



CITY OF SOMERVILLE, MASSACHUSETTS  
KATJANA BALLANTYNE  
MAYOR

March 18, 2022

Commissioner Patrick Woodcock  
Department of Energy Resources  
100 Cambridge Street Suite 1020  
Boston, MA 02116

Re: City of Somerville Comment on the Municipal Opt-in Stretch Code Straw Proposal

Dear Commissioner Woodcock,

Thank you for providing an opportunity to comment on the municipal opt-in specialized stretch energy ("MOSSE") code straw proposal pursuant to *An Act Creating a Next Generation Roadmap for Massachusetts Climate Policy* ("the Act").<sup>1</sup> We offer the following comments for your consideration. The City of Somerville looks forward to collaborating with the DOER on the next version of the MOSSE code.

### Background

The City of Somerville is a global leader in climate action. Somerville was one of 95 cities to receive an A-rating from CDP in 2021.<sup>2</sup> Somerville Climate Forward, our climate action plan, prioritizes the most impactful steps we can take to reach our net-zero carbon negative goals. These actions will also help the community adapt to the effects of climate change. The building energy sector is responsible for about two-thirds of community-wide greenhouse gas emissions. Establishing a net-zero building code is a critical metric.

Somerville adopted the Stretch Energy Code in 2011. We applaud the Commonwealth for providing this tool for municipalities. For several years, we have collaborated with neighboring cities in advocacy for more stringent building energy regulations.<sup>3</sup> The MOSSE code can help both the Commonwealth and voluntary communities like Somerville meet our shared goals of equity, justice, affordability, and emissions reduction. The Act directs the DOER to create a net-zero stretch code driven by the possibilities of eager municipalities saying "yes, we can," not limited by the thought of, "what if?" Municipal leaders need a low-barrier way to mandate net-zero buildings. Without it, the Commonwealth is at risk of falling behind on our benchmarks and our peers.

---

<sup>1</sup> MGL ch. 8 §31(14), <https://malegislature.gov/Laws/SessionLaws/Acts/2021/Chapter8>.

<sup>2</sup> CDP, *Cities A List 2021*, <https://www.cdp.net/en/cities/cities-scores>.

<sup>3</sup> *Joint Comments from the Cities of Boston, Cambridge, and Somerville on updating the Massachusetts Stretch Energy Code, pursuant to 780 CMR ch. 115 AA*, May 28, 2019. See also Board of Building Regulations and Standards (BBRS) Meeting Minutes, at pp. 5, mass.gov, May 7, 2019 <https://www.mass.gov/doc/building-regulation-and-standards-may-7-2019-minutes/download>.



## Affordability and Equity

Equity is a core value of Somerville Climate Forward. Some have expressed concern with the impact the MOSSE code could have on new affordable housing. Cities that are leading the Commonwealth on climate are also leading on affordable housing. Somerville requires new buildings with 4 or more units to offer at least 20% of the units as affordable. We are already seeing large, energy-efficient, all-electric, net-zero, affordable housing being constructed. These projects include 31 Tufts Street and 152-158 Broadway in Somerville.

The proposed MOSSE code would allow fossil-fueled buildings and eventually require them to be net-zero (all-electric) within the next decade or two. It can be difficult to retrofit buildings designed to be fossil-fueled. There are added barriers and costs to removing and replacing fossil-fueled systems. Two-thirds of Somerville's housing units are rented. Designing buildings around systems that will be obsolete within the next decade may leave renters and families to compromise their standard of living for fear of retaliation in a competitive housing market. Requiring a net-zero standard to be achieved on day-one of operation is an affordable way to transform building design and performance and reduce long-term costs.<sup>4</sup>

The quality of housing, including on-site energy features, can impact the cost burden, health, safety, and comfort of residents. The 2017 Wellbeing of Somerville Report states, "(s)tudies of the links between housing and children's health indicate that quality of housing has more impact than other housing factors such as affordability, stability or ownership."<sup>5</sup> A 2012-2013 study of Boston housing found asthmatic children living in "green" units experienced substantially lower risk of asthma symptoms, attacks, hospital visits, and related school absences.<sup>6</sup> Childhood asthma can lead to COPD. Asthma and COPD rank among the top 5 causes of hospitalization and death for Somerville residents ages 20 and older (2010-2012).<sup>7</sup> Approximately two-thirds of Somerville's housing units are rented. Studies have shown rental units with children "are more likely to have asthma triggers" and "at least one child with asthma."<sup>8</sup> The likelihood increases for renters receiving assistance.<sup>9</sup> Energy-efficiency and all-electric standards are effective interventions that address environmental stressors and positively impact health.

Quality housing and affordability should not be a choice. It is important for the DOER to consider equity and environmental justice and to resist policies that could perpetuate inequities in energy-efficient,

---

<sup>4</sup> *Somerville Climate Forward*, City of Somerville, pp. 23, 2018, <https://www.somervillema.gov/sites/default/files/somerville-climate-forward-plan.pdf#page=30>, citing Efficiency Vermont *Net Zero Energy Feasibility Study*, 2015, <https://www.efficiencyvermont.com/Media/Default/docs/white-papers/efficiency-vermont-net-zero-energy-feasibility-study-final-report-white-paper.pdf>.

<sup>5</sup> *Wellbeing of Somerville Report*, City of Somerville, pp. 64, 2017 (internal citations omitted), <https://www.somervillema.gov/sites/default/files/wellbeing-of-somerville-report-2017.pdf>.

<sup>6</sup> Colton et al, *Health Benefits of Green Public Housing: Associations with Asthma Morbidity and Building-Related Symptoms*, American Journal of Public Health, 105 (12), pp. 2482–2489, 2015, <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4638234/>. Additional studies have shown the use of gas stoves can worsen indoor air quality. Brady Seals, Andee Krasner, *Health Effects from Gas Stove Pollution*, rmi.org, May 2020, <https://rmi.org/indoor-air-pollution-the-link-between-climate-and-health>. Furthermore, climate change is expected to exasperate air quality issues. Dr. Pat Kinney and Arup, *Air Quality and Climate Change in Somerville*, Memorandum, Climate Change Vulnerability Assessment Appendix F, September 16, 2016, [https://www.somervillema.gov/sites/default/files/6-13-2017\\_Somerville%20CCVA%20Final%20Report.pdf](https://www.somervillema.gov/sites/default/files/6-13-2017_Somerville%20CCVA%20Final%20Report.pdf). See also Rental Registry and Energy Disclosure, Memorandum, May 24, 2021, [https://somervillecityma.igm2.com/Citizens/Detail\\_LegiFile.aspx?Frame=&MeetingID=3403&MediaPosition=&ID=24848&CssClass=](https://somervillecityma.igm2.com/Citizens/Detail_LegiFile.aspx?Frame=&MeetingID=3403&MediaPosition=&ID=24848&CssClass=)

<sup>7</sup> See *Wellbeing of Somerville Report*.

<sup>8</sup> Bhargavi Ganesh, et al, *The Relationship between Housing and Asthma among School-Age Children: Analysis of the 2015 American Housing Survey*, Urban Institute, pp. V, October 2017, [http://www.urban.org/sites/default/files/publication/93881/the-relationship-between-housing-and-asthma\\_1.pdf](http://www.urban.org/sites/default/files/publication/93881/the-relationship-between-housing-and-asthma_1.pdf).

<sup>9</sup> *Id.*



healthy homes. If the DOER carves out exemptions for affordable housing, it may perpetuate inequities and disparities between low- and high-income residents.

Regarding social equity, the Climate Justice Working Group wrote, “(c)odes level the playing field.”<sup>10</sup> Buildings constructed today will not only impact our emissions in 2050, but they will impact us every day through 2050 and beyond. As we have seen with federal environmental policies, standards breed innovation and spur compliance to create a healthier environment.<sup>11</sup> A net-zero standard can facilitate more cost effective, sustainable, and resilient building design.<sup>12</sup>

### **Impact on Emissions<sup>13</sup>**

According to Somerville Climate Forward, “new development in the city is anticipated to occur at an annual growth rate of over 1% in both the residential and commercial sectors.” Future development will need to achieve net-zero performance standards for Somerville to reach our emissions goals. A successful MOSSE code will result in avoided emissions, but the amount depends on how quickly we can make the transition to net-zero. Delays will result in construction under the existing building code. This will guarantee future emissions unless buildings undergo retrofits or are demolished.

Between now and 2050, each decade we wait to implement a net-zero building code reduces Somerville’s maximum emissions reduction achieved through this action by about one-third. If net-zero standards do not begin until 2050, the potential drops to zero. We ask the DOER to provide municipalities the requisite tools to meet these ambitious and necessary goals today.

### **Recommendations for the Municipal Opt-In Specialized Stretch Energy Code**

#### Net-zero

- The municipal opt-in specialized stretch energy code should allow voluntary municipalities to require new construction and major renovations to be net-zero from the on-set, which may be interpreted to mean all-electric and fossil-fuel free. This definition should include but is not limited to space and water heating systems.
- We recommend the DOER differentiate net-zero pathways for various building profiles based on feasibility with flexibility to adapt over time. It may not be feasible for commercial buildings like hospitals, biomedical labs, and high-ventilation buildings to be all-electric today, so they may have a different pathway to net-zero than commercial and industrial, residential (1-4 unit), and commercial residential (5+ units) buildings.
- Exceptions should be narrowly defined, justifiable, and revisited soon. For buildings that meet an exemption or exception, the MOSSE code should outline the standard of pre-wiring for electrification. Importantly, the MOSSE code should be flexible to allow for innovation and technological improvements.

#### Energy Efficiency

- Somerville strongly supports the proposed energy efficiency standards and Passive House incentives. Energy efficiency is the foundation and first line of defense for mitigating building emissions. Resulting cost and emissions savings compound over time. It also provides co-benefits to tenants and property owners. We recommend the DOER consider increasing the HERS rating

---

<sup>10</sup> Climate Justice Working Group, *Memorandum 1 RE: Recommendations to Improve the Master Policy List to Address Climate Justice*, at pp. 5, August 7, 2020, <https://www.mass.gov/doc/climate-justice-working-group-policy-recommendations/download>.

<sup>11</sup> *Progress Cleaning the Air and Improving People's Health*, EPA, October 13, 2021, <https://www.epa.gov/clean-air-act-overview/progress-cleaning-air-and-improving-peoples-health#:~:text=Because%20of%20the%20Act%2C%20Americans,as%20programs%20take%20full%20effect>.

<sup>12</sup> *Climate Justice Working Group*, at pp. 5.

<sup>13</sup> *Somerville Climate Forward* at pp. 17-24, 113-116.

and Thermal Energy Demand Intensity thresholds and exclude exceptions and exemptions for inefficient building design features, such as curtain walls.

- A changing climate puts Somerville's buildings at risk for increased frequency and intensity of extreme heat events, as well as precipitation and coastal flooding events.<sup>14</sup> The energy-efficiency requirements outlined in the proposal will support resiliency goals. Further encouraging municipalities to establish resiliency standards through the MOSSE code would help save lives and property in the decades to come.
- The straw proposal includes a trade-off between inefficient building design and installation of fossil fuels, and the use of materials with low embodied carbon and installing/supporting renewable energy generation. It is unclear how effective or comparable these substitutions are. It is also unclear why these were selected and if other alternative compliance pathways were considered. Instead, embodied carbon and renewable energy should be standards set by the MOSSE code and applied broadly.

#### Electric Vehicles

- In Somerville, we generally recommend new developments equip at least 25 percent of the total number of parking spaces with electric vehicle chargers and the remainder of the spaces are pre-wired for charging stations. This is already required in Boston and Cambridge. The straw proposal should include comparable standards for a requisite number of charging stations and the remainder of the spaces be pre-wired for charging.
- The type of building and its uses, number of units, number of parking spaces, and distance to public transportation, could all be factors for determining the type and quantity of electric vehicle chargers as well as the number of pre-wired spaces.

#### Affordability and Equity

- The DOER should collaborate with adopting communities to analyze housing affordability and displacement rates to study the MOSSE code's impact and inform programmatic changes.<sup>15</sup>
- We encourage the DOER to consider equity and justice as a foundation to shape policy that supports our shared values.
- To better understanding the DOER's proposal and provide meaningful feedback, more information about how the DOER is factoring in equity, justice, and social costs would be helpful.

While municipalities have been making progress, we cannot solve the climate crisis alone. The municipal opt-in specialized stretch energy code can help our efforts go further, faster. The MOSSE code could serve as a key tool to help municipalities and the Commonwealth meet our shared climate goals.

Thank you for the opportunity to provide public comment. The City of Somerville looks forward to future opportunities to collaborate with and provide feedback to the DOER. We appreciate your time, effort, and consideration.

Sincerely,



Katjana Ballantyne  
Mayor

---

<sup>14</sup> See Hazard Mitigation Plan, City of Somerville, 2022, [www.somervillema.gov/hmp](http://www.somervillema.gov/hmp) and Climate Change Vulnerability Assessment, City of Somerville, 2016, [https://www.somervillema.gov/sites/default/files/6-13-2017\\_Somerville%20CCVA%20Final%20Report.pdf](https://www.somervillema.gov/sites/default/files/6-13-2017_Somerville%20CCVA%20Final%20Report.pdf).

<sup>15</sup> Climate Justice Working Group, at pp. 4.