

Boston's Building Performance Standards - BERDO

November 18, 2024

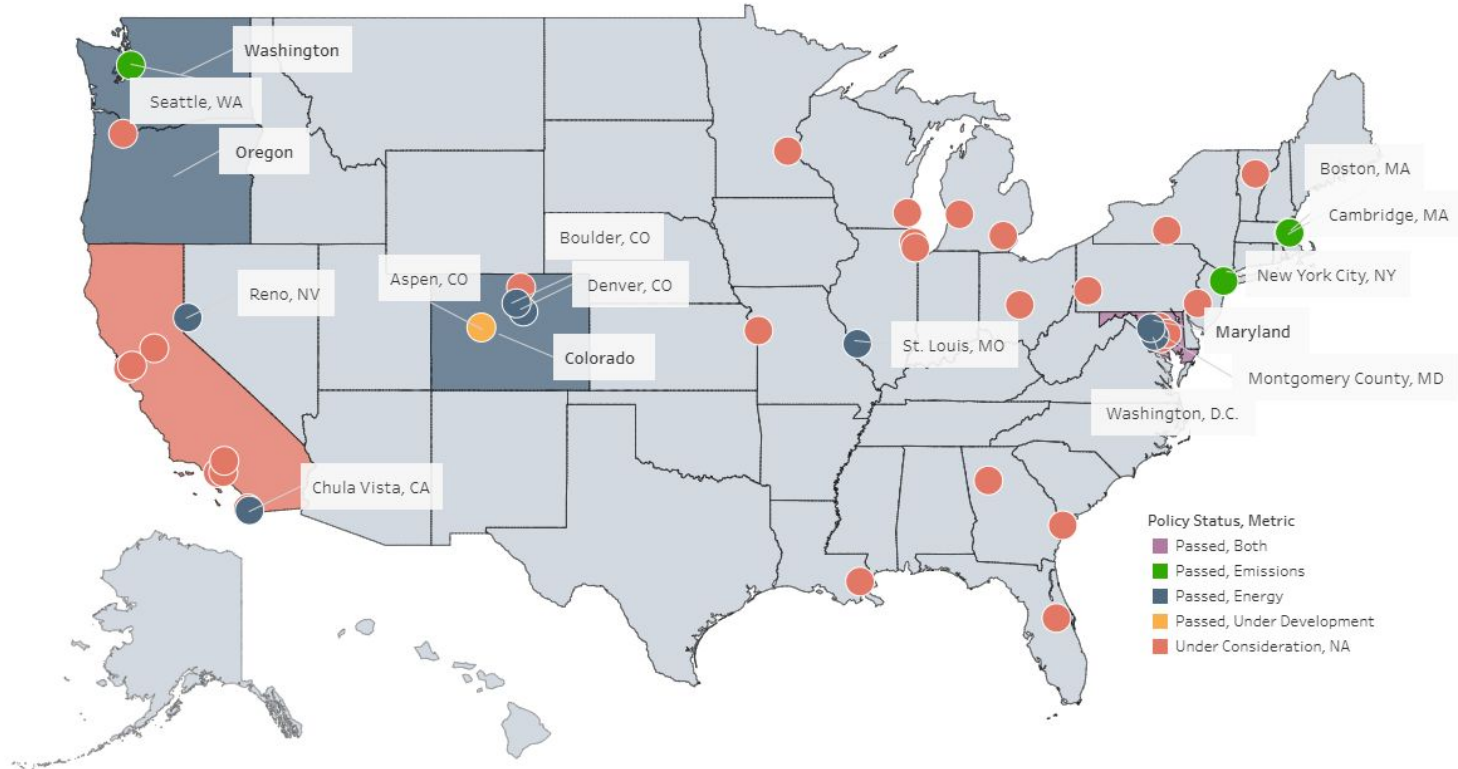


WHAT IS BERDO?

The Building Emissions Reduction and Disclosure Ordinance (BERDO) addresses Boston's largest source of emissions.

- BERDO requires medium and large buildings in Boston to reduce emissions over time and achieve **net-zero emissions by 2050**.
- By complying with BERDO, the approximately 6,000 covered buildings (5% of buildings in Boston) could collectively **reduce city-wide emissions by nearly 40%**.
- There are several ways a building can directly or indirectly reduce its emissions and come into compliance with its BERDO emissions standard.

STATE AND LOCAL BUILDING PERFORMANCE STANDARDS



WHAT IS REQUIRED UNDER BERDO?



REPORTING

Annual reporting of total energy and water use from the previous calendar year.



THIRD-PARTY VERIFICATION

Third-party verify reported data on their first year of reporting and every "Verification Year" thereafter.



EMISSIONS REDUCTIONS

Reduce annual emissions below an emissions standard (emissions limit).

WHAT BUILDINGS ARE COVERED BY BERDO?

- **Non-residential buildings** that are **20,000 ft²** or larger excluding parking (e.g., office spaces, churches, universities)
- **Residential buildings** that have **15 or more units** (e.g., apartments and multi-family buildings)
- Any parcel of land with multiple buildings that sum to **20,000 ft²** or **15 units** or more.



WHEN DO EMISSIONS STANDARDS START?

First year with an emissions standard	Non-Residential buildings	Residential buildings
2025	35,000 ft ² or larger	35 or more units
2030	20,000 - 34,999 ft ²	15 - 34 units

WHAT ARE THE EMISSIONS STANDARDS (LIMITS)?

Emissions standards set annual emissions limits based on different types of building uses.

Emissions Standards by Building Use Type:

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

- Based on emissions intensity and reported in kilograms of carbon dioxide equivalent per square foot per year.
- Based on the building use type and reduced every five years.
- All buildings covered by BERDO are expected to achieve net-zero emissions by 2050.

COMPLIANCE MECHANISMS

A blue-tinted photograph of a university campus. In the center, a large, leafy tree stands prominently. To its right, a bronze statue of a man in a long coat stands on a stone pedestal. The background shows classical-style buildings with arched windows and doorways. The overall scene is serene and academic.

HOW WILL BUILDINGS REDUCE THEIR EMISSIONS?

Options to keep a building's emissions under its limit include:

Direct reduction of emissions produced by a building:

- *Energy efficient appliance upgrades, electrification, improved building insulation and controls, etc.*

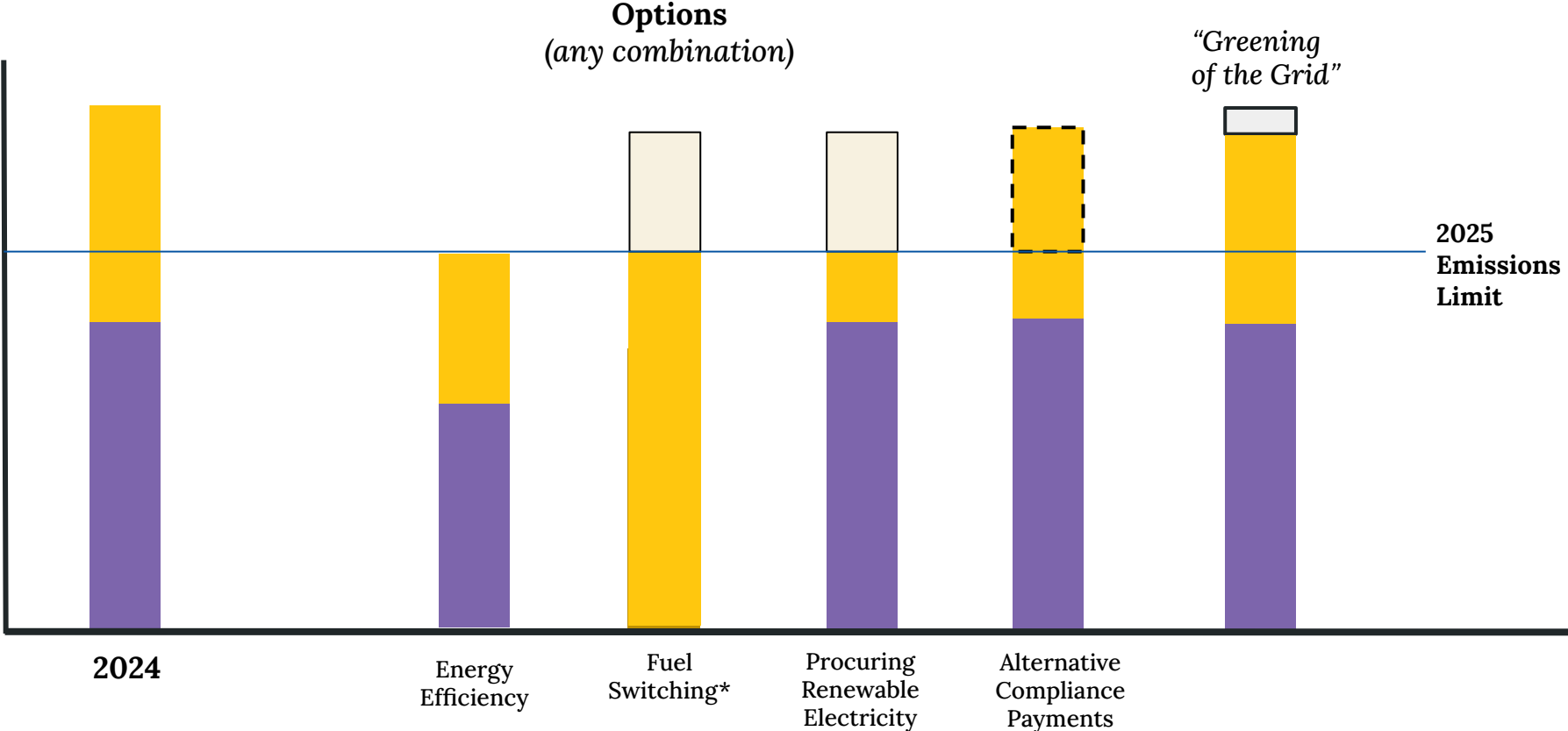
Purchasing of eligible renewable energy

- *Boston Community Choice Electricity, local solar generation, Renewable Energy Certificates, Power Purchase Agreements*
- *Renewable energy may be used to reduce emissions only from electricity usage.*

Alternative Compliance Payments (ACP)

- *\$234 per metric ton of CO₂e*
- *ACPs go into the Equitable Emissions Investment Fund*

EXAMPLE: SINGLE BUILDING COMPLIANCE



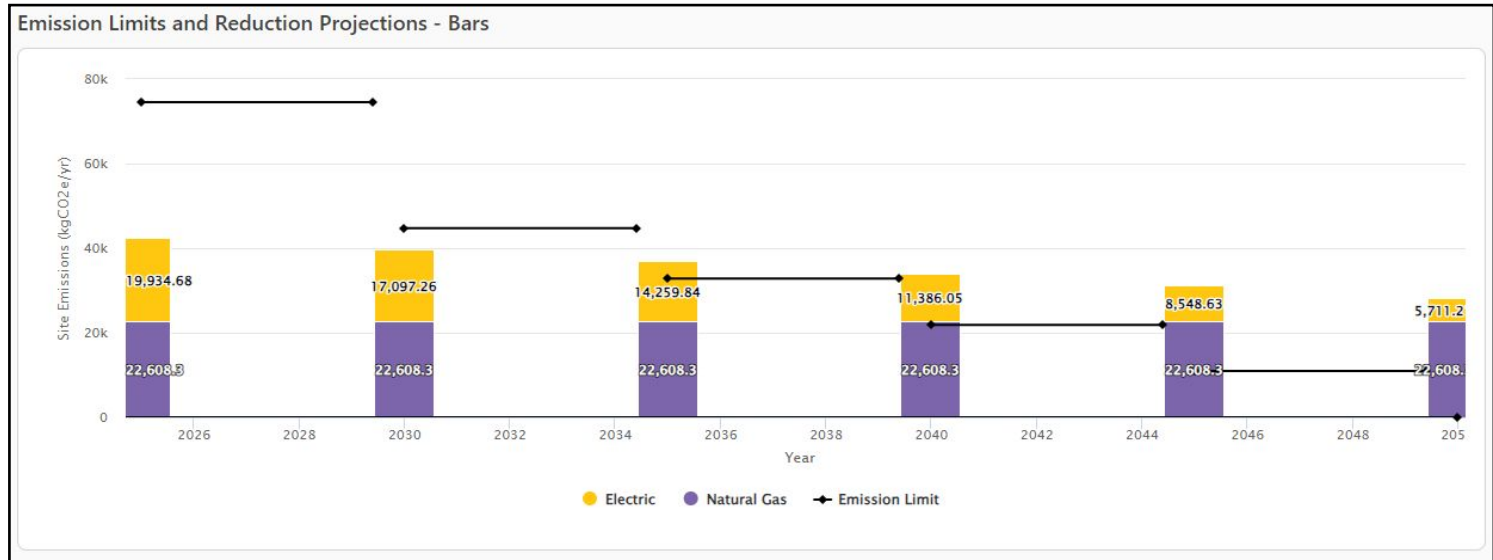
Emissions Compliance Options for Year 2025

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

Electricity (Yellow) Natural Gas (Purple)





BERDO EMISSIONS CALCULATOR

[BERDO Emissions Calculator](#) - Designed to assist building owners in evaluating and understanding their projected emissions and compliance. Paired with its [guidance document](#).



FLEXIBILITY MEASURES

The background image is a blue-tinted photograph of a university campus. In the center, a large, leafy tree stands prominently. To the right of the tree, a bronze statue of a man in a long coat stands on a stone pedestal. The background is filled with more trees and the upper portions of classical-style buildings with arched windows and columns.

	BLENDLED EMISSIONS STANDARD	BUILDING PORTFOLIO	INDIVIDUAL COMPLIANCE SCHEDULE	HARDSHIP COMPLIANCE PLAN
DESCRIPTION	Allows Owners of a building or building portfolio with more than one primary use to calculate a blended emissions standard based on the mix of primary uses in the building(s).	Allows Owners of multiple Buildings to comply with a single portfolio-level emissions standard according to the mix of Building Uses in the portfolio.	Allows Owners to comply with an alternative emissions reduction schedule based on a baseline year.	Allows Owners to comply with alternative emissions reduction limits and/or schedules.
EMISSIONS REDUCTION REQUIREMENT	Requires calculating and complying with a blended emissions standard.	Requires use of a blended emissions standard in most cases.	Requires a 50% emissions reduction from the baseline year by 2030 and a 100% reduction by 2050.	May allow alternative emissions reduction timeline or less stringent emissions reduction limits.
ELIGIBILITY	More than one Primary Use in a building.	Any Owner with multiple buildings , that demonstrates eligible shared ownership or a shared Institutional Master Plans for all Buildings in the Building Portfolio.	Third-party verified data for the baseline year and Gross Floor Area must not have reduced by more than 10% and the Primary Use type must be the same from the baseline year.	Owner must demonstrate one of the eligible hardships .
REQUIRES REVIEW BOARD APPROVAL				
CAN BE COMBINED WITH	Building Portfolios	Blended Emissions Standard; Individual Compliance Schedules; Hardship Compliance Plans	Building Portfolios	Building Portfolios

*A Building Owner **cannot** combine an Individual Compliance Schedule with a Hardship Compliance Plan.



WHY YOU MAY CONSIDER APPLYING FOR A FLEXIBILITY MEASURE

BUILDING PORTFOLIOS

- If you own multiple BERDO buildings.
- If you want to align your capital planning to target deeper retrofits and other improvements in certain buildings first.

INDIVIDUAL COMPLIANCE SCHEDULE

- If you have good quality historical data that can be third-party verified.
- If you have implemented significant building retrofits or other emissions reduction efforts prior to 2021.
- If your current emissions are significantly higher than the average building in your Building Use category.
- If you would prefer to plan emissions reduction efforts by benchmarking against your historical emissions, rather than based on your Building Use category.

HARDSHIP COMPLIANCE PLAN

- If you face an unforeseen “hardship” that will not allow you to comply with emissions standards in the short-term (1 - 3 years)
- If you face a long-term “hardship” (4+ years) in complying with emissions standards.

REMINDERS & RESOURCES

A blue-tinted photograph of a university campus. In the center, a large, leafy tree stands prominently. To the right, a statue of a man in a long coat stands on a stone pedestal. The background shows classical buildings with arched windows and doorways. The overall scene is peaceful and academic.

ONGOING CHALLENGES

- **Ongoing Data Quality Concerns**
- **Data Access from the Utility Companies**
- **Outreach to Non-Compliant Building Owners**
- **Administrative Bandwidth**

FINES & ENFORCEMENT

The Ordinance establishes three types of fines:

Failure to comply with reporting and verification requirements	<ul style="list-style-type: none">• Non-Residential Buildings $\geq 35,000$ sq. ft.• Two or more Buildings on the same parcel $\geq 100,000$ sq. ft.• Residential Buildings ≥ 35 units or $\geq 35,000$ sq. ft.	\$300 per Day
	<ul style="list-style-type: none">• Non-Residential Buildings $\geq 20,000$ SF but $< 35,000$ sq. ft.• Residential Buildings ≥ 15 units but < 35 units; or $\geq 20,000$ sq. ft. but $< 35,000$ sq. ft.	\$150 per Day
Failure to comply with Emissions standards	<ul style="list-style-type: none">• Non-Residential Buildings $\geq 35,000$ sq. ft.• Two or more Buildings on the same parcel $\geq 100,000$ sq. ft.• Residential Buildings ≥ 35 units or $\geq 35,000$ sq. ft.	\$1,000 per Day
	<ul style="list-style-type: none">• Non-Residential Buildings $\geq 20,000$ SF but $< 35,000$ sq. ft.• Residential Buildings ≥ 15 units but < 35 units; or $\geq 20,000$ sq. ft. but $< 35,000$ sq. ft.	\$300 per Day
Failure to accurately report information	<ul style="list-style-type: none">• All Buildings	\$1,000 - \$5,000, at Review Board's discretion

HOW WE ARE HELPING BUILDING OWNERS



- **Help desk phone and email**
- [BERDO Emissions Calculator tool \(Guide\)](#)
- [BERDO webinar series \(recordings available at \[boston.gov/berdo\]\(https://boston.gov/berdo\)\)](#)
 - *Recordings on flexibility measures and emissions compliance*
- [Free assistance for BERDO reporting and third-party verification](#)
 - *Targeting self-managed residential buildings, small non-profit owners, or commercial buildings with small business tenants. Staff will prioritize owners with limited English proficiency, digital literacy, financial resources, located in EJ communities, and/or facing unusual challenges.*
- [Weekly office hours for emissions compliance](#)
- [One-on-one building emissions consultations](#)
- [How to Report Guide](#)
- [Renewable Energy Guide](#)
- [Hardship Compliance Plan Guide & FAQs](#)
- [BERDO Handbook for Condo Associations](#)

RESOURCES



[BERDO Homepage](#)

[BERDO Regulations](#)

[Retrofit Resource Hub](#)

[BERDO Emissions Calculator](#)



CONTACT US:

Emissions Compliance: retrofit@boston.gov

Energy Reporting: energyreporting@boston.gov

THANK YOU

