

December 4, 2020

Massachusetts Department of Energy Resources
Samantha Meserve
Deputy Director of the Renewable and Alternative Energy Division

Dear Samantha Meserve,

Hampshire Power Corporation is a Massachusetts Benefit Corporation whose mission is to help people, property owners, and organizations maximize and monetize renewable energy systems. Hampshire Power believes that renewable energy should work for companies and residents by adding new lines of revenue while optimizing savings from energy efficiency. We work with our clients and partners to build transparent, interconnected, monitored, and fully monetized energy systems. We are vertically integrated. In other words, we install, own, operate, and maximize a wide array of energy products and services. Our vertical integration makes decision-making for our customers a smooth process, turning commercial and industrial real estate into a mutually beneficial energy portfolio.

Hampshire Power ownership and staff have nearly twenty years of experience working in the REC market, with extensive knowledge of the progression of the Solar Renewable Energy Certificate (SREC) program and now the Alternative Energy Certificate (AEC) program. Specific to the Massachusetts Alternative Performance Standard (APS), our staff has worked with numerous HVAC installers across the Commonwealth and gained approval for hundreds of business owners and residential customers renewable thermal systems. We have offered guidance to installers and customers alike as we have ridden the ups and downs of the market. We have also witnessed a growing trend with these constituents to turn away from the MA APS as a tool to drive sales or influence decision making behaviors due to the weak market value of AECs. We are concerned with the current trend as it has undermined the MA APS as a driver of market growth and its inability to support the targets required by the Commonwealth's Global Warming Solution Act and its corresponding greenhouse gases (GHG) emission goals. Therefore, we offer the following points of programmatic feedback as an active stakeholder in the future of the MA APS.

APS Minimum Standard Review Stakeholder Response:

The ongoing inclusion of combine heat and power (CHPs) in the APS has caused the imbalance between supply and demand within the first 3 years of the program. While it was understood why this technology was originally included, their ongoing inclusion does not meet the Commonwealth's GHG targets. Therefore, Hampshire Power agrees with the recommendation by the Daymark Energy Advisors to end the inclusion of new CHPs into the APS and gradually reduce, if not outright eliminate, the modifier of this technology.

As an alternative, similar to the precedent set by DOER previously to diversify the MA Class 2 RECs into the class for Waste to Energy (WTE) and non-WTE, we suggest that DOER create a new class for gas-fueled systems, AEC-CHP. Then, there would be two versions of

AECs: AEC-CHP and AEC-NonCHP. The CHP systems all go into AEC-CHP and the APS requirement does not grow for that class. On the other side, AEC-NonCHP sees significant annual APS increases.

Hampshire Power believes the priorities of the APS clearly need to focus on the renewable thermal technologies that support the Commonwealth's achievement of GHG emission reduction. As we have worked with installers across the Commonwealth for the past four years, the current levels of incentive for these renewable energy technologies is not enough to encourage market growth. Therefore, the installation of ASHPs and GSHPs will continue to grow slowly but not nearly enough to meet the demands of the Commonwealth's goals. The incentives need to be strengthened and stabilized in order for true market growth to be seen. If installers see real monetary value driven by this program, then they will learn it is to their advantage to promote and encourage their customers to participate in the APS and receive the AEC monetization of these technologies' environmental attributes. By increasing the modifiers of these technologies, and the decrease/removal of other technologies that do not achieve the reduction of GHG emissions, then the value of AECs will increase and the improved incentives for GSHPs and ASHPs will move forward their adaption across all sectors much more quickly.

Hampshire Power's participation in the APS market over the past three years offers us clear vision that the price signal is not sufficient nor stable enough to induce the needed levels of investment in electrically-fueled and/or renewably powered thermal technologies. Every residential/commercial/industrial furnace or boiler replaced with a new gas-fired system is a lost opportunity as such system will not be replaced again for 20+ years. In order to achieve the targets GHG emission reductions required by the Commonwealth, DOER must make immediate adjustments the APS program parameters so that the AEC market is robust and consistent enough to enable investors to rely on forward AEC values as part of their financial proformas. Managing the how's and why's of the market oversupply is critical to stabilize the price of AECs in the short and long-term.

Hampshire Power believes, for the long-term health of the APS, that Commonwealth legislation could be required to adjust the APS minimum standard and the rate of increase, plus the potential inclusion of LDCs in the APS requirements. However, we also recognize that legislative changes are likely to be slow and likely to be more difficult instead of adjusting the inclusion of certain technologies and their associated modifiers. Therefore, Hampshire Power recommends that DOER focus its efforts on adjusting the modifiers of the included technologies of renewable thermal to increase their value and to reduce and/or eliminate the imbalance set forth by CHP systems; or alternatively to review our suggestion of splitting the APS into APS-CHP and APS-NonCHP much like what was done in the MA Class 2 RECs. Based on the analysis of Daymark Energy Advisors, the focus of increasing the valuation of renewable technologies such as GSHP and ASHP systems by increasing their modifiers will quicken their statewide adoption and support the GHG implications of these technologies. Furthermore, Hampshire Power also supports DEA's analysis that the inclusion of the heating gas utilities (LDCs) would share the price increase across both utility types and lessen the burden on any single rate payer type. Long term balancing of the APS standard and rate of increase may still require legislative action, but Hampshire Power strongly recommends immediate action by

DOER by adjustment of technology modifiers and supports legislative action to share the APS pricing burden to the LDCs.

Current pricing due to oversupply of the APS market has dropped the value of AECs to complete insignificance. At today's rates at \$3.00 per AEC, this market-based incentive has little impact as a driver for behavior or decision making in the heating system market. It will not encourage growth or adaptation of the renewable thermal technologies, nor will it help cause any movement towards the electrification of heating in the Commonwealth of Massachusetts. At this price and the general complexity of the program, most installers simply are not discussing the program or including it as an available incentive to decrease the costs to consumers. The majority of installers we have engaged and educated about the program believe it is too confusing and lacks any real value. If the APS program supply and demand are balanced such that the price of AECs increases to at least \$15, and the modifiers used to value renewable thermal technologies, then adoption will quickly grow across this market.

Market prices of AECs:

April 2018 – avg \$17.00
July 2018 – avg \$16.22
October 2018 – avg \$17.75
January 2019 – avg \$19.02
April 2019 – avg \$14.82
July 2019 – avg \$17.69
October 2019 – avg \$10.91
January 2020 – avg \$6.50
April 2020 – avg \$2.00
July 2020 – avg \$4.25
October 2020 – avg \$3.50

As shown above in the rates of AECs over the past three years, the price volatility is causing many to not participate or even educate consumers about the APS incentive. Unlike a rebate program through Mass Save or Mass CEC, it is understood that this program was never intended to offer a flat rate of return. However, when the price swings from \$19 to \$3.00, and has stayed at this low rate for nine months and looks to go lower in the coming months, the value of this program is washed away. Many installers are simply not offering pricing structures that include the APS as a listed incentive, as they do not want to be held responsible by their customers when the market price drops significantly. With dollar values below a level that makes the incentive worth mentioning, then there will be no marketing of the APS program by installers, which in turn ensures that the APS market is not a driving factor in adoption of renewable thermal technologies. In the same way that the Commonwealth and DOER generated and adapted the SREC program, including a 10-year forward schedule of minimum and maximum prices and a mechanism to provide a price support by ensuring there was a market (the clearinghouse auction) for an over-supply of SRECs in any vintage year adjustments, helped push the rapid growth of the solar market in Massachusetts, the APS has the potential to drive the

growth of renewable thermal technologies and support the achievement of the Commonwealth's GHG goals.

As already stated, Hampshire Power currently works with numerous installers across the Commonwealth which provides us with a boots on-the-ground view of the APS program and its potential to increase adoption of renewable thermal technologies and influence the purchasing behaviors of the owners of residential and C&I buildings. However, as long as the prices are crushed by oversupply, then the dollar value of the AECs and thereby the incentive is simply too low to influence decision making. Residents and business alike are seeking ways to reduce costs in their utility and heating charges. These technologies are sought after, but the incentives must achieve a higher value and be within a stable market in order to ensure investment is worth long-term price savings and offer a reasonable ROI. Without modifications of the current APS program, this incentive will not be an influencer and mostly be ignored by installers and customers.

Eligibility Criteria Recommendations:

While overall programmatic structural modifications are absolutely necessary to the health of the APS program, smaller adaptations are also recommended. In its work with installers and other stakeholders, Hampshire Power has found that the eligibility requirement in renovation circumstances of the new ASHP systems capacity to be at least 50% of the existing system can be a difficult hurdle and has caused perfectly good systems to be determined ineligible. This has nothing to do with the benefit of the new system, but due to the long-term practice of HVAC installers to oversize heating systems within homes and buildings. During the adoption phase of these technologies, many homeowners and their installers are choosing to leave in the existing heating system as a redundant/backup/emergency system. In truth, why would you remove a working furnace or boiler, when you are adding a new heating system that uses different means to heat the home or building? Whether this is due to concerns of low temperature nights in New England or simple reduction of work, many installers are not willing to be responsible for the removal and recommend duplication of heating systems. Thus, mixing with the previous practice of oversizing the furnace or boiler with the retention of it on site, means this eligibility hurdle of 50% capacity is an unnecessary bar for some whole house systems to achieve. Ultimately, the value of the new system is in no way related to the old system and therefore should not be deemed ineligible due to past incorrect installation practices. We recommend removing this criterion entirely.

A second criteria that is causing an unnecessary burden in the application process is the paperwork required for the justification of square footage for systems in homes or buildings under 1,500 square feet. In these smaller buildings, there can be discrepancies between property cards and installer measurements or any other number of reasons for differences. However, considering the fact that the implications have no impact on the resulting AEC award of 90 AECs, we request the removal of this requirement on applications for homes and buildings of less than 1,500 square feet.

Finally, Hampshire Power also supports the recommendation of Daymark Energy Advisors to expand the program's allowance for ASHPs to include systems that are less than

90% heat load of a building. A majority of systems installed in renovation situations in homes and businesses are single units to support the overall building thermal load as opposed to whole building systems or are meant to deal with heating zone issues. This is the only incentive program that requires this threshold of 90% or greater heat load, greatly reducing the eligibility of many ASHP systems being installed across the Commonwealth. By including partial building system renovations with ASHP systems, the incentives for customers would increase and rapidly improve the adoption of this technology in the Commonwealth.

Overall, Hampshire Power supports MA APS review and stakeholder process to encourage its health and longevity. We believe it is a critical tool to achieving the lofty goals as set out in the Commonwealth's Global Warming Solution Act and its corresponding GHG emission reductions. We believe there are both short and long-term actions that can be made to balance and improve the power of the APS to become a market driving incentive and generate growth and adoption of renewable thermal technologies across the Commonwealth. As mentioned, heating system decisions are often once every 20 years, so every missed opportunity has lasting impact in our ability to achieve these legislated goals. Therefore, we recommend swift action to address the issues raised above and get it back on track such that it will be a driver of decision-making investment.

Respectfully,



Todd Ford
President and CEO
Hampshire Power Corporation

