

2020 APS Minimum Standard Review Stakeholder Questions

Responses from New England Solar Hot Water, Inc.

(11/23/20)

1. What are the benefits of the APS program to ratepayers, including but not limited to economic, environmental, and societal benefits?

The APS program has made Solar Hot Water systems affordable and thus more widely adapted. The system owners benefit through reduced utility costs, and ratepayers in general benefit via reduced CO2 emissions. Ratepayers also benefit as Solar Hot Water systems with electric backup help buildings move away from on-site fossil fuels towards electrification- a goal of the MA Comprehensive Energy Plan.

2. What are the costs of the APS program to ratepayers, including but not limited to economic, environmental, and societal costs?

None that we know of.

3. Do you believe the APS program should prioritize technologies which provide the most benefits, such as greatest greenhouse gas emissions reductions?

Yes. One idea is to increase multipliers when offsetting inexpensive natural gas to encourage owners to switch to renewable energy. Also, Solar Hot Water systems with electric backup should be encouraged in order to help move towards electrification of homes.

4. From 2015 through the present, what have been the average quarterly Alternative Energy Certificates (AEC) sale prices?

Average price over the 6-year period is not a helpful number as the price has varied widely from a high of over \$20/AEC in early years to a low of below \$3/AEC most recently.

5. Is the current APS minimum standard and the annual rate of increase adequate? Please include details and any data supporting why or why not, where possible.

No. For Solar Hot Water installations, the severe drop in AEC pricing has had a dramatic effect on financial “payback”, and thus reduced interest in these renewable energy systems. For example, for the average home with system cost of \$10,000, the potential AECs sales incentive has dropped from \$2,600 to \$550 over the past 5 years. This volatility and reduction in value definitely has had a negative impact on the Solar Hot Water industry and related CO2 emissions reductions.

6. Do you anticipate a growth or decline in the supply of AECs in the APS program over the next 5 years? 10 years? If so, how would you quantify this increase in growth rate? Please include details and any data supporting your conclusions.

If price for AECs were held steady at over \$16/AEC, more Solar Hot Water systems would be installed. We predict that installations per year would then double over the next 5 years.

7. Are there modifications to the APS program that could be made to reduce the volatility of the APS market?

This is not our area of expertise, but we're told caps and minimums, increasing obligations, and increasing multipliers may be helpful revisions.

8. Has the APS incentive had an impact on the decision of system owners to invest in APS eligible technologies? Why or why not.

Definitely! When priced appropriately (min. \$16/AEC), payback is reduced by several years, such that potential system owners are much more likely to invest.

9. How could the APS program be improved to better influence residential or commercial purchasing behaviors?

Increase pricing and reduce volatility of AECs pricing.

10. Are there currently eligibility criteria in the APS program that you believe are a barrier to participation in the program? How would you address these barriers?

For "combination" Solar Thermal systems that provide both space heating and domestic hot water, the multiplier should be adjusted up to reflect the use of heat for both purposes. Also, please consider adding Heat Pump Water Heaters to the program.

11. What revisions to the existing APS eligibility criteria would you propose to improve and simplify the APS program, if any?

Existing eligibility criteria for Solar Hot Water systems are reasonable. We propose you add electric Heat Pump Water Heaters as an eligible technology.

12. Is there any additional information you believe DOER should consider in its 2020 APS Minimum Standard Review?

Our main suggestions are as follows: 1) To increase and stabilize AECs pricing. 2) To encourage Solar Hot Water systems especially when offsetting natural gas and when replacing an existing fossil fuel-based system with Solar Hot Water with electric backup, 3) To consider adding electric Heat Pump Water Heaters as an eligible technology.