

AIR POLLUTION CONTROL COMMISSION PUBLIC HEARING



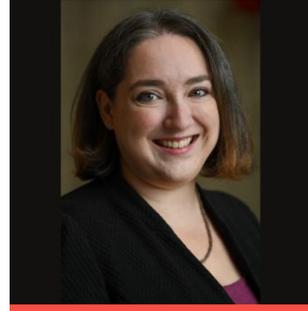
December 14, 2022

This public hearing will include opportunity for public comment. During public comment periods, members of the public may submit any comments or questions by “raising their hand” or by typing in the chat box.

AIR POLLUTION CONTROL COMMISSION



Bradley Gerratt
*Transportation
Department*



Alison Brizius
*Environment
Department*



Julien Farland
*Boston Public Health
Commission*



Eric Burkman
Commissioner At-Large



Russell Preston
Commissioner At-Large



Irmak Turan
Commissioner At-Large

CITY OF BOSTON STAFF



Kat Eshel

*Environment
Department*



**Hannah
Payne**

*Environment
Department*

Public Hearing



Building Emissions Reduction and Disclosure Ordinance (BERDO) *Phase 2A Regulations and Policies*





Phase 2 Community Engagement Process

Main components to date

Community Leads Meetings

Technical Working Sessions

Focus Groups

Air Pollution Control Commission

Series of special meetings with community partners

- Action 4 Equity
- Allston Brighton Health Collaborative (ABHC)
- Alternatives For Community & Environment (ACE)
- Boston Climate Action Network (BCAN)
- Chinese Progressive Association (CPA)
- Fairmount Indigo CDC Collaborative (represented by CSNDC)
- Mothers Out Front

Public meetings on Zoom Technical experts invited

- Working session #1 on blended emissions standards and clarifying regulations (September 7, 2022)
- Working session #2 on grid emissions factors and renewable energy purchases (September 14, 2022)
- Working session #3 on district energy systems (September 21, 2022)
- District Energy Working Session (November 3, 2022)

Special meetings to go deep into specific topics

- Higher education focus group
- Cultural institutions focus group
- Healthcare focus group
- Longwood Medical Area focus group
- A Better City focus group
- MACDC focus group
- Affordable housing focus group

Public meetings on Zoom

- APCC Special Hearing (September 28, 2022)
- APCC Hearing (October 19, 2022)
- APCC Hearing (November 16, 2022)

Regulations Process

Proposed Update



Phase 1

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

Phase 2

Phase 2a

- Review Board
- Blended emissions standards
- Designating tenant as owner
- Change of ownership
- Other clarifying regulations

Phase 2b

- Renewable energy purchases
- Emissions factors

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

First Public Comment Period (Phase 2a + Phase 2b)

Public comment period ran from October 20, 2022 through November 10, 2022



We received over 40 distinct comment letters

- 1 joint letter from 21 community-based organizations
- 21 identical comment letters from the Action Network



Comments on **Phase 2a** topics were relatively minor or straightforward.

- We presented revised regulations on these topics on November 16.



Most substantive comments were related to **Phase 2b** topics.

- We took additional time to review these comments and will present revised regulations on these topics today.

First Public Comment Period

List of organizations and individuals who sent comment letters

1. A Better City
2. Ania Camargo (MOF Member)
3. Bloom Energy
4. Boston Climate Action Network (21 individual letters)
5. Bridge Energy
6. Cedar Investors LLC
7. Christina Knapp (Sierra Club Member)
8. Competitive Energy Services
9. Conference of Boston Teaching Hospitals
10. David Heimann
11. Greater Boston Chamber of Commerce
12. Greater Boston Physicians for Social Responsibility
13. Greater Boston Real Estate Board
14. Green Energy Consumers Alliance
15. Green Ribbon Commission Higher Education Working Group
16. H. Parker James
17. Icetec Energy Services
18. Institute for Market Transformation
19. Institute of Contemporary Art (ICA)
20. International District Energy Association
21. Isabella Gardner Museum
22. Joint letter from 21 community organizations
23. Karen Conway, ICA Trustee
24. Longwood Collective
25. Longwood Medical Energy Collaborative
26. Martyn Roetter and Michael McCord
27. Maryellen O'Donnell
28. Mass General Brigham
29. Massachusetts Historical Society
30. Mike Moran, Boston Properties
31. Mothers Out Front (MOF)
32. Museum of Fine Arts Boston
33. NAIOP MA
34. Neighborhood Association of Back Bay
35. Power Options
36. Robert and Richard Boch
37. Suzanne Nadeski, Harry Miller Co.
38. The Most Worshipful Grand Lodge of Ancient Free and Accepted Masons (MA)
39. Vicinity Energy
40. Avalon Bay (*received after deadline*)
41. Court Square Press Building Condominium Trust (*received after deadline*)
42. WattTime (*received after deadline*)

Revisions to Phase 2a Regulations

Revisions to Regulations

IV. Reporting Process

V. Ownership Changes and Designations

VI. Special Conditions

IX. Emissions Standards

XIII. Review Board

Revisions to Policies

3. Third-party Verification

4. Special Conditions

7. Blended Emissions standards

9. Review Board Policies

Phase 2a Second Public Comment Period

Public comment period ran from November 18, 2022 through December 9, 2022



We received 1 comment letter

- *Comment by A Better City related to ZNC Zoning.*

Commission Q&A

BERDO Phase 2A Regulations and Policies

Commissioners may discuss and ask staff questions.



Public Q&A

BERDO Phase 2A Regulations

Members of the public may submit any comments or questions by “raising their hand” or typing in the chat box.



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Commission Motion & Vote

BERDO Phase 2A Regulations and Policies





Building Emissions Reduction and Disclosure Ordinance (BERDO) *Phase 2B Regulations and Policies*



Regulations Process

Updated Approach



Phase 1

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

Phase 2

Phase 2a

- *Review Board*
- *Blended emissions standards*
- *Designating tenant as owner*
- *Change of ownership*
- *Other clarifying regulations*

Phase 2b

- *Renewable energy purchases*
- *Emissions factors*

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*

Comments on Emissions Factors

Core themes identified from comment letters

- **Fuels**

- Suggestion to account for leaks from gas distribution system.
- Suggestion to add emissions factors for biogenic fuels.
- Clarification of how often natural gas emissions factors are updated.

- **Grid electricity**

- Concerns with discrepancies between projected grid emissions factor used for planning purposes and the annual grid emissions factor used for compliance purposes.
- General support for having more certainty of future compliance obligations.
- Clarification of timeline in which projected grid factors will be publicly available for planning purposes.

- **Time-of-use (TOU) emissions factors**

- General support for allowing TOU emissions factors
- Recommendation to publish official TOU emissions rates.
- Concerns with confidentiality of TOU data.

- **District Energy Systems**

- General support for using efficiency methodology to calculate emissions factors from district energy systems, emphasizing the importance of a consistent, transparent methodology that can be verified.
- Concerns with double counting of emissions from independent district energy systems that provide electricity to the grid.
- General support for requiring third-party verification for emissions factors provided by independent district energy systems.
- General support for classifying thermal energy provided via renewable fuels as a recognized zero carbon energy source.
- Suggestion to allow previous year's emissions rate(s) for district energy systems to be used for compliance in cases where the system operator fails to provide a verified annual emissions factors by April 1st.
- Clarification of the methodology to calculate emissions factors for independent district energy systems.
- Clarification of the requirements of independent district energy systems versus campus district energy systems.

Comments on Renewable Energy Purchases

Core themes identified from comment letters

- **Renewable Energy Credits (RECs)**
 - *Clarification that biomass does not qualify as renewable energy under BERDO.*
 - *Clarification that Class II RECs and CES-E are not accepted as an alternative compliance mechanism under BERDO.*
 - *Concerns with number of alternative compliance mechanisms available to building owners of different sizes.*
- **Power Purchase Agreements (PPAs)**
 - *Emphasis on importance of prioritizing local renewable energy generation over PPAs outside of New England.*
 - *Clarification of geographic requirements of PPAs and language relating to the North American Electric Reliability Corporation.*
 - *Support and concerns with the additionality requirements of PPAs.*
 - *Suggestion of adding flexibility when additionality requirements cannot be met due to timelines of contracts.*
 - *Concerns with eligibility of PPAs that are extended or renewed.*
 - *Suggestion to allow additional renewable energy generated in one year to be used in future years for compliance (when more renewable energy is generated than consumed).*
 - *Clarification regarding eligibility of PPAs for building portfolio compliance.*
- **Local Renewable Energy Generation**
 - *Concerns with “double counting” of RECs generated by local solar energy.*
 - *Clarification regarding the eligibility of net-metering credits to be used for compliance.*

Revised Contents of Regulations

Phase 2b topics are marked in red and Phase 2a topics are marked in gray.

- I. Introduction
- II. References
- III. Definitions
- IV. Reporting Process
- V. Ownership Changes and Designations
- VI. Special Conditions
- VII. Third-Party Data Verification
- VIII. Emissions Factors**
- IX. Emissions Standards
- X. Additional Compliance Mechanisms**
- XI. Preservation of Records
- XII. Disclosure of Records and Information
- XIII. Review Board
- XIV. Enforcement and Penalties
- Appendix A Building Use Classifications

Proposed Revisions to Phase 2b Regulations

VIII. Emissions Factors

- **Grid Emissions Factors**
 - Add new provision that in the event that the Environment Department's annual Emissions Factor for electricity from the grid is higher than the projected emissions factor, the projected emissions factor shall be used for calculating compliance.
- **District Energy Systems**
 - Add clarification that Emissions Factors from District Energy Systems must be third-party verified.
 - Add clarification that if a District Energy System operator fails to provide a third-party verified annual system Emissions Factor by April 1st, the most recent verified emissions factor from the District Energy System shall be used for compliance. If there is no verified emissions factor for the District Energy System then the current Emissions Factors reported by ENERGY STAR Portfolio Manager for the corresponding products shall be used.
- **Campus District Energy Systems**
 - Add clarification that Campus Energy Systems may either follow the same emission factor requirements for District Energy Systems OR apply the appropriate Emissions Factors to their central plant's fuel inputs and apportion the emissions across their connected buildings
- **Thermal Energy from Renewable Electricity**
 - Add clarifying language that thermal energy generated from non-emitting renewable sources will have an Emissions Factor of 0 kgCO₂e/MMBTU, provided that any renewable energy or RECs meet the requirements for renewable energy purchases.
- **Fuels**
 - Add provision that for fuels not included in the regulations or policies, Owners may petition the Commission to approve custom Emissions Factors to be applied to their Building(s), including for biogenic fuels and fuel cells.



Renewable Energy Purchases in BERDO

What are the options for building owners?

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



**Purchasing
Mass Class I RECs through
REC market or through
PPA inside ISO-NE**

These would be unbundled RECs bought and retired independently
OR
bundled RECs bought and retired as part of a PPA inside ISO-NE.



**Entering a PPA for energy
generated by renewable
non-emitting fuel sources
outside of ISO-NE**

This includes the purchase of both electricity and its associated RECs.
All PPAs need to meet additionality requirements and other rules set in the Ordinance and regulations.



**Enrolling in Boston's
Community Choice
Electricity Program.**

Here, the City buys Mass Class I RECs on behalf of residents and businesses enrolled in the CCE program.



**Local renewable energy
generation
(on-site or off-site)**

No REC retirement by off-taker is required if:
(a) the system is solar, is located in eastern MA, and the energy purchasing began before 2024
OR
(b) the system is any type of non-emitting renewable energy and is located inside the City of Boston

Proposed Revisions to Phase 2b Regulations

X. Additional Compliance Mechanisms

- **Renewable Energy Certificates (RECs)**
 - Add clarification that Mass Class I REC purchases include both unbundled RECs (purchased independently) and bundled RECs (purchases through PPA inside ISO-NE).
 - Update the timeline for REC purchases.
 - RECs may be generated within the 12 months before the compliance period or within the compliance period in which they are used; and
 - RECs are retired within 6 months of the compliance period in which they are used.
- **Power Purchase Agreements**
 - Add clarification any requirements for metering and location in 225 CMR 14.05 (MA Class I requirements) are not be applicable for PPAs.
 - Add clarification that PPAs must be with electricity generators connected to an electric grid in the jurisdiction of the North American Electric Reliability Corporation.
- Update the timeline for REC purchases related to PPA.
 - RECs may be generated within the 12 months before the compliance period or within the compliance period in which they are used; and
 - RECs are retired within 6 months of the compliance period in which they are used.
- Add provision that allows Owners to bring an extenuating circumstance that precludes meeting the additionality requirement to the Review Board.
- Add clarification that PPAs that satisfy the criteria in the regulations at the time of contract signing may be used for compliance for the length of the contract term, including extensions to the original term, and for any quantity or price of Energy purchased from the original generating source(s) identified in the PPA.

Proposed Revisions to Phase 2b Regulations



X. Additional Compliance Mechanisms

- **Local Renewable Energy Generation**
 - *Add clarification that electricity and associated generation credits, such as net-metering credits, directly attributable to electricity generated by non-emitting electricity generating systems are eligible as a compliance mechanism.*

Revisions to Phase 2b Policies and Procedures

Phase 2b topics are marked in red and Phase 2a topics are marked in gray.

1. INTRODUCTION
2. DEFAULT ENERGY USE VALUES
3. THIRD-PARTY VERIFICATION
4. SPECIAL CONDITIONS
5. **EMISSIONS FACTORS**
6. CALCULATING BUILDING EMISSIONS
7. BLENDED EMISSIONS STANDARDS
8. **ADDITIONAL COMPLIANCE MECHANISMS**
9. REVIEW BOARD POLICIES

Proposed Revisions to Phase 2b Policies and Procedures



5. Emissions Factors

• **Grid Emissions Factors**

- *Factors that the Environment Department shall consider to develop grid emissions factors include, but need not be limited to:*
 - *Emissions Factors for electricity imported into and exported out of the ISO New England grid.*
 - *Corrections to the allocation of emissions from District Energy Systems that send electricity to the ISO New England grid and thermal products to Boston buildings, to avoid duplication of emissions within BERDO Emissions Factors accounting.*
- *Added initial projected grid emissions factors in Appendix A.*
 - *These initial projections will be reviewed by the Commission before the 2030 compliance period and may be updated by the Commission based on available data and projections.*
 - *Projected emissions factors will be reviewed by the Commission at least every five years thereafter and may be updated at the discretion of the Commission.*

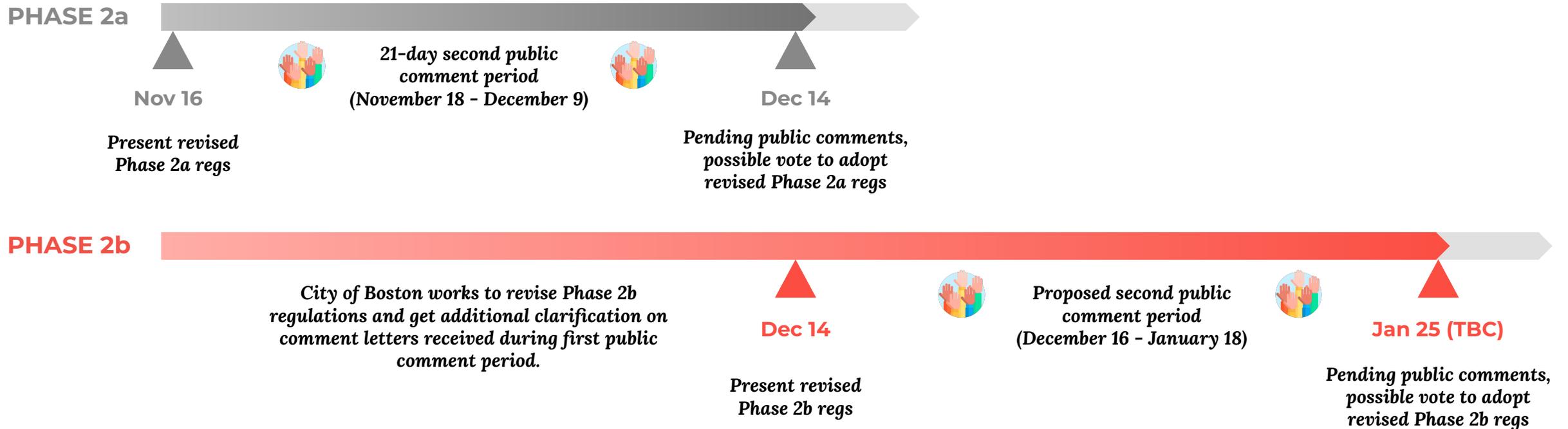
• **District Energy Systems**

- *Added details on third-party verification requirements:*
 - *Third-party verification must include a review of the data, calculations and final Emissions Factors. Verifiers must provide a signed affidavit affirming the accuracy of the data and emissions factors.*
 - *District Energy Emission Factor verifiers shall include entities with expertise on district energy system operations and electricity emissions accounting.*
 - *District Energy System operators shall submit preferred verifiers and their relevant experience to the Environment Department for approval prior to completing third-party verification and no later than March 1st. The Environment Department may request additional information on a verifier's qualifications.*

BERDO Proposed Next Steps



- **Open a comment second comment period on Phase 2b regulations. Proposed schedule:**
 - Open comment period on revised Phase 2b regulations on Friday, 12/16
 - Close public comment on Wednesday, 1/18



Commission Q&A

BERDO Phase 2B Regulations

Commissioners may discuss and ask staff questions.



Public Q&A

BERDO Phase 2B Regulations

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Commission Motion & Vote

BERDO Phase 2B Regulations



An aerial, wireframe-style illustration of a cityscape, rendered in a dark blue color. The buildings are represented by white outlines, creating a complex, geometric pattern of shapes and lines. The perspective is from a high angle, looking down on the city.

**Continued to an
upcoming hearing**

CONTINUED TO AN UPCOMING HEARING

Continued: Application for a Modified East Boston Parking Freeze Permit from VHB on behalf of Cargo Ventures LLC for 575 park and fly spaces. This permit is to relocate spaces from a surface lot at 320 McClellan Highway to a new parking garage at 440 McClellan Highway. Modification of the permit would have no effect on the East Boston parking freeze bank.

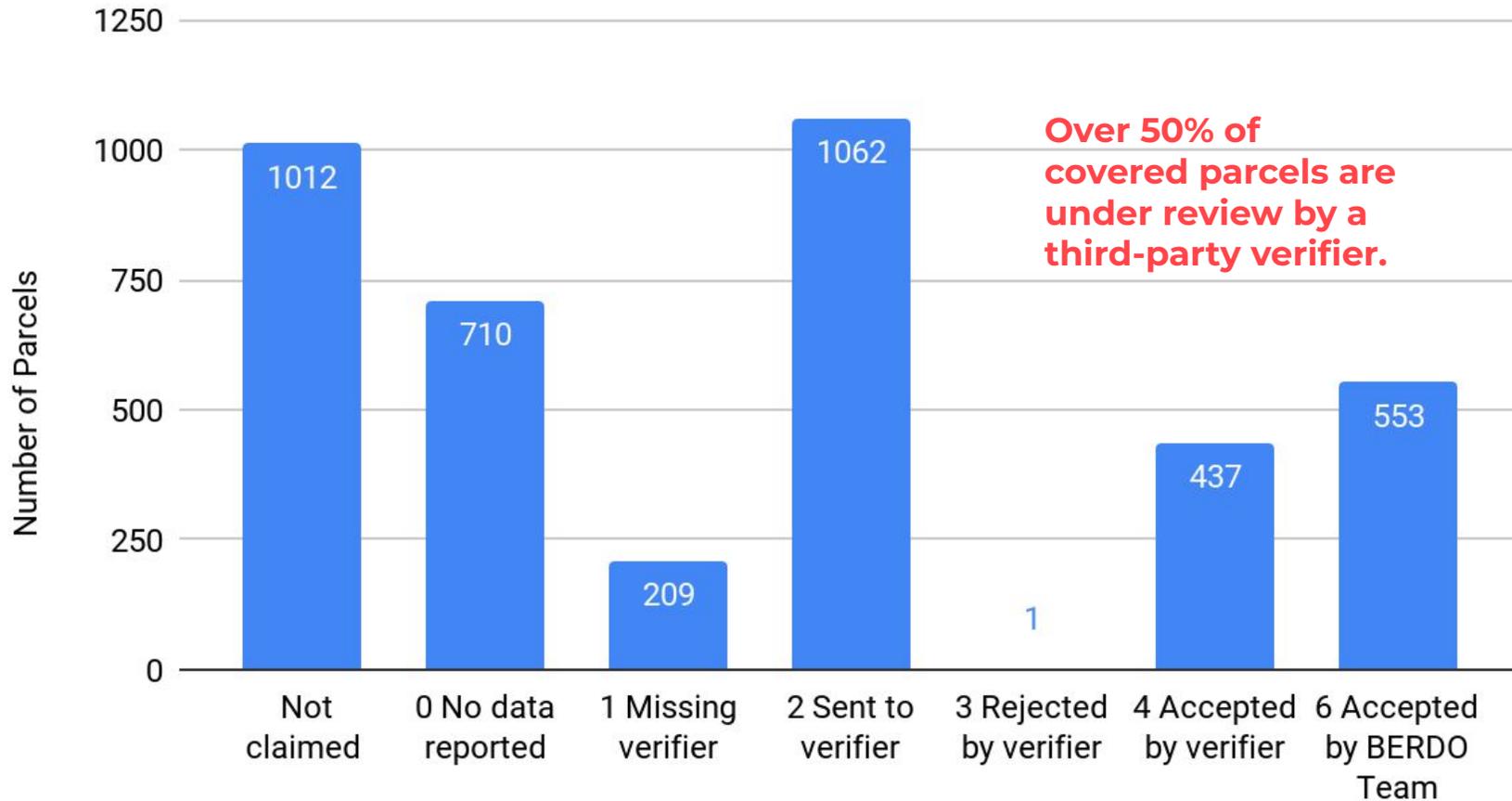
Continued: Application for a Modified East Boston Parking Freeze Permit from VHB on behalf of Cargo Ventures LLC for 127 park and fly spaces. This permit is to relocate spaces from a surface lot at 380 McClellan Highway to a new parking garage at 440 McClellan Highway. Modification of the permit would have no effect on the East Boston parking freeze bank.

Public Meeting

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Update on BERDO Implementation

BERDO Reporting Progress as of 12/14 at 11:30am



- **Not Claimed** - Building owner has not initiated reporting in our platform
- **No data reported** - Building owner has 'claimed' building in our system but hasn't fully reported data
- **Missing verifier** - Data has been reported but needs to be sent to a third-party verifier
- **Sent to verifier** - Awaiting review by third-party verifier
- **Rejected by verifier** - Verifier has identified issues with report that Owner needs to update
- **Accepted by verifier** - Verifier has completed review and data is under review by BERDO team
- **Accepted by BERDO Team** - Data quality checks have been completed and reporting is approved

Reporting deadline is December 15.

Extensions for extenuating circumstances

Summary of requests received by 11 AM on December 14th.

- **238 additional extensions requested**
 - **54** have third-party verifier secured but verifier is unable to complete work by 12/15
 - **6** are in the process of finding a third-party verifier
 - **83** have experienced challenges in obtaining utility data in time for verification
 - **32** have experienced extenuating staffing challenges that delayed reporting
 - **29** are/were waiting on on the BERDO team
 - **34** have started reporting but need more time to complete reporting and hire a third party verifier
- Our goal this year is to get everyone to report accurately and verify their data so owners can begin planning for compliance with the 2025 emissions standards.
- Staff recommend issuing additional extensions until March 1.
- Staff would like permission to grant additional extensions for extenuating circumstances that are received until January APCC meeting. Any such extensions would maintain the March 1st deadline.

Commission Q&A

Commissioners may discuss and ask staff questions.

Status of the Parking Freeze



General Parking Freeze Update

Status as of 12/12/2022

- **East Boston**

- 702 park-and-fly and 2,610 rental car spaces allocated (246 rental car spaces eliminated)
- 2022: 4/4 permits renewed (1 permit sunset)

- **South Boston**

- 28,680 spaces allocated and 1,080 spaces in freeze bank
- 2021: 122/127 permits renewed (96%): 9 W Broadway and 4 publicly-owned facilities outstanding
- 2022: 95/125 permits renewed (76%)

- **Downtown Boston**

- 31,224 spaces allocated and 4,332 spaces in freeze bank
- 2021: 242/273 permits renewed (91%): 34 Cooper St, 128 Dartmouth St and 24 publicly-owned facilities outstanding
- 2022: 198/277 (72%)

Summary of 2022 YTD

Status as of 12/12/22

2021: 413 invoices sent, 375 renewed, 31 outstanding (9 sunset)

2022: 409 invoices sent, 297 renewed, 108 outstanding (4 sunset)

Breakdown of notices sent:

- First Past Due: 197 permits
- Second Past Due: 106 permits
- First Violation Notice (sent 12/5): 83 permits
- Second Violation Notice - due to be sent approx. 1/5/22
- Third Violation Notices - due to be sent approx. 2/6/22
- Final Violation Notices - due to be sent approx. 3/6/22

Enforcement timeline

Past Dues:

- 60 days → 1st past due
- 35 days → 2nd past due

Violations:

- 30 days → 1st violation
- 30 days → 2nd violation
- 30 days → 3rd violation
- 30 days → final violation

Commission Q&A

Commissioners may discuss and ask staff questions.

Revocation of Downtown Parking Freeze Exemption Certification

34 Cooper Street - APCC453797



The background of the slide is a dark blue aerial wireframe map of a city, showing the outlines of buildings, streets, and parks. The map is centered on a specific area, likely the location of 34 Cooper Street.

Commission Q&A

34 Cooper Street - APCC453797

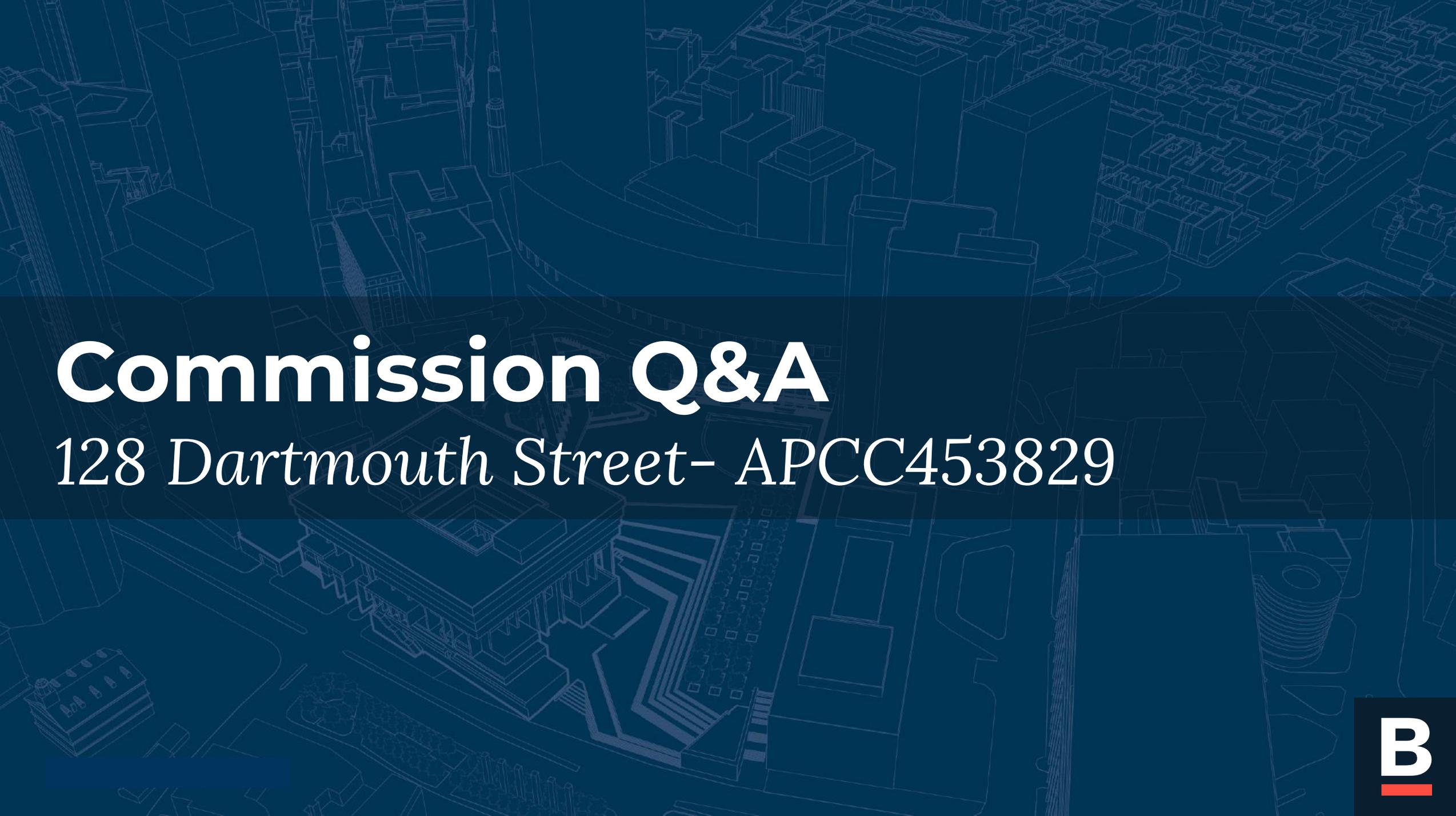
Commission Motion & Vote

34 Cooper Street - APCC453797

Revocation of Downtown Parking Freeze Permit

128 Dartmouth Street- APCC453829



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Commission Q&A

128 Dartmouth Street- APCC453829



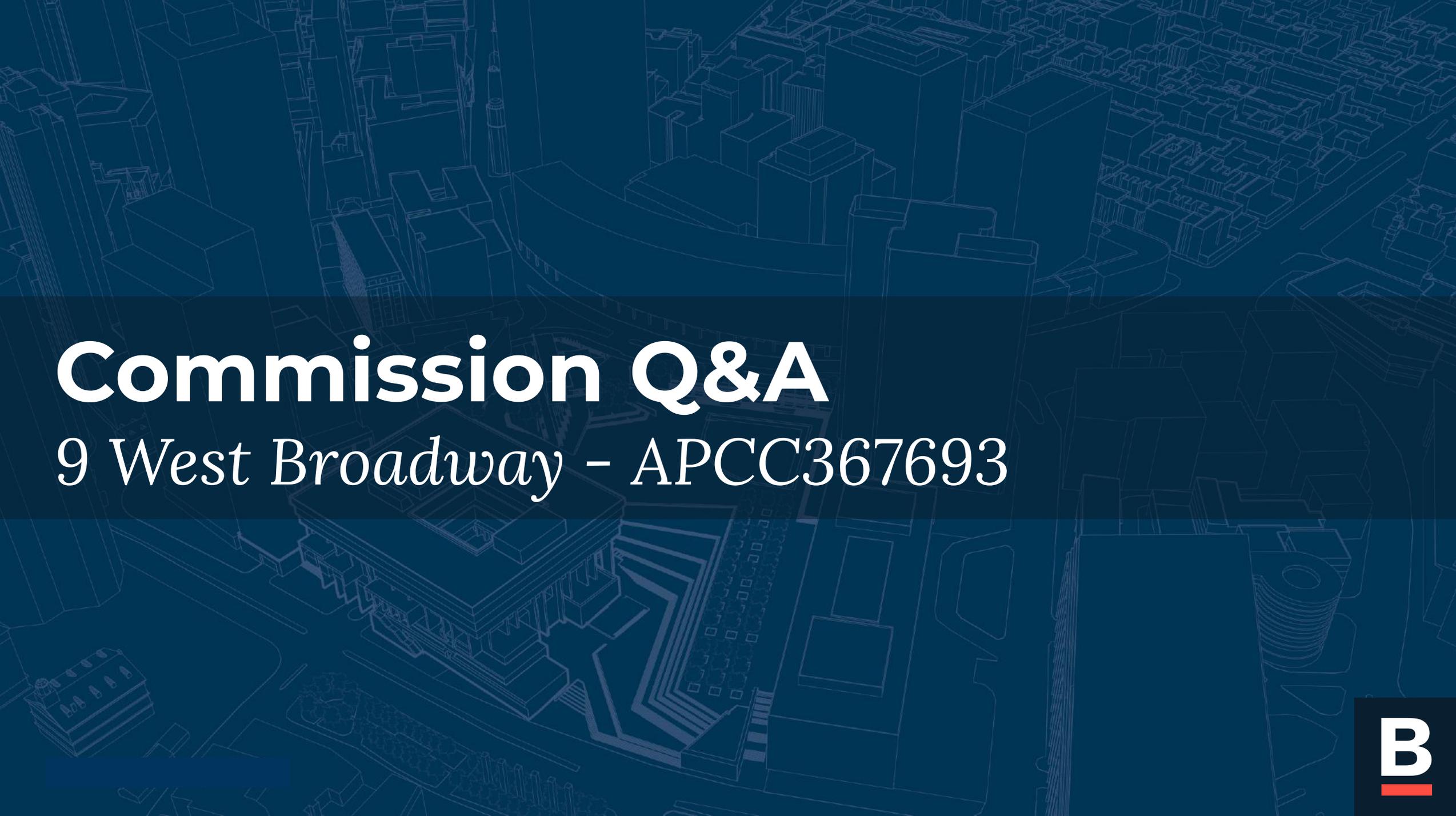
Commission Motion & Vote

128 Dartmouth Street- APCC453829

Revocation of South Boston Parking Freeze Permit

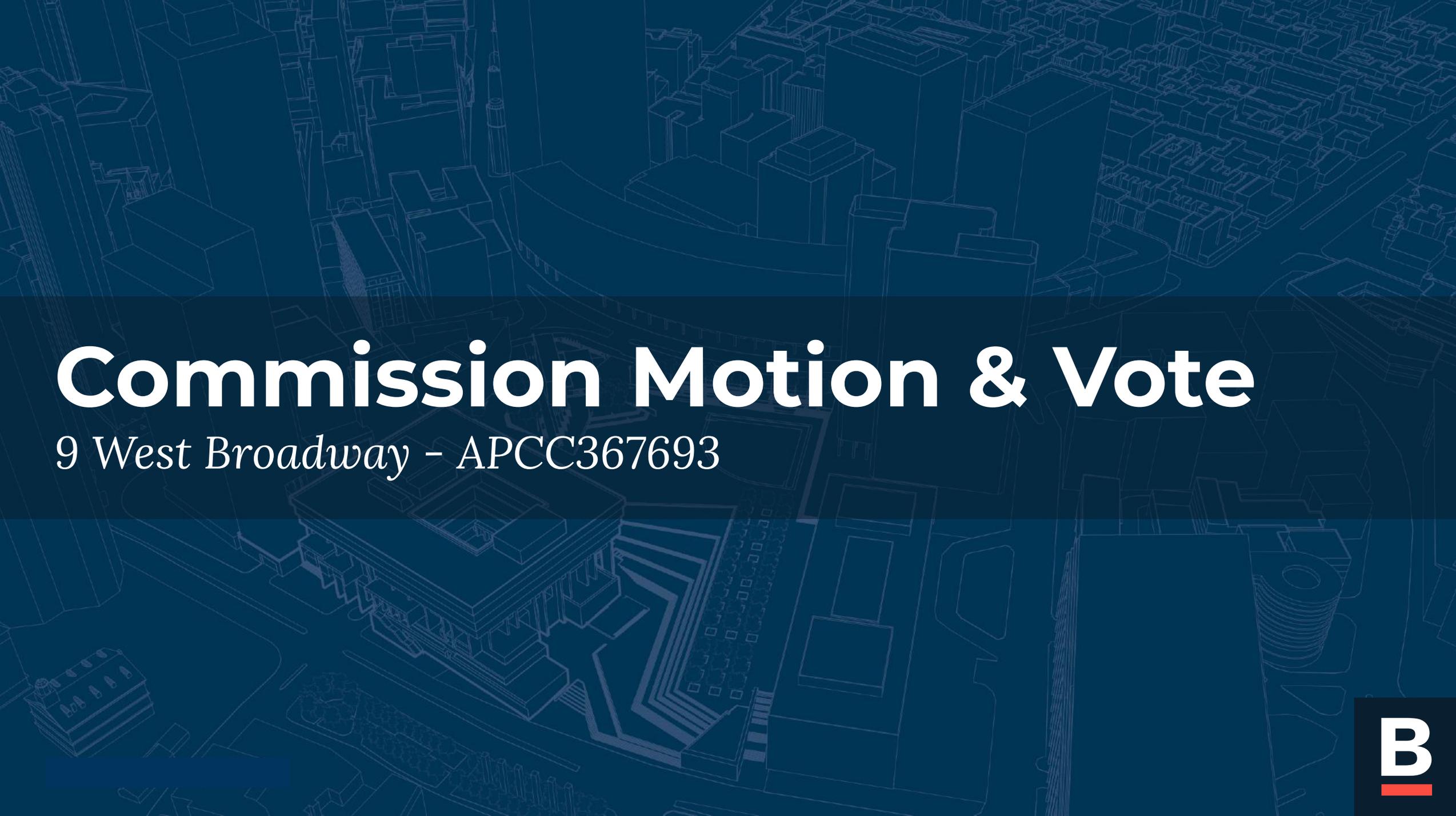
9 West Broadway - APCC367693



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Commission Q&A

9 West Broadway - APCC367693

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Commission Motion & Vote

9 West Broadway - APCC367693

2023 Hearing Dates





Proposed 2023 Hearing Dates and Times

All proposed times are on Wednesday at 1:00 p.m.

Note: Hearings will be remote at least through March 2023, in accordance with Chapter 107 of the Acts of 2022. If remote meeting provisions are not extended, a quorum of commissioners, including the chair, will need to be present in person at a publicly noticed location.

Filing deadline	Hearing date
December 16, 2022	January 25
January 13	February 15
February 10	March 15
March 17	April 19
April 14	May 17
May 12	June 14
June 16	July 19
July 14	August 16
August 11	September 13
September 15	October 18
October 13	November 15
November 10	December 13

Acceptance of the Meeting Minutes



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Commission Motion & Vote

Acceptance of the November 16, 2022 Meeting Minutes



Adjourn

Thank you for your participation!

