

Passive House Massachusetts (PHMA) encourages the EEAC to investigate the including ground- and air-source heat pump electric domestic hot water heaters, waste heat hot water heaters, and drain-water heat recovery systems providing all or part of the domestic hot water energy load in multifamily residential buildings of 10 or more apartment units as qualifying Alternative Energy Portfolio Standard (APS) Alternative Generation Units under 225 CMR Section 16.05(6)(a).

As multifamily residential buildings continue to become more energy efficient for space heating and cooling end uses, domestic hot water is growing to a larger share of end use energy in this building typology. However, energy efficient, emissions-reducing alternative energy technologies, outside of solar thermal domestic hot water systems, have been omitted from the list of qualifying generation units in the APS.

Updates to the MA Stretch Energy Code, utility rebates and incentives, and alternative energy credits have led to increases in efficiency and decreases in greenhouse gas emissions of end uses such as space heating and cooling, lighting, and appliances, but the domestic hot water end use has not seen the same efficiency and emissions improvements. As a result of the "spark spread" - the difference in the cost per Btu of energy delivered for natural gas versus electricity - and due to the conventional use of natural gas for providing domestic hot water in multifamily residential buildings, this building sector has not seen a movement towards electrification of domestic hot water systems, energy use and emissions reductions, and overall climate benefits that space heating and cooling systems have achieved in recent years.

We believe that the existing mechanism in the Alternative Energy Portfolio Standard (APS) to incentivize the use of alternative energy sources for space heating, such as air- and ground-source heat pumps, the Alternative Energy Credit (AEC), can and should be applied to domestic hot water systems utilizing alternative energy sources beyond solar thermal, which is already qualified for AECs.

We propose that EEAC and DOER investigate the potential for AECs to be awarded to these alternative energy domestic hot water systems in multifamily residential buildings of 10 or more apartment units, including possible program structure changes as a result of revising 225 CMR Section 16.05(6)(a) to include these systems, and publish their findings and recommendations to enable legislative and regulatory advancement of the inclusion of additional alternative energy domestic hot water system technologies in the APS.