



BERDO REGULATIONS PHASE 3

Working Session #2: Individual Compliance Schedules

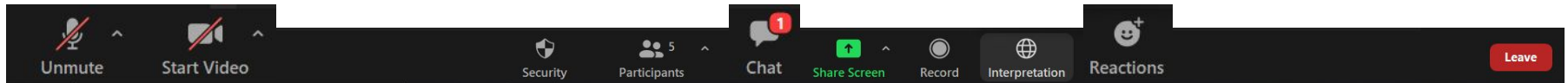
April 5, 2023



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.



BERDO Team Members

City of Boston Staff



**HANNAH
PAYNE**

*Director of
Carbon Neutrality*



**CLAUDIA
DIEZMARTINEZ**

*BERDO
Policy Fellow*

Agenda

- **Regulations development process**
- **Introduction to Individual Compliance Schedules**
- **Regulations Proposals & Discussion**
- **Next steps & Reminders**

An aerial wireframe illustration of a cityscape, showing various building footprints and streets in a light blue color against a darker blue background. The perspective is from a high angle, looking down on the city.

Regulations Development Process

Launch of Phase 3

Phase 3 Regulations: Topics to Address



BUILDING PORTFOLIO COMPLIANCE

- *Two or more Buildings with the same Owner or that are part of an approved Institutional Master Plan may comply with BERDO through a Building Portfolio. Building portfolios are approved by the Review Board.*



INDIVIDUAL COMPLIANCE SCHEDULES

- *Alternative emissions standard reduction schedules approved by the Review Board.*



HARDSHIP COMPLIANCE PLANS

- *Alternative emissions reduction targets and/or timelines approved by the Review Board. Available for buildings that experience a hardship in complying with BERDO.*



EQUITABLE EMISSIONS INVESTMENT FUND

- *New investment fund that will collect all Alternative Compliance Payments and penalties made to BERDO and invest them in local building carbon abatement projects that prioritize environmental justice communities in Boston.*



FINES AND ENFORCEMENT

- *Fines and penalties for non-compliance.*



COMPLIANCE WITH EMISSIONS STANDARDS

- *Compliance rules for buildings in special circumstances (e.g., vacant buildings, demolitions)*

The background of the slide is a dark blue wireframe illustration of a city skyline, viewed from an elevated perspective. The buildings are represented by white and light blue lines, creating a complex geometric pattern. A semi-transparent dark blue horizontal band is overlaid across the middle of the image, serving as a background for the text.

Individual Compliance Schedules

Introduction to the topic

Individual Compliance Schedules (ICS)

Requirements set in Ordinance

- ICS are **alternative emissions reduction timelines** that allow building owners to decrease their emissions at a different rate than the schedule set in the Ordinance. Any building owner may apply for a ICS.
- All ICS must establish **emissions standards with 5-year increments**. Those standards must (i) decline on a **linear or better basis**, (ii) reduce emissions by **50% by 2030**, AND (iii) reduce emissions by **100% by 2050**.
- ICS may use as a **baseline year** either (i) the first year that the Building was required to report to BERDO 1.0 or 2.0 OR (ii) any year from 2005 to the first required reporting year.
- ICS are approved by the **Review Board** and the Review Board may set **conditions on the approval** of an ICS.

The regulations will establish:

- *Process and rules to apply for ICS*
- *Process through which the Review Board will assess and approve ICS.*
- *Conditions the Review Board may set to approve ICS.*

Example of Individual Compliance Schedule (ICS)

CASE STUDY #1: Affordable housing



- Multifamily building with 100 units and 100,000 SF. *
- Building Owner does not have good historical data on their energy consumption.
- Since the building is 100,000 SF, their first year of compliance with their emissions standard is 2025.
- Building Owner will be refinancing in 2026 and plans to make energy efficiency or weatherization improvements until 2027.

EMISSIONS STANDARDS SET IN THE ORDINANCE (kgCO₂e/SF/year)

2025 - 2029	2030 - 2034	2035 - 2039	2040 - 2044	2045 - 2049	2050
4.1	2.4	1.8	1.1	0.6	0

BERDO EMISSIONS REDUCTION SCHEDULE (kgCO₂e/year) [Multiply Emissions Standard by SF]

2025 - 2029	2030 - 2034	2035 - 2039	2040 - 2044	2045 - 2049	2050
410,000	240,000	180,000	110,000	60,000	0

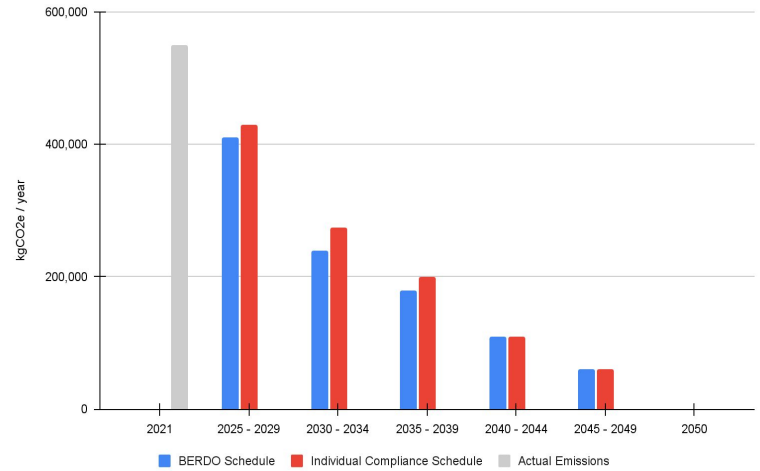
* These are fictitious numbers used to simplify analysis.

Example of Individual Compliance Schedule (ICS)

CASE STUDY #1: Affordable housing

	Actual Emissions (kgCO2/year)	BERDO Schedule (kgCO2/year)	Individual Compliance Schedule (kgCO2/year)	
2021	550,000	NA	NA	← Baseline year
2025 - 2029	NA	410,000	450,000	
2030 - 2034	NA	240,000	275,000	← 50% reduction from baseline by 2030
2035 - 2039	NA	180,000	200,000	
2040 - 2044	NA	110,000	110,000	
2045 - 2049	NA	60,000	60,000	
2050	NA	0	0	← Net zero emissions by 2050

When using an ICS, some years may be over or under the BERDO emissions standard. This is allowed by the Ordinance as long as the rate of reductions are on a linear or better basis AND the emissions reduction requirements by 2030 and 2050 are met.



* These are fictitious numbers used to simplify analysis.

Example of Individual Compliance Schedule (ICS)

CASE STUDY #2: Assembly building with uniquely high ventilation needs



- An assembly building with 100,000 SF was required to report to BERDO 1.0. The building Owner has historical data on their energy consumption. *
- Since the building is 100,000 SF, their first year of compliance with their emissions standard is 2025.
- The Owner chooses to use 2008 as their baseline year.
- The Owner invested in early energy efficiency and weatherization improvements and significantly reduced their emissions by 2021.

EMISSIONS STANDARDS SET IN THE ORDINANCE (kgCO₂e/SF/year)

2025 - 2029	2030 - 2034	2035 - 2039	2040 - 2044	2045 - 2049	2050
7.8	4.6	3.3	2.1	1.1	0

BERDO EMISSIONS REDUCTION SCHEDULE (kgCO₂e/year) [Multiply Emissions Standard by SF]

2025 - 2029	2030 - 2034	2035 - 2039	2040 - 2044	2045 - 2049	2050
780,000	460,000	330,000	210,000	110,000	0

* These are fictitious numbers used to simplify analysis.

Example of Individual Compliance Schedule (ICS)

CASE STUDY #2: Assembly building with uniquely high ventilation needs

	Actual Emissions (kgCO ₂ /year)	BERDO Schedule (kgCO ₂ /year)	Individual Compliance Schedule (kgCO ₂ /year)
2008	3,000,000	NA	NA
2021	2,000,000	NA	NA
2025 - 2029	NA	780,000	1,875,000
2030 - 2034	NA	460,000	1,500,000
2035 - 2039	NA	330,000	1,125,000
2040 - 2044	NA	210,000	750,000
2045 - 2049	NA	110,000	375,000
2050	NA	0	0

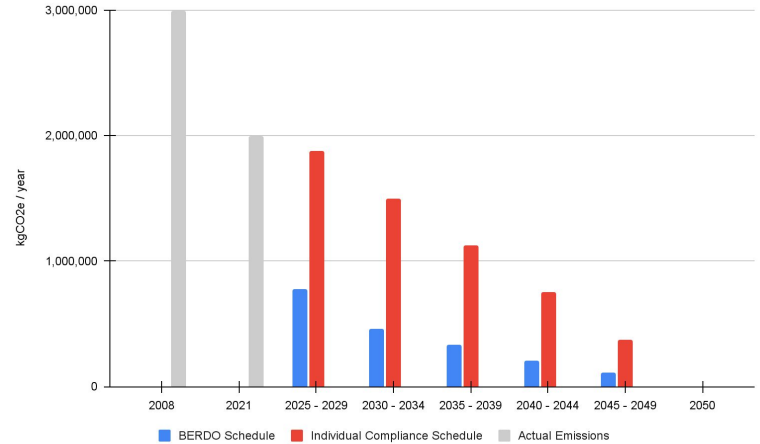
← **Baseline year**

← **Early action with large emissions reductions**

← **50% reduction from baseline by 2030**

← **Net zero emissions by 2050**

Some buildings may have unique circumstances that make their emissions much higher than the normal emissions standard for their building use type. An ICS allows Owners to base their compliance on their operations and needs.



* These are fictitious numbers used to simplify analysis.



Regulations Proposals

Discussion after each proposal

Proposed Eligibility

Per the Ordinance:

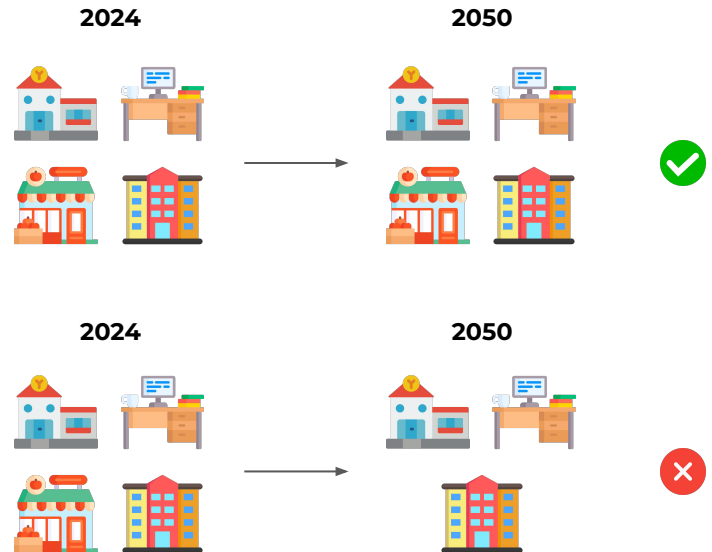
Owners of **Buildings** or **Building Portfolios** may apply for an Individual Compliance Schedule (ICS).

Preliminary Proposal:

1. Building Portfolios must be approved by the Review Board before applying for an ICS.
2. An ICS for a Building Portfolio shall apply to **all** the Buildings within the Portfolio.
3. Removing or adding buildings from a Building Portfolio with an approved ICS requires a new application for an updated ICS.

Questions for the public:

- *Should we consider other criteria to approve ICS for Building Portfolios?*



Proposed Requirements for Application Process

Per the Ordinance:

Individual Compliance Schedules must establish declining CO₂e Emissions standards in **5-year increments**, provided that such standards must (i) decline on a **linear or better basis**, (ii) reduce Emissions **50% by 2030**, and (iii) reduce Emissions **100% by 2050**; and use the year that a Building was first required to report Energy to BERDO; or use a baseline from any year starting in 2005 to the first required reporting year.

A Building or Building Portfolio that failed to comply with previous reporting requirements may use an Individual Compliance Schedule, provided, however, that the necessary data is submitted to the Review Board and any applicable penalties for past non-compliance are paid in full.

Preliminary Proposals:

1. Owner presents an alternative Emissions reduction schedule that meets the requirements set in the Ordinance (see box on the left).
2. Owner presents a reasoning or argument for the need to use an ICS.
3. Owner presents **third-party verified** Energy use, Gross Floor Area, Building Use(s), and Emissions Factors data for the year selected as the baseline.
 - a. The Building or Building Portfolio's current primary uses and respective Gross Floor Areas must not significantly differ those of the selected baseline year.
 - b. If the Building or Building Portfolio is using a blended emissions standard, the blended emissions standard for the ICS must match that of the baseline year.
4. Owner presents a description of any energy efficiency improvements or greenhouse gas emissions reduction efforts completed in the Building or Building Portfolio from the baseline year to date.
5. Owner demonstrates that the Building or Building Portfolio is currently **in compliance with the Ordinance**, including paying any applicable past penalties.
6. If the Building or Building Portfolio is located in Environmental Justice neighborhood(s), Owner identifies potential impacts to Environmental Justice populations.

Proposed Application Process

Preliminary Proposals:

Building

1. Owner submits application and verified data.
2. Environment Department reviews application for completeness, compliance with requirements, and potential environmental justice impacts if applicable.
3. If application is complete, Environment Department recommends approval with standard environmental justice reporting, if applicable.
4. Review Board votes at next meeting or may request a hearing.

Building Portfolio

1. Owner submits application and verified data for all buildings in approved Portfolio.
2. Environment Department reviews application for completeness and compliance with requirements, and potential environmental justice impacts if applicable.
3. If application is complete, Environment Department recommends to proceed with a Review Board Hearing.
4. Review Board evaluates proposal during hearing and may vote at the same hearing or at the next meeting. Review Board may request standard environmental justice reporting, if applicable, as well as other conditions for approval.

Questions

*How should changes in Building Uses or GFA be considered in ICS?
(e.g. switching uses from lab to office or from restaurant to retail)*

*What changes should warrant a new application for an ICS with the
Review Board?*

Proposed Timeline for Applications and Opt-Out

Preliminary Proposals:

1. Initial applications for ICS may be submitted on a rolling basis until November 1, 2024. Thereafter, applications must be submitted by September 1 of each year for the ICS to be reflected for the following compliance year.
2. If an Owner of a Building or an approved Building Portfolio applies for an ICS in or after 2030, they must demonstrate that (a) the Building or Building Portfolio is in compliance with the Ordinance for any previous years and (b) they have reduced actual emissions from the baseline year by 50% in 2030.
3. With notification, Owners may opt-out of using an approved ICS by September 1 of each year. Compliance obligations would be revert back to the relevant emissions standards in Table 1 of Ordinance.

Compliance and Enforcement



Preliminary Proposals:

1. After the first compliance year in which an ICS is in effect, all compliance and associated penalties will be based on the emissions standards set by the ICS.

Other Questions for Discussion

How far back do you have Energy Use data for your Buildings? Do you have records that can be third-party verified? Do you have historic building plans (GFA) that can be third-party verified?

What other information or documents should we be collecting to assess and approve ICS?

An aerial wireframe 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 text 'Next Steps' is overlaid on the left side of the image.

Next Steps

Next Steps

- Please share additional feedback by emailing Claudia Diezmartinez, BERDO Policy Fellow, at claudia.diezmartinez@boston.gov
- Slides and meeting notes will be posted on BERDO regulations page boston.gov/berdo-regulations.

Resources

Visit boston.gov/berdo for regular updates on BERDO and key resources for reporting.

- *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!*

Visit boston.gov/berdo-regulations for more information on the regulations development process.

- *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 and boston.gov/berdo-regulations for more information and updates.

