

July 31, 2018

To: Members of the EEAC
From: Adam Hasz, Equitable Energy for Massachusetts

RE: Public comments on the draft 3-year plan 2019-2021

Dear members of the EEAC, Program Administrators, and the Department of Public Utilities:

Thank you for the opportunity for public comment on the draft three-year (2019-2021) Mass Save energy efficiency plans filed by the Program Administrators in April. I appreciate the work of the EEAC in providing leadership and oversight for the future of the Mass Save program. I hope that the final three-year statewide plan approved later this year will build on previous efforts of inclusion and innovation.

Equitable Energy for Massachusetts is a research and advocacy project that explores how climate policy can reduce inequality within the Commonwealth. The project is an extension of my MIT master's thesis, which focused on the ways that Massachusetts can improve its climate policies to better reduce greenhouse gas emissions and equitably share the benefits of energy efficiency. To accomplish these goals, the EEAC, PAs, and DPU should make the following changes to the 2019 – 2021 Mass Save plan:

1. **Aggressively pursue electrification of oil and propane heating systems.** While the draft plan's current proposal of "fuel neutrality" is a step in the right direction, Massachusetts needs to phase-out petroleum-based heating by in order to meet its GWSA target of a 45% reduction in GHGs by 2030. The next page includes more information on emissions from oil-based heating.
2. **Apply the 2017 EOEEA Environmental Justice Policy to the Mass Save statewide plan.** This policy states that "EEA and its agencies shall consider environmental justice as a criterion for awarding grants and prioritizing program funding to applicable recipients." While laudable, the policy has a limited impact with the relatively modest DOER annual budget of \$49 million. If the policy was applied to the full \$730 million spent annually through Mass Save, it would significantly increase the amount of benefits provided to environmental justice communities.
3. **Integrate municipalities and community organizations into Mass Save planning to better reach renters, low-to-moderate income households, non-English speakers, and small businesses.** The "Main Streets" initiative highlighted in the draft plan is an example of this strategy. PAs should also work with cities and community groups to reach underserved residential populations.
4. **Approve the City of Lowell's request to become a Mass Save Program Administrator.** Lowell's proposal contains a number of interesting ideas, including an increase in the proportion of funds designated for low-income communities and a local green jobs training program. If successful, Lowell's innovative approach would significantly increase equity within the Mass Save program.
5. **Redesign performance incentives to be linked to key performance indicators, including electrification and equity.** When previous plans contained performance incentives for energy savings, Program Administrators exceeded their goals. Incentives linked to other objectives would encourage PAs to also achieve goals like heat-pump conversions and renters served.

Thank you for your consideration. I look forward to reading the revised draft of the plan in September.

Sincerely,
Adam Hasz

To meet its 2030 GWSA Targets, Massachusetts must eliminate heating with petroleum products

The Massachusetts Global Warming Solutions Act (GWSA) requires an 80% reduction in economy-wide greenhouse gas emissions by 2050, based on 1990 levels. In 2015, Governor Baker pledged that the Massachusetts interim 2030 GHG reduction target would be between 35% and 45%. Given this goal, Massachusetts must essentially eliminate heating with petroleum products by 2030.

The graph below shows the combined heating emissions from residential and commercial buildings in Massachusetts for 1990 and 2015. It also shows a projection of residential and commercial emissions in 2020, based on the Massachusetts Clean Energy and Climate Plan update from 2015. The graph shows the emissions limit required if the building sector is to achieve a 45% GHG reduction relative to 1990 levels, an implied limit of 12.9 MMT. Existing GHG emissions from natural gas heating systems in 2015 came to a total to 12.7 MMT, just under the implied emissions limit for 2030.

The graph has strong implications for the 2030 GWSA target: to achieve a 45% reduction in CO2 from buildings, Massachusetts essentially needs to eliminate heating with petroleum products. The best available alternative to oil-based heat is building electrification via heat pumps. While the replacement electric heat pumps will consume electricity, those electric emissions can be offset through the purchase of new renewable electricity. Given that heating systems have a typical lifespan of 15-years, Massachusetts must immediately begin upgrading old oil and propane boilers to heat pumps. Mass Save is an ideal delivery mechanism for this effort as long as incentives are changed to promote heat pumps.

Commercial and residential CO2 emissions needed for a 45% reduction (data from EIA 2017)

