Building Seattle Better

Improving Performance in Existing Buildings

Technical Advisory Group – Meeting #3

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AGENDA

- Welcome, Ground Rules
- Recap
- Equity
- Metrics
- Targets
- Wrap Up

TAG Meeting Ground Rules

1. Stay mentally and physically present
2. Contribute to meeting goals
3. Let everyone participate
4. Listen with an open mind
5. Think before speaking
6. Stay on point and on time


Recap

TAG Meetings Topic Schedule

TAG Meeting	Draft Topics
Meeting #1 ✓	• Introduction, background, context
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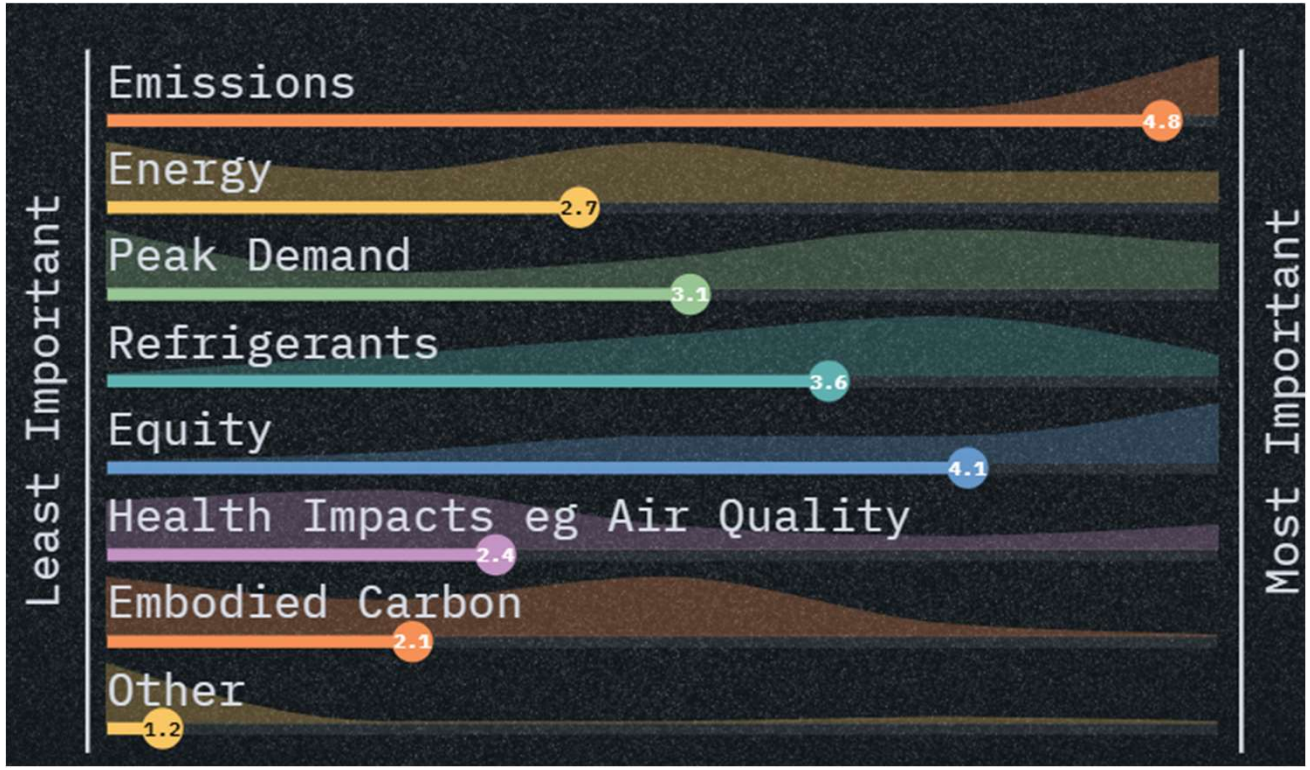
Meeting #4	• **Targets cont.:** finalize input on targets in relation to compliance intervals • **Compliance intervals:** how many cycles, timing of cycles, relationship with final and interim targets?
Meeting #5	• **Compliance intervals cont.:** finalize input on compliance intervals • **Punchlist items:** wrap on any new or unaddressed topics/ideas
Meeting #6	• **Market perspective:** considering TAG input on policy design, what key market shifts are needed to ensure a successful carbon-based BPS? How can the City help support this transition as part of the core policy design and/or other policies and programs?2 • **Closing:** Synthesis and summary of TAG process and input.

Recap

- Metrics and targets are critical elements in each BPS pathway and how they will impact BPS goals as well as owners and race and social equity
  - Year for final performance target? ….2040, 2045, 2050?
  - How many compliance cycles until final target?....3, 4, 5, 6?
  - How much to reduce in each cycle?
  - Interim targets by building type or individual buildings?

Metrics Menti Recap




Racial Equity & Social Justice

City of Seattle: Racial Equity and Social Justice

- "Racial equity: When social, economic and political opportunities are not predicted based upon a person's race." *City of Seattle Racial Equity Toolkit*

- "**To help break down systemic barriers, City employees prioritize racial equity when creating policies, making decisions**, and in our daily work and interactions. In addition to leading with racial equity, City employees recognize inequities based on gender, sexual orientation, ability, age, citizenship status, and other ways people are marginalized. **We acknowledge historical truths that have led to unequal outcomes for communities of color.** We involve individuals and communities most impacted by racial and social inequity in the development of policies and practices, both within our workforce and throughout Seattle." *City Workplace Values and Expectations*

Racial Equity and Social Justice: BPS Considerations

- Will this action provide benefits for, and improve lives of people of color, or those most harmed by economic, racial, and environmental injustices?
  - will there be reduced utility bills?
  - will Seattle's Black, Indigenous, and people of color (BIPOC) communities benefit from healthier living and working spaces?
  - are we creating living wage jobs and career opportunities for BIPOC and for women?

- Are we prioritizing investments in communities historically most harmed by economic, racial, and environmental injustices?
  - if we have a support program or incentives; who has access to them?
  - are we alleviating cost impacts for low-resource building owners, particularly affordable housing and small businesses?

- Does this policy or decision ignore or worsen existing disparities or produce unintended consequences?
  - does it minimize the risk for rent increases, or displacement pressures?
  - is it so complex that it makes it more difficult for entities with limited staff capacity to comply?

Equity in Practice: Affordable Housing Example in BPS Policies

	NEW YORK CITY	ST. LOUIS	BOSTON
Policy Parameters	**Exemption** **Alternative Pathways**	**Timelines (Compliance Cycles)**	**Funding** **Decision Making**
Policy Details	NYC Housing Authority buildings are exempt from the policy. Buildings with >35% rent-regulated units may choose a prescriptive list of energy conservation measures to comply rather than meet the emissions limits.	Qualified affordable housing buildings and houses of worship will operate on a six-year compliance cycle (versus a four-year cycle) to allow adequate time for owners' financing and capacity restraints.	Equitable Emissions Investment Fund: BPS fines to be directed to carbon abatement projects specifically targeting Boston's environmental justice (EJ) populations and affordable housing buildings. Fund is under authority of a Review Board made up of two-thirds EJ org-nominated members.

https://www.imt.org/wp-content/uploads/2021/07/IMT-Matrix-Comparison-of-Building-Performance-Standards-Nov-2021.pdf


Metrics

Honing Metrics

- **Applying equity across all BPS elements**
  - Focus on equity implications of various design decisions
  - For example: type, timing, and complexity of metrics and/or targets
- **Recap of Menti prioritization**
- **Based on TAG #2 input, today we will focus on:**
  - Carbon metric
  - Energy metric
  - Additional considerations such as peak demand, refrigerants, embodied carbon, and IAQ/Health
    - Looking for input on importance to TAG and, if so, when/how to address either within BPS or in other policies or programs

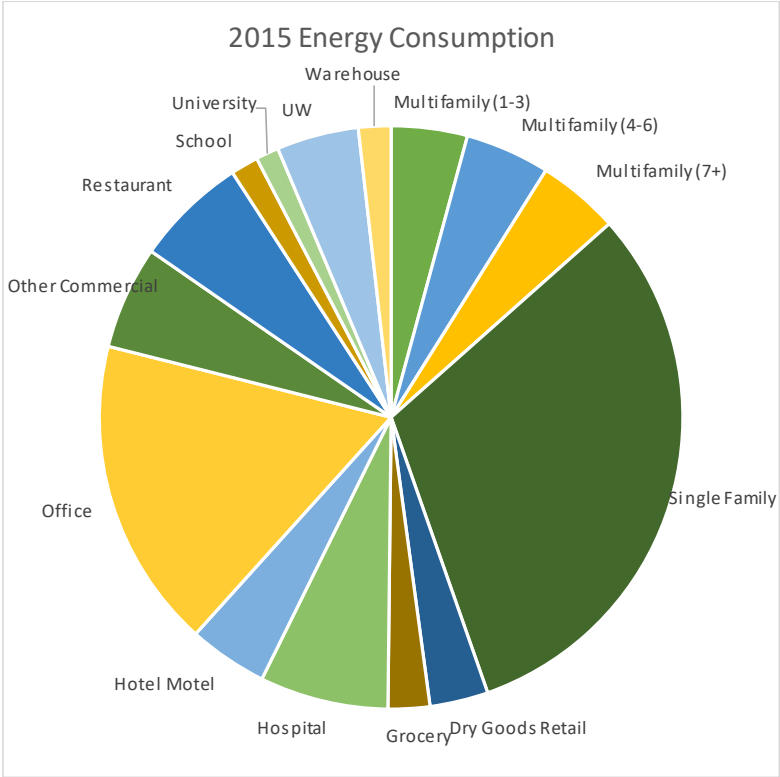
Carbon Metric (Breakout Groups)

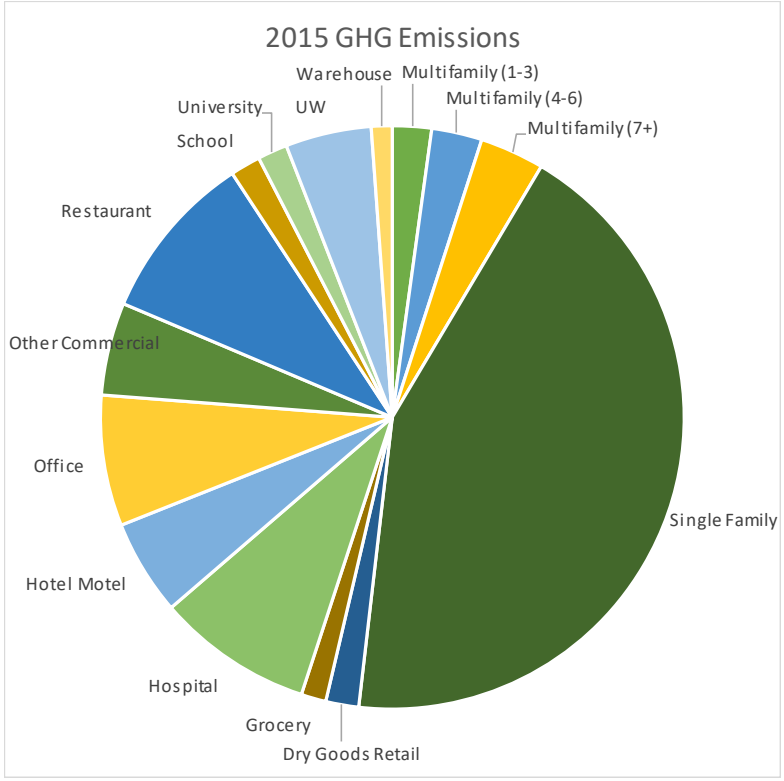
- What should the metric regulate?
  - Total energy, e.g., include electricity
  - Onsite emissions
  - Onsite, plus district energy
- Total versus net emissions (Offsets allowed?)
- Electricity emissions rate? (As-Needed)
- What are implications of carbon metric structure for owners/equity?

Energy Metric (Breakout Groups)

- Should there be an energy metric included?
  - What would be the benefits?
- If so, should Seattle establish its own energy metric or add the State of WA metric for those not covered?:
  - For > 50k nonresidential?
  - For all multifamily and 20k to 50k nonresidential?
  - If so, which BPS cycle should they go into effect, 2026 BPS, 2030 BPS?
- What are implications of adding a Seattle energy metric for owners/equity?

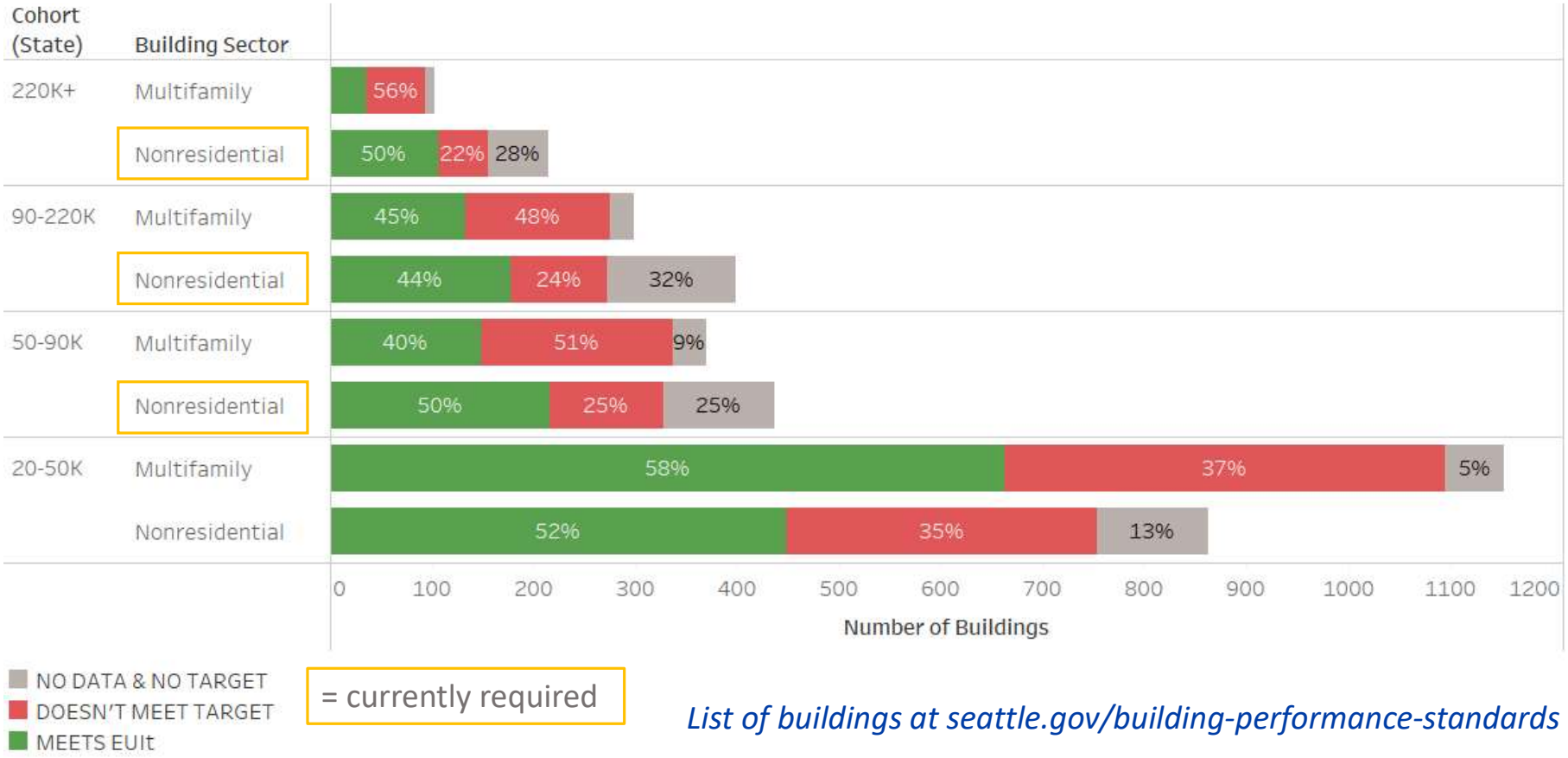
Building Types





Source: *Building Energy Use Intensity Targets,* Ecotope for OSE, 2017

WA State Energy Performance Standards (OSE Estimates)



List of buildings at seattle.gov/building-performance-standards

Other Important Considerations (Breakout Groups)

- Key considerations:
  - Coincident Peak Electrical Demand – when total system demand on the **utility** serving the property was at its highest point for the year; local demand is at the substation level
  - Refrigerants – hydroflourocarbon (HFC) emissions have thousands of times greater global warming potential than carbon dioxide; electrification technology like heat pumps rely on refrigerants; there are alternative refrigerants in development for commercialization
  - Embodied carbon- total impact of all GHG emitted from material extraction through the end of its useful life for buildings and equipment; what about saving existing buildings
  - Indoor air quality (IAQ)
    - CO_2 < 1,000 ppm
    - PM2.5, Formaldehyde, or CO
    - ventilation
  - Resilience - ability to prepare for, recover from, and adapt to climate impacts

Other Important Considerations (Breakout Groups)

- How and when should these considerations be addressed in relation to the BPS?
  - BPS policy, complementary policy, program, other regulation?
    - For example: embodied carbon in building code or IAQ in Building Tune-Up Policy
  - When is it important to address these considerations?

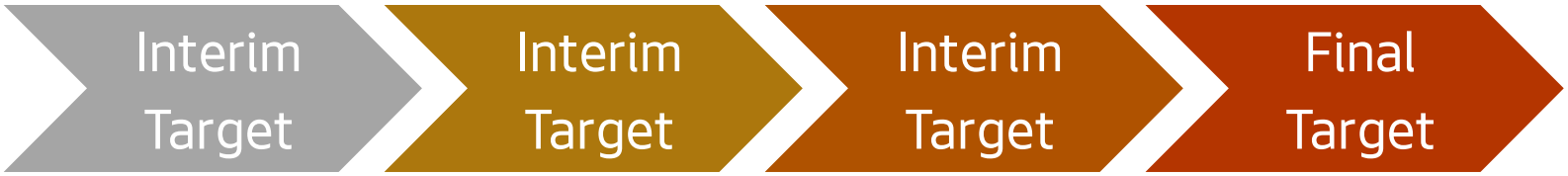
Shareout Discussion on Metrics (Full TAG)

- Shareout from groups
- Salient themes
- Anything we are missing or need to revisit?

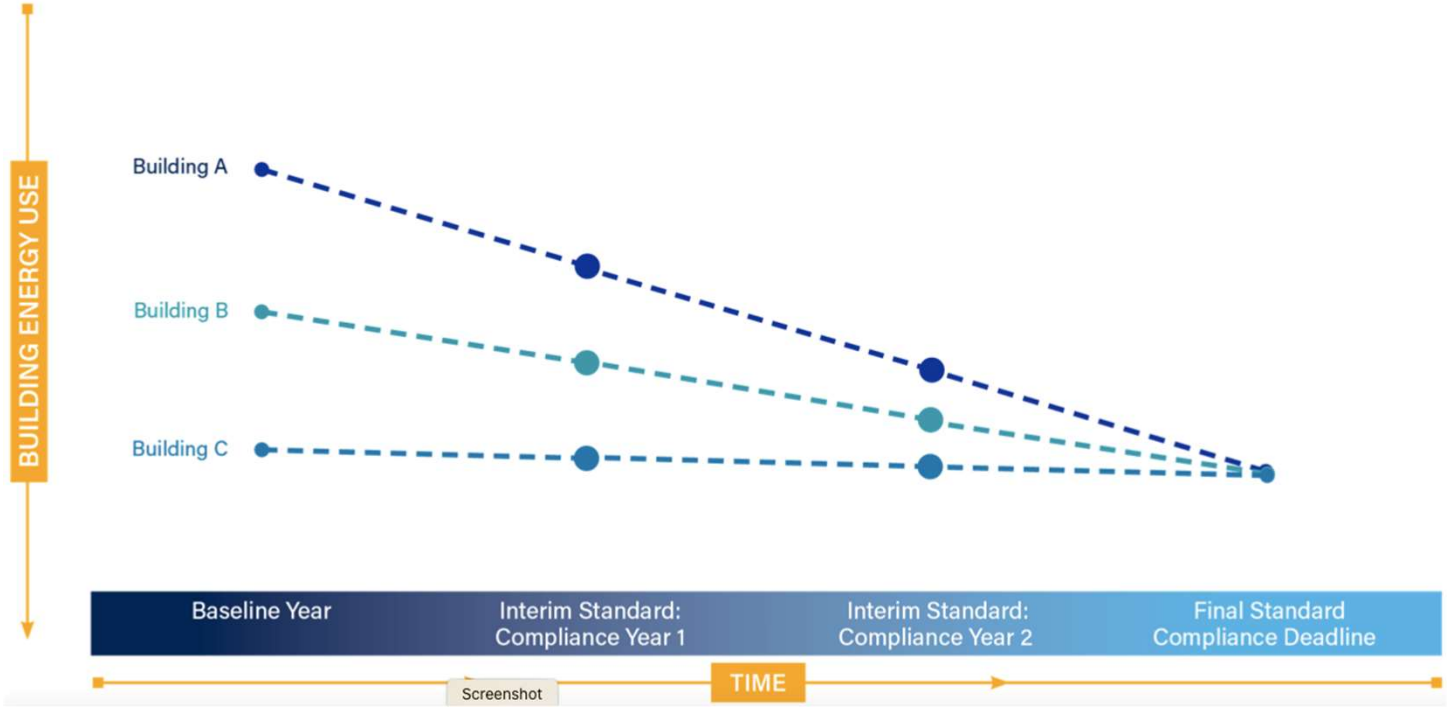
Targets

(introduction for more discussion at meeting 4)

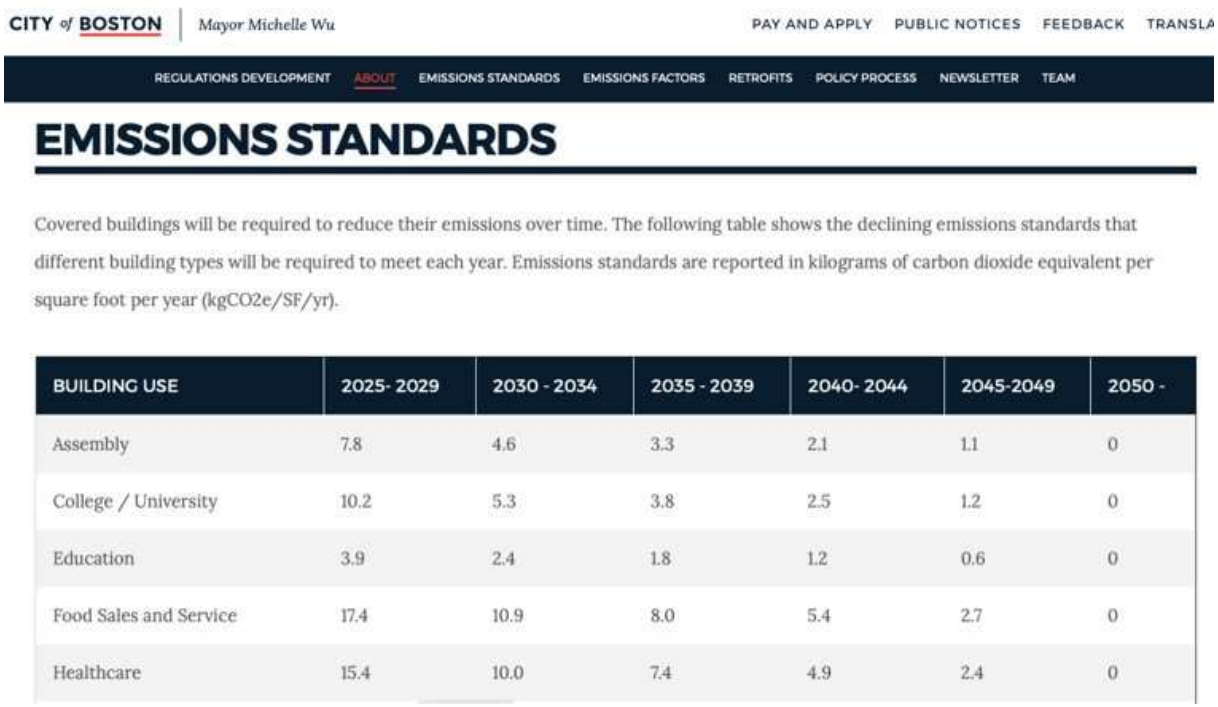
Structuring Targets as a Pathway: When, What, Why?



Example 1: Individual Building Trajectories (From Institute for Market Transformation BPS Model Policy)



Example 2: Universal Building Trajectories (From City of Boston BPS)



CITY of BOSTON | Mayor Michelle Wu

PAY AND APPLY PUBLIC NOTICES FEEDBACK TRANSLA

REGULATIONS DEVELOPMENT ABOUT EMISSIONS STANDARDS EMISSIONS FACTORS RETROFITS POLICY PROCESS NEWSLETTER TEAM

EMISSIONS STANDARDS

Covered buildings will be required to reduce their emissions over time. The following table shows the declining emissions standards that different building types will be required to meet each year. Emissions standards are reported in kilograms of carbon dioxide equivalent per square foot per year (kgCO2e/SF/yr).

BUILDING USE	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 and Service	17.4	10.9	8.0	5.4	2.7	0
Healthcare	15.4	10.0	7.4	4.9	2.4	0

Example 3: Universal Building Trajectories with Three-Stage Compliance

1. **Strategic planning**, as well as early action through support programs and financial incentives.
2. An **interim GHG emissions target** to support achieving the 39% by 2030 overall building sector emissions reduction target.
3. A **final target** which would require more complete **decarbonization** to achieve net-zero emissions.

Final Targets: Carbon

- What does "net-zero emissions" mean?
  - Especially for 20K-50K sq ft and multifamily
- Should there be variations based on property type, other?
  - Are there some buildings/types that have exceptional technical/economic challenges to reaching zero?
- What are implications of the final carbon target for owners/equity?

Interim Targets: Carbon

- **Structure:**
  - By individual building: targets using ratios based on building specific (baseline - final)/number of cycles?
  - By building type: targets using ratios based on building type average (baseline - final)/number of cycles?
- **Cycles:** Preliminary input on number of cycles and timeframes
- **Why:** What are implications of the interim carbon targets for owners/equity?

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- www.seattle.gov/building-performance-standards
- Share comments at cleanbuildings@seattle.gov