



SMART GROWTH AND REGIONAL COLLABORATION

August 11, 2022

Commissioner Patrick Woodcock
Director Maggie McCarey
Department of Energy Resources
100 Cambridge Street, Suite 1020
Boston, MA 02114

Re: Stretch Energy Code and Specialized Opt-in Code Comments

Dear Commissioner Woodcock and Director McCarey:

Thank you for the opportunity to provide comments on the draft regulations on the Stretch Energy Code (Stretch Code) and Specialized Opt-in Code (Specialized Code) released June 24, 2022. We appreciate that these proposals encompass both an update to the existing Stretch Code and a framework for a new Specialized Code, as required by the 2021 Climate Act. We are writing to reiterate our strong support for the increased stringency of the energy efficiency provisions in the Stretch Code update and to urge additional action to uphold the net zero intent and resultant benefits of the Specialized Code.

The Metropolitan Area Planning Council (MAPC) is the Regional Planning Agency serving the people who live and work in the 101 cities and towns of Greater Boston, which comprises roughly half of the state's population and two-thirds of the state's jobs. We are committed to smart growth, sustainability, regional collaboration, and advancing equity. MAPC has long recognized that mitigating climate change and making our Commonwealth more resilient for residents of all income levels will lead to healthier and stronger communities.

The transition to better buildings presents tremendous opportunities beyond greenhouse gas (GHG) emissions reductions alone. If properly managed, this transition can improve public health, strengthen local economies, increase resilience to extreme weather, and redress environmental injustices many decades in the making. Thousands of well-paying jobs and expanded workforce opportunities, lives saved through reduced pollution, more cost-effective building operations, and healthier housing developments will result from constructing and retrofitting our buildings to be green, healthy, efficient, and affordable. MAPC's experience working to expand access both to clean energy and affordable housing across the Greater Boston region, and beyond, has shown us that we don't have to choose between mitigating climate change and increasing housing opportunity; we can advance these priorities together. The Commonwealth must move quickly to facilitate this transition by massively scaling up its investments in the codes, policies, programs, grants, and incentives necessary to decarbonize the Massachusetts buildings sector to reach our 2030, 2040, and 2050 commitments.

The large majority of MAPC communities have already adopted the Stretch Code and a good number of these are eager to adopt a strong net zero Specialized Code that will help advance their local climate goals. Communities in our region are committed to building a future where everyone has access to a home that is healthy, safe, affordable, and climate resilient. A robustly energy-efficient and climate-smart building code can improve public health outcomes and reduce the operational costs of buildings, while also decreasing peak

energy demand. At the same time, such a code can improve the climate resilience of buildings and strengthen the power grid overall. We consider the life, safety, and equity implications of these codes to align with our inherent duty to protect and improve the wellness of our region's residents.

We appreciate the edits made to both the Stretch Code and the Specialized Code. More specifically, in the Stretch Code, we support the inclusion of the Thermal Energy Demand Intensity (TEDI) pathway. This long overdue focus is key to reducing the energy that escapes from the thermal envelope. We anticipate that this will be a welcome inclusion for schools and other municipal buildings. MAPC is also supportive of the option for multi-family buildings to choose between the Passive House and HERS pathways for multi-family buildings. Recent research conducted by MAPC shows that many multi-family housing developers, especially those building subsidized Affordable Housing, are already building to Passive House standards. We also appreciate the electrification requirements for buildings using a less stringent curtainwall envelope performance option and the inclusion of thermal bridge accounting in the updated Stretch Code. These updates capture the important opportunity to increase efficiency and insulation performance. MAPC also commends DOER for requiring additions over 20,000-sf to meet applicable Stretch Code requirements and for including commercial building alterations and Change of use Occupancy in the Stretch Code prescriptive pathway.

These are the ways we would urge you to consider strengthening the current Stretch Code proposal:

- **We recommend that the Updated Stretch code for Residential Low-Rise go into effect January 1, 2024.** This will give existing communities time to adapt while also ensuring that the benefits of the new Stretch Code are not delayed.
- We also appreciate that all non-residential commercial buildings applying for a permit on or after July 1, 2023, will be subject to the updated Stretch Code provisions. **We suggest that market-rate multi-family buildings should be required to meet this requirement by January 1, 2024, instead of July 1, 2024.**
- **We encourage the Department to consider phasing in greater renewables requirements into the new Stretch Code.** Rooftop or carport solar should be a requirement, where feasible and with special consideration for affordable housing development, in the Stretch Code update, not only in the new Specialized Code. Other options could include the opportunity to contract for offsite renewable energy to offset remaining emissions. These requirements could be phased into the code a year or two into the cycle.
- Given the large range of home values in our region, **we recommend that DOER either eliminate or consider a tiered threshold for Substantial Improvements** (improvements that cost more than 50% of the value of the existing home) as defined in the International Existing Building Code (IEBC 2021). Setting one threshold regardless of home value means that low- and medium-cost homes will more often be subject to this requirement while more expensive homes that consume more energy may avoid it based on their high home values.

While the proposed draft language for the update to the existing Stretch Code largely meets the moment, with areas for improvement noted above, we have more significant concerns about the proposed draft language for the Specialized Code and we urge you to amend it to more fully meet the needs of our cities and towns.

Expand the Net Zero Definition

Many of our communities support a definition of a net zero building that can zero out its emissions today through stringent energy efficiency standards, electrification to the greatest extent possible, and renewable energy to offset any remaining emissions. While onsite rooftop solar at the levels proposed is an important measure, there should be flexibility to meet the solar requirement through rooftop solar, solar parking canopy, or community shared solar to achieve higher compliance. In the future, the procurement of offsite renewables should also be a viable compliance pathway, similarly to the 2021 IECC appendices and proposed language for the 2024 IECC.

Stronger HERS Ratings

The proposed Specialized Code includes the same stringent energy efficiency standards proposed in the Stretch Code update. We recommend that the HERS ratings for the Specialized Code be lowered slightly to reflect the additional rigor of this code, such as 40 for gas heated buildings and 42 for the All-Electric Building Performance Standard Pathway and allowing HERS 45 with solar.

Maximizing the energy efficiency of all-electric buildings ensures that the cost of operations and the energy burden to residents will be minimized, which is a crucial equity issue. For example, in residential buildings where residents pay for utilities, maximizing efficiency reduces utility costs for residents. Even when residents don't pay for utilities, building owners can invest savings from lower energy costs into other operating expenses such as maintenance or resident services. Less energy waste is a win-win for owners and residents.

Require Electrification Where Already Feasible

As increasing numbers of new buildings are achieving all-electric construction now and many more will due to these codes, we urge DOER to go beyond pre-wiring and leverage the Specialized Code more fully as a catalyst. For the building typologies that can be constructed all-electric economically today, such as most within the residential code and small and large office buildings, we recommend requiring electrification within the Specialized Code by no later than January 1, 2025.

For building types where it may be infeasible to completely electrify today, such as multifamily and other buildings dependent on central hot water systems and some high ventilation buildings, viable options remain to improve efficiency and drastically reduce fossil fuel use. We recommend DOER monitor these advances and consider them for inclusion in the next code update. For example, multiple cases exist in which new multifamily buildings are optimizing heat pump water heaters for central hot water, and costs will become increasingly competitive as technologies are scaled up. We urge DOER to work closely with DHCD to create additional incentives to support this transition, particularly for affordable housing.

More EV-ready Parking

We were pleased to see the updated Stretch Code requirement that 20% of new parking spaces have wiring for Electric Vehicles (EVs). Given that new baseline, we recommend that the Specialized Code requirement be higher for residential buildings. We recommend 60% of spaces be wired for EV charging. For example, a two-family home should have two spaces wired if two spaces are offered. In no case, however, should a residential building be required to provide parking when it would not have otherwise to meet the EV wiring requirement. In other words, a building that did not plan to offer parking should not be required to do so because of code requirements.

Account for Embodied Carbon

The previous straw proposal included references to embodied carbon in relation to curtain walls, but that section is not in the current proposal. The manufacturing of many construction materials is inherently carbon-intensive, including numerous foam products used in high-performance buildings. Constructing with highly carbon-intensive materials can create a building with a multi-year carbon debt that delays the project's contribution to our net zero carbon goals, even if not currently accounted for in the Massachusetts GHG inventory. MAPC continues to recommend that the Department begin to define and account for embodied carbon for new buildings, at least within the Specialized Code.

Additional Considerations

Cities and towns continue to be eager to lead on climate action and are actively seeking additional tools to decarbonize their buildings on the timeline and scale to meet the moment. A Specialized Code option that falls short of net zero is unlikely to curb a patchwork proliferation of local policies that seek to do it themselves. Alternatively, a Specialized Code that enables our cities and towns to achieve net zero for new construction and major renovation to the extent possible with current technologies and costs would benefit our climate, residents, and public health. Strong additional requirements could include:

- increased thermal efficiency;
- a solar energy system equivalent to 50 percent of roof space at minimum;
- reduced allowances for curtain walls and glazing;
- 100% clean electricity (equal to MA Class I renewables) through competitive supply contracts or green municipal aggregation; and
- increased energy recovery, particularly for high ventilation buildings.

Including such requirements in the Specialized Code would create greater consistency and predictability for the community at large.

Thank you for your consideration of our comments and attention to these important issues. We are eager to work with you to advance these ideas and create a healthier, stronger Commonwealth. For any questions related to our comments, please feel free to contact me at jcurti@mapc.org.

Sincerely,



Julie Curti
Acting Director of Clean Energy
Metropolitan Area Planning Council