



CITY OF SOMERVILLE, MASSACHUSETTS
JOSEPH A. CURTATONE
MAYOR

August 7, 2017

Samantha Meserve
Department of Energy Resources
100 Cambridge Street
Boston, MA 02114

Re: Proposed Revisions to the Alternative Energy Portfolio Standard Regulations;
225 CMR 16.00

Dear Ms. Meserve:

The City of Somerville is one of the leading cities in the nation in the fight against climate change. About half of the greenhouse gas (“GHG”) emissions that contribute to climate change from within our City come from heating and cooling buildings. To meet Somerville’s goal of becoming carbon neutral by 2050, as a community, we need to find ways to “decarbonize” our heating and cooling systems, and our electricity supply.

Somerville is a designated Green Community, designated SolSmart Gold by the U.S. Department of Energy, and is an early U.S. signatory of the Global Covenant of Mayors for Climate & Energy. In recent years, Somerville has launched multiple municipal programs promoting energy-efficiency, electrification, and decarbonization, such as Somerville Energy Efficiency Now, Somerville Community Choice Electricity (municipal aggregation), and Solarize Somerville. HeatSmart/CoolSmart, our latest program, launching today, aims to build awareness about cold-climate air source heat pumps (“ASHP”).

Inclusion of ASHP in the Alternative Portfolio Standards (“APS”) will help to accelerate the adoption of these technologies, as the Renewable Portfolio Standard has done for solar PV. State support for these technologies through the APS will be essential for the execution of the supply strategy and the achievement of the City’s climate goals, which align with the state GHG reduction targets laid out in the Global Warming Solutions Act.

Eligibility Criteria for Small Air Source Heat Pumps; 225 CMR 16.05(4)(e); draft p. 22¹

Of the renewable thermal technologies included in the draft APS regulation, ASHPs are particularly applicable for Somerville, the most densely populated city in New England. For new construction, the draft regulations require that small ASHP supply 100% of the building’s total

¹ 225 CMR 16.00. Draft APS Regulation. Retrieved through
<http://www.mass.gov/eea/docs/doer/renewables/thermal/225-cmr-16-draft-aps-regulation-redline.pdf>.





annual heating. For retrofit applications, ASHP must supply at least 90% of total annual heating. 225 CMR 16.05(4)(e).

As we move towards strengthening our renewable energy mix, Somerville supports incentivizing the full electrification of heating systems. We also recognize that partial systems may be a transition tool, building awareness and comfort with technology. Accordingly, we urge DOER to consider lower minimum percentages, at least initially, to help speed the adoption of ASHPs.

Heat Pumps Providing Cooling Energy; 225 CMR 16.05(1)(a)(6)(a)(i); draft p. 11 - 12

The draft regulations provide that air-source and ground-source heat pumps will receive APS Alternative Energy Attributes (“Attributes”) only when “operating in a heating mode.” 225 CMR 16.05(1)(a)(6)(a)(i). However, Somerville recently conducted a vulnerability assessment² that revealed Somerville will face increased frequency and intensity of heat events in the summer. This will certainly lead to increased air conditioning usage in the summer, increasing the pressure of on the electric grid absent high-efficiency cooling systems.

Somerville encourages the DOER to make Attributes available for operation in cooling mode as well, although perhaps with a lower multiplier. While the ultimate goal may be heating electrification, providing Attributes for cooling energy would create an additional incentive to install heat pumps, which would then be used for both heating and cooling. In addition, use of heat pumps for cooling increases energy efficiency because they are more efficient than the window air conditioning units they may replace. As climate change progresses, Massachusetts will see a decrease in heating degree days and an increase in cooling degree days, placing more importance on the efficiency of cooling systems.

Bonus Multipliers for Installation in Efficient Buildings; 225 CMR 16.05(1)(a)(6)(b)(ii); draft p. 15

Somerville strongly supports the use of bonus multipliers for heat pumps installed in highly efficient residential buildings and Net Zero Energy commercial buildings. 225 CMR 16.05(1)(a)(6)(b)(ii). DOER should consider Passive House as another standard for bonus multipliers. To incentivize on-site production and resilience, bonus multipliers could also be given to buildings that install solar PV and/or storage along with heat pumps.

Advanced Minting of Attributes; 225 CMR 16.05(4)(d); draft p. 22

Somerville supports the option of advanced minting of Attributes for small systems. 225 CMR 16.05(4)(d)(1). This will remove the hurdle of metering for small system owners and also

² City of Somerville, *Climate Change Vulnerability Assessment* at 17-22, 27, 38, 62, June 2017. Retrieved through http://www.somervillema.gov/sites/default/files/6-13-2017_Somerville%20CCVA%20Final%20Report.pdf.





provide the option for an up-front rebate. However, discounting advance-minted Attributes based on the ratio of settled Attributes to the APS compliance obligation, 225 CMR 16.05(4)(d)(2), would be very confusing for small system owners and create uncertainty. DOER should modify these provisions to provide more certainty regarding the number of Attributes for which systems will be eligible.

Outreach and education

The City of Somerville was one of five New England cities to earn a grant from the Carbon Neutral Cities Alliance to conduct one of the first group-buy, community-based ASHP campaigns in New England. Based on the “Solarize” model, *HeatSmart/CoolSmart Somerville*³ endeavors to engage residents and HVAC professionals, incentivize early adopters, and ultimately, encourage growth in the market. Even though ASHP technology has been widely throughout the world, it has not yet penetrated the New England market; as such, consumer knowledge of ASHP is relatively low.

DOER should provide clear guidance to building owners regarding the incentive level available for different ASHP configurations. The APS regulation should be finalized in an expedient manner to support the needed transition to renewable thermal sources. To effectively support this transition, DOER should provide significant outreach and education to consumers, contractors, public officials, and other stakeholders so that the incentives can be clearly applied to technologies and building owners can make good decisions about their investments.

The comments were prepared in coordination with the City of Cambridge.

Thank you again for the opportunity to provide comments.

Sincerely,



Joseph A. Curtatone
Mayor

³ See www.somervillema.gov/hscs.

