

THE POLICY LANDSCAPE FOR LARGE BUILDINGS IN MASSACHUSETTS: CHALLENGES & OPPORTUNITIES

A&WMA ONTARIO CONFERENCE, SEPTEMBER 13, 2023

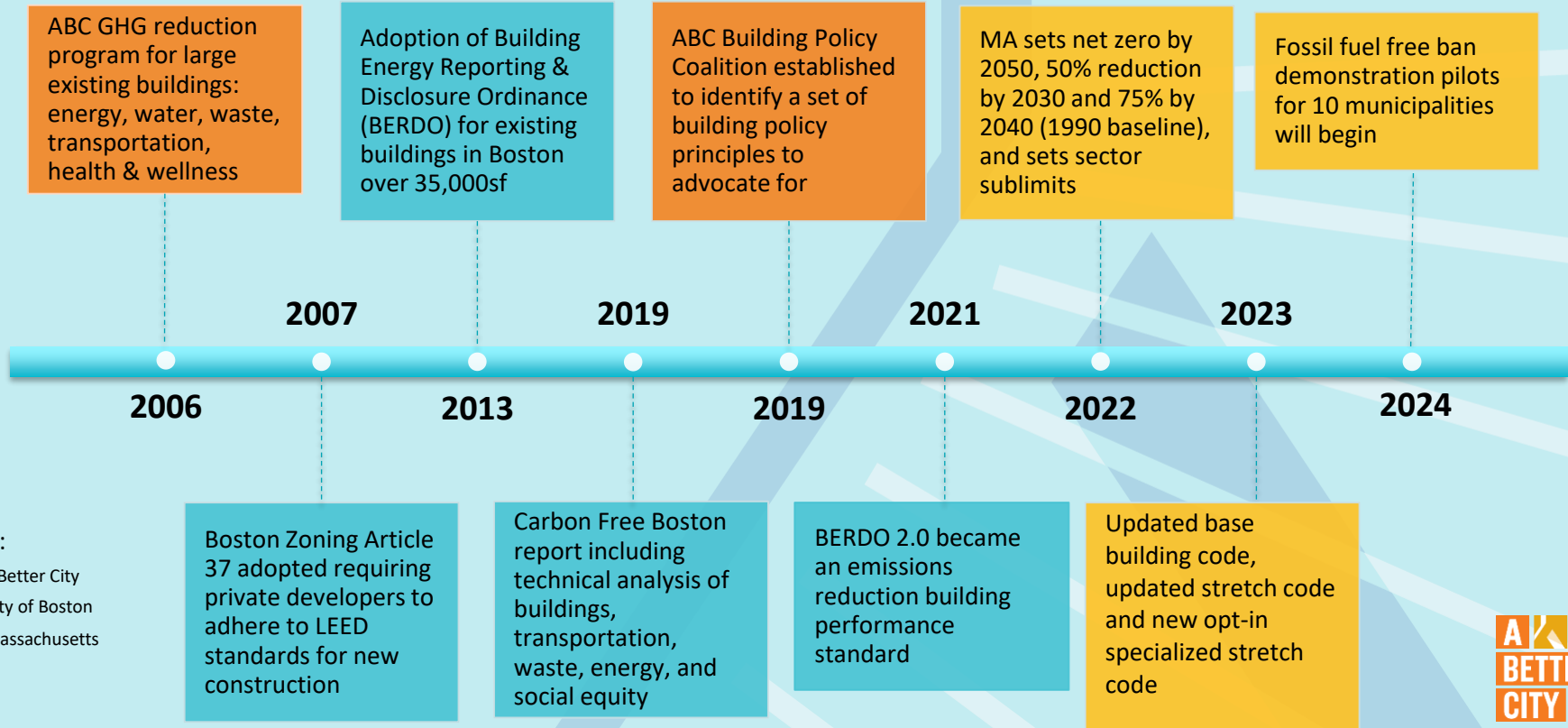
**A
BETTER
CITY** 

YVE TORRIE, DIRECTOR OF CLIMATE, ENERGY & RESILIENCE

WHO IS A BETTER CITY?

- 130-member business and institutional organization
- Committed to enhancing the Greater Boston region's economic health, competitiveness, equitable growth, sustainability, and quality of life for all communities
- Providing solutions and influencing policy in three critical areas: 1. transportation and infrastructure, 2. land use and development, and 3. energy and the environment

DECARBONIZATION TIMELINE



“GETTING TO YES”: THE ROLE OF PARTNERSHIPS

- City of Boston and State coordination with administrators and policy makers
- A Better City staff and members sitting on technical advisory groups, boards, councils, and committees
- Providing direct engagement for members with City and State officials through focus groups and events
- Working with a wide range of partner organizations to understand and work through challenges and opportunities
- Submitting substantive, solutions-oriented comments on draft policies

RESULT: Policies that reflect multi-stakeholder input

LARGE BUILDING DECARBONIZATION CHALLENGES & OPPORTUNITIES

- Challenges beyond a building's control e.g. grid capacity, or challenges specific to a building e.g. technical/operational, financial, regulatory/contractual
- Opportunities to demonstrate solutions with different building typologies, join Power Purchase Agreements or Virtual Power Purchase Agreements, and develop innovative workforce development programs

EXAMPLE OF DECARBONIZATION CHALLENGES: GRID CAPACITY & MODERNIZATION

- Electrification of buildings and transportation increases demand on a clean electric grid
- Capacity, transmission and distribution requirements for municipalities, state and region is key
- Decarbonization policies in municipalities may be at odds with electric grid
 - E.g. Cambridge existing buildings over 100,000SF on 2035 timeline; ISO New England on 2050 timeline
- Siting of new substations can take a long time
- Onsite renewable energy interconnection with the grid is challenging

RESULT: A state-wide grid modernization Working Group

EXAMPLE OF DECARBONIZATION CHALLENGES:

TECHNICAL

- Equipment not demonstrated or available in US
- High critical loads with high emissions (e.g., energy use for healthcare, labs, data centers)
- Backup generation requirements
- Emissions factors for different energy systems
- Power Purchase Agreement and Virtual Power Purchase Agreement additionality requirements and Renewable Energy Certificate requirements
- Long-term energy contracts
- Tenant contracts

EXAMPLE OF DECARBONIZATION

OPPORTUNITIES: DEMONSTRATING SOLUTIONS

- Massachusetts Clean Energy Center's Building Electrification and Transformation Accelerator for Commercial Buildings (BETA) – to launch Fall 2023
 - \$1.7 million Commercial Buildings Pilot to develop a decarbonization process for different building typologies to create feasible and replicable “all at once” retrofits and “over time” approaches taking advantage of natural equipment replacement cycles.
 - Goal to develop case studies and publicly accessible resources including technical and financial gaps that could help policy makers develop appropriate clean energy policies.
- New York Empire Building Challenge – 2021 private public partnership
 - NYSERDA investing \$50 million, private sector investing \$250 million, 16 real estate portfolio owner partners, 138 buildings, 125 millions sf aimed at demonstrating the technical and economic feasibility of retrofitting tall buildings to low carbon standards, and generating blueprints so building owners can replicate.
- Networked Geothermal Pilot, Framingham, MA – construction began June 2023
 - Eversource project in a neighborhood in Framingham consisting of 37 buildings – 32 residential and 5 commercial totaling 140 customers

EXAMPLE OF DECARBONIZATION OPPORTUNITIES: POWERCORPSBOS BUILDING OPERATIONS

- Modelled after a successful workforce development program in Philadelphia:
 - 1st building operations cohort in Boston January to June 2023; 2nd building operations cohort July-December 2023
- 6-month program that includes:
 - Foundational soft-skills 1 day/week
 - Technical training 2 days/week at community college
 - In-service learning 2 days/week in large buildings
- Participants:
 - Boston Youth 18-30 with high school diploma
 - Unemployed or underemployed; not in college or a career
 - Priority for marginalized communities including: returning citizens, court-involved residents, youth who have experienced homelessness/housing instability, youth from foster care



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