolio Manager

Energy Star Portfolio Manager

Portfolio Manager Data Sharing

- Connect buildings in Portfolio Manager with the City to share data directly
- Allows City to view data in real time to improve transparency and support
- No longer need to submit annual report via link

The screenshot displays the Energy Star Portfolio Manager web interface. At the top left is the Energy Star logo and the text "ENERGY STAR® PortfolioManager®". To the right, a navigation bar includes "Welcome CityofBoston: Account | Notifications", "ENERGY STAR Notifications", and "Contacts | help | Sign Out". Below this is a secondary navigation bar with tabs for "MyPortfolio", "Sharing", "Reporting", and "Recognition". The "Sharing" tab is highlighted with a yellow box. The main content area is divided into two sections. On the left, under "My Shared Properties (0)", there are three blue buttons: "Share (or Edit Access to) a Property" (highlighted with a yellow box), "Share with your Utility or Service Provider for exchanging data", and "Download Sharing Report". On the right, under "Sharing Notifications (0)", a light blue box contains the text "You have no new notifications."

Task 4: Report Supplemental Data through BERDO Reporting Form

BERDO Reporting Form

- **The BERDO Reporting Form will be used to:**
 - Claim your properties
 - Request extension
 - Update contact information
 - Submit additional information not collected through Portfolio Manager
 - Submit third party verification

Task 5: Third-Party Verification

Third Party Verification: Overview

- **Third Party Verification**
 - Required in 2022 for 2021 data
 - Necessary for compliance with future emissions standards
 - Must be completed by credentialed professional not on staff of building owner or property management company

Task 5: Third-Party Verification

Third Party Verification: Summary of data to be verified

Required in 2022

1. Confirm square footage and allocation to appropriate building use is correct in Portfolio Manager
2. Confirm unit count is accurate in Portfolio Manager (*residential only*)
3. Confirm all energy usage is accounted for in Portfolio Manager
 - *All meters are reported and all delivered fuels are accounted for*
4. Verify all energy use is accurately reported

Optional for 2022*

1. Confirm eligibility of any RECs
2. Confirm eligibility of any PPAs
3. Confirm use of any backup generation to be exempt from emissions standards.
4. Confirm any EV charging station usage to station usage to be exempt from emissions standard.

**Note: Future regulations will specify what needs to be verified for compliance with emissions standards. We anticipate that at a minimum the four steps above will be required if they are used by a building.*

Task 5: Third-Party Verification

Third Party Verification: RFI Release

- **Request for Information (RFI)**
 - RFI issued to identify Qualified Energy Professionals available to undertake third-party verification.
 - Responses can be found on [Boston.gov/berdo](https://www.boston.gov/berdo) under “Instructions, Guides, and Forms”
 - Sort by your property type
 - Qualified Energy Professionals can still respond to the RFI
 - You are not required to use a business on the RFI response list.

Task 6: Preserve Records

Building owners must retain the following records in printed or electronic format for ten years.

1. Records necessary to demonstrate compliance with data reporting
2. Records confirming data submission
3. Requests to tenants made for information needed for compliance
4. Third-Party Verification confirmations and contact information of the verifier
5. Requests for extensions of reporting deadlines.

Reporting Tips

Visit boston.gov/berdo for detailed guidance

- **Request your extension by June 15th**
- **Review our updated How to Report Guide for 2022**
 - Many things have changed, so don't assume how you've reported in the past will work in 2022.
- **Find your properties on the covered building list**
 - If you have multiple buildings on one tax parcel, you will need to find each building and the corresponding BERDO ID.
- **Each building must be reported separately in Portfolio Manager**
 - You must enter a BERDO ID (new this year) into Portfolio Manager
 - Buildings with shared systems should report as a campus and follow requirements in regulations

An aerial, wireframe-style illustration of a cityscape, rendered in a light blue color against a darker blue background. The buildings are represented by simple geometric shapes and lines, creating a sense of depth and perspective. The overall aesthetic is clean and modern.

Next Steps and Support

We are here to help

Please reach out with questions and ideas

- **Webinar Series**
- **Help Desk & Office Hours**
 - Continued building owner support via email: energyreporting@boston.gov and phone: 617-635-3850.
- **Retrofit Resource Hub**
 - [Retrofit Resource Hub](#) with technical and financial resources to help you plan for energy and efficiency retrofits.
- **BERDO Email Newsletter**
 - Sign up at boston.gov/berdo

Upcoming Webinars

- **How to Make a Zero-Over-Time Plan**
 - *Wed., June 29 @ 2:00 pm*
- **BERDO Office Hours**
 - *Wednesday, June 1 @ 3:30pm*
 - *More dates will be posted*

Visit the [Retrofit Resource Hub](#) to register and find out about future webinars.

We want to hear from you

How can we help you with reporting and planning to meet emissions standards?

- **What would be helpful?**
 - Consultations
 - Additional webinars
 - Engaging specific audiences
 - Other
- **Regulations Phases II & III**
 - Launching Phase II public process soon





**VISIT
BOSTON.GOV/BERDO
FOR MORE
INFORMATION**

Links

[BERDO Homepage](#)

[BERDO Regulations](#)

[How to Report Guide](#)

[BERDO Reporting Form](#)

[BERDO 3rd Party Verification RFI Responses](#)

THANK YOU



Approved credentials for Qualified Energy Professionals

Must hold active credential and cannot be on the staff of Building Owner or building's management company

- Professional Engineer (PE)
- Licensed Architect
- Registered Architect (RA)
- Passive House
- Building Energy Assessment Professional (BEAP)
- Certified Energy Auditor (CEA)
- Building Energy Modeling Professional (BEMP)
- RPA/FMA High Performance Designation (RPA/FMA-HP)
- Certified Measurement and Verification Professional (CMVP)
- LEED Advanced Professional (AP) Building Operations & Maintenance
- Commissioning Process Management Professional Certification (CPMP)
- Certified Commissioning Professional (CCP)
- Associate Commissioning Professional (ACP)
- Certified Building Commissioning Professional (CBCP)
- Existing Building Commissioning Professional (EBCP)
- Certified Commissioning Authority (CxA)
- Operations and Performance Management Professional (OPMP)
- Certified Energy Manager (CEM)
- Energy Management Professional (EMP)
- Building Operator Certification (BOC) Level 2