

# BERDO REVIEW BOARD MEETING

*March 24, 2025*



*Mayor Michelle Wu*

# BERDO REVIEW BOARD



**Jessica Boatright**  
*Board Member*



**Rashida Boyd**  
*Board Member*



**Gabriela Coletta Zapata**  
*City Councilor*



**Stephen Ellis**  
*Board Member*



**Hessann Farooqi**  
*Board Member*



**Lori Ferriss**  
*Board Member*



**Gail Latimore**  
*Board Member*



**Jack Nelson**  
*Board Member*



**Reginald Stovell Jr.**  
*Board Member*



# City of Boston BERDO Staff



**Hannah  
Payne**

---

*Director,  
Carbon Neutrality*



**Diana  
Vasquez**

---

*BERDO Review  
Board Manager*



**Dr. Claudia  
Diezmartinez**

---

*Policy and Equity  
Advisor*

# Agenda

*Today's Meeting*



## **Public Hearing**

- 1.** *Boston University Building Portfolio Hearing*

## **Public Meeting**

- 2.** *Discussion and Vote on Opening the Equitable Emissions Investment Fund for the 2025 Application Cycle*
- 3.** *Approval of Meeting Minutes*
- 4.** *Administrative Updates*
- 5.** *Adjournment*





# Boston University Hearing

*Building Portfolio and Individual Compliance Schedule*



# Application pathways

*All Building Portfolios must be approved by the Review Board*

## PATHWAY 0

Buildings with a single Owner located in a **single parcel** that sum to at least 20,000 sq. ft. or 15 units, but would not otherwise be individually subject to BERDO.

No hearing required for approval

## PATHWAY 1

Buildings that are individually subject to BERDO and **do not** trigger environmental justice requirements

No hearing required for approval

## PATHWAY 2

Buildings that are individually subject to BERDO and **do** trigger **environmental justice requirements**

Review Board may hold a hearing

## PATHWAY 3

Buildings that do not meet one or more eligibility criteria **OR**  
Owner is unable to calculate blended Emissions standard **OR**  
Owner is also applying for or already has an Individual Compliance Schedule (ICS)

Review Board shall hold a hearing

# Building Portfolio Application

## Pathway 3



### Building Portfolio Hearing:

- Applicant presents on their application and requested information regarding impacts to EJ populations
- Review Board accepts public comment regarding application

### Review Board **may** vote to:

- Approve with standard conditions;
- Approve with special conditions; or
- Deny the application

### Special Conditions:

- These are conditions that are relevant to the distribution of decarbonization benefits to Environmental Justice Populations.
  - The applicant and the Review Board must agree to the special conditions before a vote can be taken.



The background of the slide is a dark blue aerial view of Boston, overlaid with a white line-art map of the city's streets and building footprints. The map is centered and covers the entire background.

# Boston University Slides

*Boston University presents*







BOSTON  
UNIVERSITY

# Building Portfolio & ICS Applications

BERDO Review Board | Monday, March 24, 2025

**Presented By:**

Dennis Carlberg AIA, LEED AP BD+C  
Chief Sustainability Officer

Gabrielle Brewer  
Sustainability Analyst

# Agenda

1. BU Climate Action Plan
2. BERDO Portfolio
3. Baseline Energy and Emissions Factors
4. Decarbonization Plan
5. Emissions Standard Compliance Plan
6. Moving Forward & Questions



# Climate Action Plan | Goals

**1**

Prepare for  
Climate  
Change

**2**

Net Zero  
Direct  
Emissions by  
2040

**3**

Act on  
Indirect  
Emissions

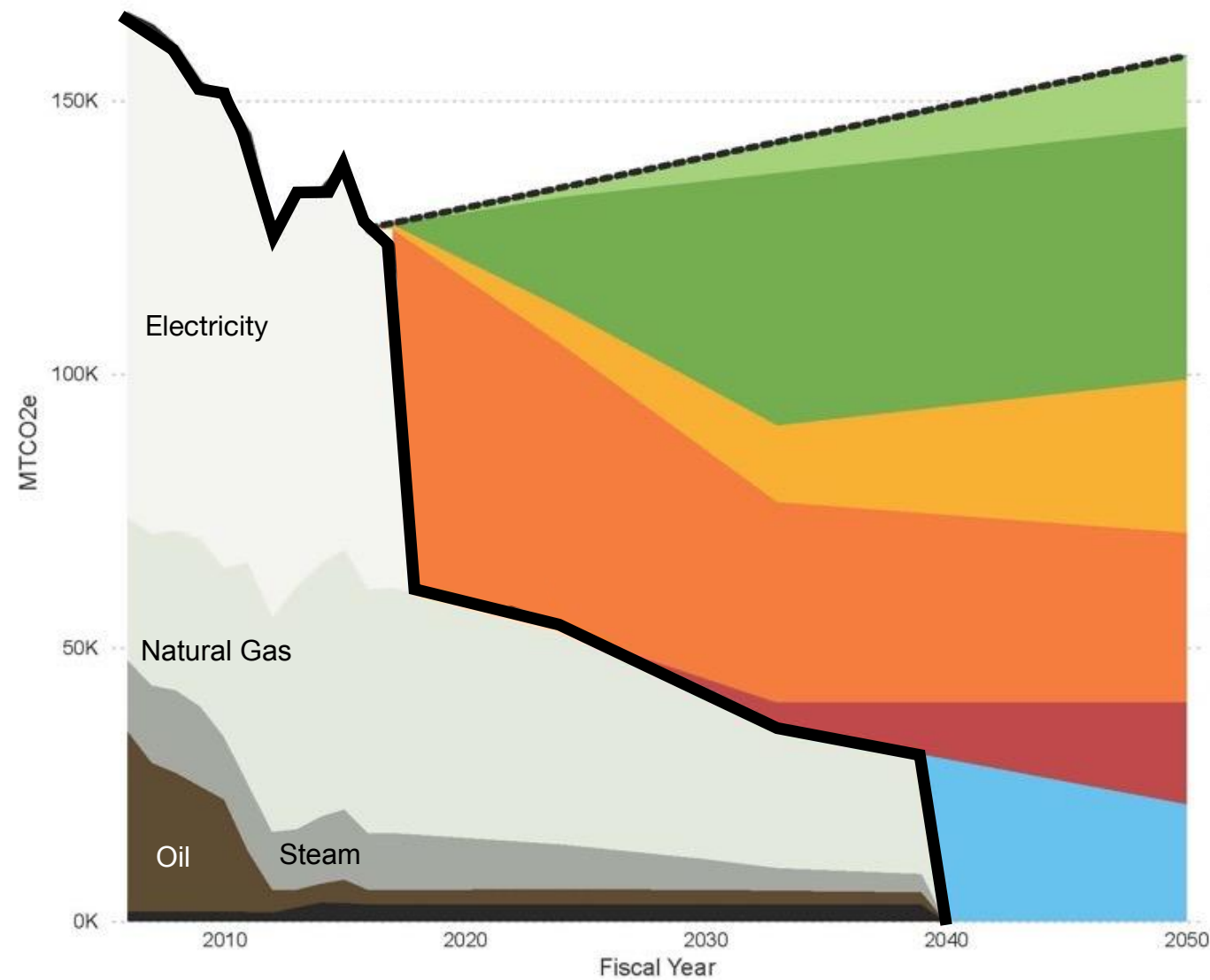
**4**

Climate  
Change  
Education &  
Research

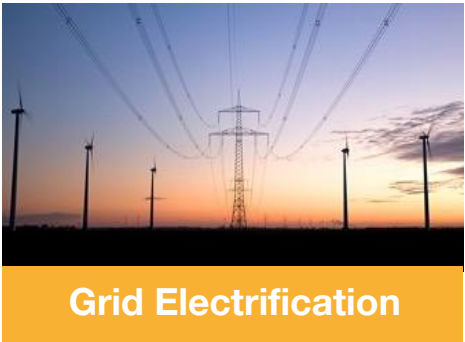
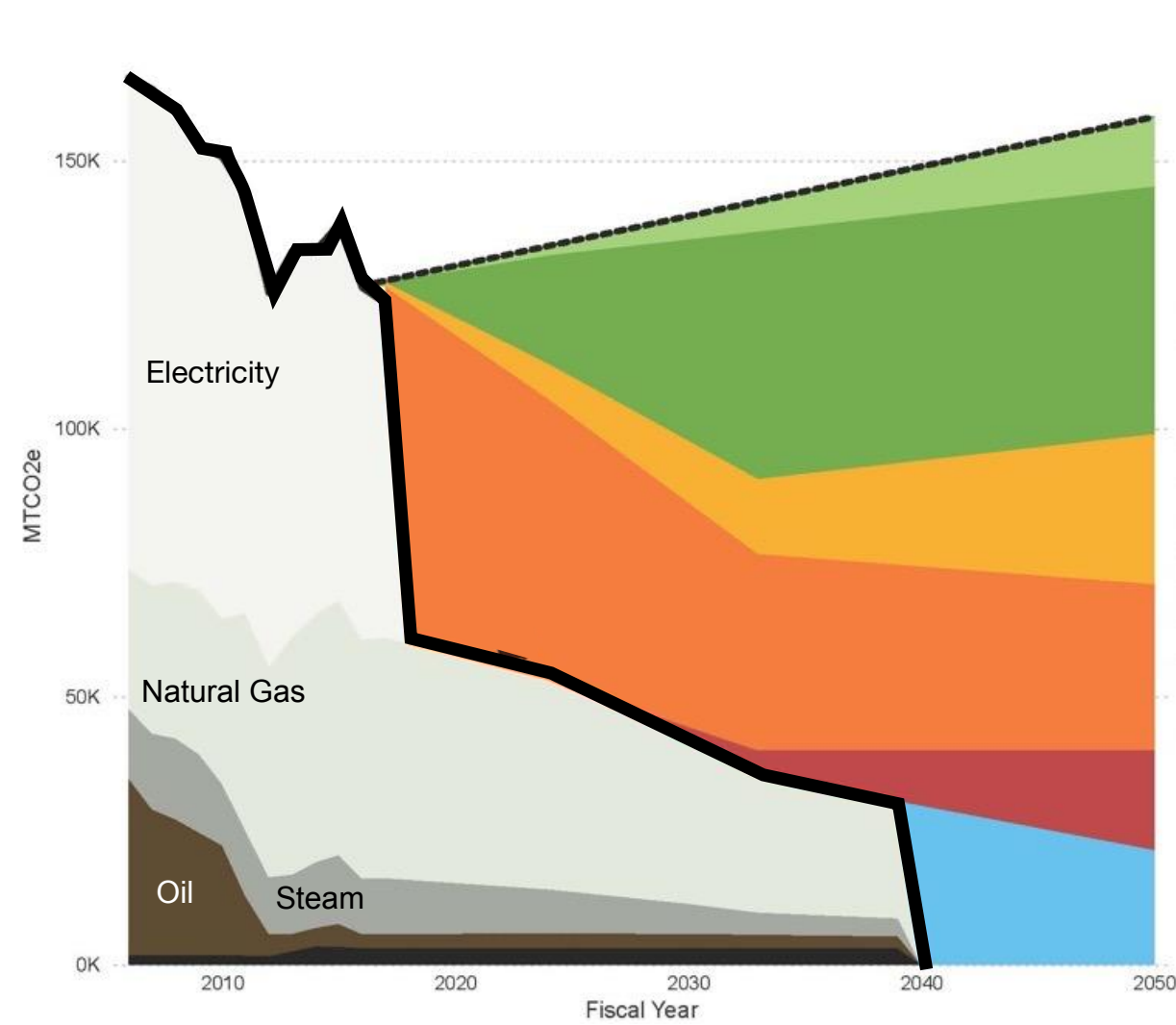
**5**

Integrate CAP  
with BU  
Strategic Plan

# Net Zero Direct Emissions by 2040

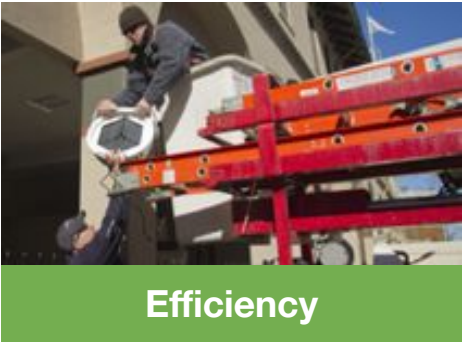
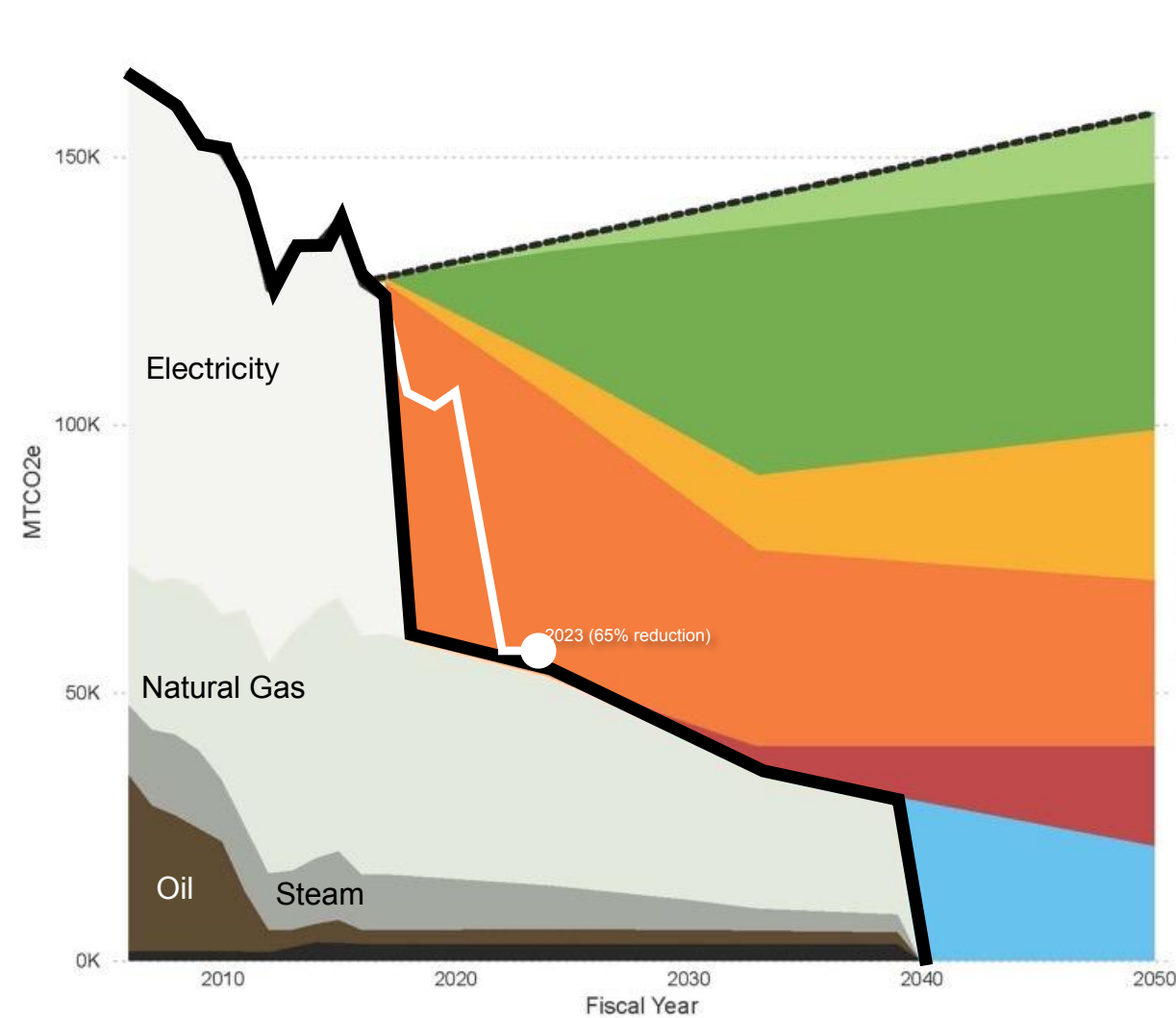


# Net Zero Direct Emissions by 2040





# Net Zero Direct Emissions by 2040

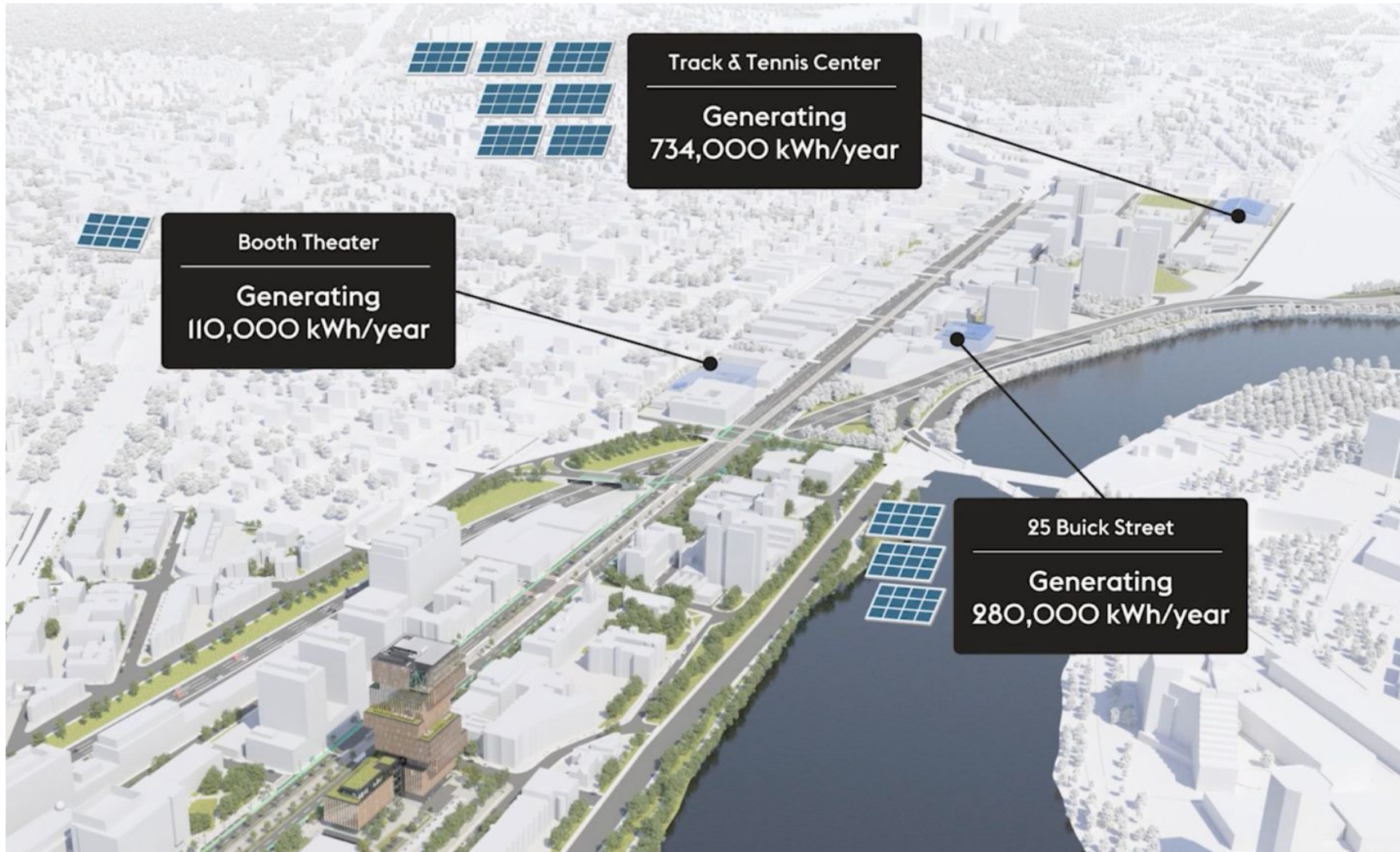


# Net Zero Direct Emissions by 2040





# Net Zero Direct Emissions by 2040



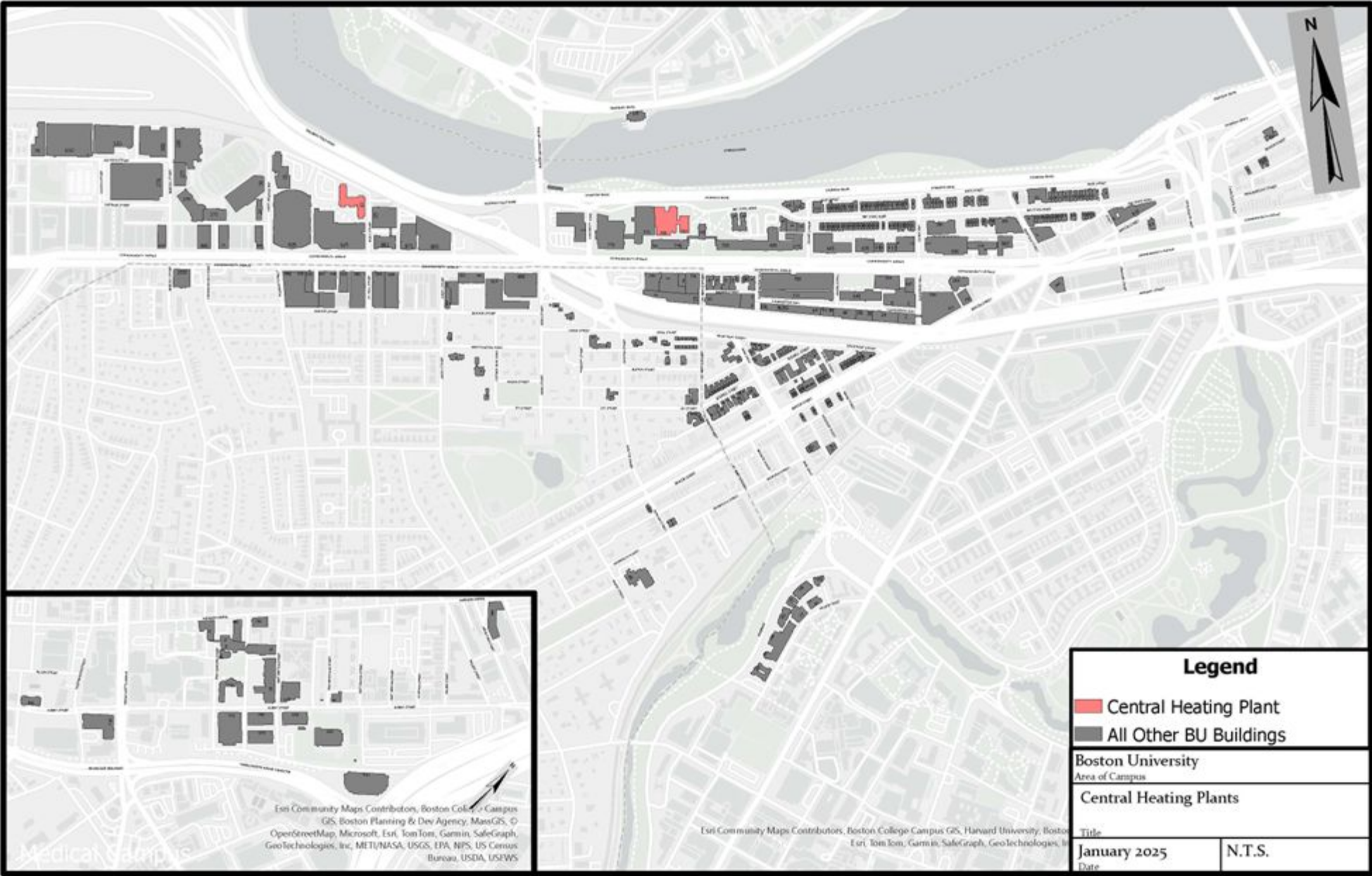


# Net Zero Direct Emissions by 2040

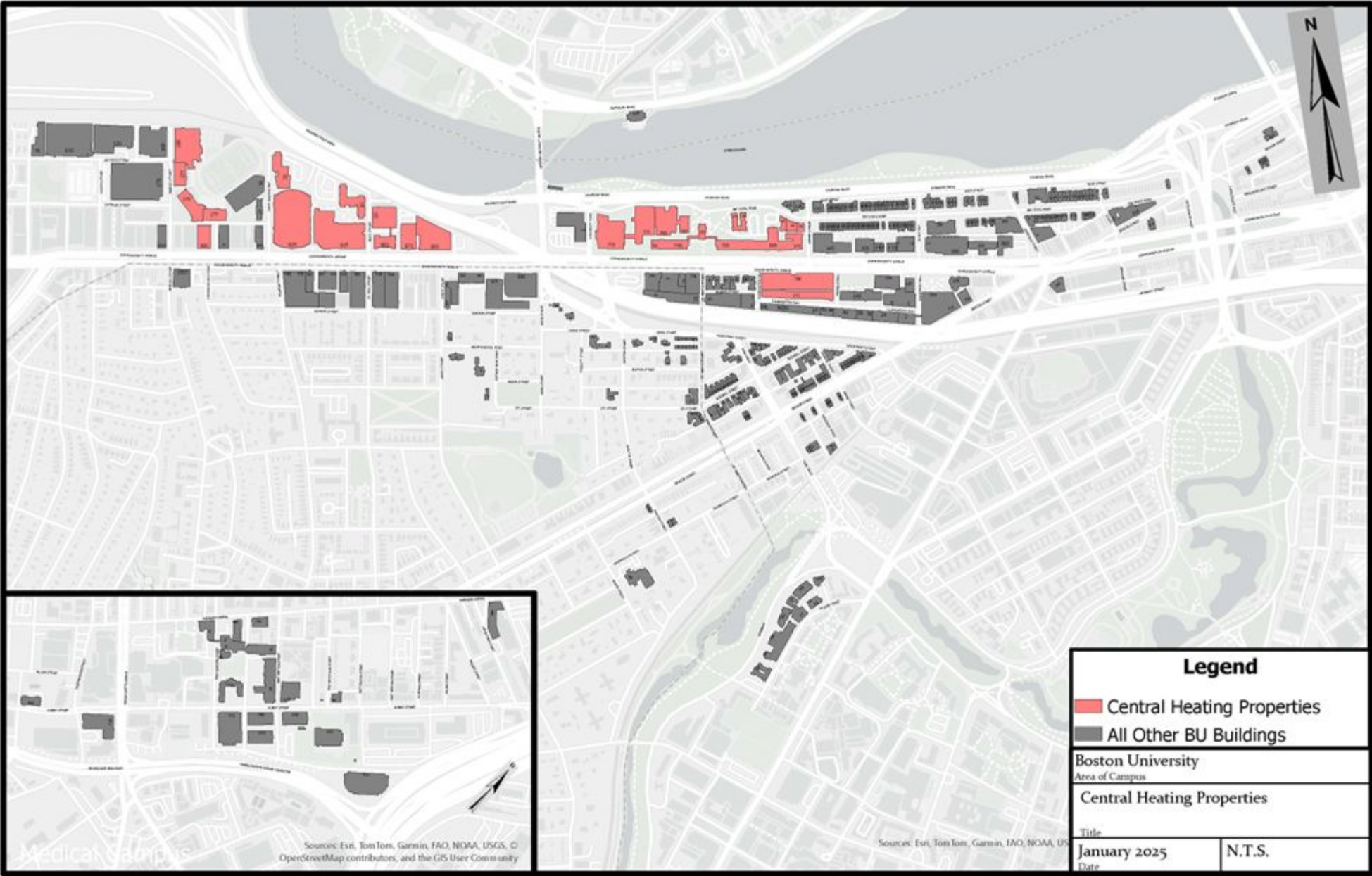


# **BERDO Portfolio**

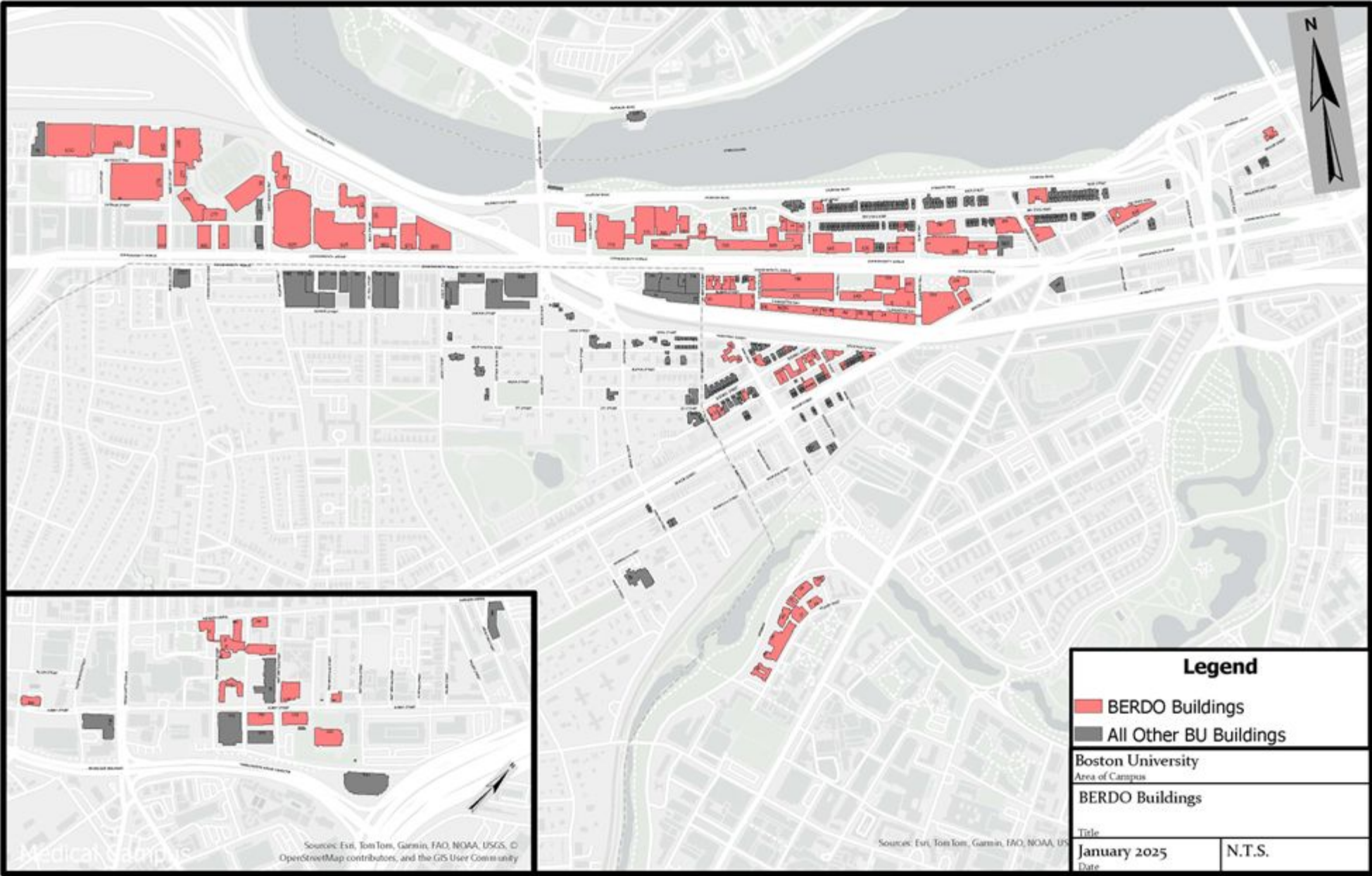
**Building Portfolio and ICS Applications**











# Pathway Three

## *Building Portfolio with Individual Compliance Schedule*

- A building portfolio allows Boston University to make progress across its campuses rather than needing to focus only on buildings above target.
  - BU can use a more strategic approach to decarbonization across campuses rather than building-by-building.
- Placing the University's portfolio in an ICS allows BU to take advantage of the progress made to date.

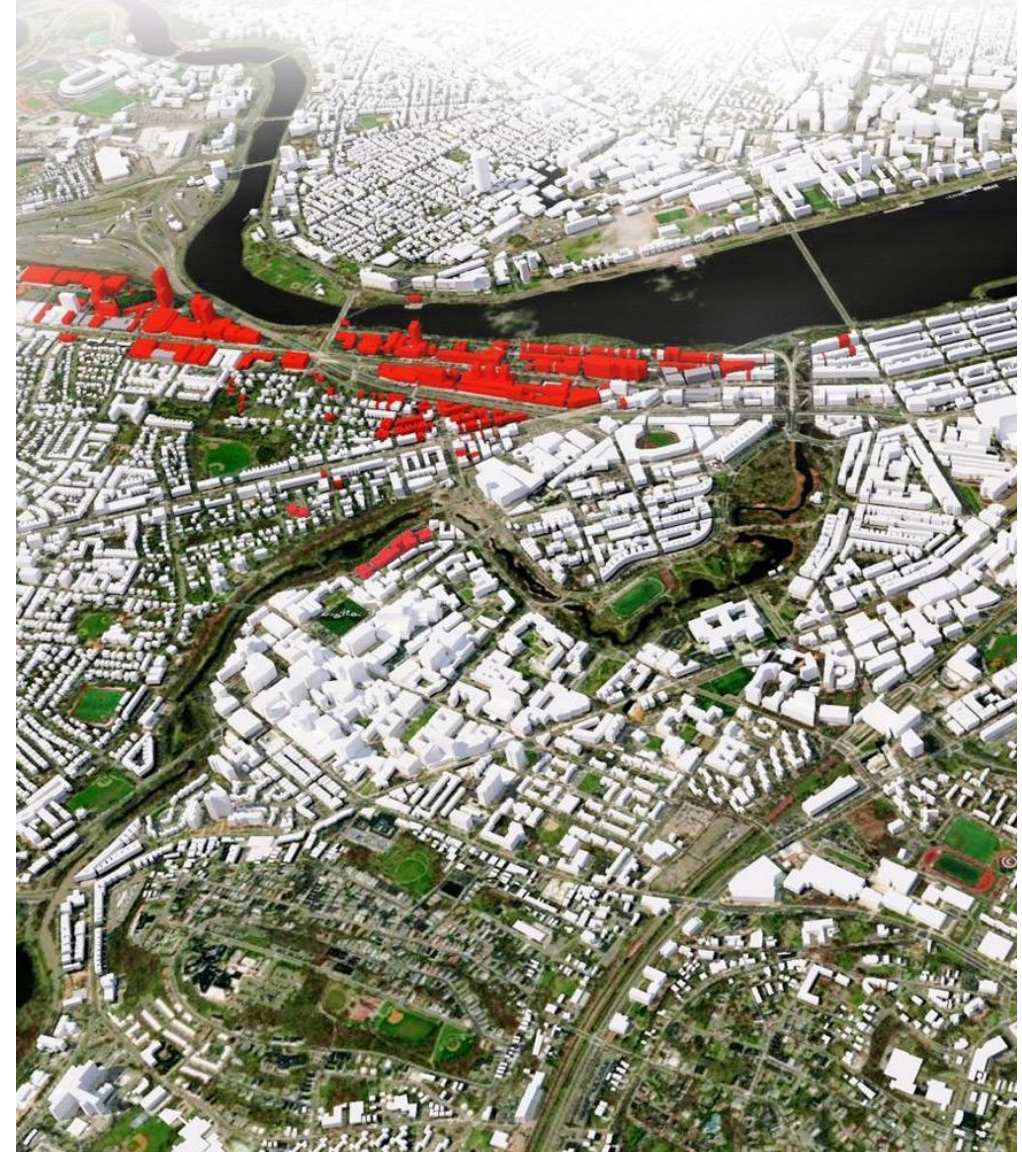




# Portfolio Makeup

- 105 buildings in the portfolio.
  - Excludes:
    - 665 Commonwealth Avenue
    - 11-19 Deerfield Street
- Baseline years:
  - Charles River Campus – 2006
  - BU Medical Campus – 2014
  - Fenway Campus – 2019
- GFA has not been reduced by more than 10% in any building.
- Baseline and verification year primary use is the same; buildings designated with actual use type.

Charles River Campus - 2006





# Portfolio Makeup

- 105 buildings in the portfolio.
  - Excludes:
    - 665 Commonwealth Avenue
    - 11-19 Deerfield Street
- Baseline years:
  - Charles River Campus – 2006
  - BU Medical Campus – 2014
  - Fenway Campus – 2019
- GFA has not been reduced by more than 10% in any building.
- Baseline and verification year primary use is the same; buildings designated with actual use type.

## BU Medical Campus - 2014

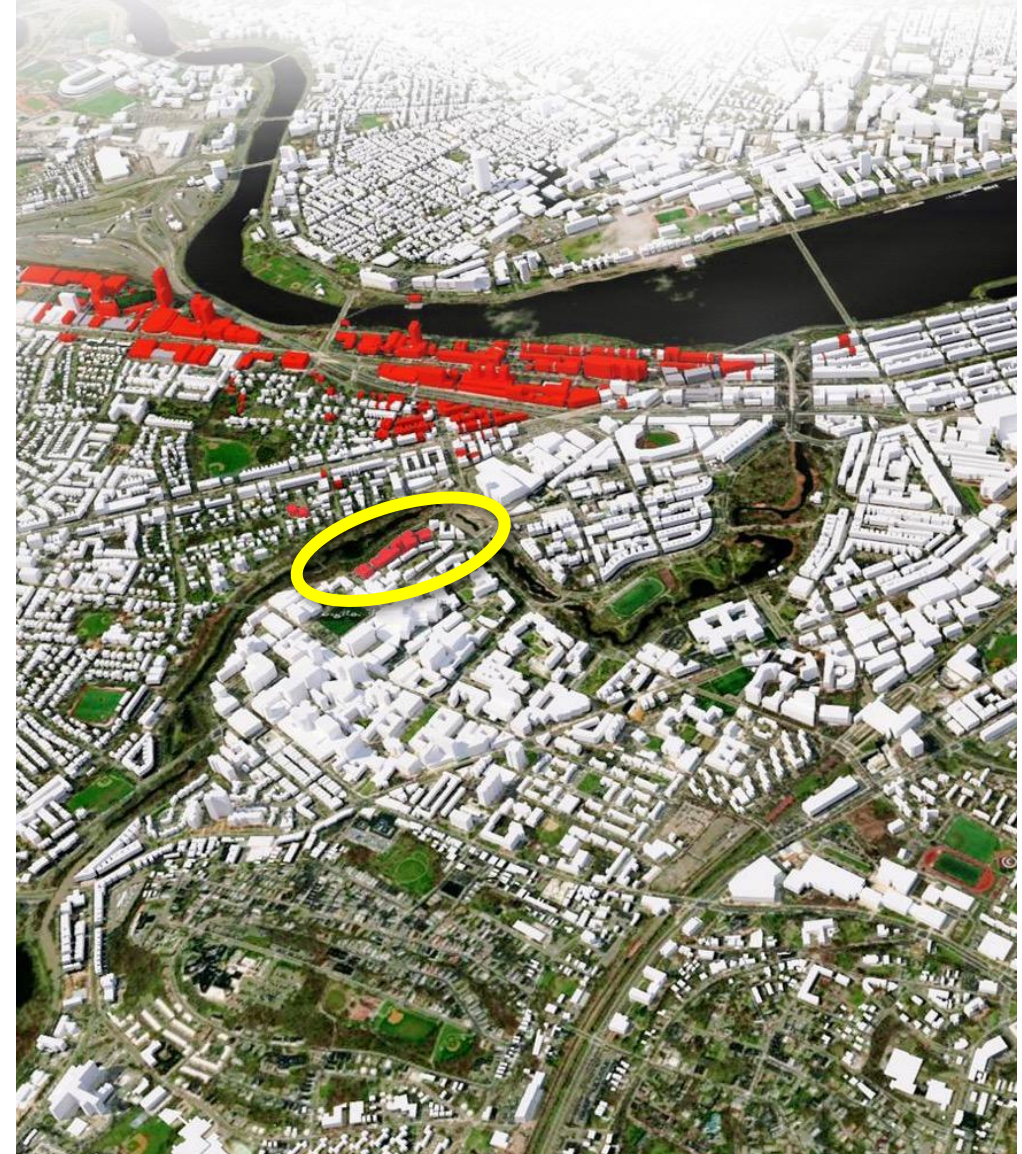




# Portfolio Makeup

- 105 buildings in the portfolio.
  - Excludes:
    - 665 Commonwealth Avenue
    - 11-19 Deerfield Street
- Baseline years:
  - Charles River Campus – 2006
  - BU Medical Campus – 2014
  - Fenway Campus – 2019
- GFA has not been reduced by more than 10% in any building.
- Baseline and verification year primary use is the same; buildings designated with actual use type.

**Fenway Campus - 2019**

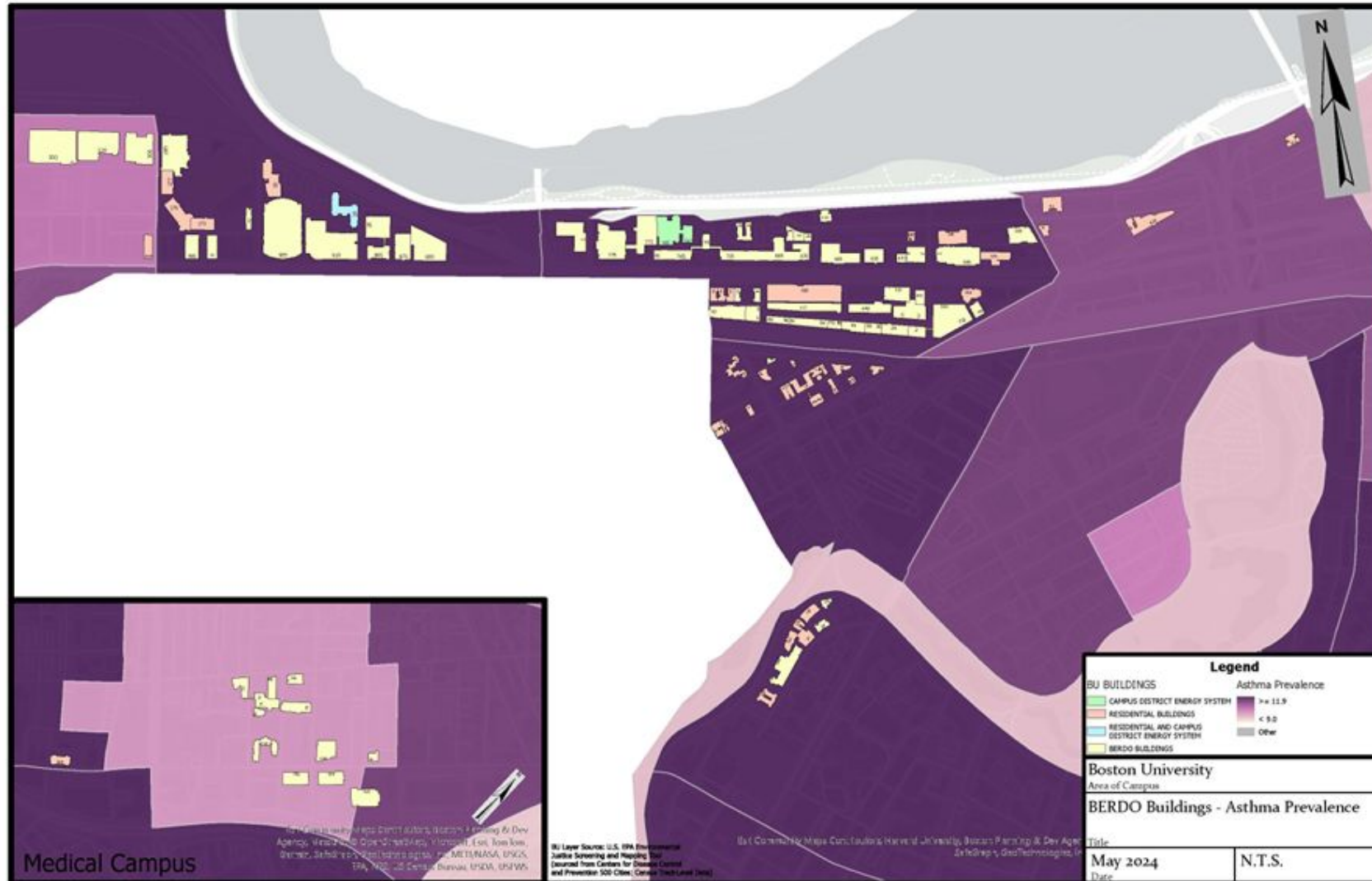


# Environmental Justice Maps



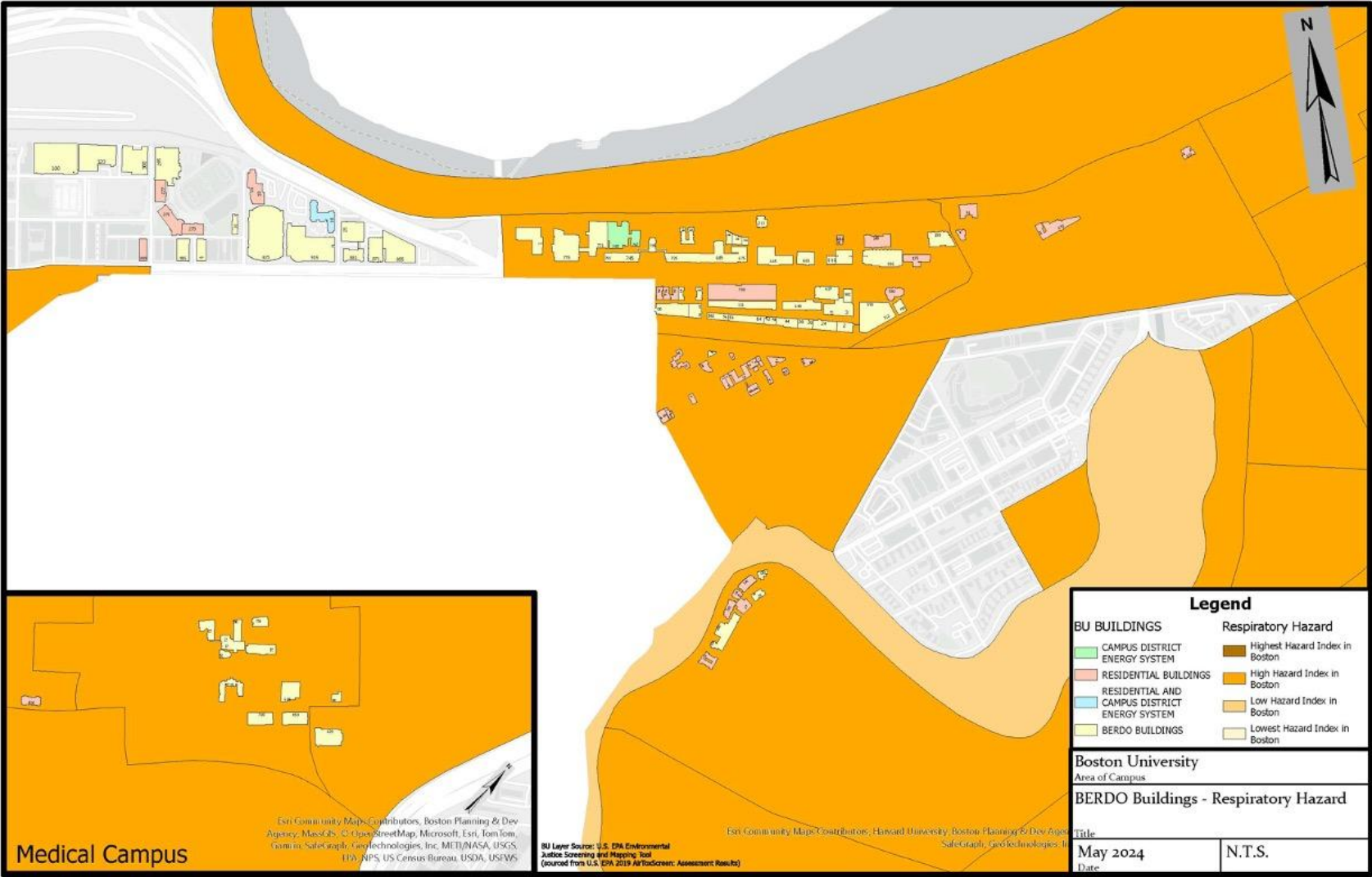


# Environmental Justice Maps





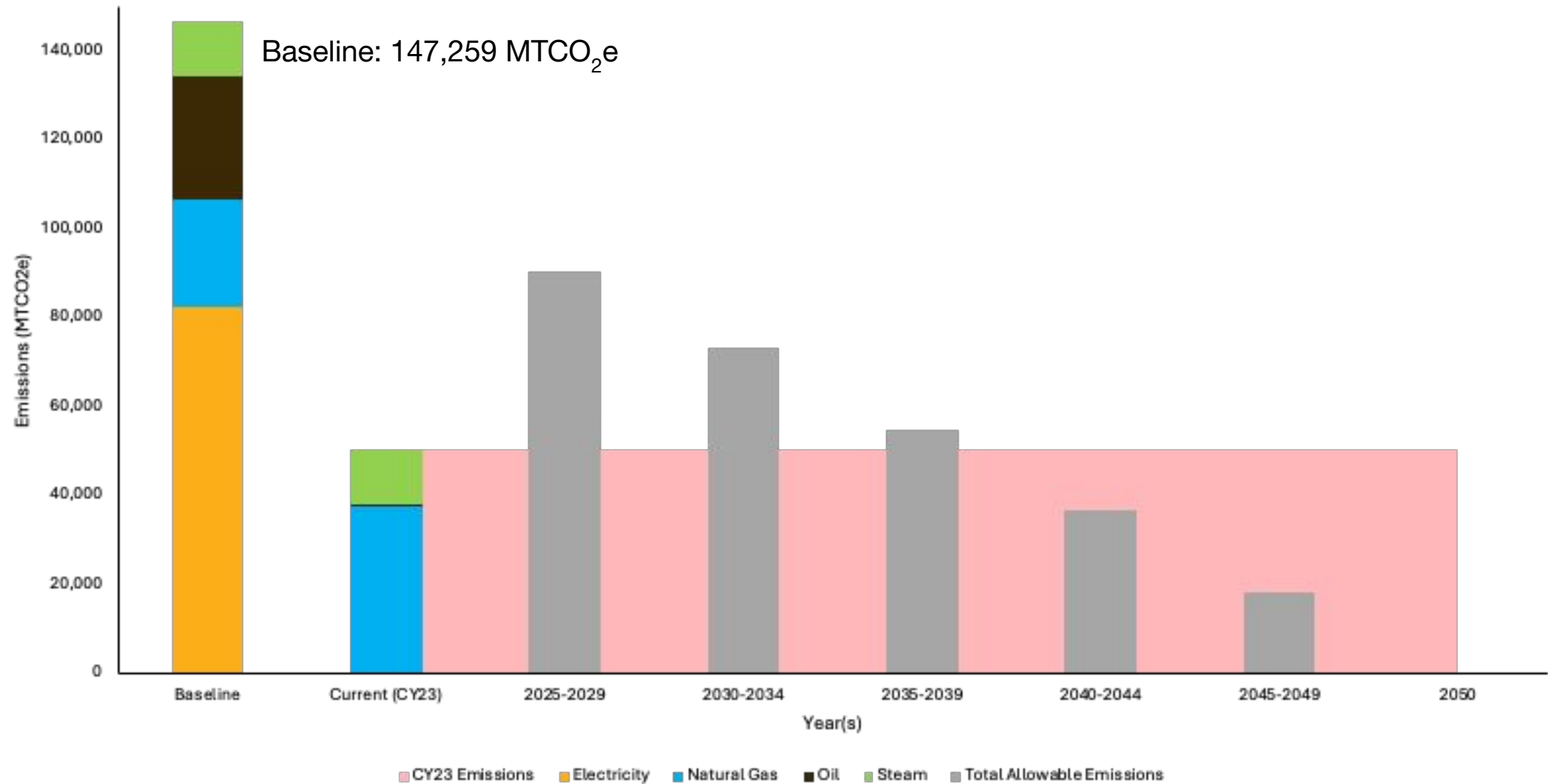
# Environmental Justice Maps



# Environmental Justice Maps



# Building Portfolio with ICS





# Baseline Energy Use

- Historical utility files from the baseline years were used to obtain baseline energy use and associated emissions.
- Billed monthly energy use by meter at each BERDO property was provided as supporting documentation.

	A	B	C	D	E	F
	BERDO ID	Address	Baseline Year	Baseline Electricity (kWh)	Baseline Gas (Therms)	Baseline Oil (Gal)
2	101238	10 Buick St	2006	8,614,064	255,175	218,369
3	106307	100 Ashford St	2006	1,814,520	58,770	-
4	101260	10-18 Buswell St (14 E	2006	253,827	63,616	-
5	106323	1019-1023 Commonw	2006	695,964	21,547	-
6	101272	10-32 Harry Agganis V	2006	344,815	12,556	-
7	101261	110 Cummington Mal	2006	1,549,988	50,999	-
8	101266	111 Cummington St (	2006	3,172,860	1,637	74,897
9	106277	120 Ashford St	2006	1,076,971	875	43,568
10	101245	140 Bay State Rd	2006	1,337,672	87,969	24,712
11	101249	158-162 Bay State Rd	2006	82,776	3,510	2,944
12	108048	16 Arundel St	2006	23,630	67	4,575
13	107080	1A Buswell St	2006	33,880	5,888	-
14	107748	2 Buswell St	2006	27,030	65	4,371
15	107072	22 Buswell St	2006	74,614	4,242	-
16	101287	226 Bay State Rd	2006	293,760	-	14,023
17	101243	232 Bay State Rd	2006	140,480	-	20,744
18	101250	23-25 Blandford St	2006	1,391,160	37,404	-
19	107082	236 Bay State Rd	2006	252,000	-	21,814
20	107071	24 Buswell St	2006	72,836	5,282	-
21	101284	24 Cummington St	2006	11,650,320	302,167	42,617
22	101237	25 Buick St	2006	2,228,695	75,045	-
23	107083	264-270 Bay State Rd	2006	376,834	-	51,192
	Baseline Data Aggregate		+			

# Emissions Factors

- In 2009, Boston University decided to use Mass DEP electricity emissions factors because they better represent the Massachusetts electricity grid.
- Massachusetts alone contributes the highest emissions to the ISO New England grid.
- Boston University holds itself accountable for the emissions generated in the Commonwealth without claiming the lower emissions factors that take advantage of cleaner electricity production in other New England states.

2006 Electricity Emissions Factors by State



\*eGrid – NEWE Emissions Factors

# Emissions Standard Compliance Plan

- Submitted draft of Emissions Standard Compliance Plan with applications.
  - Transparency;
  - Update when due in 2027 to reflect any changes.
- Draft included:
  - Background and progress made;
  - Climate Action Plan update;
  - Portfolio-wide plans;
  - Community engagement and research.
- Anticipated revisions:
  - Update to Climate Action Plan;
  - Priority matrix for decarbonization.

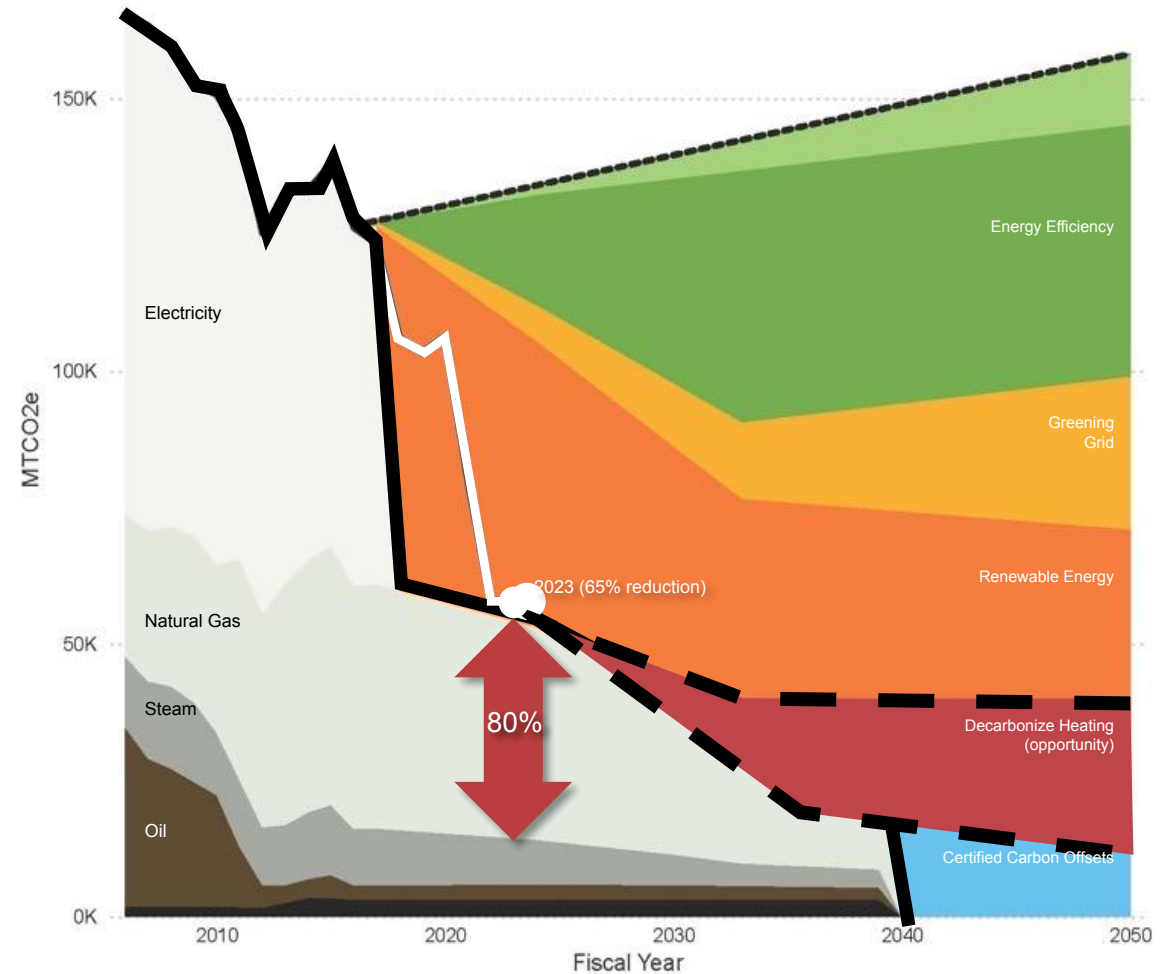




# Moving *Forward*

# Climate Action – Operational Carbon

- Change since baseline:
  - 65% reduction in emissions across Boston University's three campuses:
    - Energy efficiency;
    - Fuel switching from oil to natural gas;
    - 100% of electricity matched with renewables;
    - Growing on-site solar portfolio.
- Next Up:
  - 80% of remaining emissions from natural gas, 17% from steam;
  - Environmental Justice;
  - Urban Heat Islands;
  - Respiratory Hazards;
  - Asthmas Prevalence.





# Climate Action – Operational Carbon

Center for Advanced Biomedical Research  
700 Albany Street



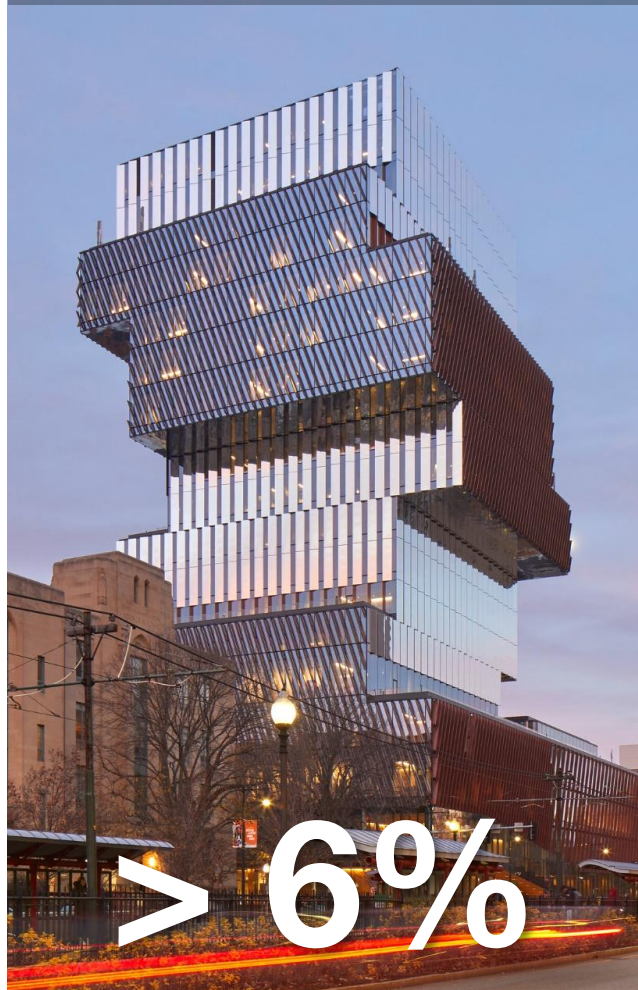
Warren Towers  
700 Commonwealth Avenue





# Climate Action – Embodied Carbon

Duan Family Center for Computing  
& Data Sciences



Pardee School for  
Global Studies

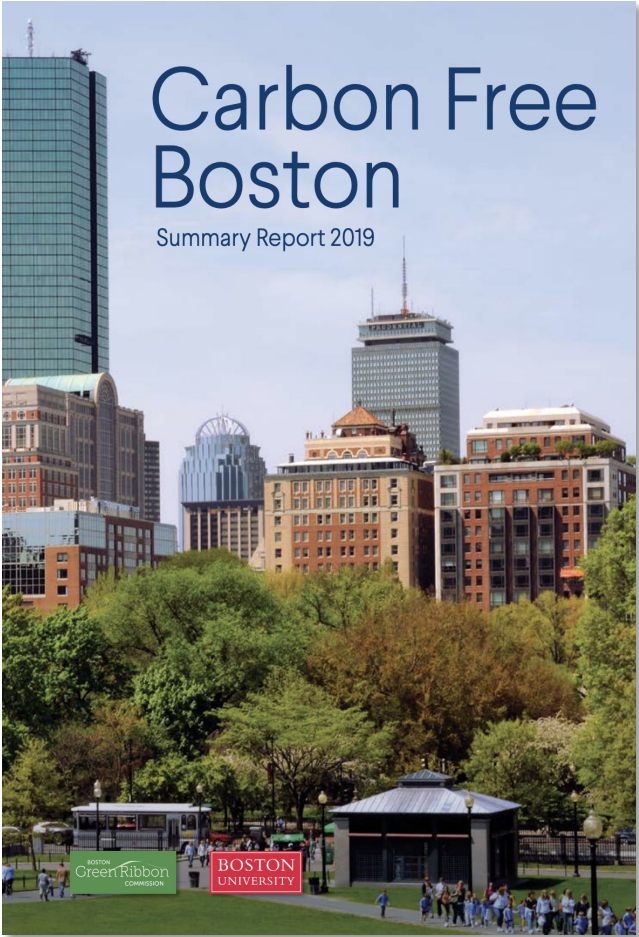


Warren  
Towers






# Climate Action Research



## 2024 NET ZERO CARBON ZONING INITIATIVE



[Overview](#)  
[Upcoming Events](#)  
[Zoning Proposals](#)  
[Resources](#)

### Overview

The City of Boston aims to achieve carbon neutrality by 2050. Buildings account for nearly 71% of our community's carbon emissions and new buildings represent the greatest opportunity for emissions reductions. The Zoning Reform Team, alongside the City's Environment Department, is excited to release the Final NZC Draft for Article 37 to support and advance the City's decarbonization goals.



# Campus Climate Lab





# Community Engagement



# Questions?



The background of the slide is a dark blue aerial view of a city, overlaid with a white line-art map showing building footprints, streets, and parks. The map is semi-transparent, allowing the city view to be seen through it.

# Staff Comments

*Environment Department shares staff comments*



# New England's Electric Grid

- Boston is located within the **New England regional grid**.
- **ISO New England (ISO NE)** is the entity that operates this regional grid, manages wholesale electricity markets, and engages in long-term power system planning.



# Emissions Factors in BERDO

## What is an Emissions Factor?

- An emissions factor represents the amount of emissions released by each unit of fuel or energy consumed
- Represents how “dirty” or “clean” a fuel is

CO<sub>2</sub> Emissions Factors for Different Fuel Types\*

Fuel Type	kg/MMBTU
Natural Gas	53.11
Diesel #2	74.21
Propane	64.25
Kerosene	77.69
Fuel Oil #1	73.5
Fuel Oil #2	74.21
Fuel Oil #4	75.29
Fuel Oil #5/6	75.35

$$\text{Emissions} \quad \text{🏭⚡} = \text{Units of Fuel Consumed} \times \text{Fuel Emission Factor}$$

# ICS Adopted Policies

- Emissions Factors for the electric grid shall correspond to the historical Emissions Factors published by ISO New England. If available, Owners shall use Emissions Factors including net imports to the ISO New England grid.
- Owners may propose alternative Emissions Factors to the Review Board. The Review Board shall have the discretion to accept or deny alternative Emissions Factors.

**This application:** BU has proposed to use an alternative Emissions Factor of grid electricity.





# ISO New England v. MassDEP approach

	ISO New England Emissions Factors (BERDO)	MassDEP Emissions Factors
Data source	Emissions associated with electricity <b>generated</b> in New England.	Emissions associated with electricity <b>consumed</b> in Massachusetts.
Data availability	Official emissions report published 10-12 months following the calendar year. Hourly generation and emissions data in ISO NE is available for download from the Energy Information Administration immediately.	2-3 years following the calendar year. Last data available from 2022.
Use in BERDO	Data used to determine emissions compliance.	Not used in BERDO.

Source: [MassDEP 2022 Report](#)

# Emissions Factor Comparison



Baseline Years	BERDO recommended Electricity EFs (kg/MWh)	BU Proposed Electricity EFs (kg/MWh)
2006	350	458
2008	374	440
2009	345	404
2013	292	341
2014	292	329
2016	286	327
2017	269	312
2019	248	216

# Staff Recommendation

## Recommendation

For consistency across BERDO, staff recommend that the Board reject the use of MassDEP Emissions Factors and request that BU update their ICS calculations and emissions standards with ISO NE data published by BERDO.



The background of the slide is a dark blue aerial view of a city, overlaid with a white line-art map showing building footprints and street layouts. The map is centered and covers the entire background.

# Board Q&A

*Board Members may discuss and ask staff questions*





# Public Comment Period

*Members of the public may provide public comment*



An aerial view of Boston, Massachusetts, rendered in a white line-art style on a dark blue background. The map shows the city's layout, including major roads, parks, and the harbor. The text "Board Motion & Vote" is overlaid on the map.

# Board Motion & Vote

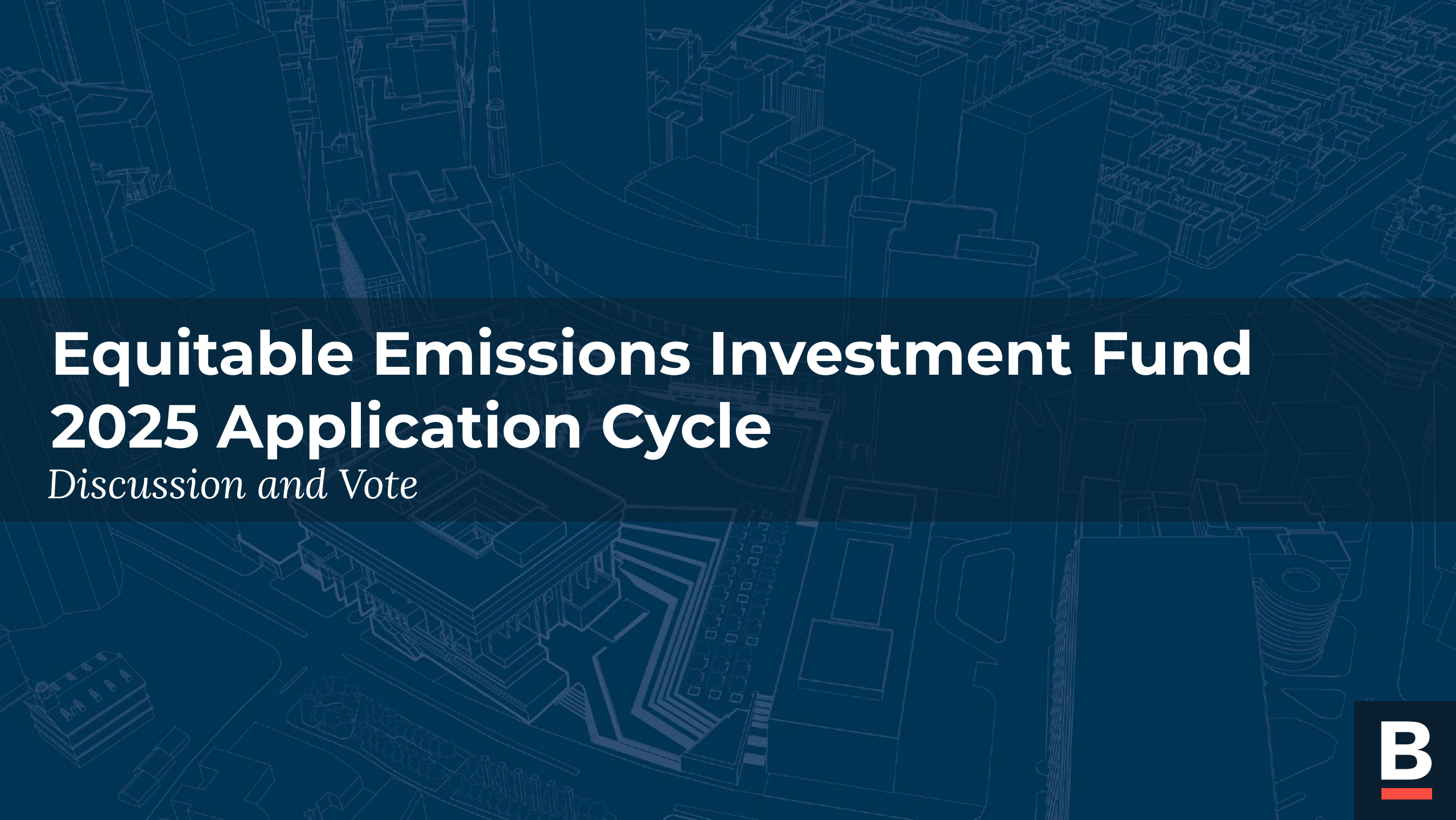
*Boston University*





# Public Meeting



The background of the slide is a dark blue aerial view of a city grid, rendered in white line art. The lines represent building footprints and streets, creating a complex, geometric pattern. The perspective is from a high angle, looking down on the city.

# **Equitable Emissions Investment Fund** **2025 Application Cycle**

*Discussion and Vote*



# Review of Board Survey Responses

*Responses submitted by Board Members*

## **Based on Board Responses to Survey**

This application cycle would prioritize buildings that are:

- Subject to BERDO
- Commercial buildings
- Residential buildings.

And projects that are:

- Related to energy efficiency improvements
- Renewable energy
- Fuel switching
- Supporting workforce development.

## **Additional Item**

- Allow applicants from the previous round to roll over their applications to this funding round.



# 2025 Application Cycle of the Fund

*Proposed Process and Timeline*

## Release Grant Announcement

- Open application on **Monday, March 31, 2025**
- Close application on **Friday, May 30, 2025**

## Eligible Applicants

- Nonprofit organizations
  - *Opportunity for eligible applicants from last year to roll over applications*

## Eligible Projects

- Must include reductions in building emissions in Boston
- Must include benefits to Environmental Justice Populations and populations disproportionately impacted by air pollution



## GRANTING OPPORTUNITY

*BERDO's Equitable  
Emissions Investment Fund*

**Issued by:**  
City of Boston,  
Environment Department

**Issue Date:** Monday, March 31, 2025, 9 am ET  
**Closing Date:** Friday, May 30, 2025, 5 pm ET

**Inquiries:**  
Questions should be directed to  
[BerdoReviewBoard@boston.gov](mailto:BerdoReviewBoard@boston.gov)



# Second Application Cycle of the Fund

*Proposed Process and Timeline*

## Application Form

- Google Form to input responses to questions from updated Grant Announcement.
  - Last year’s Grant Announcement [available here](#).
  - Alternative methods of submission available upon request.

## Awards

- Preference to grant multiple awards, targeting up to \$250,000 per award.
  - Subject to change based on applications received and the board’s discretion.

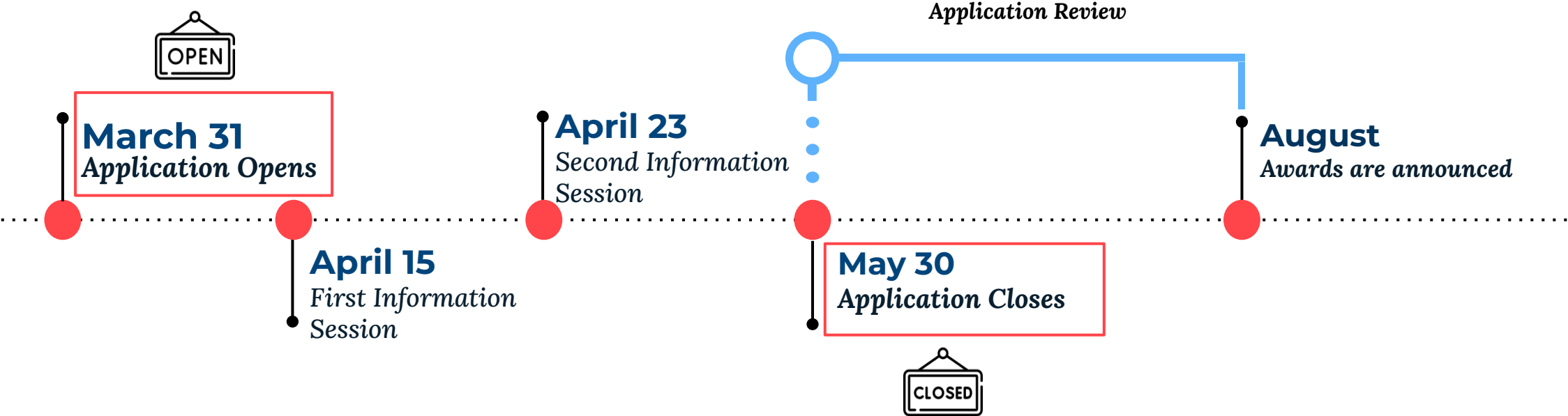
## Additional information

- A Frequently Asked Questions (FAQs)
- Two information sessions for interested parties

Dates	Times	Location
April 15, 2025	12 - 1pm	Virtual (Zoom)
April 23, 2025	10 - 11 am	Virtual (Zoom)

# Proposed Timeline

2025 Application Cycle





# Review of Application Proposal

*Proposal for second cycle of Equitable Emissions Investment Fund*

## **Proposal for the 2025 Equitable Emissions Investment Fund**

- The Review Board allocate \$750,000 for the second application cycle with a preference to grant multiple awards of approximately \$250,000. The application period will open on March 31 and closing on May 30, 2025.

The background of the slide is a dark blue aerial view of a city grid, rendered in white line art. The lines represent building footprints and streets, creating a complex, geometric pattern. A semi-transparent dark blue horizontal band runs across the middle of the image, serving as a backdrop for the text.

# Board Q&A

*The Fund 2025 Application Cycle*







# Board Motion & Vote

*The Fund 2025 Application Cycle*







# Approval of Meeting Minutes

*Board votes on approving previous meeting's minutes*



The background of the slide is a dark blue aerial view of a city, overlaid with a white line-art map showing building footprints and street layouts. The map is centered and covers the entire background.

# Administrative Updates

*Staff presents administrative updates*

# Sign up for the BERDO Webinar Series

*Registration is required*



BERDO WEBINAR TITLE	DATE AND TIME	PAGE LINK
Hardship Compliance Plans for 2025 and 2025	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	<a href="#">Register here</a>
Condo Associations and BERDO Compliance	Tuesday, April 8 6 - 7:30pm	<a href="#">Register here</a>
Building Portfolios and Individual Compliance Schedules for 2026	Wednesday, May 21 2 - 3:30pm	<a href="#">Register here</a>

All webinars are available at [boston.gov/berdo#events](https://boston.gov/berdo#events).





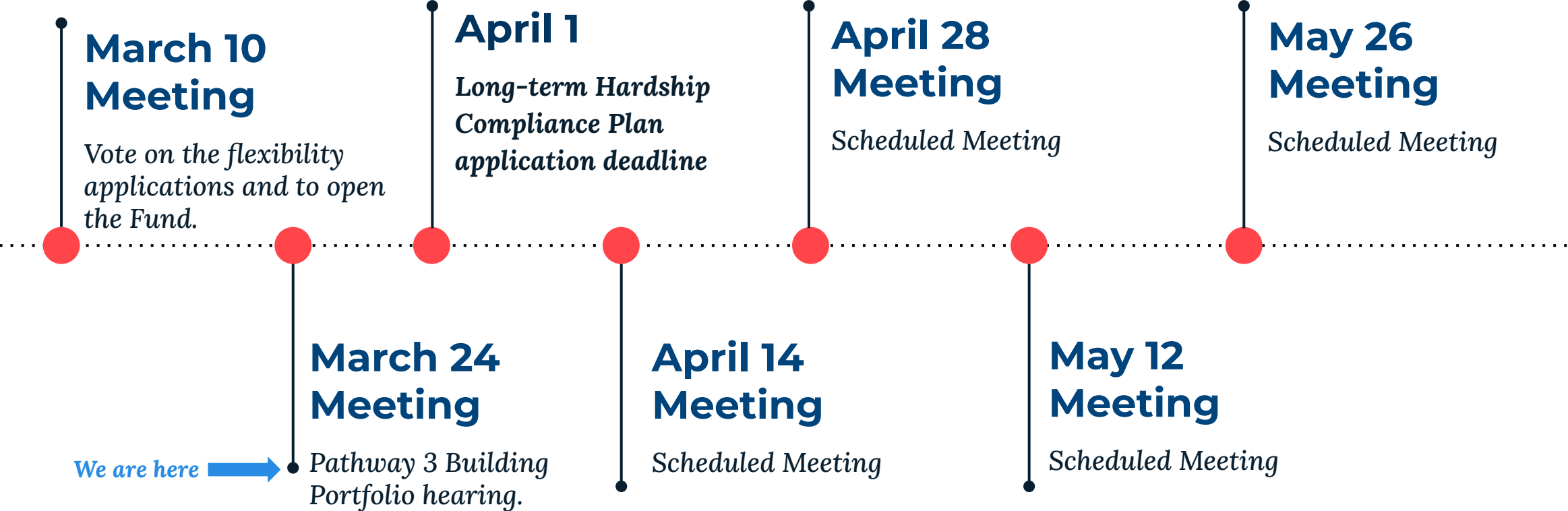
# In-Person BERDO Neighborhood Workshops

All events are available at [boston.gov/berdo#events](https://boston.gov/berdo#events) (RSVP encouraged, but walk-ins are welcomed)

NEIGHBORHOOD	LOCATION	DATE
<a href="#"><u>Chinatown, Downtown, North End, Beacon Hill, and West End</u></a>	Civic Pavilion 5 Congress St, Boston, MA 02203	March 26, 2025 3:00pm - 7:00pm
<a href="#"><u>South Boston and Seaport</u></a>	South Boston Branch BPL 646 E Broadway, South Boston, MA 02127	March 27, 2025 3:00pm - 7:00pm
<a href="#"><u>Roxbury, Dorchester and South End</u></a>	Bruce C. Bolling Municipal Building 2300 Washington St, Roxbury, MA 02119	April 16, 2025 3:00pm - 7:00pm
<a href="#"><u>Fenway and Back Bay</u></a>	Coming Soon!	Coming Soon!

[RSVP FOR ANY WORKSHOP HERE](#)

# Review Board Upcoming Timeline





# Adjourn

Thank you! A recording and slide deck for this meeting will be available at [boston.gov/berdo-review-board](https://boston.gov/berdo-review-board).

