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BSA's 2024-2025 Climate Advocacy Platform

The Boston Society for Architecture's (BSA) mission is to improve the quality of life for Boston-area residents by championing innovation in the built environment with a focus on sustainability, well-being, and equity.

Today, Massachusetts faces its toughest climate challenge yet, reducing the building sector emissions relative to 1990 baseline levels – a 50% reduction by 2030, a 75% reduction by 2040, and 100% reduction by 2050 – in accordance with the Next Generation Roadmap Act signed into law in 2021, while simultaneously increasing the resiliency of Massachusetts communities to withstand worsening climate impacts and increasing risks to health, safety and property. Massachusetts buildings generate about 35% of the state's annual greenhouse gas emissions, a close second to the transportation sector. According to the most recent emissions inventory data, in 2020, the building sector showed a 31.4% reduction relative to 1990 levels, suggesting the enormity of the challenge to reach a 50% reduction by 2030, a mere six years from now.¹

As an organization representing 92% of the registered architects in Massachusetts, we feel an obligation to support and advocate for design standards, policies, and innovative practices that will help address the climate crisis and challenges that we are currently facing. Below are our 2024-2025 Climate Advocacy Platform Priorities:

Focus on Embodied Carbon—To address the impacts of the built environment on climate change, we must address whole-life carbon, the total greenhouse gas (GHG) emissions including both operational carbon emissions and embodied carbon emissions, over the life cycle of a building. The BSA advocates for policies and programs that provide the resources necessary to require full transparency on the environmental impacts of the building sector and work to reduce embodied carbon emissions. Annually 11% of global carbon emissions come from the embodied carbon in the materials used to construct the built environment. This focus includes prioritizing the renewal of existing buildings, a move towards a circular economy to reduce material waste, and production of low carbon materials.

Building Reuse, Deconstruction and the Circular Economy:

One of the most effective strategies for reducing embodied carbon is to reuse existing building stock and materials. The BSA advocates that adaptive reuse of existing buildings should be considered first, before demolition and rebuilding new projects. A reuse ecosystem in Massachusetts should be developed to enable a circular economy.

Increase the stringency of energy efficiency codes—The BSA advocates for statewide adoption of more stringent energy efficiency requirements towards zero carbon operation for all buildings, including alignment with passive building principles for thermal load reduction, through adoption in the Building Code and other regulatory and legislative policies and processes. Building operations represent 28% of annual global carbon emissions. We need to continually raise the bar on minimum acceptable energy performance in Massachusetts and amplify and simplify financial incentives and stacking to achieve maximum feasible outcomes. Building thermal load reduction is a foundational issue, enabling cost effective implementation of the subsequent agenda items.

Transition to All-Electric Buildings- Currently in Massachusetts, persistence of fossil fuel combustion for 80% of 2.8 million existing Massachusetts homes.² The BSA advocates for the transition to all-electric buildings. We support policies

¹ Miriam Wasser, "Mass. is on track to meet its near-term climate goals, but the hardest work lies ahead," *WBUR*, 1 Dec 2023, <https://www.wbur.org/news/2023/12/01/report-card-climate-change-clean-energy-heat-pumps-ev-emissions>.

² "How Massachusetts Households Heat Their Homes," *Mass.gov* Energy Policy Planning & Analysis Division, 2023, <https://www.mass.gov/info-details/how-massachusetts-households-heat-their-homes>.



such as the City of Boston’s Building Emissions Reduction and Disclosure (BERDO), that requires owners of large buildings to report their annual energy and water consumption, and will need to comply with building emission standards that will decrease overtime, and ultimately reach net-zero emissions by 2050.³ Buildings need to wean off fossil fuels and transition to all-electric, clean renewable Energy.

Power Buildings with Renewable Energy—The BSA advocates for all buildings to be powered by on-site and off-site renewable energy. To decarbonize our buildings, they need to be powered by on-site renewable energy or new renewable energy sources that result in a direct reduction in grid emissions.

Select Low-Impact Refrigerants—The BSA advocates for policies around refrigerant selection that reduces ozone depletion and global warming potential. In Drawdown, Paul Hawken listed refrigerant management as one of the biggest ways to reduce global carbon emissions.

Ensure Buildings Operate Efficiently—The BSA advocates for policies that support efficient building operations. Building commissioning, energy disclosure ordinances, and other operational actions can help ensure buildings are operating at the efficiency levels they were designed to achieve.

Address Disparities in Impact of Climate Change on Communities of Color—The BSA advocates for all climate change policies and initiatives to focus on minority communities where the impacts of carbon emissions and climate change continue to fall disproportionately, enabling cities and communities to thrive.

Resiliency- With 9 inches of sea level rise, a severe flood with a 1% annual chance of occurring is estimated to inundate 2,000 buildings in Boston alone, representing \$20 billion in total property value and the homes of 18,000 Bostonians. Within the lifetime of many existing buildings, the 1% annual chance storm with 36 inches of sea level rise would affect nearly 85,000 Bostonians and 12,000 buildings worth an estimated \$85 billion in total property value.³ Many communities outside of Boston will also experience similar threats from sea level rise, along with the risks to public health and infrastructure caused by heat waves and fresh water flooding caused by intense precipitation damages.⁴ The BSA advocates for strong design approaches and policies that ensure buildings and communities address future risks and vulnerabilities from social, environmental, and environmental change, and are able to adapt flexibly to current and future risks. The Climate Ready Boston project in Boston and municipal vulnerability planning undertaken in almost every city and town in the Commonwealth have identified the full range of risks and often provided detailed solution strategies.

In 2023, the United Nations’ Intergovernmental Panel on Climate Change (IPCC) issued its Sixth Assessment Report, which stressed that limiting warming to 1.5oC above pre-industrial levels is crucial to avoiding the worst impacts of climate change and securing a livable future. The report raised a dire warning that we’re way off track and global greenhouse gas emissions are not slowing down. Massachusetts citizens feel these impacts, having recently experienced record heat (108 degrees in Boston on the heat index scale in June 2024), excessive rain (causing widespread flood damage across many Massachusetts communities in August 2023), and a rash of insect-borne diseases (e.g. West Nile virus, Eastern Equine Encephalitis, and Lyme disease). It is essential for the AEC community to advocate for and address the intersectionality of housing and climate resilience, as vulnerable communities often face the greatest risks from environmental changes, making equitable housing solutions a critical component of any climate strategy.

³ “Building Emissions Reduction and Disclosure,” *Boston.gov*, 12 Nov 2024, <https://www.boston.gov/departments/environment/berdo#regulations-and-policies>.

⁴ “Climate Resilience,” *Boston.gov*, 2024, <https://www.boston.gov/departments/climate-resilience>.



Given these developments and recognizing the power of architects to envision and deliver crucial climate solutions, the Boston Society of Architects' board adopts this updated 2024-2025 Climate Advocacy Platform and urges interested members to join together to advance these principles through architectural practice, strategic advocacy, and public education.