

BERDO 2.0 REGULATIONS LISTENING SESSION

August 18, 2022



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City of Boston Staff



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AGENDA

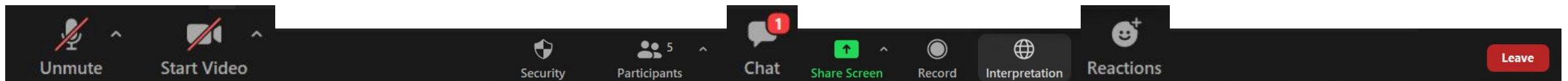


- **Introductions**
- **BERDO 2.0 Progress**
- **Regulations Development Process**
 - *Emissions Factors & Discussion*
 - *Renewable Energy Purchases & Discussion*
 - *Blended Emissions Standards & Discussion*
- **Next Steps**

WELCOME



- Update your name in Zoom to include your preferred name and your pronouns.
- 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.
 - Note: due to the number of participants, we will not be answering individual questions in the chat.



The background of the slide is a dark blue aerial wireframe map of a city, showing building footprints and street layouts in a light blue color. A semi-transparent dark blue horizontal band is overlaid across the middle of the image, containing the main title text.

BERDO 2.0 Progress & Reporting Reminders

BERDO 2.0 Key Features

Building Emissions Reduction and Disclosure Ordinance

- **Covered buildings:**
 - *Non-residential buildings that are **20,000 ft²** or larger (excluding parking)*
 - *Residential buildings that have **15** or more units*
 - *Any parcel with multiple buildings that sum to **20,000 ft²** (excluding parking) or **15** units must report on all buildings*
- **Annual energy and water use reporting and disclosure.**
- **Covered buildings must achieve net-zero emissions by 2050.**
 - *Non-residential buildings that are **35,000 ft² +** and residential buildings with **35+ units** have to meet declining emissions standards starting in **2025**.*
 - *Non-residential buildings that are **20,000 - 34,999 ft²** and residential buildings **15-34 units** have to meet declining emissions standards starting in **2030**.*

BERDO 2.0 Reporting

- **Numbers on reporting (as of 08/17/22)**
 - 2298 extensions requested
 - 366 reports in progress
 - 259 submissions verified
- **Deadlines**
 - June 15, 2022 - BERDO Reporting Deadline
 - December 15, 2022 - BERDO Reporting Deadline with Extension
- **Process reminders**
 - Check covered building list
 - Third-party verification
 - New Portfolio Manager submission process
 - Review How to Report Guide

The background of the slide is a dark blue aerial wireframe map of a city, showing building footprints, streets, and parks in a light blue color. The map is centered and covers the entire background.

BERDO 2.0 Regulations

Proposed approach for regulations development



Regulations Process

Phased approach by key topics



Phase 1

- ***Adopted in March 2022***
- *Reporting and data verification requirements*

Phase 2

- *Review Board regulations*
 - *Notes and slides from listening session of July 19 available on [regulations website](#).*
- *Emissions factors*
- *Renewable energy purchases*
- *Blended emissions standards*
- *Designating tenant as owner, and other clarifying regulations as needed*

Phase 3

- *Hardship compliance plans*
- *Individual compliance schedules*
- *Portfolio compliance*
- *Equitable Emissions Investment Fund regulations*
- *Additional regulations as needed to implement and enforce the ordinance*

Phase 2 Community Engagement Process



Main components

Community Leads Meetings

Special meetings with community partners

- Advise on community needs and priorities.
- Engage residents.
- Inform and provide feedback on regulations.
- Ensure the regulations and implementation of BERDO are aligned with environmental justice and equity.

Technical Working Sessions

**Public meetings on Zoom
Technical experts invited**

- Provide technical feedback on regulations

Focus Groups

Special meetings to go deep into specific topics

- Convening of specific groups to have in-depth discussions on relevant issues.
- Scheduled as needed.

Air Pollution Control Commission

Public meetings on Zoom

- Series of monthly meetings from September to December.
- City will present proposals and draft language on regulations.
- Commission will provide direction and open public comment periods when appropriate.

Key Topics to Discuss Today

Topic #1

Emissions Factors

- An Emissions Factor represents the amount of greenhouse gases released (measured in CO₂e) by unit of fuel or energy consumed.
- These are used to calculate the total emissions generated by a building.

$$\text{Energy consumed} \times \text{Emissions factor} = \text{Total emissions}$$

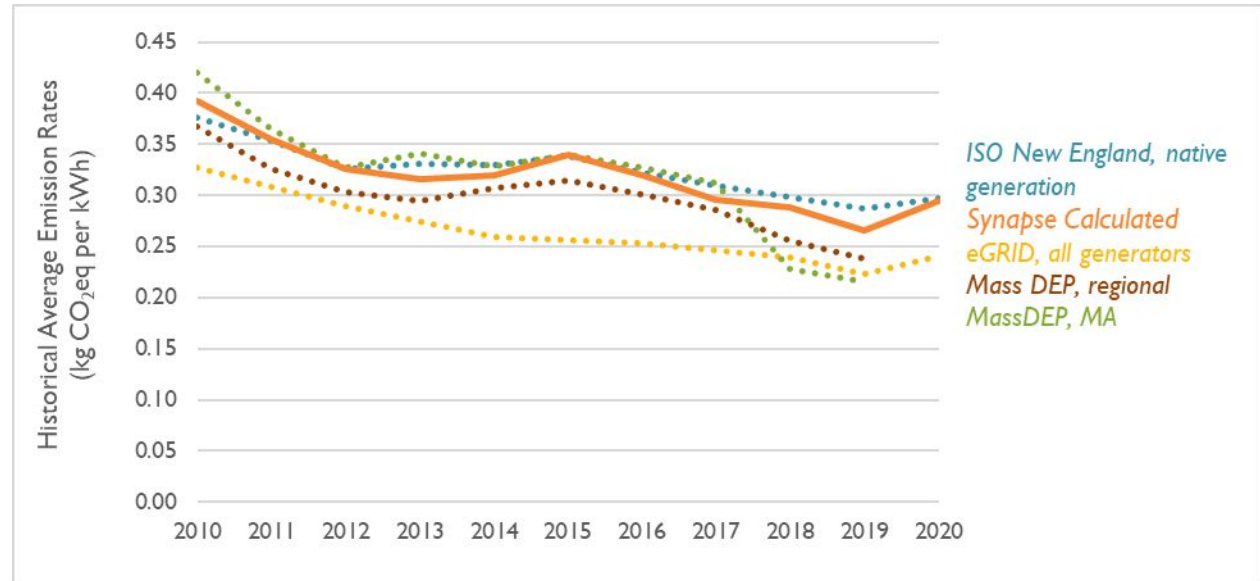
Emissions Factors

Electricity



Electricity grid emissions

- Official emissions factors for each year are available with a 2 - 3 year delay.
- Emissions rates vary by methodology.
- Boston is connected to a regional grid that includes the rest of New England.



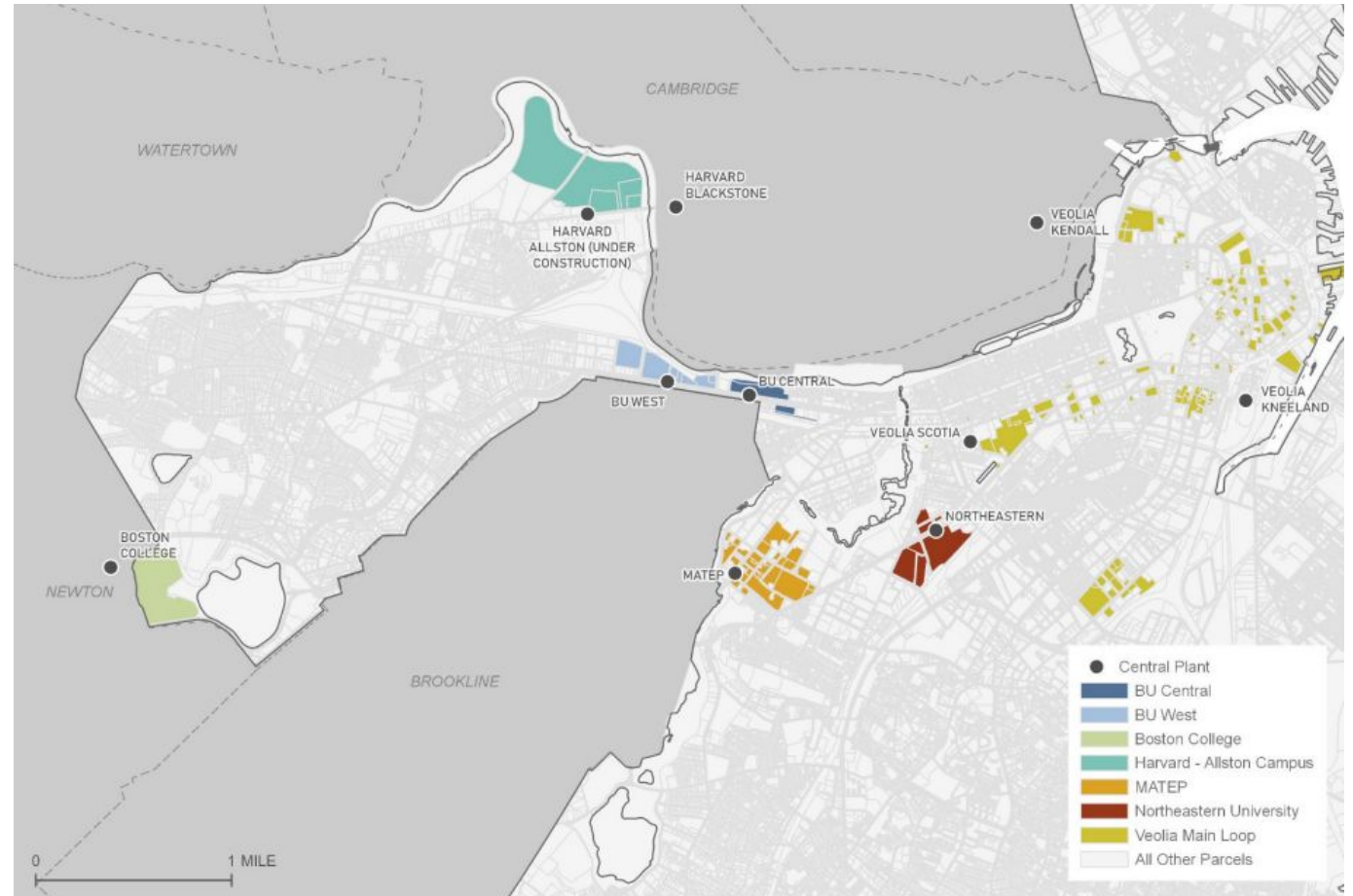
Emissions Factors

District Energy Systems



District energy emissions

- Numerous buildings in Boston use steam, hot water, chilled water, or electricity provided by district energy systems.
- District heating or cooling systems produce thermal energy resources at a central plant and distribute them to buildings for heating or cooling.
- We need to set methodologies for determining the emissions factors for the local district energy systems.



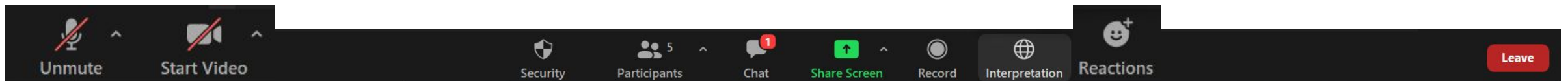
Source: Carbon Free Boston, Boston University Institute for Sustainable Energy

Key Questions: Emissions Factors

- *How should emissions factors be calculated?*
- *Should grid emissions factors be forecasted?*
- *How often should emissions factors be updated?*
- *What is the process to calculate and verify emissions factors from district systems?*
- *Should requests to use custom emissions factors be approved by the Review Board?*
- *What other questions do you have on this topic?*

How to participate

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Key Topics to Discuss Today

Topic #2

Renewable Energy Purchases

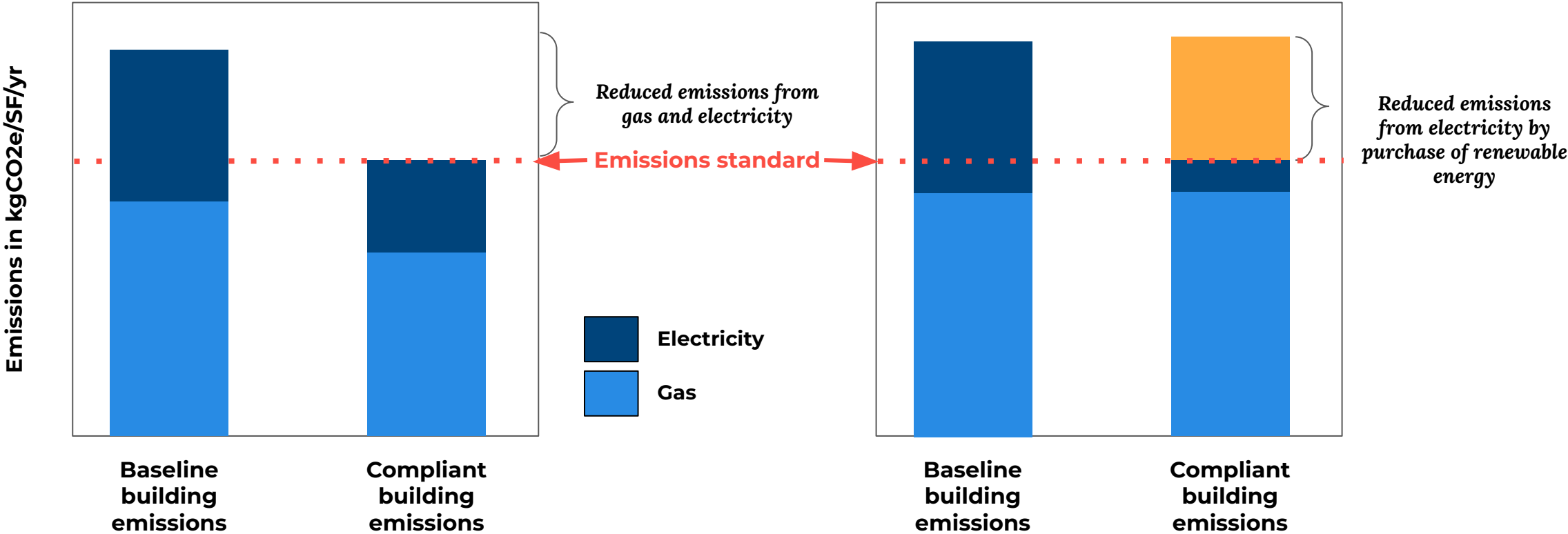
The Ordinance establishes that buildings may mitigate their CO₂e emissions from electricity by:

- **Purchasing Renewable Energy Certificates (RECs).**
 - A REC is a certificate representing the positive environmental attributes of electricity generated by a renewable energy source. Even if a building does not directly consume renewable energy, the owner could purchase RECs that represent that energy in the market.
 - 1 REC = 1 MWh = 1,000 kWh of renewable electricity.
 - Must be generated by non-CO₂e emitting renewable sources and meet the RPS Class I eligibility criteria.
- **Entering Power Purchase Agreements (PPAs) for energy generated by renewable non-emitting fuel sources.**
 - A PPA is a contract by which an Owner agrees to purchase electricity from a generating facility over a fixed term of years.
- **Participating in Boston's [Community Choice Electricity](#) program.**

Renewable energy purchases can be used to reduce emissions from electricity usage

Example 1. A building can reduce emissions from gas and electricity through energy efficiency improvements or on-site renewable energy

Example 2. A building can reduce emissions from electricity by purchasing RECs from the market or by entering into a PPA.



Key Questions: Renewable Energy Purchases

- *What should count as renewable non-emitting fuel sources?*
- *Should the regulations include additionality requirements for PPAs?*
- *How should RECs produced under Solar Massachusetts Renewable Target (SMART) be treated?*
- *What other questions do you have on this topic?*

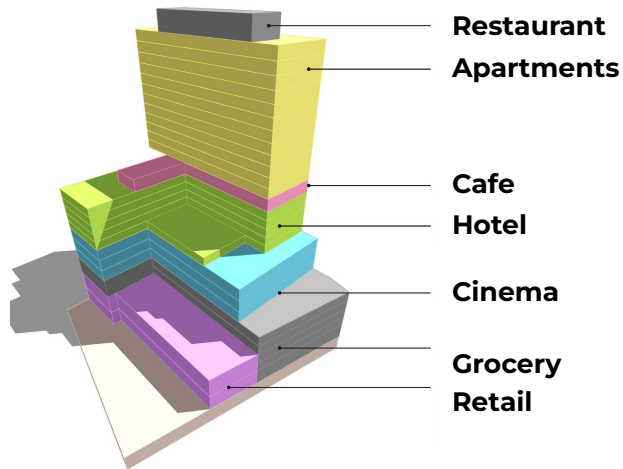
Key Topics to Discuss Today

Topic #3



Blended Emissions Standards

- *Buildings or Building Portfolios with more than one primary use may comply with a blended CO2e Emissions standard.*



A use may constitute a primary use only if:

- *It occupies at least 10% of a Building's or Building Portfolio's square footage, or*
- *It accounts for more than 10% of a Building's or Building Portfolio's total annual Energy use or CO2e Emissions*

Example of building with multiple primary uses

Key Questions: Blended Emissions Standards

- *What is the process to opt into using a blended emissions standards?*
- *Should owners be able to opt out of a blended emissions standard year to year?*
- *How should the primary uses of a building be verified?*
- *What other questions do you have on this topic?*

Next Steps



Working Sessions Schedule for 2022

Additional meetings may be convened as needed and advertised via the BERDO newsletter and [boston.gov/events](https://www.boston.gov/events).

Meeting Number	Date	Focus areas
#1	September 7 10:00 - 11:30 a.m.	Blended emissions standards, designating tenant as owner, and change of ownership
#2	September 14 1:00 - 2:30 p.m.	Grid emissions (emissions factors) and renewable energy purchases
#3	September 21 1:00 - 2:30 p.m.	District energy systems and co-generation

KEY DATES FOR APCC HEARINGS (TENTATIVE SCHEDULE SUBJECT TO CHANGE):

Meetings publicly noticed and accessible via [boston.gov/public-notice](https://www.boston.gov/public-notice).

- **September 14 at 11 a.m. (APCC Monthly Hearing):** City presents overview of regulations development process.
- **September 28 time TBD (APCC Special Hearing):** City presents first proposals for regulations.
- **October 19 at 1:00 p.m. (APCC Monthly Hearing):** City submits draft regulations language. At the discretion of the Commission, first public comment period will open.
- **November 16 at 1:00 p.m. (APCC Monthly Hearing):** Discussion of feedback from public comment period.
- **December 14 at 1:00 p.m. (APCC Monthly Hearing):** To be determined by prior hearing.

Next Steps

- Please share additional feedback via [Google Form](#)
 - <https://forms.gle/aJgVgM1ZLUPtBYf3A>
- Slides and meeting notes will be posted on BERDO regulations page:
 - boston.gov/departments/environment/berdo-regulations-development.

Resources

- **[Boston.gov/berdo](https://www.boston.gov/berdo) is updated regularly**
 - *Sign up for the BERDO newsletter to be notified of latest updates.*
 - *Upcoming events including regular reporting office hours.*
 - *Recorded webinars on BERDO basics, how to report, building decarbonization strategies, and more!*
- **Dedicated [page for BERDO regulations](#)**
 - *Process updates, events, and opportunities to engage.*
- **The [Retrofit Resource Hub](#) is your one stop resource for reducing energy use and emissions.**
 - *Find technical and financial resources about renewable energy, electrification, and efficiency measures.*

THANK YOU!

Please visit boston.gov/berdo for more information and updates.

