

BERDO REGULATIONS PHASE 3

Working Session: Hardship Compliance Plans

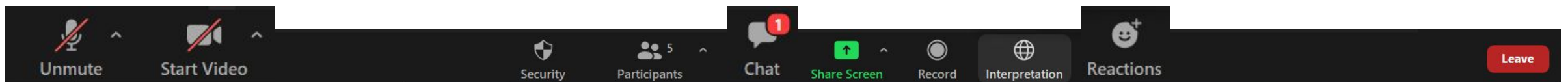
August 22, 2023



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.



Agenda



- Welcome, introductions, and reminders
- Introduction to Hardship Compliance Plans
- Presentation of preliminary proposals
 - *Deep Dive on technical circumstances and characteristics that may lead to hardship*
- Q&A and Discussion

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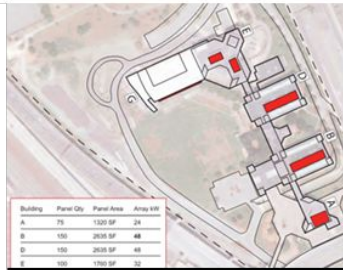
The House (Passive House)



WS Development, Seaport



GSA, Courthouse



BHCC, Renewable Study



Committing to Zero



Thermal Network Systems



Wellesley, Global Flora



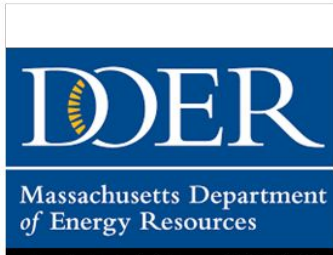
Harvard Medical School



Harvard SEAS, Allston



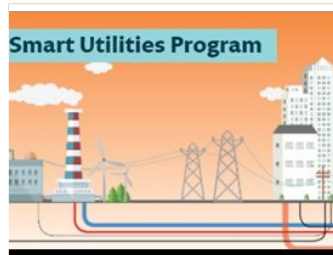
Best Practices Guide



Technical Advisory (SE-TAC)



Co-Chair; Board Member



City of Boston



NYC Roadmap to 80x50



City of Boston

Phase 3 Regulations: Topics to Address



BUILDING PORTFOLIOS

- *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 based on a baseline year. Individual Compliance Schedules are approved by the Review Board.*



HARDSHIP COMPLIANCE PLANS

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



EQUITABLE EMISSIONS INVESTMENT FUND

- *New investment fund that will collect all Alternative Compliance Payments (ACPs) 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) and other clarifying regulations.*

We are receiving feedback on Phase 3 regulations

You can find draft language and preliminary proposals on boston.gov/berdo-regulations

- The Air Pollution Control Commission (APCC) has opened a second formal public comment period for draft regulations regarding **Building Portfolios** and **Individual Compliance Schedules**.
- The BERDO team is also receiving informal public comments on preliminary proposals for regulations regarding **Hardship Compliance Plans** and the **Equitable Emissions Investment Fund**.
- We invite you to provide feedback on all topics in a single letter to the APCC (apcc@boston.gov) by **September 15 at 12:00 p.m.**
- If you would like to only provide informal comments on Hardship Compliance Plans and the Equitable Emissions Investment Fund, you can also send your feedback to claudia.diezmartinez@boston.gov by **September 15 at 12:00 p.m.**
- Based on feedback, the BERDO team will revise draft language and present it to the APCC at a **special public hearing in September** (time TBD).

Tomorrow: Upcoming Public Working Session

You can find more information on boston.gov/berdo-regulations



- [Public working session](#) on the **Equitable Emissions Investment Fund**
 - Wednesday, August 23, 2023, from 1:00 to 2:30 pm ET on Zoom.
 - Please [register for the meeting here](#).

The background of the slide is a dark blue aerial wireframe illustration of a city, showing various building footprints and street layouts in a light blue color.

Introduction to Hardship Compliance Plans

Hardship Compliance Plans (HCPs)

Requirements set in Ordinance

- HCPs are a flexibility mechanism that allows Building Owners to receive **alternative emissions reduction targets** and/or **timelines for compliance**.
- HCPs are available for buildings that experience a **hardship in complying with the Emissions standards in BERDO**.
- Examples of characteristics and circumstances that create a hardship may include historic building designations, affordable housing refinancing timelines, pre-existing long-term energy contracts without reopeners, financial hardship, and any other factors detailed in the upcoming regulations.
- HCPs are approved by the **BERDO Review Board**.
- The Review Board may set **conditions of approval**.

Flexibility mechanisms in BERDO

Comparison of key features

	Building Portfolios*	Individual Compliance Schedules	Hardship Compliance Plans
Description	Allows Owners of multiple BERDO Buildings to comply with a single portfolio-level emissions standard that is based on Building Uses (kg CO ₂ e/ sq. ft / year).	Allows Owners to comply with an alternative <u>absolute</u> emissions reduction schedule that is based on baseline year(s)** (kg CO ₂ e / year)	Allows Owners to comply with an alternative emissions reduction target and/or schedule.
Emissions reduction requirements	Requires: <ul style="list-style-type: none"> Emissions standards in Table 1 of the Ordinance Emissions reduction schedule in Table 1 of the Ordinance. 	Requires: <ul style="list-style-type: none"> Emissions reductions are linear or better By 2030: 50% reduction in <u>absolute</u> emissions from the baseline year. By 2050: 100% reduction in <u>absolute</u> emissions from the baseline year. 	May allow: <ul style="list-style-type: none"> Less stringent emissions standards. Alternative emissions reduction schedule.

* Owners of Building Portfolios may also apply for an Individual Compliance Schedule or a Hardship Compliance Plan.

** For Building Portfolios, Individual Compliance Schedules can be based on multiple baseline years.

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Preliminary proposals for Hardship Compliance Plans

What is a “hardship”?

Preliminary proposals

Hardship means that, **due to the unusual circumstances or characteristics of a Building Owner, Building or Building Portfolio**, meeting the applicable Emissions standard through **all combinations** of (i) direct emissions reductions, (ii) participation in CCE, (iii) purchase of RECs, (iv) participation in PPAs (v) Alternative Compliance Payments, (vi) Building Portfolios, and/or (vii) Individual Compliance Schedules will:

- Create an **undue burden** on a Building Owner; or
- Significantly interfere with or significantly increase the cost to provide **critical services**.

What are “undue burdens” and “critical services”?

Preliminary proposals

Undue burden on a Building Owner exists if a Building Owner’s total compliance costs would (i) be significantly higher because of the unusual circumstances or characteristics of a Building Owner, Building or Building Portfolio, (ii) cause interruption in financial ability to operate, or (iii) cause other significant effects that the Review Board determines should be mitigated in light of benefits provided by and/or greenhouse gas emissions avoided by the Building or Building Portfolio.*

Critical services include provision of life saving services and affordable housing.

** Deferred maintenance costs cannot contribute to an undue burden*

Owner and Building Circumstances and Characteristics that Could Contribute to Hardship

Preliminary proposals

Categories of Building Owner or Building circumstances and characteristics that could, either singularly or collectively, create a hardship for a Building Owner:

1. **Financial**
2. **Regulatory/Contractual**
3. **Technical/Operational - focus of today's conversation**
4. **Other**

Guidance regarding demonstrating such circumstances or characteristics will be provided by the Environment Department.

Examples of Circumstances and Characteristics that Could Contribute to Hardship

Preliminary proposals

1. Financial Circumstances and Characteristics

- Owner bankruptcy for all or part of a compliance year.
- Schedule of compliance costs do not align with long-term schedules for capital expenditures that cannot be changed or are beyond the control of the Owner (e.g., affordable housing refinancing timelines).
- Other?

4. Other Hardship Circumstances and Characteristics

- Natural disasters
- Other circumstances and characteristics accepted by the Review Board
- Other?

2. Regulatory/Contractual Circumstances and Characteristics

- Long-term energy contracts without reopeners for a significant portion of a Building's or Building Portfolio's energy demand.
- Delays in electric system interconnections beyond X months for reasons outside a Building Owner's control.
- Government significant delay or denial of a permit or other approval required for compliance-related work.
- Government regulations affecting minimum energy use.
- Accreditation/certification standards affecting minimum energy use.
- Other?

Examples of Circumstances and Characteristics that Could Contribute to Hardship

Preliminary proposals

3. Technical/Operational Circumstances and Characteristics

- Space constraints for significant compliance related work.
- Equipment needed for significant compliance related work is not adequately demonstrated or available in the United States.
- High process loads with high emissions.
- High critical loads with high emissions (e.g., energy use for life safety).

Types of Relief for Demonstrated Hardship(s)

Preliminary proposals

The Review Board may grant an applicant one or more of the following types of relief, either for a **defined period of time** or **permanently**. Relief may apply to some or all of a Building Owner's compliance obligations.

- Alternative schedules for complying with the Emissions standards in the Ordinance; such schedules do not need to be linear or better.
- Alternative Emissions standards than those in the Ordinance.
- Exemption of specified Energy use(s) from a Building Owner's compliance obligations.
- Adjusted compliance obligations in light of third-party electrification barriers or delays.
- Additional compliance mechanisms.
- Other relief the Review Board deems appropriate on a case-by-case basis.

Content for Applications for HCPs

Preliminary proposals

- Narrative and supporting material regarding existence and scope of circumstances and characteristics that contribute to a hardship.
- Consideration and use of all compliance mechanisms and other flexibility measures authorized by the Ordinance.
- Description of prior significant emissions reduction efforts or work on high-energy systems or loads.
- Evaluation of opportunities and financial support for compliance-related work at a Building.
 - *E.g., energy audits (including Mass Save), government programs, off-site opportunities for siting equipment.*
- Requested relief and conditions on proposed alternative compliance to advance BERDO objectives.
 - *E.g., tenant protections, rent stabilization, workforce development, etc.*

Deep Dive on Technical Circumstances and Characteristics

Focusing on:

- Technical circumstances and characteristics that could contribute to a hardship
- Potential examples of buildings or circumstances that would contribute
- How to demonstrate the existence of technical circumstances and characteristics

Technical Circumstances and Characteristics

Space constraints for significant compliance related work

- This factor may contribute to a hardship if/when space necessary to install proposed compliant systems would be overburdensome to access or isn't available.

Possible building examples

- Some buildings may not have sufficient roof/penthouse/mechanical space to install additional equipment (e.g. high rise)
- Some buildings may have difficulty re-allocating space as mechanical area
 - *Spaces adjacent to existing mechanical may be required for egress/accessibility*
- Some buildings may have difficulty installing sufficient ducts, electrical service, or other distribution equipment due to architectural factors (e.g. insufficient shaft space or alternate pathways, significant structural limitations)

Proposed substantiation examples

- Comprehensive application addressing all compliance pathways, partial compliance, and prior/ongoing emissions reductions
- Feasibility study describing all technical solutions evaluated; DD-level calculations and sketches by a professional engineer (ensure this is the relevant professional for the claimed hardship)
- As-built drawings detailing available and utilized roof, penthouse, mechanical space, other building areas as necessary

Technical Circumstances and Characteristics

Equipment needed for significant compliance related work is not adequately demonstrated or available in the United States

- This factor may contribute to a hardship in the rare instance that the equipment in question would need to be replaced by technology not yet widely adopted here, which could lead to longer permitting timelines and higher design fees.

Possible building examples

- Specific manufacturing or industrial equipment replacements (in conjunction with attempts to decarbonize process loads)
- Emerging technologies

Proposed substantiation examples

- Comprehensive application addressing all compliance pathways, partial compliance, and prior/ongoing emissions reductions
- Feasibility study describing all technical solutions evaluated; DD-level calculations and sketches by a professional engineer
- Description of the proposed equipment and how it is used in areas where it is more common
- Narrative by that engineer describing what about the specific equipment is unique and therefore not feasible to replace

Technical Circumstances and Characteristics

High process loads with high emissions

- This factor may contribute to a hardship when process loads required for the operation of a building or business are energy intensive, or rely on fossil fuels necessarily.
- This may contribute to hardship in later compliance periods, as there are generally other emissions to be reduced separate from applicable process loads like building heating/cooling, etc.

Possible building examples

- Gas fired, high-temperature manufacturing equipment – reliant on fossil fuels
- Ice making equipment – electric, but energy intensive
- Other?

Proposed substantiation examples

- Comprehensive application addressing all compliance pathways, partial compliance, and prior/ongoing emissions reductions
- Feasibility study describing all technical solutions evaluated; DD-level calculations and sketches by a professional engineer
- Narrative by the engineer describing what about the specific equipment is unique and therefore creating a hardship

Technical Circumstances and Characteristics

High critical loads with high emissions (e.g., energy use for life safety)

- This may contribute to a hardship when the remaining difficult to decarbonize energy is used for life safety of human occupants or to create appropriate habitats for animals
- May be derived from higher required energy use or longer required operating hours (some overlap with [Regulatory/Contractual](#))

Possible building examples

- Hospitals and healthcare facilities
- Aquarium, zoo, vivarium space
- [Other?](#)

Proposed substantiation examples

- Comprehensive application addressing all compliance pathways, partial compliance, and prior/ongoing emissions reductions
- Feasibility study describing all technical solutions evaluated; DD-level calculations and sketches by a professional engineer
- Narrative from the engineer describing the critical load and what qualities it has that contribute to hardship

The background of the slide is a dark blue wireframe illustration of a cityscape, showing various building outlines and street patterns from an aerial perspective.

Q&A and Discussion

Discussion questions about technical characteristics and circumstances

- Are there other technical characteristics or circumstances that could create a hardship to comply with the Emissions standards in BERDO?
- Are there other types of challenges we have not considered?
 - *Are there any major hardship typologies we are missing?*
- What type of material is available/should be used for demonstrating technical circumstances or characteristics that contribute to hardship?, e.g.,
 - *When should third-party verification be required?*
 - *Should more than one feasibility assessment/pricing quote be required?*
 - *How often should different technical issues be re-evaluated?*

Discussion questions about technical characteristics and circumstances (cont.)

- Are there other types of relief that should be considered?

Reminder: Upcoming Public Working Session

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THANK YOU!

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

