



MEETING NOTES

BUILDING EMISSIONS PERFORMANCE STANDARD

OPEN HOUSE #4

January 2020

The purpose of this Open House was to:

1. Remind participants of the policy context and development process;
2. Present the draft policy;
3. Review next steps;
4. Provide participants with the opportunity to ask additional questions and provide feedback.

Questions and comments received and answered live:

- David Heimann:
 - I am a resident of a co-housing condo in Jamaica Plain run by the residents. There are easily more than 10,000 square feet in facilities, basement area and the like. How can we figure out the total square footage of the building? Does it include residential spaces, common spaces, or both?
 - Staff answer: The gross square footage is defined as all spaces inside the exterior envelope, which includes common areas and residential units. You can check in the assessor's database.
- Dennis Villanueva:
 - Will there be any consideration of carbon offsets in the near future? I understand there will be stringent rules for them, but displacing thermal load is difficult for some types of buildings and I am curious if this will be discussed or allowed at some point.
 - Staff response: Carbon offsets are not included as a standard compliance mechanism in the draft policy as presented, in part due to feedback received from community partners in the Resident Advisory Group. Buildings with unique circumstances would be able to submit a hardship compliance plan for review and approval by the Review Board.
 - The City's carbon report [*Carbon Free Boston*] projected that there will be a significant gas load by 2050, which means that not every building and sector can electrify. They will need gas unless something else shows up. How will we deal with this because paying the Alternative Compliance Payment will be a premium for facilities?
 - Summary of staff response: The Carbon Free Boston model used only technologies that were commercially available in 2018-2019, resulting in a conservative projection of energy transition. The analysis



identified a decarbonization scenario that decreased building sector emissions by approximately 90%, with a remaining 10% of emissions that would need to be offset. Compliance mechanisms to achieve the emissions targets may be reviewed as part of a future program evaluation. Additionally, building owners with unique circumstances would be able to submit a hardship compliance plan for review and approval by the Review Board.

- George Henderson: The Technical Advisory Group notes show that allowing flexibility for the individual compliance schedule required tighter emissions targets. The difference in targets for this schedule and the standard emissions targets can be up to 9% for the 2025 goal and 14% for 2030. Is that true? What is the reasoning for this and how will buildings accomplish this?
 - Staff response: Allowing for individual self-improvement compliance plans would require that emissions targets be tighter in order to ensure that Boston will meet its interim goal of reducing emissions by 50% by 2030 from a 2005 baseline. The City discussed this tradeoff with the TAG and other stakeholders, and received feedback that continuing to offer a self-improvement, or Individual Compliance Schedule, was preferred.
- Maxwell Burke: Can you expound on how we are planning on executing the portal that would unite the consumers with the energy efficiency providers (for lack of a better term)?
 - Staff response: Buildings owners may connect with resources through the [Boston Energy Retrofit Resource Hub](#). The City will be expanding programming in the coming years to serve building owners, tenants and workers.
- Issa Ramaji: Will there be any funding for university research projects or innovative solutions from small businesses? NYSERDA has supporting funding for similar projects.
 - Staff response: The Massachusetts Clean Energy Center (www.masscec.com) has offered resources and funding for innovative projects. The National Science Foundation has also offered funding, including for university research projects and small business programs.
- Loie Hayes: Since current data is untrustworthy and new buildings will be challenged to create this data, why are we proposing waiting five years for third-party verification? It is a wasted opportunity as building owners could be making plans to comply but they need to work using correct data from the very beginning. I suggest requiring third party verification in the first year instead of the 5th year, or within the first 5 years of reporting data, or prior to their first data report, or within the first year of their first data report. I am not not suggesting third-party verification every year.



- Staff response: Thank you for your suggestion, we will take it under advisement.
- Scott Greenbaum: District steam is the largest emitter of GHGs per unit of energy delivered to the sites. What are the plans to phase out district steam? Is this policy restricting new district steam connections? Allowing new buildings to connect to district steam would result in having to figure out how to electrify them in the future. I don't believe that we can be carbon neutral while using district steam, even if it is produced using green hydrogen.
 - Staff response: The draft policy is technology agnostic. The question of how to decarbonize Boston's district steam systems was discussed in the context of the Technical Advisory Group and will continue to be a topic of discussion.
- Joel Harrington: Enel X is the largest battery storage and EV infrastructure company in the US. We are headquartered in Boston and are a commercial tenant. We like the addition of battery storage with solar. We have done a project with UMass Boston which is saving the university \$1.5 Million in energy expenses. We also like exemption on EV and EV infrastructure as building owners shouldn't be penalized for doing the right thing, especially since 2/3rd of emissions in the city comes from the transportation sector. One addition we would like to see is Eversource's demand response programs. Building owners use these programs to reduce peak reductions when emissions tend to be high and energy is costly. Examples include various universities, large commercial tenants, and building owners that use the programs on hot summer days and cold winter days where they are asked to shift their usage for reliability purposes. These programs pay building owners for participating and it should be encouraged. It is a low cost investment and doesn't require capital intensive protects and retrofits.
 - Staff note: Based on the [2018 City of Boston Greenhouse Gas Inventory](#), the transportation sector accounts for 29% of Boston's emissions. Conversely, the transportation sector accounts for 65% of statewide emissions.
- David Heimann:
 - I heard someone talk about district steam as being a source of inefficiency and difficulty in improving. The way I understand it, a number of buildings heat with steam that is generated by a central boiler. Is that what district steam is?
 - Staff response: District energy systems are typically composed of a central energy production facility that distributes heating, cooling and/or electricity to a network of surrounding buildings.
 - Suppose one takes a boiler facility that runs on fossil fuels and replaces it with an electric boiler or a solar panel-driven boiler, is that a good way to take a district system and make it much more energy efficient? Is that what Community Choice Energy does?



- Staff response: Community choice electricity (CCE) is a different program whereby a municipality procures bulk electricity on behalf of its residents, creating a secure and affordable electricity supply. Learn more and sign up for Community Choice Electricity here: www.cityofbostoncce.com. Regarding district energy systems, they can be decarbonized, but a performance standard is technology agnostic and does not prescribe how a given system should decarbonize. Building owners can report a custom emissions factor specific to their energy system.
- Amanda Clevinger: What is the timeline for the legislative process?
 - Staff answer: We are currently receiving feedback and continuing to refine the policy. We will share any updates when they're available.
- Andy Wells-Bean: Eventually all buildings will need to be net zero in Boston for us to hit our climate goals. Won't the long gap between reporting and meeting standards for the 20,000 to 35,000 square feet contingent leave us with a lot of catching up to do right as we should be focusing on helping smaller buildings get to Net Zero? I feel like we should be doing a lot more in this space before 2030.
 - Staff answer: The existing policy covers buildings that account for the largest chunk of our emissions and the smaller buildings contribute to far less carbon than a single one of our largest buildings. By dropping our threshold, we are aligning ourselves with the small project threshold at the Boston Planning and Development Agency and we will be adding approximately 50% more buildings. We are also creating a framework that will encourage and enable building owners to take action. For smaller buildings that are still underneath the threshold, the resource hub will be available for decarbonization and resiliency resources. Smaller buildings under the new policy will not be required to meet any 2025 targets to give them a longer planning horizon but will still be required to hit the same targets as larger, already covered buildings in 2030.
- Yve Torrie: How have the ISO-NE grid emission factors been factored into the standard? Will the buildings be penalized if the grid doesn't stay on the clean grid trajectory they are anticipating?
 - Staff answer: Under the Massachusetts Clean Energy Standard, utilities are required to decarbonize electricity by 80% by 2050 and this was built into our assumptions for the policy. Buildings would have several clean energy purchasing options available to them even if the grid emission factor is not tracking with what is mandated.
- Linda Hirsch: Boston Climate Action Network has been looking into the data and is concerned about the compliance and enforcement (not fines) of the new policy as the number of BERDO non-compliant buildings is higher than expected. We were told that the reason the City hasn't gone after these buildings is because the



mechanism we have is to take them to court and that is too cumbersome. Will there be a new mechanism going forward or, in general, what is it going to take to make sure that if people don't do what they are supposed to do, something happens to them?

- Staff answer: The performance standard is designed to ensure effective and impactful enforcement. The draft policy includes several enforcement pathways created for municipal governments by Massachusetts General Law.
- Trish Baumer: For the complementary strategies that were presented, how do we plan to incorporate that? Is it through legislation? They did not seem like they were environment-related.
 - Staff answer: The complementary strategies presented include programs and separate policies that are not included in the policy itself but would help support equitable implementation. The presentation highlighted the development of programming to support building owners, tenants and workers in a new resource hub, and anti-displacement policies, some of which are already signed into law, and others that would need to be adopted at the state level and for which the City of Boston has advocated in favor of (specifically, just cause eviction and right to counsel).
- Bart Bales, PE: We are working with a building on district steam and are trying to convert it to net-zero eventually. I am the mechanical systems engineer in this project and would like to use water-to-air heat pumps if there was a district hot water loop (if it is being created). Is there an effort to coordinate these efforts? We will connect later for better understanding.
- RP Thompson: Currently, after five-years a building is required to do an energy audit and we said this is changing to the emission standard. How soon does the emissions standard need to be met or will there be an extension period as it is a new requirement? Has that been written into the policy?
 - Staff answer: BERDO buildings are currently required to undertake an energy action or assessment; this requirement may be met by undertaking an ASHRAE Level 2 energy audit, among several other compliance options. The proposal is to shift from an energy action and assessment requirement towards a performance standard. The first compliance period would likely begin in 2025 (depending on when the ordinance is passed), which would give buildings time to plan ahead to meet the targets.
 - Staff note: Building owners are encouraged to contact our team to understand how the proposed targets would apply to their building(s) by emailing our BERDO team at energyreporting@boston.gov.
- Dennis Carlberg: I am very interested in the evolution to the equitable investment fund. I think it is a very good way to think about how to use the Alternative Compliance Payments. I echo Dennis Villanova's thoughts on encouraging a verified



offset pathway. It may not be for the first round but can be considered as the ordinance moves forward.

- Danilo Morales: What is the city doing with unions or in general to include more women and people of color within workforce development to create local jobs and decent wages for people through this policy?
 - Staff answer: We are collaborating with the Office of Workforce Development and other stakeholders to ensure we make a tight connection between workforce development, economic inclusion, and new workforce opportunities for people of color and residents.
- Theresa Mason: There is so much work involved with this process but it will be challenging. It will need more staff. Have we thought about how we will staff up for this ordinance?
 - Staff answer: Staffing needs are addressed as part of the City's normal budgetary process. The City would ensure that the appropriate staffing capacity is given for meeting the needs of this policy if passed.

Record of questions and comments received in the chat during the presentation:

Note: Several questions were answered live during the meeting or during small group discussions. We have noted where questions were answered live. (Typos were edited for clarity.)

- John Karnath: How many government buildings and K-12 schools fall into the 35K threshold. Could the program track the projects and progress of these buildings?
 - Staff answer: All municipal buildings are covered under the current policy (BERDO), and would be covered in the performance standard. The Renew Boston Trust is the City's program to finance energy efficiency, renewable energy and resiliency projects in the City of Boston's buildings. More detail can be found on [this page](#).
- Raquel Halsey: What is the racial, ethnic, and socioeconomic breakdown of the input received?
 - Staff answer: To convene the Resident Advisory Group, One Square World and Alternatives for Community and Environment worked with Chinese Progressive Association, City Life/Vida Urbana and New England United for Justice to reach out to residents of multifamily buildings covered under the policy, particularly in environmental justice communities. Participants include Asian residents, Latinx residents, Black residents, and white residents, from several neighborhoods including Chinatown, Allston-Brighton, Dorchester, Jamaica Plain, and Roslindale. In order to support participation by low-income residents, residents have been compensated for their time spent attending the meetings and sharing their



lived expertise to help shape the policy. The meetings have also included interpretation in Cantonese at all meetings, and Spanish, Russian and Cabo Verdean Creole as requested.

- Maxwell Burke: Is there a public database of the buildings discussed that is available?
 - Staff answer: The list of currently covered buildings may be found on the BERDO webpage [here](#). The BERDO data to date can be found [here](#).
- Ellen Richer: Able to report or required to report? (For additional proposed metrics)
 - Staff answer: The proposed additional metrics are optional.
- Yue Huang: Are there any rewards or incentives for doing beyond the bare minimum? E.g., if a building manager meets standards earlier than 2031 or if they submit additional metrics that are not required?
 - Staff answer: The draft policy presented during the meeting does not include specific incentives for meeting emissions targets early. Early adopters may meet targets for several compliance periods early, and may benefit from more efficient building operations over a longer period of time.
- Michele Brooks (she/her) Sierra Club: Love this component of the policy! [*note: comment related to the reduced threshold for covered buildings*]
- Andee Krasner: Do building owners of buildings that are between 20K -35K square feet really need 10 years to learn a new policy and figure out how to comply? That seems like a very long time given that Boston has recognized that the climate crisis is a health emergency and GHGs from buildings are driving climate change.
 - *Question answered live during the meeting. See answer above.*
- Will Jeffers - ICA: How is building square footage reporting currently vetted? If a building does not follow the Portfolio Manager square footage guidelines and overreports its square footage, it could lead to possible underreporting of Site EUI and GHG Emissions Intensity.
 - Staff answer: Periodic third-party verification would authenticate reported building data, including square footage by use type.
- John Karnath: Will the blended emissions standards be aligned with Energy Star?
 - Staff answer: The blended emissions target would be based on the building's usage as reported through ENERGY STAR, or a comparable system, and periodically verified by a third-party professional.
- Will Jeffers - ICA: Has Massport committed to voluntary compliance for properties within the City of Boston?
 - Staff answer: The Commonwealth is developing a 2030 Clean Energy and Climate Plan and 2050 emissions reduction targets; the City is participating in its development as a member of the Implementation Advisory Committee for the Global Warming Solutions Act.
- Tom Chase, Dorchester: In terms of equity, for housing specifically, kgCO₂e/person/year would seem to be a more appropriate metric for targets



rather than kgCO₂e/sf/year. A luxury building with large units could emit far more per person than an affordable building with smaller units.

- Staff note: The technical analysis assessed emissions intensity per occupant and found few accessible sources of consistent data on building occupancy per building, to the extent that it was deemed impractical to set a standard based on occupancy. The meeting slides and report from the Technical Advisory Group can be found on the policy project page [here](#).
- David Heimann: For a residential condominium with common facilities, does the square footage include the common facilities or only the residential units?
 - *Question answered live during the meeting. See answer above.*
- Will Jeffers - ICA: There is no incentive for space efficiency!
- Yve Torrie: what are the individual compliance pathway's interim goals?
 - Staff answer: Individual compliance schedules would need to be aligned with the City's emissions reduction goals of 50% by 2030 from a 2005 or later baseline and 100% by 2050. Interim goals would need to be proposed by the building owner and approved by the Review Board.
- George Henderson: Are the performance standards designed to ensure Boston meets the goal, set forth in "Imagine Boston 2030," of reducing carbon emissions 50% by 2030?
 - Staff answer: The emissions standards are aligned with Boston's goals of a 50% reduction by 2030 from a 2005 baseline and carbon neutrality by 2050.
- Maxwell Burke: A lot of luxury residential buildings have the kind of long term energy contracts that they are talking about that makes them "exemption compliant" so it's a moot point.
- Scott Greenbaum: The elephant in the room is Veolia and MATEP the two district steam systems.
- Will Jeffers - ICA: How does the implementation of this policy dovetail with the implementation of the recommendations of the Climate Ready Boston initiatives? As a Facilities manager of a vulnerable community resource/harborfront property in the Seaport, I would like to see a concrete commitment to the implementation of recommendations in the Climate Ready South Boston report to be concurrent (or preferably prior to) substantial capital investment by the ICA to decarbonize its facility.
 - Staff answer: The Climate Ready and carbon neutrality programs are closely coordinating. To learn more about the Climate Ready Boston initiative and its implementation, please visit the [program page](#).
- Judy Teitelman: Does the BPDA have any buy-in with these standards and will the ZBA be taking these standards into account when it comes to zoning decisions and variances?
 - Staff answer: The Environment Department is working closely with the BPDA to align this draft policy and the Zero Net Carbon Zoning Initiative:



<http://www.bostonplans.org/planning/planning-initiatives/zero-net-carbon-building-zoning-initiative>

- Marisa Sotolongo: If building owners have the option to use either onsite renewable energy versus offsite energy options to comply, will we have public information on how many are choosing one or the other?
 - Staff answer: Annual data disclosure would include the building's total emissions, as well as if and how it has met the emissions targets, including onsite and offsite renewable energy.
- John Karnath: The electrical industry has done a solid job introducing wind, solar into their grids. There are promising studies that clean hydrogen can be added to NG, thus reducing carbon emissions. Would the City consider this option if it becomes viable?
 - Staff answer: This draft policy is technology agnostic. Standard emissions factors would be detailed in the regulations, and could be updated by a regulations change should the carbon intensity of an energy source change. Building owners may submit custom emissions factors if relevant with supporting documentation.
- Douglas E Carney, AIA MBA: will all City buildings comply too?
 - Staff answer: Yes, all City buildings are covered under both existing and draft policies.
- Douglas E Carney, AIA MBA: should be interesting
- Michele Brooks (she/her) Sierra Club : Is the Building Retrofit Resource Hub being run by Eversource and if so, could you explain why a more neutral entity couldn't be tasked with running it?
 - Staff answer: The [Building Energy Retrofit Resource Hub](#) currently available online is an early iteration of the program, and is offered through a partnership with the Mass Save program, including local utility Eversource. The resource hub described in the draft policy will incorporate additional programs and resources as it develops.
- Loie Hayes: Waiting 5 years for third-party verification risks too many years of energy decisions being made on the basis of bad data.
- Douglas E Carney, AIA MBA: Will the city pay fines too?
 - Staff answer: All municipal buildings would be covered under the policy.
- Issa Ramaji: Are there any funds available for research projects or innovative solutions by small companies?
 - *Question answered live during the meeting. See answer above.*
- Stefan Doerre: Using the current BERDO data and the emissions standards from the draft proposal I calculated that over 60% of the buildings already meet the 2025 standards. On the surface that could be good news. However, about 20% of the buildings report efficiencies (EUIs) too good to be true, based on their use, age or even Energy Star score. How does the City ensure BERDO data quality right now



and not only in 2025 so that owners don't think they already comply based on their current reports?

- Staff answer: Outreach to building owners will be an important part of the engagement work leading up to 2025 to inform them of the policy, strategies to achieve the targets, and to address potential data discrepancies. Third-party verification will further support data accuracy and allow building owners to verify compliance with emissions standards.
- Will Jeffers - ICA: Is Portfolio Manager a robust enough data platform to support the objectives of this initiative?
 - Staff answer: We are in close communication with ENERGY STAR related to this policy and are working to ensure that Portfolio Manager, or a similar platform, will fulfill the policy's needs.
- Michele Brooks (she/her) Sierra Club: Has the incoming acting mayor Janey been briefed on this policy and do we know if her administration would introduce it or whether it would need to be introduced by a City Council member?
 - Staff answer: We are currently receiving feedback and continuing to refine the policy. We will share any updates as they're available.
- Linda Hirsch : Current BERDO data show a lot of buildings that don't report. We were told the City never goes after those owners because it is required to take them to court, and that is too cumbersome. How do we know that reporting AND meeting the standards will actually be enforced under the new law?
 - *Question answered live during the meeting. See answer above.*
- Tom Chase, Dorchester: The current MA energy efficiency incentive system in general is exceptionally complicated - MassSave (multiple programs, multiple administrators), LEAN, SMART, AECs, etc. - adding another vehicle for much needed investment is appreciated. Seeking authority to centralize program administration across all of these entities could streamline delivery, lower barriers to entry, reduce duplicate efforts, stretch budgets further, and improve the impact of new investments.
- Will Jeffers - ICA: Portfolio Manager has specific guidelines for calculating square footage for various types of buildings
- Maureen Quinn-Dupont: Audubon's Lights Out program is turning off a building's excess lights. Lights Out costs no money, reduces carbon, saves money on energy and saves bird's lives. Incorporating Lights Out will help Boston reach its carbon reduction goals.
 - Link to the [Lights Out program page](#).
- LeeAnn Gordon, MFA Boston: Will there be penalties for non-compliance?
 - Staff answer: Yes, the draft policy details fines for non-compliance.
- David Heimann: One concern I have is when we built our condo in 2005 we designed to have as few emissions as possible, so this will create a higher and more expensive



bar to clear now that would have been had we neglected to make our buildings energy efficient back in 2005. This would result in a good deed being punished!

- Staff note: Early adopters with more energy-efficient buildings that already comply with emissions thresholds would not need to take additional action. All buildings will eventually need to become carbon neutral by 2050; early mover buildings would likely have more time to plan for capital improvements. If you have questions about your building, you may reach out to the BERDO program team at energyreporting@boston.gov.
- Claire Corcoran: Geo-thermal networked micro districts could diversity heating and cooling, building in resiliency as a non electric renewable energy source, non explosive as well. See HEETma.org and Eversource rate case in process.
- Martyn Roetter: Is there a plan to install EV charging stations throughout the City since many residents will not be able to consider installing charging stations in their buildings?
 - Staff answer: The City's Zero Emission Vehicle Roadmap adopted an aspirational target that every household will be within a 10-minute walk of an EV car share facility or a publicly accessible charging station by 2040. The City is deploying electric vehicle charging on six municipal lots, and is exploring next steps to continue to expand public charging access. Recharge Boston is the City's Zero Emission Vehicle program to support electric and zero-emission vehicle adoption:
<https://www.boston.gov/departments/transportation/recharge-boston-electric-vehicle-resources> ZEV Roadmap
- Dolores Fazio: Would like to see something stated about the value of embedded carbon. i.e. The levels of waste disposal residents take for granted.
- Will Jeffers - ICA: Hi David, I think the new standards are based on a fixed target rather than percentage improvement from a base year, so I don't think you will be penalized for past energy efficiency
- Bart Bales: Can Hub address be put in chat?
 - Staff answer: Building Energy Retrofit Resource Hub:
<https://www.boston.gov/departments/environment/building-energy-retrofit-resource-hub>
- Maxwell Burke: Who should we contact about Hub innovation feedback? Thank you.
 - Staff answer: Please contact us at energyreporting@boston.gov for feedback for the development of new resource hub programming.
- Scott Greenbaum: Since district steam is the most carbon intense source of energy. What is the plan to phase Veolia and MTAP out by 2050. This will require planning. Also will new steam connections be outlawed.
- RP Thompson: when would the first emissions standard need to be met if this policy passes as written?



- Staff answer: The first year of compliance for the emissions standard would likely be 2025 as reported to the City by May 15, 2026 (depending on when the ordinance is passed).
- Heather Merhi-Mathews: For \$234/mtCO₂e compliance payment, what is the assumed conversion between mtCO₂e and MWh – for comparison to REC prices?
 - Staff answer: This will vary from grid to grid and over time. In 2018, the emissions of ISO-NE is 0.2984637795 mtCO₂e/MWh.
- Marisa Sotolongo: If compliance can be spread out over multiple buildings owned by the same person, is there a mechanism to ensure that EJ communities aren't being left behind through this process? Is there a point at which all buildings need to meet some standard?
 - Staff answer: Building owners seeking to comply using a portfolio would need to obtain Review Board approval. The Review Board may request that the building owner applying for a portfolio pathway present how they are prioritizing decarbonization of buildings within their portfolio that are located in or near environmental justice populations. Portfolio review procedures would be further detailed in the regulations.
- Maxwell Burke: Initial 3rd party verification would be beneficial. Developers will not be pleased though.
- Will Jeffers - ICA: Third party verification of base year data would be great!
- Winston Vaughan: Or perhaps auditing outliers?
- Maxwell Burke: Can't audit without baseline data
- Will Jeffers - ICA: Is that figure of emissions from the transportation sector correct? Earlier in the presentation it was put forth that buildings are responsible for the bulk of emissions. Please clarify.
 - Staff answer: Buildings account for approximately 70% of Boston's emissions. The annual greenhouse gas inventory and its methodology are available online at [this page](#).
- John Karnath: Will there be more emphasis on greening the grids (gas, electric, steam, etc.) as this will go very far in carbon neutrality? Distribution resistance loses over 30% of all energy before it gets to the users. Most grids are pre-1960 and grid replacement will lower resistance and mitigate leaks, etc.
 - Staff answer: Grid decarbonization and modernization is discussed in the [Carbon Free Boston technical reports](#).
- Theresa Mason, BCAN: How does EEOS anticipate meeting the staffing needs implied in the draft ordinance?
 - *Question answered live during the meeting. See answer above.*
- John Karnath: We should consider another cap on failure to meet emissions standards. These are being eliminated from the current to the new.



- Mark Lukitsch: I thought I heard that Emergency Generation might begin to be phased out in 2030. Is that correct, or did I mishear? If the intent would be to phase out emergency generators, please explain.
 - Staff answer: The draft policy proposes to exempt emergency generators from the calculation of a building's emissions until 2030, unless otherwise amended in the regulations.
- Antonette Simonelli: I'm on the resource hub and see options for renters, home owner and landlord, where would a property manager fall under that, as we're not any of those. thank you!
 - Staff answer: Property managers may contact the [Building Energy Retrofit Resource Hub](#) for assistance.
- Bart Bales, PE: District heating and cooling based on circulating either neutral water or hot and chilled water has been proposed. Is there any planning to coordinate such an effort with this project? This would allow for building future HVAC planning to be based on water to air or water to water heat pumps.
 - Staff answer: The policy is designed to be technology agnostic. The City is supportive of technological innovations that help the community meet its climate goals.
- John Karnath: The Federal government is also considering Compliance Payments for carbon emissions. Will the City modify their tonnage fee or work with the Federal team to balance this?
 - Staff answer: In the draft policy presented, the payment level of \$234/mtCO₂e is the average retrofit cost per ton, based on analysis on local and regional data, designed to reflect the local cost of carbon abatement in Boston. The payment level would be periodically re-assessed to ensure that it is aligned with market local conditions.
- Scott Greenbaum: We are adding over 10,000,000 SQFT of new barely code compliant all-glass buildings in the next five years approved by BPDA and ZBA. We are going backwards fast. What is being done to get these buildings up to code and working toward the 2025 and 2030 goals. Where is the \$1,000,000,000's of coming from? Is the City going to raise it?
 - Staff answer: The BPDA is undertaking a Zero Net Carbon Zoning Initiative to help ensure future new construction is consistent with our community goals. You can learn more about the initiative [here](#). For those buildings that have already been built, the owners and managers would be required to meet the with the emissions standards described in this draft policy.
- Bart Bales, PE: We are currently looking at transforming a building currently connected to the steam district loop and find the question relevant.
- Loie Hayes: One of the goals of this policy change is to produce cleaner air by reducing burning of fossil fuels locally. Doesn't the allowance of PPAs outside of the



NE grid undercut this goal? [Similar question: Andee Krasner: Do the PPAs have to be located in New England? If not, can you explain why not?]

- Staff answer: Building owners would have several options for off-site renewable energy procurement, including non-emitting Massachusetts Class I RECs and Power Purchase Agreements (PPAs) inside or outside of New England. Under the draft policy, PPAs may still need to meet specific additionality criteria as may be further refined in the regulations. On-site efficiency and fuel-switching are strategies that would more directly address local air pollution, including greenhouse gases.
- Hailey Moll: Staffing for BERDO has been limited to one or two positions for the past 7 years. How does EEOS anticipate meeting the staffing needs implied in the draft ordinance?
 - Staff answer: Staffing needs are addressed as part of the City's normal budgetary process. The City would ensure that the appropriate staffing capacity is given for meeting the needs of this policy, if passed.
- Hailey Moll: Existing BERDO data is available publicly, but that data is understandable only if you know how to analyze complex factors in the database. How is disclosure going to be improved in BERDO 2.0?
 - Staff answer: The City is developing scorecards and other tools to disclose building data in a more accessible and legible format for all users. The draft policy also would also require City disclosure in multiple languages.
- Stefan Doerre: Realistically the City will be in a position to need to enforce reporting. Compliance with reporting is declining year after year. Right now the City doesn't enforce reporting, possibly because of a lack of enforcement tools. Yet BERDO 2.0 does not seem to provide any new tools for enforcement of reporting. Without reporting, emissions are not known and emissions fines can't be levied. Wouldn't the City be well advised to create better tools for enforcement in the new ordinance?
 - Staff answer: The performance standard is designed to ensure effective and impactful enforcement. The draft policy includes several enforcement pathways created for municipal governments by Massachusetts General Law.
- Brian Smith: Will the advisory board include members from the building operations field to bring "real world" input to the collective?
 - Nominations would be solicited from people with expertises in many fields, including building engineering and energy and real estate development and management. Review board composition and the nomination process would be further detailed in the regulations.
- Winston Vaughan: I think he's talking about this:
<https://heet.org/2020/01/03/eversource-plans-three-geothermal-pilots/>



- Winston Vaughan:
<https://heet.org/wp-content/uploads/2019/11/HEET-BH-GeoMicroDistrict-Final-Report-v2.pdf>
- Maryellen O'Donnell: What was the mix of multifamily buildings that were included in establishing the carbon emission targets. How did one account for size and age of building?
 - Staff answer: All multifamily buildings covered under the current BERDO policy were included in the analysis to establish the carbon emissions targets. The technical analysis considered many different characteristics of buildings, including age and size, and found that most did not significantly impact emissions intensity in aggregate. See the slides from the first TAG meeting for more detail ([available here](#)).
- Dennis Villanueva: Just a clarification: we are talking total emissions, meaning source emissions. Correct?
 - Staff answer: For the purposes of the draft policy presented, we are counting Scope 1 and Scope 2 emissions.
- Maryellen O'Donnell: What is the role of the 75 Energy Star score in this new proposed phase?
 - Staff answer: The performance standard would be based on building emissions, not on ENERGY STAR Certification and Energy Star scores, though building owners may find these tools helpful to understand building progress.
- Pat Gozemba: Please check out Geothermal Microdistricts to diversify heating and cooling. See HEETma.org and Eversource rate case in process. A Geothermal Micro-district will hopefully be initiated first in Lawrence.
- Norm Lamonde: Has the City defined parameters for the Review Board to use in assessing what constitutes a hardship?
 - Staff answer: The standard for hardship will be further defined in the regulations.
- Norm Lamonde: Will exempted square footage and associated emissions impacts be tracked and disclosed?
 - Staff answer: The presented draft policy does not include any exemptions from the reporting requirement; all covered buildings will be required to report the annual energy and water use to the City, with disclosure by the City of Boston.
- Norm Lamonde: Will buildings that follow Hardship Compliance Plans still need to reduce emissions consistently over time? If not, how does the City anticipate making up for the emissions of exempted buildings?
 - Staff answer: Hardship Compliance Plans would vary based on a building's unique circumstances, and could take the form of an extension, adjusted



targets, or other unique pathways; the Review Board may set additional criteria as appropriate, to be further detailed in the regulations.

- Maryellen O'Donnell: Please elaborate on the unique circumstances that would qualify an older building to seek an alternative pathway in its quest to meet the targeted carbon emission performance standard?
 - Staff answer: The process and standards for Hardship Compliance Plans would be further detailed in the regulations.
- Emily Jones: Hi Kat, Alison, Carl, Trinh, and team - Great to hear about the connections you are building between green buildings and high-road green jobs. Interested in making sure resiliency related funding is included in the funds you provide to support multifamily affordable housing owners in creating low-carbon, climate ready communities as they approach major rehab/refi events. Thank you!
- Will Jeffers - ICA: Since this discussion is happening virtually, how are stakeholders without internet access being included?
 - Staff answer: The Resident Advisory Group meetings have included residents who connected to meetings via phone. WiFi hotspots were not requested by any residents.
- Raquel Halsey: Yes @ Danilo. And paid apprenticeship programs. Will these resources be listed on the WIOA website?
 - Staff answer: We are collaborating with the Office of Workforce Development and partners at other levels of governance to ensure we make a tight connection between workforce development, economic inclusion, and new workforce opportunities for people of color and residents.
- Linda Hirsch: And Inspectional Services, as retrofits are done?
- Dolores Fazio: @ Danilo Linking the State's workforce development initiatives to the City's is one of the keys too
- Maryellen O'Donnell: Can you please post a copy of this draft?
 - Staff answer: The draft ordinance is not yet available. Up-to-date materials will be posted on the [project page](#) as they become available.