

JUNE 20, 2024

Via e-mail: ma-eeac@mass.gov

Energy Efficiency Advisory Council (EEAC)
Department of Energy Resources
100 Cambridge Street, Suite 1020
Boston, MA 02114

Re: The Massachusetts 2025 – 2027 Energy Efficiency and Decarbonization Plan Draft
Subject: Written Comment from the American Council for an Energy-Efficient Economy

Dear Council Members,

The American Council for an Energy-Efficient Economy (ACEEE) welcomes this opportunity to provide comments and recommendations on the Mass Save 2025 – 2027 Energy Efficiency and Decarbonization Plan (2025 - 2027 Plan).

ACEEE is a nonprofit research organization based in Washington, D.C. that conducts research and analysis on energy efficiency. ACEEE is one of the leading groups working on energy efficiency issues in the United States at the national, state, and local levels. We have been active on energy efficiency issues for more than four decades. For many years, ACEEE has provided technical assistance on energy efficiency topics to various stakeholders in Massachusetts.

Massachusetts was ranked 2nd in ACEEE's 2022 State Energy Efficiency Scorecard and ranked 1st overall in the country for several years prior.¹ The state clearly prioritizes equitable energy efficiency policies and programs and ACEEE is generally supportive of the goals and strategies laid out in the 2025 – 2027 Plan. However, after reviewing the 2025 – 2027 Plan, we have identified a few areas for improvement and/or where greater nuance is needed. Our recommendations are summarized here first. Additional details on these are provided below for your consideration.

- *Equitable building electrification*
- *Prioritize energy efficiency for renters*
- *Approaches to quantify greenhouse gas (GHG) emissions through energy efficiency programs*
- *Non-Energy Impacts of commercial and industrial heat pumps*

Recommendations

Accelerate equitable building electrification

The 2025 – 2027 Plan cites electrification of new and existing buildings, through heat pump installation, as a key strategy to reduce GHG emissions. While ACEEE is pleased to see this included, we would like to emphasize the importance of equitable electrification in our comments. In the 2025 – 2027 Plan, approximately 14% of the overall heat pump installation targets will go towards low-to-moderate income (LMI) households. ACEEE recommends a higher heat pump installation target for LMI

¹ Subramanian, S., W. Berg, E. Cooper, M. Waite, B. Jennings, A. Hoffmeister, and B. Fadie. 2022. 2022 State Energy Efficiency Scorecard. Washington, DC: ACEEE. www.aceee.org/research-report/u2206

communities in the 2025 – 2027 cycle, with the ultimate aim of closing the gap between program delivery benefits and ideally the percentage of LMI households in the state (approximately 40%).² Setting ambitious goals to drive equitable distribution of heat pump installations comes with cost and logistical challenges, but the cost and consequence of inaction are even greater. This May, ACEEE published a research report, *“The Value of Prioritizing Equitable, Efficient Building Electrification,”* that shows the significant quantifiable benefits of prioritizing LMI households in the electrification transition.³ The report found that for all American households a scenario with 75% residential electrification produces \$96 billion in net cost savings over the 2024–2050 analysis period if LMI households are included, but a net cost increase of \$88 billion without equitable electrification. Average energy burdens (the percentage of income spent on energy bills) for LMI households are also shown to go down if equitable electrification is prioritized. These findings are driven by the inefficiency of many LMI homes and likely increases in fixed costs for remaining gas customers as some customers electrify and leave the gas system. Importantly, the report found that the societal benefits of electrification, such as costs associated with medical care due to outdoor air pollution, are biggest in the Northeast region due to its dependence on oil and propane heat for extreme winters. In consideration of the financial circumstances of LMI customers, it is crucial that Mass Save give special attention to the incentive levels needed for LMI customers to afford equipment upgrades, which should be combined with rate design policies that ensure customer energy burden is addressed. We also note the importance of improved rates for heat pump customers, such as those being considered in several pending and expected Department of Public Utilities (DPU) dockets.

Accordingly, we recommend that Mass Save reorient its spending on electrification programs in favor of low-income households being given first priority to fully electrify. Specifically, Mass Save should rapidly expand electrification incentive services for customers receiving delivered fuels and also prioritize efficient heat pump upgrades for customers with electric resistance heat. We also note that Home Energy Rebates funded by the federal Inflation Reduction Act can and should be used to assist with funding LMI retrofits. Around 27% of all households in Massachusetts use delivered fuels such as oil and propane to heat their homes, about three times the national average.⁴ Both single-family and multi-family homes stand to benefit from electrification and efficient heat pump upgrades. Research by Rewiring America shows that almost 80% of low-income renters in multifamily properties in Massachusetts would see energy bill savings when switching to a medium-efficiency heat pump from fuel oil.⁵

As customers exit the gas system, it is essential that LMI households are not left behind to shoulder gas utility stranded asset costs. Program Administrators (PAs) have provided written assurance in response to ACEEE inquiries that low-income gas customers are eligible for heat pump incentives, who are asked to acknowledge the risk of higher energy costs when electrifying. However, on the Mass Save website there continues to be language stating that low-income households with gas heat are excluded from

² MA Energy Efficiency Advisory Council. 2024. *Initial Equity Data Review*. April 8. ma-eeac.org/wp-content/uploads/Initial-Equity-Data-Review-for-4.8_4.8-Final-002.pdf

³ Fadali, Lyla, Michael Waite, and Paul Mooney. 2024. *The Value of Decarbonizing Equitable, Efficient Building Electrification*. Washington, DC: ACEEE. <https://www.aceee.org/research-report/b2405>

⁴ EIA (Energy Information Administration). 2024. “Massachusetts State Energy Profile.” www.eia.gov/state/print.php?sid=MA

⁵ Rewiring America. 2024. *Comments on the Mass Save Three-Year Efficiency Plan*. June 3. <https://ma-eeac.org/wp-content/uploads/Rewiring-Americas-Mass-Save-Energy-Efficiency-Plan-Comments.pdf>

current program offerings. Even as Mass Save targets electrification for customers with delivered fuels, its website and all marketing materials should make clear that low-income gas customers are also eligible to receive incentives for heat pump conversion.

Upfront costs for heat pump installation are not the only barrier for heating electrification for LMI households. Unless paired with complementary upgrades, high electricity costs could actually exacerbate energy burdens for some LMI households. However, complementary policies and rate design reform can help increase energy affordability for LMI customers who electrify, which is currently being addressed through the Department of Public Utilities Notice of Investigation on Energy Affordability for Massachusetts Ratepayers (D.P.U. 24 – 15).⁶ Additionally, last August, Unitil proposed differential electric rates for efficient space heating customers and an increased electric discount rate for low-income customers.⁷ Importantly, Unitil’s proposal enables low-income households to participate in both the heat pump rate and receive the low-income rate discount to ensure that energy burdens are not exacerbated for these households due to the transition.

Since 2013, Mass Save supported the installation of 75,000 heat pumps, but only 3,600 were for low-income customers (about 5%). The Mass Save 2025-2027 draft plan, as currently written, would deliver 115,000 heat pumps, of which only 16,000 are planned for LMI customers, while the remaining 99,000 are for standard market rate incentives. This would increase the LMI share to 14%, but fall far short of proportionate installations, which would be closer to the approximately 40% share of the population in the LMI income category. Massachusetts has been a leader among peer states in its pursuit of equitable decarbonization, overcoming an array of policy, program design, and implementation challenges to do so. Driving both equity and decarbonization at the same time is challenging, but necessary. We urge the state to continue to be ambitious in pursuit of distributive justice for LMI customers through its heat pump programs.

Prioritize energy efficiency for renters

Renters are more likely to live in inefficient housing and have lower disposable income than their counterparts, and are more susceptible to energy insecurity, including high energy burdens.⁸ Energy efficiency upgrades are imperative for rental households not only to make bills more affordable but also to improve quality of life through healthier indoor environments and better levels of comfort. According to the Massachusetts EEAC’s Initial Equity Data Review, 38% of households in the state are occupied by renters, whereby 25% are classified as low-to-moderate income (LMI) and 12% are market-rate or non-LMI.⁹ However, the 2025 – 2027 Plan allots 82% of the total residential incentive budget toward non-renter and non-moderate-income households. That leaves only around 14% of the overall incentive budget for moderate-income renters and only 4% of the incentives towards low-income and market-

⁶ Massachusetts DPU (Department of Public Utilities). 2024. *Notice of Inquiry by the Department of Public Utilities on its own Motion into Energy Burden with a Focus on Energy Affordability for Residential Ratepayers*. D.P.U. 24-15, January 4. <https://fileservice.eea.comacloud.net/FileService.Api/file/FileRoom/18395018>

⁷ Unitil. 2024. “Massachusetts Rate Cases.” unitil.com/ma-rate-case/en

⁸ Samarripas, Stefen. 2022. “One-Third of Tenants Behind on Utility Bills, Highlighting Need for Energy Upgrades.” *ACEEE Blog*, August 21. www.aceee.org/blog-post/2022/08/one-third-tenants-behind-utility-bills-highlighting-need-energy-upgrades

⁹ MA Energy Efficiency Advisory Council. 2024. *Initial Equity Data Review*. April 8. ma-eeac.org/wp-content/uploads/Initial-Equity-Data-Review-for-4.8_4.8-Final-002.pdf
https://ma-eeac.org/wp-content/uploads/Initial-Equity-Data-Review-for-4.8_4.8-Final-002.pdf

rate renters.¹⁰ The portfolio allocation for low-income renters should be increased substantially. ACEEE recommends increasing the overall budget and incentive levels allocated for renter households to reflect the prevalence of these households in the Mass Save program's service territories and to ensure that the energy efficiency programs are benefitting a historically disinvested group of households. Federal funding from the Inflation Reduction Act and the Infrastructure Investment and Jobs Act can be used to bolster program budgets for rental property retrofits. Increasing energy efficiency for renter-occupied homes will also contribute to the state's climate goals by reducing GHG emissions. However, these funds should be seen as additive, and not a replacement for equitable distribution of efficiency program spending for renters and LMI households within Mass Save.

We recommend that the 2025 – 2027 Plan specify best practices and strategies that the PAs should undertake to increase EE services for renters. In 2021, ACEEE published a topic brief on best practices for affordable utility multifamily energy efficiency programs.¹¹ Below are high-level best practices that may be applicable to Mass Save's programs. Please refer to the report for more details on each of these strategies.

1. Create a one-stop shop.
2. Coordinate and partner with relevant stakeholders to implement programs and better support projects.
3. Help owners identify and combine all available incentives for retrofit projects.
4. Monitor and evaluate program outreach continuously.
5. Help building owners finance energy efficiency projects.

Mass Save's multifamily program follows many of these recommendations, but full use of these principles could aid the program to reach increased participation and savings targets.

ACEEE also developed guidance on marketing, education, and outreach for energy efficiency improvements in rental housing.¹² While this information is geared towards local governments, its guidance may be useful for addressing the interests of Massachusetts cities and towns that have prioritized equitable decarbonization and improved programs for renters and moderate-income customers, as indicated by the Metropolitan Area Planning Council.¹³ Strategies include identifying and engaging interested property owners and managers to connect with renters, working with community based organizations that can help build trust between local governments and renters, providing communication materials to owners and managers regarding energy efficiency for renters, and highlighting nonenergy benefits for renters, such as improved air quality and comfort. Again, Mass Save is doing some of this, but more can be done.

¹⁰ Ibid.

¹¹ ACEEE. 2021. *An Overview of Affordable Multifamily Programs: Best Practices and Context for Utilities*. September. https://www.aceee.org/sites/default/files/pdfs/affordable_multifamily_programs_final_9-14-21.pdf

¹² ACEEE. 2022. *Guidance on Marketing, Education, and Outreach Campaigns Targeting Energy Efficiency Improvements in Rental Housing*. November. https://www.aceee.org/sites/default/files/pdfs/toolkit_3_marketing_education_and_outreach_11-15-22.pdf

¹³ Winner, Brooks. 2024. "The Draft Mass Save Three-Year Plan is Out. Here's What Cities and Towns Needs to Know." MAPC (Metropolitan Area Planning Council), April 29. www.mapc.org/planning101/draft-mass-save-three-year-plan/

Approaches to quantify GHG emissions through energy efficiency programs

We are pleased to see that decarbonization of the buildings, transportation, and commercial and industrial sectors is a top priority for Mass Save programs in the 2025 – 2027 Plan.¹⁴ These efforts are meant to ensure PAs meet the GHG reduction goals set by the Secretary of the office of Energy and Environmental Affairs (EEA) on March 1st, 2024.¹⁵ The Secretary of the EEA also prescribes which emission factors the PAs need to use for calculations and GHG reporting requirements. We recommend additional attention be given to selecting an emissions framework that aligns with these policy goals, while ensuring data analysis is sufficiently robust to inform current and future decision making. ACEEE will soon release a white paper that evaluates various state approaches for calculating GHG reductions through EE programs. It points to the value of calculating emissions reductions using multiple methods to serve different policy decision making and applied use needs.¹⁶ Presently, Massachusetts uses average emissions in its calculations for GHG reductions. ACEEE's forthcoming report encourages states and utilities to report emission reductions using marginal emissions in addition to average emissions, similar to how multiple cost-effectiveness tests can be used to provide a more complete perspective on the benefits and costs of an energy efficiency portfolio.

Non-Energy Impacts of commercial and industrial heat pumps

Commercial and industrial (C&I) heat pumps deliver efficiency savings, carbon reductions, and an array of important non-energy impacts (NEIs). ACEEE published a brief on industrial heat pump (IHP) co-benefits¹⁷ this week that could be a useful resource for studies on C&I heat pump NEIs in the Mass Save 2025 - 2027 cycle. While IHPs' energy and decarbonization benefits are well known,¹⁸ greater understanding of their other benefits could help accelerate deployment of this technology. For example, IHPs can improve operations (including more precise heat control and better-quality products) and workplace health and safety (which could lead to better job retention), while reducing insurance, maintenance, and water treatment costs. Nearby communities also benefit from overall improvements in air quality, reduced environmental risks, and new workforce and economic opportunities. These NEIs should be further researched so that they can be captured and quantified for C&I projects.

In our brief, we encourage utility managers and PAs to find candidate sites for IHP demonstrations, particularly in facilities that have low-to-medium temperature process heat needs, and provide incentives and support for such projects. PAs should especially consider facilities in which product quality improvements can be monitored and where program outcomes can be shared. Public-facing data that can confirm operational improvements will help more accurately quantify IHP co-benefits for future projects and therefore increase the technology's value proposition while reducing perceived risk of adopting IHPs.

¹⁴ See p.19 of <https://ma-eeac.org/wp-content/uploads/Final-Draft-MA-2025-2027-Plan.pdf>

¹⁵ Executive Office of Energy and Environmental Affairs. 2024. *Greenhouse Gas Emissions Reduction Requirement for Mass Save*. March 1. <https://ma-eeac.org/wp-content/uploads/Appendix-V-EEA-GHG-Goal-Letter-March-1-2024.pdf>

¹⁶ Specian, M. 2024. *Accounting for Change: Policies and Technical Approaches for Reducing Greenhouse Gas Emissions through Energy Efficiency Programs*. Washington, DC: ACEEE.

¹⁷ Hoffmeister, Andrew, Hellen Chen, and Jonah Eisen. 2024. "The Industrial Heat Pump Opportunity Goes Beyond Energy Savings." <https://www.aceee.org/topic-brief/2024/06/industrial-heat-pump-opportunity-goes-beyond-energy-savings>

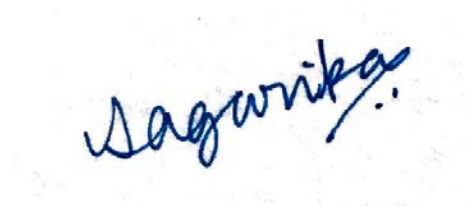
¹⁸ ACEEE. 2024. "Industrial Heat Pumps." Accessed June 19. <https://www.aceee.org/industrial-heat-pumps>

Coordinate between government agencies

Massachusetts' leadership on equity and decarbonization reflects an 'all of government' approach that, in addition to Mass Save, includes many related efforts, such as the Interagency Rate Reform Working Group, the Clean Heat Standard, and the Massachusetts Community Climate Bank. There is also considerable new federal funding flowing to the state through the Inflation Reduction Act. The Mass Save 2025-2027 final plan should include details on how its programs will be coordinated with and leverage funds from these related efforts to maximize its impact in saving energy, increasing equity and reducing energy burden, and achieving the state's ambitious decarbonization targets.

ACEEE appreciates the opportunity to comment on the 2025 – 2027 Plan and is looking forward to continued engagement with the EEAC on these issues. Please contact us with any questions or if you would like to discuss these comments in greater detail.

Sincerely,



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