April 1, 2024

Elizabeth Mahony
Commissioner
Massachusetts Department of Energy Resources
100 Cambridge Street, 9th Floor
Boston, MA 02114

Re: 2025-2027 Energy Efficiency and Decarbonization Plan

Dear Commissioner Mahony:

Pursuant to G.L. c. 25, §§ 19 and 21, the Program Administrator sponsors of the Mass Save® program respectfully submit this draft 2025-2027 Energy Efficiency and Decarbonization Plan ("2025-2027 Three-Year Plan") to the Energy Efficiency Advisory Council ("Council"). The Program Administrators thank the Massachusetts Department of Energy Resources ("DOER"), the Attorney General's Office ("AGO"), Council members, the Council's consultants ("Consultants"), and other interested stakeholders for their efforts and valued input as the Program Administrators have worked on developing this draft. The 2025-2027 Three-Year Plan is attached and can also be accessed, along with all appendices and bulk attachments here: 2025-2027 Three-Year Plan April Draft.

The 2025-2027 Three-Year Plan invests over $4.99 Billion in energy efficiency and decarbonization efforts in Massachusetts and will deliver $13.8 Billion in total benefits to Massachusetts customers. The 2025-2027 Three-Year Plan will also reduce over One Million metric tons of CO2e, achieving the aggregate greenhouse gas emissions reduction goal set pursuant to G.L. c. 21N § 3B by the Secretary of Energy and Environmental Affairs in her letter dated March 1, 2024. The 2025-2027 Three-Year Plan invests over $1 Billion in incentives for energy efficiency and electrification improvements for low- and moderate-income customers and renters. This is the largest investment in these customer groups ever put forward in an energy efficiency and decarbonization plan in the Commonwealth, and—the Program Administrators believe—in the nation.

As further explained in the 2025-2027 Three-Year Plan, the Program Administrators will achieve these goals by: (1) expanding and developing decarbonization efforts across the residential, low-income, and commercial and industrial sectors; (2) focusing on improving equitable access to programs and offers, especially for those populations who have had lower historical participation rates; and (3) materially enhancing the customer experience.

The Program Administrators appreciate the intense efforts devoted to this process by DOER, the AGO, the Council and its Consultants, and many stakeholders. The statewide 2025-2027 Three-Year Plan builds on the Commonwealth's successful track record delivering nation-leading energy efficiency and decarbonization programs to meet its climate and energy goals, and also sets forth creative and new approaches to meet these ambitious goals.

The Program Administrators look forward to future engagement and comments on this draft 2025-2027 Three-Year Plan and are confident that when the final plan is submitted this October, it will represent the most innovative and ambitious three-year plan ever presented. Thank you for your engagement.

Sincerely,

The Massachusetts Program Administrators

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The Massachusetts 2025-2027 Energy Efficiency and Decarbonization Plan

Draft, April 1, 2024

WE ARE MASS SAVE®:

BERKSHIRE GAS
An AVANGRID Company

Cape Light Compact

EVERSOURCE

Liberty™

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Introduction

As the Massachusetts Program Administrators (PAs),[1] we are proud to submit our first draft of the 2025-2027 Energy Efficiency and Decarbonization Plan (2025-2027 Plan) to the Energy Efficiency Advisory Council (EEAC).[2] This $4.99 billion investment represents a significant step toward the achievement of the Massachusetts 2030 climate goals for the building sector and in support of our efforts to ensure that all eligible residents and businesses across the Commonwealth benefit from the Mass Save® programs.

To accomplish these outcomes, we propose to continue offerings that contribute to these goals as well as introduce a set of bold, new solutions designed to improve the customer experience and reduce barriers to participation, particularly for communities and customer groups who have historically participated in the programs at lower levels. We are deeply grateful to the EEAC, including the Equity Working Group, our implementation and community partners, and our trade allies for their feedback and support in developing the first draft of the Plan and without whom implementation of the Mass Save programs would not be possible. We look forward to continued collaboration as we work to refine and finalize the Plan.

1 The PAs are: The Berkshire Gas Company, Cape Light Compact JPE (the Compact), NSTAR Electric Company, NSTAR Gas Company, and Eversource Gas Company of Massachusetts, each d/b/a Eversource Energy, Liberty Utilities Corp. (New England Natural Gas Company) d/b/a Liberty, Massachusetts Electric Company, Nantucket Electric Company, Boston Gas Company, each d/b/a National Grid, and Fitchburg Gas & Electric Light Company d/b/a Unitil. The Program Administrators may be referred to as the "PAs", the "Massachusetts PAs", or the "Program Administrators" throughout this document

2 The 2025-2027 Energy Efficiency and Decarbonization Plan may be referred to as the "2025-2027 Plan", the "Three-Year Plan", or the "Plan" throughout this document.

By the Numbers

The 2025-2027 Plan builds on more than two decades of customer investment in energy efficiency and electrification in the Commonwealth. These nation-leading programs support approximately 76,000 high-quality, energy efficiency and electrification jobs in Massachusetts.[3]

	What We've Done Since 2013, we have:	**What We're Going To Do** Under the 2025-2027 Plan, we aim to:
	Weatherized approximately 350,000 homes, including 70,000 low-income households.	Weatherize 174,000 homes, including approximately 48,000 low- and moderate-income households.
	Supported the installation of heat pumps in over 75,000 homes and businesses (since 2019), including 3,600 low-income households.	Support the installation of heat pumps in over 115,000 households, including 16,000 low- and moderate-income households.
	Reduced greenhouse gas (GHG) emissions by 3.7 million metric tons of carbon dioxide equivalent (CO_2e), the same as of taking 800,000 cars off the road for a year.	Reduce GHG emissions by 1.0 million metric tons of CO_2e.
	Delivered over 153 million megawatt-hours (MWh) and 4.7 billion therms in energy savings, as well as $31 billion in total benefits to customers.	Deliver 9.8 billion MWh and 1.1 billion therms in energy savings and $13.8 billion in total benefits to customers.
	Invested $1.1 billion in improvements that lower energy bills and improve health, safety, and comfort for low-income households.	Invest over $1 billion in incentives paid for low- and moderate-income customers and renters.
	Provided $6.7 billion in customer incentives.	Provide over $3.5 billion in customer incentives.

3 Massachusetts Clean Energy Center, "2023 Massachusetts Clean Energy Industry Report," at 17.

How We Are Going To Do It

Reduce greenhouse gas emissions

Achieve 9.8 million MWh and 1.1 billion therms in energy savings, including by weatherizing over 175,000 homes and small businesses
Drive electrification of new and existing buildings, including by supporting installation of heat pumps in 115,000 homes
Support GHG reductions for C&I customers via new measures designed to specifically reduce emissions and decarbonization planning
Introduce a coordinated approach to joint electrification funding and delivery
Reduce the costs of electrification to customers by pursuing outside funding

Enhance program access for all

Increase moderate-income customer participation by reducing barriers to qualification, making the offering available to moderate-income renters, eliminating out-of-pocket costs for weatherization and electrification, and improving the customer experience
Drive increased weatherization and electrification of rental units and low- and moderate-income housing in designated equity communities
Continue to expand access to weatherization and electrification for low-income customers
Support energy efficiency and electrification improvements in schools in equity communities
Increase participation for renters statewide by delivering enhanced weatherization and barrier remediation
Enhance language access for LOTE (Languages Other Than English) customers
Help minimize energy burdens for low- and moderate-income customers via clean energy adoption

Deliver an improved customer experience

Provide holistic, multilingual support for all customers via creation of a statewide contact center
Ensure timely rebate processing and an improved rebate experience
Provide a simplified, managed delivery option for installation of heat pumps, starting with low- and moderate-income homeowners and renters
Standardize the custom pathway for C&I customers
Invest in digital enhancements and improved reporting

Strengthen and diversify the workforce

Collaborate with the Massachusetts Clean Energy Center to increase workforce diversity, doubling annual funding from $12 million to $24 million per year.
Expand and strengthen a robust heat pump installation workforce via the Heat Pump Installer Network
Ensure delivery of high-quality installations via contractor management and training
Expand C&I training opportunities

What's New?

Major enhancements for the 2025-2027 Plan include:

Decarbonization

- Enhanced Home Energy Assessments to provide interested customers with recommendations and opportunities for pursuing decarbonization of their homes.
- A simplified customer experience to drive greater adoption of electrification through a managed delivery option for installation of heat pumps, starting first with moderate-income customers.
- Incentivizing meaningful GHG savings for medium and large commercial customers through new measures, such as refrigerant leak mitigation and retrofits, behind-the-meter gas leak mitigation, carbon capture of onsite emissions, and reducing embodied carbon in construction materials.
- Creation of a coordinated, statewide approach for joint delivery and funding of electrification.

Equity

- Expanded eligibility criteria for moderate-income customers by considering both state and area median income and by enabling qualified renters to access moderate-income offers.
- Increased support for moderate-income homeowners and renters with barriers to weatherization and electrification, which will include a managed delivery model to reduce or eliminate out-of-pocket costs and the time commitment required of customers.
- Additional investment in designated equity communities through no cost weatherization for all customers and increased funding for weatherization and electrification of rental properties. In collaboration with the Department of Energy Resources (DOER), the PAs will also leverage federal Inflation Act Reduction funding to support electrification of moderate-income customers in these communities.
- Increased funding for Community First Partners.
- Accelerated delivery of weatherization and electrification improvements to low-income customers by expanding the list of qualified vendors and providing direct income verification.
- Targeted support for weatherization and electrification of schools in equity communities.
- Enhanced support for LOTE customers by working to provide comprehensive language access support throughout the customer journey.
- Individual electric PA offerings and programs to help low- and moderate-income customers decarbonize their homes and businesses while minimizing their operating costs.
- Collaborate with the Massachusetts Clean Energy Center to increase workforce diversity, doubling annual funding from $12 million to $24 million per year.

Customer Experience

- Provision of multilingual, holistic customer support for all residential customers and small businesses through the launch of a statewide contact center and continued expansion of a statewide client services center for low-income customers.
- Increased data transparency and reimagined reporting.

Reduce greenhouse gas emissions

The Global Warming Solutions Act, as amended, establishes a statewide goal to achieve net zero GHG emissions by 2050 and reduce GHG emissions at least 50 percent below 1990 levels by 2030.[4] To help accomplish these goals, the 2030 Clean Energy and Climate Plan aims to reduce GHG emissions from residential and commercial heating and cooling equipment by weatherizing and electrifying buildings. The 2030 Clean Energy and Climate Plan identifies the Mass Save programs as an important component to achieving this transition. Consistent with statewide efforts and the requirements of the Global Warming Solutions Act, the Secretary of Energy and Environmental Affairs (EEA Secretary) has established a GHG reduction goal for the 2025-2027 Plan of 1.0 million metric tons of CO_2e.[5]

We aim to deliver these GHG reductions through the following five key strategies:

Achieve 9.8 million MWh and 1.1 billion therms in energy savings, including by weatherizing over 175,000 homes and small businesses

Energy efficiency and weatherization are critical to reducing energy use and emissions, maintaining comfort, and minimizing customers' energy bills. Energy efficiency also provides the foundation to help manage the system costs of electrification by minimizing the extent of infrastructure investments resulting from the transition to electric heating and cooling. In accordance with our enabling authority, we will continue to pursue all-available, cost-effective energy savings, with a primary focus on weatherization and building envelope improvements for over 175,000 homes and small businesses.

To drive adoption of weatherization in small businesses, we will bring in more weatherization vendors through our Customer Directed Option and work to upskill the vendor community to identify and deliver high-quality weatherization projects. Additionally, we will support more small business weatherization projects for customers who lease their facilities and for select nonprofit organizations by increasing incentives. We will also help drive energy savings for medium and large commercial and industrial (C&I) customers by introducing support for building commissioning. This effort will drive near-term savings by optimizing the performance of existing controls and equipment, while identifying opportunities to implement new capital measures such as control upgrades and building envelope improvements.

4 See Acts of 2008, c. 298 (Global Warming Solutions Act) as amended by Acts of 2012, c. 209; Acts of 2018, c. 227 § 20; Acts of 2021, c. 8; Acts of 2022, c. 179.

5 In connection with the establishment of the GHG reduction goal, the EEA Secretary has also requested that the Program Administrators model achievement of 2.2 million metric tons of GHG emission reductions by 2030 in order to inform efforts to secure more resources for the implementation of energy efficiency and decarbonization programs in the Commonwealth. The timing and steps for this analysis are described in further detail below. See EEA Secretary's Letter to the Program Administrators establishing a GHG emissions reduction requirement for Mass Save 2025-2027 Energy Efficiency Plans, Mar. 1, 2024.

Reduce greenhouse gas emissions

Drive electrification of new and existing buildings, including by supporting installation of heat pumps in 115,000 homes

The 2022 Climate Act reinforced our decarbonization efforts by requiring the phase-out of support and incentives for fossil fuels under the Mass Save programs, except in extremely limited situations.[6] The 2025-2027 Plan goes beyond these requirements by making electrification the default solution for all residential customers, where possible, and a cornerstone for achieving planned GHG reductions. We will also expand Home Energy Assessments to provide interested customers with recommendations and opportunities to pursue decarbonization of their homes. In addition to supporting electrification of space and hot water heating, as well as appliances (e.g., induction stoves, clothes washers and dryers), assessments will also help inform customers about electrical upgrades required to support electrification, as well as opportunities to adopt electric vehicle charging and onsite renewable energy.

In the previous term, we laid the foundation for transforming the heating and cooling market by supporting the development of an ecosystem of weatherization and heat pump installation contractors, manufacturers, and distributors necessary to support this work in the Commonwealth. In the 2025-2027 term, we will continue to build and strengthen this ecosystem with the goal of installing heat pumps in 115,000 housing units, including 16,000 for low- and moderate-income households. To improve the customer experience and reduce barriers to adoption, we propose the development of a managed (or "turnkey") solution for residential customers who want to install heat pumps without having to identify and select a contractor themselves. Under this approach, customers will have the option to work with a single vendor provided through the programs to pursue weatherization, barrier mitigation, and electrification upgrades for their home. The vendor will manage each step of the process and the various subcontractors. Initially, we plan to start with moderate-income customers and then expand to market-rate customers near the end of the three-year term. We anticipate that the creation of this turnkey offering will help manage customers' costs associated with decarbonization.

Additionally, we will provide the option for residential customers who choose to select their own installation vendor to pre-approve their heat pump projects before installation. Pre-approval helps to ensure customers understand the eligibility requirements at the outset and install heat pumps that are subsequently eligible for incentives. Separately, we will offer virtual decarbonization assessments to help customers make informed decisions when they are considering installing a heat pump, including help comparing installation quotes. Finally, we will redesign the Residential New Homes & Renovations program to make all-electric construction the default option for new homes built in the Commonwealth.

6 See An Act Driving Clean Energy and Offshore Wind, Acts of 2022, c. 179, § 26 (2022 Climate Act).

Reduce greenhouse gas emissions

Support GHG reductions for C&I customers via new measures designed to specifically reduce emissions and decarbonization planning

There are multiple barriers to electrifying medium and large commercial buildings, many of which are significant enough in scope to not be fully addressable over the three-year term. While electrification remains challenging in the C&I sector, we are committed to helping C&I customers decarbonize. As part of this Plan, energy assessments will cover both energy efficiency and electrification to help customers in developing decarbonization roadmaps for their buildings. We will also introduce new services to support customers through portfolio-level assessments of buildings and through enhanced support for facilities that must comply with GHG reduction ordinances such as BERDO (Boston's Building Emissions Reduction and Disclosure Ordinance), BEUDO (Cambridge's Building Energy Use Disclosure Ordinance), and new statewide building energy reporting requirements for all other buildings over 20,000 square feet.

We will also incentivize measures that will result in meaningful GHG savings, but may have little or no direct energy savings. Examples of these types of measures include refrigerant leak mitigation and retrofits, behind-the-meter gas leak mitigation, carbon capture of onsite emissions, and reducing embodied carbon in construction materials. In certain building types, these GHG reducing measures can be highly cost effective and can have shorter implementation cycles.

Introduce a coordinated approach to joint electrification funding and delivery

We will implement a new statewide model to jointly fund and deliver prescriptive electrification projects that will simplify and improve the customer experience and ensure that funding is available for customers of all fuel types. Under this model, we will have a single, statewide rebate processing vendor for all PAs and implement cross-PA data sharing for customers of multiple PAs. This will reduce customer confusion and improve the customer experience by ensuring that residential customers get to the right person quickly when they need guidance or experience an issue with their rebate.

This joint approach will also ensure that we can more seamlessly market to and educate our customers on electrification, regardless of heating fuel type or overlapping service territories. Additionally, customer engagement for C&I custom electrification projects will be led by the electric PA—eliminating the potential for overlapping outreach and confusion in joint service territories. This new model will also allow for equitable sharing and allocation of costs, savings, and GHG emissions reductions between electric and gas PAs related to prescriptive electrification projects based on a distribution formula and customer base. This sharing will help marginalize cost-effectiveness issues related to full electric conversions.

We will incentivize new measures for C&I customers that will result in meaningful GHG savings, such as refrigerant leak mitigation and retrofits, behind-the-meter gas leak mitigation, and reducing embodied carbon in construction materials.

Reduce the costs of electrification to customers by pursuing outside funding

We will continue to aggressively pursue outside funding to support our decarbonization efforts and reduce the burden on customers. Sources of outside funding for the 2025-2027 term include, but are not limited to, proceeds from the Regional Greenhouse Gas Initiative auctions, federal Inflation Reduction Act funding for electrification of moderate-income customers in designated equity communities, and federal bipartisan Infrastructure Investment and Jobs Act funding to install batteries for low- and moderate-income customers. We will also work with the Massachusetts Community Climate Bank and other institutions to identify ways to reduce the costs of HEAT Loan payments to customers.

We recognize the critical role energy efficiency, active demand reduction, distributed energy resources, and other demand-side measures can and have played in reducing and/or deferring the need for what would otherwise be necessary electric and gas infrastructure investments. These opportunities have become increasingly salient in light of recent Massachusetts Department of Public Utilities (Department) proceedings, including non-pipe alternative evaluation requirements and targeted electrification opportunities as described in the Department's recent order in Docket D.P.U. 20-80, and electric distribution company investment proposals delivered through the Electric Sector Modernization Plan process.[7] In all cases, we anticipate that the statewide programs enumerated in this Plan will remain the foundation of the customer-side contributions to any non-pipe alternative, non-wire alternative, or targeted electrification offerings.

7 The Massachusetts Department of Public Utilities may be referred to as the "Department," "DPU," or "D.P.U." throughout this document.

Enhance program access for all

We are committed to ensuring that all eligible residents and businesses across the Commonwealth can access, participate in, and benefit from the Mass Save programs. For the 2025-2027 plan, we propose to invest over $1 billion in incentives for energy efficiency and electrification improvements for low- and moderate-income customers and renters. This is the largest investment in these customer groups ever put forward in an energy efficiency and decarbonization plan in the Commonwealth, and we believe--in the nation. We are particularly focused on serving customer groups who have historically participated at lower rates, including customers in equity communities, moderate-income customers, renters, customers who speak languages other than English (LOTE customers),[8] and small businesses, and to do so without increasing these customers' energy burdens. We look forward to working with the Department in its recently opened docket focused on energy affordability, D.P.U. 24-15, to ensure that electrification measures are affordable for low- and moderate-income customers.

For the 2025-2027 term, we aim to enhance program access for all through the following five key strategies:

Increase moderate-income customer participation by reducing barriers to qualification, making the offering available to moderate-income renters, eliminating out-of-pocket costs for weatherization and electrification, and improving the customer experience

We will expand the definition of "moderate-income" to consider both state and area median income and make moderate-income offerings available to landlords whose tenants meet these income qualifications. These changes will increase the number of customers eligible for our moderate-income offerings and reduce barriers to program qualification by aligning with the criteria used for many federal and state programs, such as rental assistance.

To reduce out-of-pocket costs and remove barriers to participation, we propose to offer no-cost weatherization, barrier remediation, and electrification to moderate-income customers. These measures would be delivered via a turnkey solution simplifying the customer experience and helping to manage customer costs. To further reduce barriers to qualification, we also propose allowing moderate-income customers to qualify for no-cost weatherization by self-attesting to their household income and household size. Through these efforts, we aim to weatherize approximately 13,000 moderate-income housing units, as well as support electrification of approximately 5,800 moderate-income housing units across the state. To protect against increasing moderate-income customer energy burdens, our electrification efforts will focus on customers who heat with electric resistance, oil, and propane.

8 A person who speaks a Language Other Than English, or LOTE customer, refers to any individual who speaks, reads, writes, or understands a non-English language and has a language access need. The term LOTE is growing in usage within the language access industry and was identified as a preferred term by people who self-identify as such. We will utilize "LOTE customer" throughout this Plan document in lieu of the previously used terms of non-English speakers, English-isolated customers, and Limited English Proficiency.

Enhance program access for all

Drive weatherization and electrification of rental units and low- and moderate-income customer housing in designated equity communities

To increase participation among customers who have historically participated at lower rates, we will continue to utilize our Community First Partnership and nonprofit partners to provide targeted, multilingual messaging and outreach with a focus on reaching equity communities. We will build on these efforts by increasing funding, and the flexibility of that funding, for Community First Partners to help retain qualified staff. In designated equity communities, we will offer no cost weatherization to all eligible customers, and provide additional funding through our custom multifamily offering to support weatherizing and electrifying rental properties with a large share of low- and moderate-income customers. We will work closely with community stakeholders, Community First Partners, the Massachusetts Clean Energy Center, and others to identify buildings in these communities with majority renter and moderate-income populations, in which electrification will not result in increased energy burden for these tenants. Additionally, through our Mass Save Community Education Grant, we will continue to increase our community engagement, with a focus on equity communities, through energy efficiency education and literacy programs paired with marketing and training support.

Continue to expand access to weatherization and electrification for low-income customers[9]

In partnership with the network of Community Action Program agencies, we will continue to deliver programs at no cost to low-income customers. Over the 2025-2027 Plan, we aim to weatherize 35,000 and install heat pumps at over 10,000 low-income housing units. Electrification will continue to be the default solution for delivered fuels and electric resistance customers because these are the situations where electrification will not lead to increased energy burdens. To improve the customer experience and reduce the time required to provide services to this customer demographic, we will continue to support Action for Boston Community Development's (ABCD) operation of its Statewide Client Services Center and make available year-round income qualification that is independent of the fuel assistance application process. Also, ABCD and Action Inc. will continue to maintain contractor capacity across Eversource and National Grid territories by using qualified firms to deliver energy services to low-income customers in communities with increased demand for services where the local Community Action Program agency's time-to-serve exceeds six-to-eight weeks, and to expand into other service territories as needed.

Support energy efficiency and electrification improvements in schools in equity communities

We look forward to working with DOER and other stakeholders on collaborative initiatives to support decarbonization of schools in equity communities. We currently anticipate that we will offer services targeted to schools and other public buildings, with an emphasis on equity communities, to support building decarbonization and electrification, with an energy efficiency first approach. We will work in collaboration with state agencies involved in funding schools, especially DOER, the Massachusetts School Building Authority, the Massachusetts Clean Energy Center, and the Massachusetts Department of Elementary and Secondary Education to create a pipeline for existing school decarbonization and a streamlined school district/municipal experience. Advancing these schools toward decarbonization might mean helping communities identify sources of funding to assist with needed repairs resulting from years of deferred maintenance. It will also be important to layer and/or blend funding from various agencies and grant resources and to do so in a way that advances projects toward decarbonization.

9 Low-income customers are defined as those earning up to 60 percent of state median income, as required by the Low-Income Home Energy Assistance Program (LIHEAP). Low-income customers are also often referred to in Mass Save program documents as "income-eligible customers," because they qualify for certain additional financial assistance. "Low-income" and "income-eligible" are used interchangeably through this document to refer to these customers.

Specific PA support for schools in coordination with these state agencies could include support for municipal energy managers, including resources shared across communities as appropriate, decarbonization roadmap support, other technical assistance, enhanced incentives, assistance for communities in applying for federal and state funding and equipment training for facilities staff at schools and other public agencies.

Increase participation for renters statewide by delivering enhanced weatherization and barrier remediation

To more comprehensively serve renters and rental properties statewide, we will continue targeted outreach to landlords and tenant groups and will also continue to offer no-cost weatherization and incentives for pre-weatherization barrier repairs for market-rate, renter-occupied units. Weatherization and barrier remediation provide benefits to both the tenant and the landlord by improving comfort, increasing property value, and reducing energy bills.

Enhance language access for LOTE (Languages Other Than English) customers

We are addressing the need for serving our customers in their preferred language and through culturally relevant outreach informed by key Language Access recommendations commissioned by the PAs in 2022-2024. Through implementation of the Language Access recommendations, we will offer language services in the five most-spoken languages other than English in Massachusetts, which are Spanish, Portuguese, Haitian-Creole, Mandarin, and Cantonese. Language services include material translations, interpreter services, and use of multilingual staff as available. We will also continue to work with our Community First Partnership and other community partners to support language access for all customers.

Help minimize energy burdens for low- and moderate-income customers via clean energy adoption

Several electric PAs are developing additional, targeted offerings and programs to help low- and moderate-income customers decarbonize their homes and businesses while minimizing their operating costs. For example, National Grid is developing an offer to provide a per-kW PV rebate to eligible customers who heat with gas and install PV alongside a heat pump, in order to help bring down the operating costs of that heat pump. Eligibility for this offer will be limited to residential customers earning 61 to 150% of area median income, schools, public buildings, and non-profits located in equity communities, with a budget between $35 and $45 million for the three-year term. Eversource is also developing offers that will target communities impacted by infrastructure upgrades, including projects covered under the Integrated Planning Approach described in Eversource's Electric Sector Modernization Plan, and low- and moderate-income customers for whom the operating costs of electric technology may be a barrier to adoption. This funding may include additional incentives for adoption of electrification technology or barrier remediation, new incentives for adoption of solar and/or storage, and support for provision of "turnkey" delivery of these measures, among other things. Eversource is dedicating up to $70 million for this work. Similarly, the Compact proposes to complete its Cape and Vineyard Electrification Offering (CVEO) during the 2025-2027 term, which supports electrification and PV installation for low- and moderate-income customers on the Cape, within the budget originally approved by the Department. The PAs are working on details, collaborating with DOER and the AGO on these efforts, and developing a regulatory approach that addresses the Department's precedent, including in D.P.U. 22-137.

Deliver an improved customer experience

Currently, customers lack a centralized location and appropriate customer support resources to help them understand the various options for decarbonizing their homes or small businesses, the steps required to pursue them effectively, and how to efficiently access program supports and financial incentives. These challenges can pose barriers to participation, ultimately limiting customer adoption of the building decarbonization solutions critical to meeting the Commonwealth's climate and clean energy goals.

To drive the ambitious levels of customer adoption needed to meet the Commonwealth's decarbonization goals, we plan to implement new enhancements to streamline the customer experience and lead to increased program participation. Our objective is to deliver deliver an improved customer experience through the following five key strategies:

Provide holistic, multilingual support for all customers via creation of a statewide contact center

To complement ABCD's Statewide Client Services Center for low-income customers described above, we will launch a new statewide contact center to provide comprehensive, multilingual support to residential and small business customers statewide regarding all energy efficiency and electrification offerings.[10] This support will include guidance for customers at the beginning of their decarbonization journey who want information on where and how to start and the range of potential solutions available for their home or small business. Our statewide contact center will also support those customers who already have a specific objective in mind, such as electrification of their home, and want to know how they can access the Mass Save programs to support their plans.

Our statewide contact center will be staffed by program specialists who are knowledgeable of all Mass Save offerings and who can assist with topics including program guidance, Home Energy Assessments, HEAT Loans, decarbonization consultations, relevant tax credits or federal incentives, and the status of a rebate. Center staff will also be trained and equipped to help customers access incentives outside of the Mass Save programs, such as incentives for electric vehicles and distributed solar installations. Customers will be able to access these comprehensive resources via phone, chat, and email.

10 The Compact has an existing call center to support these efforts.

Deliver an improved customer experience

Ensure timely rebate processing and an improved rebate experience

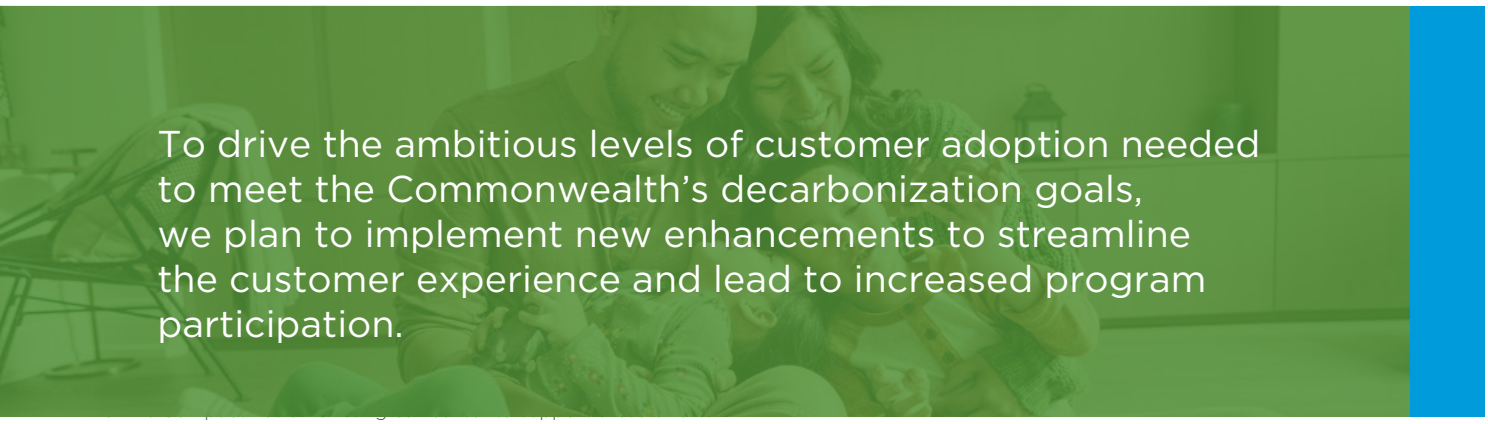
We process approximately 300,000 rebates annually. To support this demand and create a faster rebate process, we engaged a new rebate processing vendor as of July 1, 2023, and have worked very closely with them to improve the process for customers. We understand the significant challenges posed to customers by rebate processing delays last term and have actively worked to eliminate these issues and improve the customer experience. We will continue to improve the quality and completeness of submitted applications by creating an optional pre-approval step for customers pursuing electrification to help ensure customers understand and comply with each of the required components for successfully securing a rebate prior to submission of an application form.

Additionally, we will continue to work with our rebate processing vendor to further reduce the number of applications with missing information via enhancements to the online submission process and proactive outreach to affected customers. This outreach is in addition to the automated notifications customers already receive. Finally, we are also working to optimize and reduce the time required for inspections, while ensuring appropriate levels of post-installation review. Together, we expect these efforts to improve the rebate experience while ensuring that installed heat pumps achieve the expected energy savings and GHG reductions, and that customer dollars are prudently deployed.

Improve the customer experience for electrification, starting with low- and moderate-income homeowners and renters

As already noted, we propose to improve the customer experience and reduce out-of-pocket costs by offering moderate-income renters and homeowners no-cost weatherization, barrier remediation, and electrification, delivered via a turnkey approach. This approach will be modeled on our existing framework for weatherization, enabling the programs to provide a facilitated project management experience to customers for a broader range of offerings within decarbonization. By expanding the range of turnkey offerings, 2-to-4-unit homes containing a mix of market-rate and low- and moderate-income customers will be able to participate more effectively.

Based on our initial experience implementing a turnkey approach for moderate-income customers, we will expand the turnkey electrification offering to market-rate customers prior to the end of the 2025-2027 term. Through our partnership with the network of Community Action Program agencies and implementation partners, we will also continue to reduce the time to serve low-income customers by deploying qualified vendors to areas where the local Community Action Program agency's time to serve exceeds six-to-eight weeks.



To drive the ambitious levels of customer adoption needed to meet the Commonwealth's decarbonization goals, we plan to implement new enhancements to streamline the customer experience and lead to increased program participation.

Deliver an improved customer experience

Standardize the custom pathway for C&I customers

We will offer several enhancements to improve the experience of customers and vendors participating in the custom pathway. This includes standardizing savings calculation tools, engineering requirements, project documentation, and both pre- and post-installation inspections and savings validation processes across PAs. These resources will be made available on a shared website available to all PA engineers and technical service vendors. A central working group will oversee this standardization effort on an ongoing basis. A 2024 statewide solicitation for technical service vendors will also help ensure we take a consistent approach to overseeing technical vendors and further enable shared practices. New initiatives for building commissioning and schools in equity communities will offer additional customer support in developing more comprehensive projects. Finally, the PAs are exploring ways to make project information more readily available to customers.

Invest in digital enhancements and improved reporting

We will continue to enhance MassSave.com to expand electrification-related content, improve language access, and foster an optimal user experience. This will include personalization enhancements to nurture residential and C&I customers along their decarbonization journeys by providing the most relevant and helpful content and information. The net effect of the above-referenced strategies will lead to higher customer satisfaction, increased speed and accuracy of rebate processing, improved customer support, and ultimately, increased program participation.

The PAs are working in collaboration with DOER to provide the Council, the public, and interested stakeholders with valuable and easy-to-understand information on the programs that help measure progress toward our Plan goals. This information will include details on key measures such as weatherization jobs and heat pumps installed across different customer types and communities; investments in low- and moderate-income customers and in designated equity communities; and information on commercial projects such as custom electrification and existing building commissioning projects. Further details are included in Section 5.4: Operational Metrics and Key Performance Indicators.

Strengthen and diversify the workforce

The success of the 2025-2027 Plan and ultimately the Commonwealth's ability to meet its net zero commitments are dependent on having a workforce capable of providing energy efficiency, electrification, and decarbonization services. Over the last decade, the energy efficiency workforce in Massachusetts has grown over 86 percent and now directly supports approximately 76,000 good paying green collar jobs. We recognize that a stable, trained, diverse and adaptable labor pool is essential to the continued growth and success of our programs.

To meet this need, we are pursuing several strategies to expand and diversify a robust workforce. These efforts are designed to help us meet ambitious building efficiency, energy savings, and decarbonization goals with a workforce that reflects the diversity of the communities and customers we serve. Our four key strategies to strengthen and diversify the workforce are described below:

Collaborate with the Massachusetts Clean Energy Center to increase workforce diversity, doubling annual funding from $12 million to $24 million per year.

We will work collaboratively with the Massachusetts Clean Energy Center over the 2025-2027 term to increase workforce diversity, doubling annual funding from $12 million to $24 million per year. Areas of focus will include training for contractors that speak a language other than English and connecting these contractors with LOTE customers, business development support for Minority and Women's Business Enterprises, as well as transportation support for employees among others. The Massachusetts Clean Energy Center will also provide regular reporting to the EEAC and the Department on their efforts, including through key performance indicators. This will help ensure that the $72 million in customer funds transferred from the Mass Save programs to the Massachusetts Clean Energy Center are designed to support the equity-related workforce needs of the programs, that diverse trainees and businesses are given opportunities, as available, within the network of Mass Save contractors and vendors upon completion of their training, and that we ultimately succeed in creating a more diverse workforce that better represents the communities in which they serve.

In addition to collaborating with the Massachusetts Clean Energy Center, we will also continue to provide several complementary efforts. These include: (1) holding Supplier Diversity Summits and establishing a process for matching Minority and Women's Business Enterprise suppliers with vendors with whom they can partner in applying for specific Mass Save procurement opportunities; (2) offering the Mass Save Workforce Training Grant, which seeks to increase the sustainability of the energy efficiency workforce by upskilling and transitioning new workers into the workforce through partnership development and grant funding; and (3) for Eversource and National Grid specifically, training new and diverse candidates from equity communities through the Clean Energy Pathways program.

Strengthen and diversify the workforce

Expand and strengthen a robust heat pump installation workforce via the Heat Pump Installer Network

We will continue to develop an extensive network of heat pump installers who go through a qualification process in order to participate in the Mass Save programs. Training requirements for heat pump installers ensure that customers receive a quality heat pump installation. Over the 2025-2027 term, we will continue to expand our Heat Pump Installer Network and strengthen training requirements. Our Heat Pump Installer Network will provide the foundation for the development of a turnkey electrification pathway for moderate-income and market-rate customers.

Ensure delivery of high-quality installations via contractor management and training

We are constantly evaluating the contractors who participate in the Mass Save programs and contractors who do not meet expectations can be excluded from participating. To ensure excellence in program delivery and to help contractors succeed, we will provide training opportunities, including no-cost virtual trainings that are available 24/7 through our Mass Save Heating & Cooling Learning Center.

Expand C&I training opportunities

We will expand the quantity and range of training courses available, with dedicated staff to support these efforts. Our focus areas for additional trainings will include electrification, weatherization, heat recovery, building controls, energy auditing, and building commissioning. While the majority of these trainings will target system designers and installers, many will also benefit facility managers and staff. We will also collaborate with DOER to update and expand energy code trainings for architects, engineers, and builders in response to recent changes to Massachusetts building and stretch codes, as well as cutting-edge design practices.

Finally, we have established relationships with local institutions and industry organizations to foster workforce growth and development in the C&I sector. These relationships will result in workforce development training that includes an introduction to the latest technologies, identifying opportunities to implement the technologies, tools for understanding the benefits of implementing improvements, and opportunities to make use of PA resources. We also partner with the Northwest Energy Efficiency Council to offer Building Operator Certification, which elevates building operators' credentials through training in energy efficiency and smart building technologies, continued education, and certification.

SECTION ONE: PRIORITIES

1.1 Decarbonization

The Green Communities Act, as amended and codified at G.L. c. 25, §§ 19, 21, 22 ("GCA"), mandates the Massachusetts PAs to "pursue all cost-effective energy efficiency that is less expensive than supply" and to construct the three-year plan to meet or exceed the GHG emissions target goals set by the EEA Secretary pursuant to G.L. c. 21N, § 3B. These mandates have created a broad framework for planning and implementation. For the 2025-2027 term, the PAs will fully support customers throughout their decarbonization journey, helping them with measures that reduce or eliminate carbon-emitting equipment in their homes and businesses. For several decades, the PAs have delivered nation-leading strategies and programs at scale and are bringing this expertise and delivery infrastructure to bear to drive meaningful progress toward the Commonwealth's climate goals.

Second only to transportation, the building sector is the Commonwealth's largest source of GHG emissions. Therefore, any plan to mitigate GHG emissions must include strategies for decarbonizing space and water heating, which account for the majority of building energy consumption. While the PAs have historically provided incentives for measures that reduce carbon emissions by using energy more efficiently, they are now additionally focused on driving adoption of technologies that aim to decarbonize a customer's home or business by electrifying equipment that currently use fossil fuels.

As customers' primary sources of information and support, the PAs will provide a comprehensive suite of services and tools to present actionable information, education, and resources to customers related to all opportunities to reduce their energy use and convert to low or no-carbon alternatives to fossil fuel heating, including those outside of traditional building-centered energy efficiency measures. Additionally, for medium and large C&I customers who face barriers to cost-effectively electrifying, the PAs will incentivize measures that will result in meaningful GHG reductions, such as refrigerant leak mitigation and retrofits, behind-the-meter gas leak mitigation, carbon capture of onsite emissions, and reducing embodied carbon in construction materials.

1.1.1 Residential Sector Decarbonization Efforts

In the Residential sector, the PAs' strategic decarbonization enhancements will include:

- Enhancing Home Energy Assessments to provide interested customers with a suite of recommendations and opportunities to pursue decarbonization for their homes.

- Offering a simplified customer experience to drive greater adoption of electrification through a turnkey delivery option for installation of heat pumps, starting first with moderate-income customers and then expanding to market-rate customers by the end of the three-year term.
- Creating an optional pre-approval step for customers selecting their own heat pump installer to educate customers upfront on eligibility requirements and providing decarbonization assessments to help inform their evaluation of which installation options are right for their home.
- Redesigning the Residential New Homes & Renovations program to make an All-Electric offering the default option for new construction in the Commonwealth.
- Creating a coordinated, statewide approach for joint delivery and funding of electrification.

For a detailed discussion of these efforts, please see section 3.1.1: Residential New Homes & Renovations, section 3.1.2: Residential Turnkey Services, and section 3.1.3: Residential Rebates.

1.1.2 Low-Income Sector Decarbonization Efforts

In the Low-Income sector,[1] these strategic decarbonization enhancements will include:

- Driving no-cost electrification for low-income customers, with a focus on those who heat with delivered fuels and electric resistance.
- Accelerating delivery of weatherization and electrification improvements to low-income customers by expanding the list of qualified vendors.
- Supporting deep energy retrofits and electrification via the Multifamily Deep Energy Retrofit pathway.

For a detailed discussion of these efforts, please see section 3.2: Low-Income Sector.

1.1.3 C&I Sector Decarbonization Efforts

In the C&I sector, these strategic decarbonization enhancements will include:

- Improving the customer experience and simplifying the administration of electrification measures by moving to a statewide model for custom electrification projects in which the electric PA leads

[1] Please note that in prior three-year plans, the name used for this sector and its programs was “Income Eligible sector.” For the 2025-2027 term, it will be referred to as the Low-Income sector.

engagement with the customer on electrification; however, the costs and benefits will be shared between the electric and gas Program Administrators.

- Driving greater adoption of weatherization in small businesses by expanding the number of weatherization vendors through the PAs' Customer Directed Option and providing enhanced incentives for small business customers who lease their facilities and for select nonprofit organizations.
- Optimizing energy use for medium and large businesses by expanding and enhancing support for deep building commissioning.
- Increasing support for weatherization and electrification of schools in equity communities.
- Helping customers develop long-term strategies for decarbonizing by offering support for customer development of decarbonization roadmaps for their building or portfolio of buildings.
- Offering incentives for new measures that will result in meaningful GHG reductions, such as refrigerant leak mitigation and retrofits, behind-the-meter gas leak mitigation, carbon capture of onsite emissions, and reducing embodied carbon in construction materials.
- The PAs are exploring creative new approaches including collaborating with the Massachusetts Department of Environmental Protection ("MassDEP") in investigating water and wastewater treatment plant heat recovery technologies. There is a mutual desire to see these technologies implemented where appropriate. The shared goal is to have at least a couple of projects go through implementation and then conduct verification and data analysis to gain insights about functionality, as well as actual energy and GHG savings.

For a detailed discussion of these efforts, please see section 3.3: Commercial & Industrial Sector.

1.1.4 Greenhouse Gas Reduction Goal

All of these above-referenced efforts are designed to meet or exceed the EEA Secretary's GHG reduction goal for the 2025-2027 term of 1.0 million metric tons of CO_2e. In connection with the establishment of the GHG reduction goal, the EEA Secretary has also requested that the Program Administrators model achievement of 2.2 million metric tons of GHG emissions reductions by 2030 in order to inform efforts to secure more resources for the implementation of energy efficiency and decarbonization programs in the Commonwealth. The PAs are currently working on modeling and design for this scenario, as well as the strategies necessary to achieve those goals, and will provide it at a time to be determined in collaboration with DOER prior to final submission of the Plan.

Finally, the PAs expect that these foundational measures will be coordinated with the development of community specific Decarbonization Plans pursuant to the Electric Sector Modernization Plans and the review of non-pipe alternatives as required by D.P.U. 20-80.

1.2 Equity

Equity is a foundational principle of the PAs' decarbonization efforts under the 2025-2027 Plan. "Equity" means engaging all stakeholders, including the PAs' customers and communities, with respect and dignity while working toward fair and just outcomes, especially for those burdened with economic challenges, racial inequality, negative environmental impacts, and justice disparities. The goal of the PAs' equity efforts is to effect more equitable participation in decarbonization programs, particularly among those groups who have historically participated at lower rates, including renters/landlords, moderate-income households, LOTE (Languages Other Than English) customers, and small businesses. The Equity Working Group, a subcommittee formed as part of the EEAC, has provided invaluable feedback on how to overcome barriers to serving these groups and recommendations for improving the equity outcomes of the programs. The PAs thank them for their support and look forward to continued collaboration in the 2025-2027 term.

The PAs believe the first step to reducing inequities in access to decarbonization is understanding where and why they exist. During the 2019-2021 term, the PAs commissioned a series of studies to gather insights from a variety of stakeholders, including residential and small business nonparticipants, and to understand the barriers to participation.[2] These studies showed that renters, moderate-income customers, LOTE customers, and small businesses were less likely to participate than other customers and identified several consistent themes around barriers to participation, including lack of trust in government and landlords, prioritization of basic needs over energy efficiency, lack of understanding/awareness of offers, and perceptions that offers are not relevant to them.

The most common reasons nonparticipants reported for not taking part in Mass Save® programs were: (1) not being aware of the program offers (27 percent), (2) thinking that their house is already energy efficient (23 percent), (3) not wanting to deal with the hassle of participating (22 percent), or (4) not having the time (18 percent). One commissioned report, the Residential Nonparticipant Market Characterization and Barriers Study, showed that nonparticipants tend to fall into multiple categories of nonparticipation and were likely to

[2] See Residential Nonparticipant Customer Profile Study (MA19X06-B-RESNONPART), produced for the Massachusetts PAs by DNV GL, Feb. 6, 2020. Residential Nonparticipant Market Characterization and Barriers Study (MA19X06-B-RESNONPART), produced for the Massachusetts PAs by Navigant, Illume, and Cadeo, Feb. 27, 2020. Commercial and Industrial Small Business Nonparticipant Customer Profile Study (MA18X11-B-SBNONPART), produced for the Massachusetts PAs by DNV GL, Apr. 15, 2020.

live in rental units, be low- or moderate-income, and report lower awareness of Mass Save, even with increased effort and financial incentives.[3]

During the 2022-2024 term, the PAs commissioned the Massachusetts Limited English Proficient and English-isolated Customer Journey Mapping and Barriers Study.[4] The study found that LOTE customers experience similar barriers to those identified in prior nonparticipant research, such as concerns about trusting service providers, prioritizing basic needs over efficiency improvements, not fully understanding programs or why providers offer them, and underinformed perceptions of how program offerings can benefit them.

As part of the 2025-2027 Plan, the PAs propose to invest over $1 billion in incentives for energy efficiency and electrification improvements for low- and moderate-income customers and renters. This is the largest investment in these customer groups ever put forward in an energy efficiency and decarbonization plan in the Commonwealth, and the PAs believe—in the nation. Across all sectors, the PAs are working to increase participation among these nonparticipant groups by deploying dynamic strategies to reach and serve these customers, including through increased collaboration with community partners to build trust and awareness, enhanced incentives, expanded eligibility for income-based offers, improved language access, targeted messaging, and significant efforts to streamline delivery and reduce customer time commitment. The next sections provide an overview of the barriers and proposed efforts to reach nonparticipants for each identified group, along with references to detailed discussions of relevant program offerings in later sections of the Plan.

1.2.1 Renter-Occupied Units

Renters are fundamentally constrained in their ability to pursue decarbonization because they lack the authority to make most capital improvements related to their housing. Most impactful decarbonization measures require coordination with the property owner to move forward. Despite these challenges, reaching these renter-occupied units continues to be the PAs' priority—particularly in designated equity communities with high concentrations of low- and moderate-income renters.

The PAs will build on the most successful strategies and partnerships from the 2022-2024 Massachusetts Strategic Renters Plan and introduce new strategies to target renter-occupied units. These include:

[3] See Residential Nonparticipant Market Characterization and Barriers Study, at 2.

[4] See Navigant, Illume, and Cadeo. Residential Nonparticipant Market Characterization and Barriers Study. The studies include the Massachusetts Limited English Proficient and English-isolated Customer Journey Mapping and Barriers Study, Small Business, and Moderate-Income.

- Continuing to provide a no-cost turnkey weatherization offer for all renter-occupied units statewide.
- Expanding turnkey offerings for moderate-income renters to include no-cost pre-weatherization barrier remediation, as well as no-cost heat pump installation and pre-electrification barrier remediation. This will include coordinated delivery of services to address the time constraints of moderate-income renters, and outreach to landlords to encourage energy efficiency improvements in rental units with income-qualified tenants.
- Providing more investment in designated equity communities through no-cost weatherization for all customers and increased funding for weatherization and electrification of rental properties. Rental properties in designated equity communities are expected to be occupied primarily by low- and moderate-income renters.
- Engaging with trusted partners to reach and serve renters, including Community First Partners, community-based organizations, and landlord and tenants' organizations.
- Providing direct outreach to landlords and property managers, along with renter-focused webinars.
- Continuing to offer incentives and support for pre-weatherization barrier remediation, along with additional incentives for all renter-occupied units.

For a detailed description of the efforts to reach and serve renter-occupied units, please refer to section 3.1.2: Residential Turnkey Services.

1.2.2 Moderate-Income Households

Throughout the 2025-2027 term, the Massachusetts PAs will build upon the significant efforts already underway to serve more moderate-income households. To achieve this, the PAs will expand program eligibility, simplify income qualification, and offer enhanced incentives and turnkey services to ease the logistical and financial burden of participation. In response to recommendations and input provided by the Equity Working Group, the PAs deployed several new approaches in 2024 designed to test strategies to increase moderate-income participation.

The PAs will continue to evolve these approaches through the 2025-2027 term, incorporating lessons learned from their initial implementation experience. The PAs' planned enhanced strategies include:

- Expanding eligibility criteria for moderate-income customers by considering both state and area median income and by allowing qualified renters to access moderate-income offers.
- Adopting self-attestation as a qualification method statewide for turnkey weatherization services.
- Streamlining the qualification process through categorical eligibility and by pursuing data-sharing agreements with income-based benefits program administrators.
- Continuing to offer no-cost weatherization.
- Offering no-cost pre-weatherization and pre-electrification barrier remediation, as well as electrification of space heating, which will include a turnkey model to reduce or eliminate out-of-pocket costs and the time commitment required of customers.
- Ensuring moderate-income customers will also be able to access more facilitation support via a navigator.

For a detailed description of the efforts underway and planned to reach and serve moderate-income customers, please refer to section 3.1.2: Residential Turnkey Services.

1.2.3 LOTE (Languages Other Than English) Customers

The Massachusetts Limited English Proficient and English-isolated Customer Journey Mapping and Barriers Study found that LOTE customers have similar concerns to other nonparticipant groups about trusting service providers. These customers are more likely to trust local networks for information and tend to experience more challenges accessing services due to the lack of multilingual services along the customer journey. During the 2022-2024 term, the PAs worked with a language consultant to develop recommendations for addressing language needs based on the study's insights. For further discussion of the PAs' language access and efforts to reach and serve LOTE customers, please refer to section 3.4.3: Language Access.

1.2.4 Small Businesses

The PAs are committed to ensuring equitable access to and participation in the efficiency and decarbonization programs available to small businesses. The Program Administrators' approach to equity in the small business sector will include efforts to expand access to small businesses owners who speak a language other than English, build on their existing community engagement efforts, and improve the quantity and quality of vendors engaging with small businesses through equitable workforce development.

Key enhancements for the 2025-2027 term include:

- Continuing to reach and engage small businesses through the Community First Partnership and Main Streets events, hosted in partnership with Community First Partners and with a focus on select communities. For more details on the Community First Partnership, see section 3.4.2: Community Outreach and for more detail on Main Streets, see section 3.3.4: Small Business Turnkey Retrofit.
- Expanding the number of weatherization contractors able to serve small businesses through the PAs' Customer Directed Option.
- Expanding small business turnkey retrofit offerings to drive more participation in facilities where the customer leases their building and for charitable nonprofit organizations, including houses of worship.

For further details, see the Strategic Enhancements part of section 3.3.4: Small Business Turnkey Retrofit.

1.2.5 Community Engagement and Investment in Designated Equity Communities

Community-based organizations are trusted partners of the customers who live and work in their communities. Community partners are on the ground every day engaging with residents and small businesses and are therefore able to reach them effectively. In the 2025-2027 term, the Massachusetts PAs will expand their efforts to partner with communities to reach nonparticipants through increased funding to the Community First Partnership and Mass Save Community Education grants. For a detailed discussion of community engagement efforts, please refer to section 3.4.2: Community Outreach.

Additionally, the PAs worked in collaboration with DOER, and with the input of the Equity Working Group, to identify designated equity communities with a high share of low- and moderate-income customers and renters for enhanced incentives and focus. In these 21 designated equity communities, the PAs will provide no-cost weatherization for all eligible customers and increased funding for weatherization and electrification of rental properties. For a detailed description of the efforts and the list of designated equity communities, please refer to section 3.1.2: Residential Turnkey Services. Finally, the PAs will also provide targeted support for weatherization and electrification of schools in equity communities. For a detailed discussion of efforts to support schools, please refer to Strategic Enhancement #9 in section 3.3.2: Existing Buildings.

1.2.6 Workforce Development

The PAs will work collaboratively with the Massachusetts Clean Energy Center ("MassCEC") over the 2025-2027 term to increase workforce diversity, doubling annual funding from $12 million to $24 million per year. These efforts will help ensure that the $72 million in funds transferred from the Mass Save programs to the

center over the 2025-2027 term are designed to support the equity-related workforce needs of the programs, that diverse trainees and businesses are given opportunities, as available, within the network of Mass Save contractors and vendors upon completion of their training, and that ultimately a more diverse workforce is created that better represents the communities in which they serve.

For a detailed discussion of the MassCEC's and the PAs' workforce development efforts, please refer to sections 3.4 Hard-to-Measure Initiatives and 3.4.4: Workforce Development.

1.3 Customer Experience

Decarbonization of a home or business requires multiple building improvements supported by a range of different technologies. Many interdependencies must be considered to achieve the desired outcomes as decarbonization is not a one-size-fits-all process; thus, it demands creativity, end-to-end support, and alignment of goals between project phases to ensure success. Customers pursuing decarbonization receive help from clear objectives, relevant education, facilitated processes and decision support, language access, quality assurance, and access to information throughout the journey.

To drive the ambitious levels of customer adoption needed to meet the Commonwealth's decarbonization goals, the Program Administrators will implement new enhancements to streamline the customer experience and lead to increased program participation. The PAs plan to deliver an improved customer experience through the following key enhancements:

- Creating a new statewide contact center to provide comprehensive, multilingual support to residential and small business customers about all decarbonization offerings. Further details on the statewide contact center are included in section 3.4.1: Statewide Contact Center.
- Continuing to invest in an improved rebate processing experience. Further details on these efforts are included in section 3.1.3: Residential Rebates and section 3.3.3: Equipment Rebates & Instant Incentives.
- Creating a turnkey delivery option for electrification, starting with moderate-income customers and expanding to market-rate customers prior to the end of the three-year term. Moderate-income customers will also be able to access more project facilitation support via a Navigator. Further details on these efforts are included in section 3.1.2: Residential Turnkey Services.
- Reducing barriers to qualification for moderate-income customers by expanding eligibility to consider both state and area median income and simplifying the verification process by adding the

ability to qualify via categorical eligibility based on participation in other programs, such as rental assistance. Further details on these efforts are included in section 3.1.2: Residential Turnkey Services.

- Providing a single point of entry and direct year-round income verification services for low-income customers through the continued expansion of the Low-Income Energy Affordability Network ("LEAN") Statewide Client Services Center, enabling program access beyond what was possible through historical enrollment processes. Further details on these efforts are included in section 3.2: Low-Income Sector.
- Continuing to reduce the time to serve low-income customers in Eversource and National Grid territories by deploying qualified vendors to areas where the local Community Action Program agencies' time-to-serve exceeds six-to-eight weeks. Further details on these efforts are included in section 3.2: Low-Income Sector.
- Continuing to evolve MassSave.com to better organize and share program information and improve language access in a way that fosters improved engagement for customers, vendors, and stakeholders. Further details on these efforts are included in section Six: Marketing.
- Creating a digital platform for C&I customers that includes statewide prescriptive and custom express tools. Further details on these efforts are included in section 3.3: C&I Sector.
- Ensuring more consistent treatment of custom projects and better coordination of common vendors across PAs. Further details on these efforts are included in section 3.3.4: Small Business Turnkey Retrofit.

SECTION TWO: STATUTORY AND REGULATORY REQUIREMENTS

2.1 Statutory and Regulatory Process

The PAs are responsible for administering energy efficiency programs within the Commonwealth.[5] The Green Communities Act ("GCA") requires the PAs to pursue all available energy efficiency and demand reduction resources that are cost effective or less expensive than supply.[6] Additionally, *An Act Creating a Next Generation Roadmap for Massachusetts Climate Policy* ("2021 Climate Act") requires the PAs to construct the three-year plans to meet or exceed the GHG goal set by the EEA Secretary.[7] The GCA sets up a multi-level regulatory framework in which the PAs work with diverse stakeholders through the EEAC on program development and implementation and appear before the Department for three-year plan approval, reporting, and cost recovery.

2.1.1 Regulatory Background

The GCA is the founding legislation for the creation of the modern three-year energy efficiency and electrification plans administered by the Massachusetts PAs.[8] Passed in 2008, the GCA mandated the electric and natural gas distribution companies to develop comprehensive plans to capture all-available, cost-effective energy efficiency and demand resources using dedicated customer revenues. The Massachusetts Legislature charged the Department with the responsibility for reviewing and approving the plans.

The Global Warming Solutions Act ("GWSA") passed the same year, established GHG emissions limits for the Commonwealth.[9] The 2021 Climate Act established a legal requirement to reduce GHG emissions by 50 percent below the 1990 baseline level by 2030 and to achieve net zero GHG emissions by 2050, as well as the adoption of sector-based sub-limits for residential and commercial heating and cooling.[10] The 2021 Climate Act also requires the EEA Secretary to establish a GHG reduction goal for a three-year plan ("GHG Goal") that contributes to achievement of the statewide GHG limits and sector-based sub-limits.[11] The EEA Secretary set

5 G.L. c. 25, §§ 19, 21.

6 G.L. c. 25, § 21(b)(1).

7 G.L. c. 25, § 21(d)(4).

8 See *An Act Relative to Green Communities*, Acts of 2008, c. 169.

9 See *An Act Establishing the Global Warming Solutions Act,* Acts of 2008, c. 298.

10 G.L. c. 21N, §§ 3, 3A.

11 G.L. c. 21N, § 3B.

the GHG Goal in her letter dated March 1, 2024 ("GHG Goal Letter"). For the 2025-2027 term, the PAs intend to achieve the GHG Goal through both traditional energy efficiency measures and measures that reduce a building's GHG emissions. While these GHG reduction measures may not explicitly save energy, they reduce a building's GHG emissions and should contribute toward the 2025-2027 Plan's achievement of the GHG Goal as set by the EEA Secretary and ultimately the statewide GHG emissions limit for 2030.

An Act Driving Clean Energy and Offshore Wind, Acts of 2022, c. 179 ("2022 Climate Act") further prohibited spending on incentives or support for new fossil fuel equipment starting with the 2025-2027 Plan, except in a few limited situations.[12] The 2022 Climate Act also required that the Plan consider program participation among low- and moderate-income households, and include strategies to address equitable access to the Mass Save programs.[13] Finally, the 2022 Climate Act also authorized inclusion of programs that combine energy efficiency, electrification, renewable generation, and storage.[14]

2.1.2 Roles and Responsibilities

Department of Public Utilities

The Department is a quasi-judicial regulatory agency with extensive statutory authority over the PAs.[15] The DPU is responsible for ensuring that the electric and gas utilities provide safe, reliable, and least-cost service to Massachusetts customers. In addition to prioritizing safety, security, reliability of service, and affordability, the Department must also prioritize equity as well as reductions in GHG emissions to meet statewide GHG emission limits and sub-limits.[16] Having the resources, technical expertise, and the statutory obligation to regulate in the public interest, the Department is uniquely structured to ensure that energy efficiency funds are deployed cost effectively, that all customers are both eligible to access and able to receive energy

[12] The statute explicitly provides that there shall be "no spending on incentives, programs or support for systems, equipment, workforce development or training as they relate to new fossil fuel equipment *unless such spending is for low-income households, emergency facilities, hospitals, a backup thermal energy source for a heat pump, or hard to electrify uses, such as industrial processes."* G.L. c. 25, § 21(b)(2) (italics added).

[13] *Ibid.*

[14] *Ibid.*

[15] The Department's authority extends beyond energy efficiency to all aspects of the operations of electric and gas distribution companies including, but not limited to, rate setting, service quality, customer care, and the operation of a safe and reliable utility. See G.L. c. 164, § 76. Since its establishment by the Legislature in 1919, the Department has comprehensively regulated the operations of electric and gas utility companies in Massachusetts pursuant to G.L. c. 25 and 164 to ensure that electric and gas services are provided pursuant to just and reasonable rates.

[16] See G.L. c. 25, § 1A.

efficiency services, and that energy savings are being achieved. The Department also evaluates three-year plans to ensure they are constructed to achieve the GHG Goal.

Under the GCA, the Department has oversight authority over the PAs and the EEAC and is responsible for final administrative review of energy efficiency determinations.[17] The DPU has ultimate jurisdiction with respect to the final three-year plan approval, cost effectiveness, rates, and cost recovery.[18] The Department established Guidelines that set forth the requirements for energy efficiency, including the elements, review process, and mid-term modifications related to three-year plans, the method for determining cost effectiveness, and the mechanisms for cost recovery.[19] The DPU conducts its review of three-year plans and PA performance through adjudicatory proceedings consistent with the Massachusetts Administrative Procedure Act, which requires the Department to maintain standards of fair procedure such as notice, an opportunity to be heard, and the ability to appeal decisions.[20] Funding for the Mass Save programs is also approved by the Department and reconciled annually through separate proceedings.

In addition to the Guidelines, the Department can include directives in its orders approving the three-year plans that the PAs must adhere to through compliance filings and in other three-year plan-related filings. For example, in its 2022-2024 Three-Year Plans Order, the Department added to the Guidelines' mid-term modification thresholds to require Department approval for a PA to exceed its planned program budget. Thus, for the 2022-2024 term, to qualify for a program budget modification, the PA must demonstrate to the Department that an increase in budget results in an increase in kWh or therm savings.[21] However, the Department specifically noted that this requirement was for the 2022-2024 term.[22] Accordingly, the PAs

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17 G.L. c. 25, §§ 19, 21, 22.

18 The GCA states that, in authorizing energy efficiency programs, the Department "shall ensure that they are delivered in a cost-effective manner capturing all available efficiency opportunities, minimizing administrative costs to the fullest extent practicable and utilizing competitive procurement processes to the fullest extent practicable, provided, however, that when determining cost-effectiveness, the calculation of program benefits shall include calculations of the social value of greenhouse gas emissions reductions except in the cases of conversions from fossil fuel heating and cooling to fossil fuel heating and cooling." G.L. c. 25, § 19(a, b). To mitigate capacity and energy costs for all customers, the GCA also requires the Department to ensure that electric and natural gas resources are first met "through all available energy efficiency and demand reduction resources that are cost effective or less expensive than supply, provided, however, that when determining cost effectiveness, the calculation of program benefits shall include calculations of the social value of greenhouse gas emissions reductions." G.L. c. 25, § 21(a).

19 D.P.U. 20-150-A.

20 G.L. c. 30A, §§ 5, 10-12, 14 (outlining adjudicatory proceedings and availability of judicial review). Additionally, to comply with G.L. c. 30A, the Department must maintain a record of its adjudicatory proceedings, afford parties the opportunity to present evidence and argument and issue decisions in writing or on the record with a statement of reasons. G.L. c. 30A, §§ 10-11. Finally, Department decisions are subject to appeal to the Supreme Judicial Court on the record formed during the G.L. c. 30A adjudicatory proceeding. G.L. c. 30A, § 5.

21 D.P.U. 21-120 through D.P.U. 21-129, at 225.

22 D.P.U. 21-120 through D.P.U. 21-129, at 225, n. 138.

request that this requirement not be extended into the 2025-2027 term and the mid-term modification process as outlined in the Guidelines be applied without modification.

The Department is responsible for determining the effectiveness of the three-year plans on an annual basis per G.L. c. 25, § 21(d)(2). The PAs submit detailed reports to the Department each year, documenting program participation, savings, benefits, and expenditures, summarizing and providing completed evaluation studies, and explaining any variances from expected performance levels. Plan-year reports filed following the initial two years of a term are not adjudicated; however, if a PA has not reasonably complied with its three-year plan, the Department may open an investigation into the PA's performance.[23] At the conclusion of the program term, each PA files a detailed term report showing compliance with the requirements of the GCA and Department guidelines and directives. The Department reviews the term report through an adjudicatory proceeding and provides final approval of costs and performance incentives.

At the conclusion of a three-year plan, the Department submits to the Massachusetts Legislature, a report "indicating the degree to which the activities undertaken pursuant to the performance of each Plan met the [GHG Goal]."[24] This report must use the most recent and complete data and measurements available.

Energy Efficiency Advisory Council

The EEAC consists of 15 voting members of diverse backgrounds and expertise, composed of governmental and non-governmental members, who are appointed by the Department.[25] The EEAC also includes one "non-voting, ex-officio member" from each of the PAs (composed of Massachusetts electric and natural gas distribution companies and municipal aggregators with certified energy plans).[26] There is also one non-voting member representing each of the following: the heating oil industry, energy efficiency businesses, and the Independent System Operator-New England ("ISO-NE").[27]

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23 G.L. c. 25, § 21(e).

24 G.L. c. 25, §21(d)(5).

25 G.L. c. 25, § 22(a). The 15 voting members include one person representing each of the following: (1) residential customers, (2) the low-income weatherization and fuel assistance program network, (3) the environmental community, (4) businesses, including large C&I end-users, (5) the manufacturing industry, (6) energy efficiency experts, (7) organized labor, (8) the Department of Environmental Protection, (9) the Attorney General's Office, (10) the Executive Office of Housing and Economic Development, (11) the Massachusetts Nonprofit Network, (12) a city or town in the Commonwealth, (13) the Massachusetts Association of Realtors, (14) a business employing fewer than 10 persons located in the Commonwealth that performs energy efficiency services, and (15) the Massachusetts Department of Energy Resources. The Commissioner of DOER serves as chair of the Council. G.L. c. 25, § 22.

26 G.L. c. 25, § 22(a).

27 G.L. c. 25, § 22(a).

The statutorily defined composition of the EEAC ensures that the programs, development, and implementation of three-year plans can benefit from a broad range of perspectives, such as nonprofits, business, manufacturing and real estate associations, environmental advocates, municipalities, state agencies, and residential and low-income customers. The expertise of the EEAC's diverse membership and consultants allows it to provide strategic, objective advice to the PAs. The EEAC also provides a forum for coordinating stakeholder feedback on a statewide basis. The EEAC coordinates with the PAs in developing a three-year plan, periodically reviewing program cost effectiveness, and providing a report to the Massachusetts Legislature about the implementation of the PAs' three-year plan.[28] The EEAC retains energy efficiency experts.[29] To conduct its business, the EEAC holds monthly meetings, conducted in accordance with Open Meeting Law. The EEAC may also create subcommittees to help with its business (e.g., the Executive Committee and the Equity Working Group).

2.1.3 Three-Year Plan Process

Development of the Plan

The process established by the GCA is designed to provide extensive and meaningful stakeholder input into the design and implementation of the three-year plans. The PAs engage with the EEAC on the development of each new three-year plan, including through regular meetings, topic specific EEAC workshops, and through regular communications with DOER, the Attorney General's Office ("AGO"), and the EEAC's consultants. In 2023, the PAs actively took part in six workshops convened by the EEAC in support of the development of the 2025-2027 Plan. Following the workshops in 2023, the EEAC issued a resolution on December 20, 2023, memorializing certain strategic and tactical recommendations to the Massachusetts PAs from the EEAC workshops. The PAs also took part in two public listening sessions organized by the EEAC in 2023 and reviewed oral and written public comments at regular EEAC meetings. The PAs closely reviewed the Council's recommendations and comments from the listening sessions and incorporated many of the comments and recommendations into the program designs for the draft Plan.

The formal stakeholder process commences with the submission of the draft Plan to the EEAC every three years on or before March 31, which entails opportunities for public comment and formal review and recommendations from the EEAC.[30] Three months after submission of the plan to the EEAC (i.e., end of June),

[28] G.L. c. 25, § 22(b), (c).

[29] G.L. c. 25. § 22(c).

[30] G.L. c. 25, § 21(c). For the 2025-2027 Plan, because March 31, 2024 is a Sunday, it is being submitted April 1, 2024.

the EEAC offers its approval or comments to the PAs.[31] In this role, the EEAC "shall review and approve demand resource program plans and budgets, work with PAs in preparing energy resource assessments, determine the economic, system reliability, climate and air quality benefits of efficiency and load management resources, conduct and recommend relevant research, and recommend long-term efficiency and load management goals to maximize economic savings and achieve environmental goals."[32] As part of its review of three-year plans, the EEAC must have a two-thirds majority vote to approve "efficiency and demand resource plans and budgets."[33]

In addition to the formal and collaborative process with the EEAC in the development of the 2025-2027 Plan, the PAs also engaged myriad stakeholders, including customers, past participants and nonparticipants, contractors, evaluators, energy experts, trade allies, manufacturers, and distributors. The PAs value and appreciate the input and strong interest in energy efficiency from Councilors, stakeholders, and customers. The PAs consider the diverse input of the EEAC in light of the PAs' responsibility to administer the Mass Save programs in accordance with the statutory framework of the GCA, including an assessment of customer bill impacts and requirement to meet the EEA Secretary's GHG Goal. The PAs also worked closely with the AGO, DOER, and the EEAC's consultants to closely review aspects of the 2025-2027 Plan, savings, and cost assumptions in order to come to agreement on major elements of the Plan.

Department Review and Approval of the Plan

Every three years, the PAs file their joint three-year plan on or before October 31, together with the EEAC's approval or comments and a statement of any unresolved issues, with the Department for its review and approval.[34] The Department reviews the three-year plan to ensure that it is constructed to meet or exceed the GHG Goal set by the EEA Secretary, and that each PA acquires all cost-effective energy efficiency and demand reduction resources, delivers energy efficiency programs while minimizing administrative costs, and complies with the requirements of G. L. c. § 21 of the GCA. Within 120 days after submission, the Department "shall approve, modify and approve, or reject and require the resubmission of the plan accordingly."[35] In reviewing

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31 G.L. c. 25, § 21(c).

32 G.L. c. 25, § 22(b).

33 G.L. c. 25, § 22(b).

34 G.L. c. 25, § 21(d)(1).

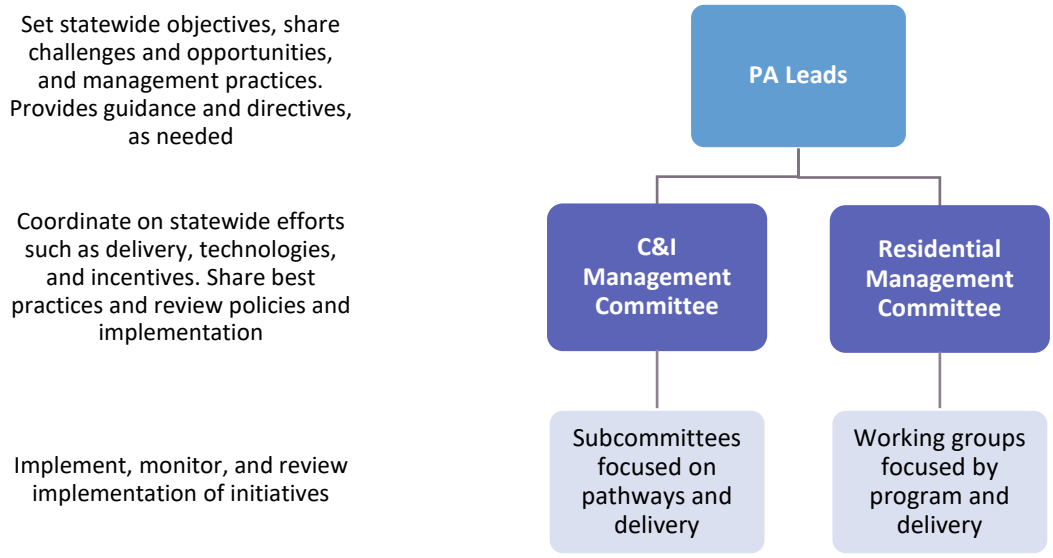
35 G.L. c. 25, § 21(d)(2). Due to the deadlines set forth in the GCA, the Department does not approve the three-year plan until after the start of the new three-year program term (i.e., the end of February). In recognition of the need for continuity of energy efficiency programs, the Department has allowed for the interim continuation of existing energy efficiency programs, pending approval of

the PAs' three-year plans, the Department reviews savings, cost effectiveness, budgets, bill impacts, and funding to determine whether the PAs have met their obligations under the GCA and other Department precedent.

Plan Delivery

Consistent with the GCA, the PAs work together to jointly develop and implement the three-year plans. The PAs work collaboratively on a daily basis to ensure that all eligible customers experience seamless programs, with consistent application procedures, incentives, and supportive educational and technical services. The PAs continuously develop and share best practices and seek to improve the programs to provide the best possible service to their customers. To that end, the PAs have developed a management structure for program delivery, as outlined below.

Figure 1: Management Structure for Program Delivery



The PA Leads team includes representatives from each PA who is empowered to make decisions regarding statewide objectives, collaborate on challenges and opportunities, and management practices. The PA Leads also provide guidance and directives, as needed, to the Management Committees and subgroups. The Management Committees are made up of subject matter experts from each PA. These Management Committees coordinate statewide efforts such as delivery, technologies, and incentives, and share best

proposed new programs under review. See 2013-2015 Three-Year Plans Order, D.P.U. 12-100 through 12-111, at 160-161; Massachusetts Electric Company and Nantucket Electric Company, d/b/a National Grid, D.P.U. 09-116, Order Approving Motion for Interim Continuation (Dec. 30, 2009).

practices and review policies and implementation to ensure consistency across PAs and programs. Finally, within the Management Committees are various working groups and subcommittees tasked with more discrete issues about implementing, monitoring, and reviewing programs. At each level, the PAs strive for consistent, unanimous decisions on program delivery. Any issues are raised to a higher level and ultimately are addressed by the PA Leads.

In addition to the management groups above, the PAs serve on a number of essential committees and working groups that ensure statewide collaboration among stakeholders and consistency within and across the programs. These committees and groups are detailed below.

Figure 2: Committees and Working Groups

Group/Committee	Members and Responsibilities
Common Assumptions Group	• The group maintains consistent application, calculation, and presentation of savings, benefits, and costs, as well as consistent planning and reporting models.
Demand Working Group	• The group works on initiatives related to reducing customer demand and statewide strategies.
Equity Working Group	• Members of the EEAC established an Equity Working Group to discuss how the Mass Save programs can more equitably serve residents and businesses. • The group includes representatives from DOER, the AGO, EEAC Councilors, the PAs, and other interested stakeholders.
Evaluation Management Committee	• Steering committee for statewide evaluation activities and issues, program guidance, and direction to each of the evaluation research areas. • Committee plans, prioritizes, and delineates the evaluation/research studies to be undertaken.
Low-Income Best Practices Group	• Includes representatives from the PAs, Community Action Program agencies, and LEAN (Low-Income Energy Affordability Network). • The group discusses program implementation, new measures, innovative strategies, and other matters related to Low-Income sector offerings.
Low-Income Program Administrator Working Group	• The group discusses and coordinates implementation of Low-Income sector offerings to ensure alignment across PA service territories. Covers new measures, strategies, program issues, referrals, and document reviews.
Massachusetts Technology Assessment Committee	• Proactive and reactive body. The committee addresses residential and C&I technologies, drawing on the subject matter experts from the committee, PA staff, or outside expertise, as necessary. • The committee has the authority for consistent program interpretation of technical matters relating to emerging technologies and provides information, documented technical interpretations, and technology assessments.
Renters Working Group	• The group discusses and coordinates efforts and progress toward the strategies and tactics from the Massachusetts Strategic Renters Plan broken up by partnerships,

Group/Committee	Members and Responsibilities
	marketing, and program initiatives, which are designed to target renters and landlords in hopes of increasing enrollment into Mass Save programs and offerings.
Statewide Marketing Group	• The group organizes statewide marketing and media campaigns, manages MassSave.com, updates social media campaigns, and works to ensure that communications are presented in multiple channels to reach highly diverse customer bases.
Workforce Development Working Group	• Group discusses and coordinates strategies and implementation of workforce development needs and pathways to encourage equitable participation in the clean energy workforce jobs supported by Mass Save programs. Covers news initiatives, partnership opportunities, program team's solicitation of feedback from vendors and collaboration on diversifying the workforce.

2.2 Statutory and Regulatory Requirements

2.2.1 Summary of Budgets, Lifetime Savings, and Benefits

The program budgets, savings, and benefits in the 2025-2027 Plan are presented on an aggregate, statewide basis. As detailed in the data tables, each PA provides its individual proposed savings and budget levels for the three-year term beginning January 1, 2025, consistent with the statewide program designs and the guidelines. Please see Appendix C: Statewide Energy Efficiency Data Tables for budgets, savings, benefits, and cost-effectiveness calculations. As described in this Plan, the PAs have established key metrics for the 2025-2027 term that are designed to measure success and support their overall comprehensive approach to increasing energy efficiency and reducing GHG emissions.

The key metrics are:

- Net lifetime all-fuel savings, which is calculated by converting energy savings, regardless of the fuel type, to MMBtu units (1 million British Thermal Units). The conversion factors come from the Avoided Energy Supply Costs ("AESC") study, described below, and takes into account, when converting from electricity, the embedded energy with heat values from a mix of fuels that generate the electricity on the regional grid.
- 2030 cumulative annual emissions reductions (in metric tons of CO_2e).
- Demand savings (kilowatt = kW) for the electric PAs.
- Net lifetime electric savings (megawatt hours = MWh), excluding electrification (fuel conversions) and active demand response efforts for the electric PAs.

- Net lifetime natural gas savings (therms) for the gas PAs.

Please see Appendix C: Statewide Energy Efficiency Data Tables for more details about the use of these core savings metrics for measuring success in the 2025-2027 term. Following historic aggregate savings achievements, the goals in this Plan reflect the current market after years of energy efficiency programming in Massachusetts, the unique characteristics of each PA's service area, the specific needs of each PA's customers, and the Commonwealth's policy goals related to energy and GHG emissions reductions. The PAs' programs provide benefits for customers related to avoided costs, non-energy impacts ("NEIs"), GHG emissions reductions, and job growth and retention.

Statewide Combined Data

Figure 3: Statewide Net Lifetime Savings All Fuels (MMBtu), excluding ConnectedSolutions

	2025	2026	2027	2025-2027
Residential	33,706,016	36,852,677	42,004,236	112,562,930
Low Income	11,352,313	11,635,907	12,017,728	35,005,948
Commercial & Industrial	15,984,393	16,283,854	16,544,702	48,812,949
Total	**61,042,721**	**64,772,438**	**70,566,667**	**196,381,826**

Figure 4: Statewide Benefits ($)

	2025	2026	2027	2025-2027
Residential	2,206,765,632	2,392,392,425	2,723,854,686	7,323,012,743
Low Income	858,827,247	881,509,036	914,435,425	2,654,771,708
Commercial & Industrial	1,226,485,321	1,263,046,102	1,298,289,879	3,787,821,303
Total	**4,292,078,200**	**4,536,947,563**	**4,936,579,990**	**13,765,605,753**

Figure 5: Statewide Budgets ($)

	2025	2026	2027	2025-2027
Residential	859,238,751	930,306,054	1,011,889,503	2,801,434,309
Low Income	298,812,502	314,183,755	335,328,645	948,324,902
Commercial & Industrial	385,809,906	419,867,646	436,660,650	1,242,338,201
Total	**1,543,861,158**	**1,664,357,455**	**1,783,878,799**	**4,992,097,412**

Figure 6: Statewide Adjusted Gross Lifetime GHG Emissions Reductions (C02e)

	2025	2026	2027	2025-2027
Residential	3,138,211	3,428,883	3,924,480	10,491,573
Low Income	804,425	827,350	859,188	2,490,963
Commercial & Industrial	1,424,090	1,470,660	1,515,027	4,409,777
Total	**5,366,727**	**5,726,893**	**6,298,695**	**17,392,314**

Statewide Electric Data

Statewide tables reflect aggregated proposals of the individual electric PAs.

Figure 7: Electric PA Net Lifetime Savings All Fuels (MMBtu), excluding active demand response programs

	2025	2026	2027	2025-2027
Residential	16,307,934	17,770,848	20,242,968	54,321,751
Low Income	4,550,960	4,733,817	5,000,107	14,284,884
Commercial & Industrial	10,923,395	10,918,126	10,827,780	32,669,302
Total	**31,782,289**	**33,422,791**	**36,070,856**	**101,275,937**

Figure 8: Electric PA Net Lifetime Electric Energy Savings (MWh), excluding electrification and ConnectedSolutions

	2025	2026	2027	2025-2027
Residential	849,058	909,038	996,387	2,754,483
Low Income	345,595	359,416	378,884	1,083,895
Commercial & Industrial	1,579,995	1,556,326	1,516,111	4,652,432
Total	**2,774,648**	**2,824,780**	**2,891,382**	**8,490,809**

Figure 9: Electric PA Net Summer Peak Demand Reductions (kW), including ConnectedSolutions

	2025	2026	2027
Residential	117,752	135,543	152,743
Low Income	3,433	3,466	3,593
Commercial & Industrial	138,387	144,698	150,541
Total	**259,572**	**283,707**	**306,877**

Figure 10: Electric PA Budgets ($)

	2025	2026	2027	2025-2027
Residential	489,438,832	530,909,520	579,901,674	1,600,250,025
Low Income	170,678,996	181,476,225	197,654,679	549,809,900
Commercial & Industrial	286,211,078	311,994,031	320,003,643	918,208,751
Total	**946,328,905**	**1,024,379,776**	**1,097,559,996**	**3,068,268,677**

Figure 11: Electric PA Adjusted Gross Lifetime GHG Emissions Reductions (C02e)

	2025	2026	2027	2025-2027
Residential	1,645,114	1,785,136	2,041,387	5,471,638
Low Income	360,482	376,822	401,104	1,138,408
Commercial & Industrial	915,758	932,504	942,053	2,790,315
Total	**2,921,354**	**3,094,462**	**3,384,544**	**9,400,360**

Statewide Natural Gas Data

Statewide tables reflect aggregated proposals of the individual gas PAs.

Figure 12: Gas PA Net Lifetime Savings (MMBtu), All Fuels

	2025	2026	2027	2025-2027
Residential	17,398,082	19,081,829	21,761,268	58,241,179
Low Income	6,801,352	6,902,090	7,017,621	20,721,064
Commercial & Industrial	5,060,997	5,365,728	5,716,922	16,143,647
Total	**29,260,432**	**31,349,647**	**34,495,811**	**95,105,890**

Figure 13: Gas PA Net Lifetime Gas Savings (therms)

	2025	2026	2027	2025-2027
Residential	148,281,597	162,785,890	184,336,624	495,404,110
Low Income	67,288,945	68,302,276	69,468,877	205,060,098
Commercial & Industrial	54,979,779	58,460,991	62,071,693	175,512,462
Total	**270,550,320**	**289,549,156**	**315,877,194**	**875,976,670**

Figure 14: Gas PA Budgets ($)

	2025	2026	2027	2025-2027
Residential	369,799,919	399,396,535	431,987,830	1,201,184,283
Low Income	128,133,506	132,707,530	137,673,966	398,515,002
Commercial & Industrial	99,598,828	107,873,615	116,657,007	324,129,450
Total	**597,532,253**	**639,977,679**	**686,318,803**	**1,923,828,735**

Figure 15: Gas PA Adjusted Gross Lifetime GHG Emissions Reductions (C02e)

	2025	2026	2027	2025-2027
Residential	1,493,097	1,643,747	1,883,092	5,019,936
Low Income	443,943	450,529	458,084	1,352,556
Commercial & Industrial	508,332	538,155	572,975	1,619,463
Total	**2,445,373**	**2,632,431**	**2,914,151**	**7,991,954**

2.2.2 Common Assumptions and the Technical Reference Manual

The PAs continuously work together to develop and apply common assumptions. Consistent collaboration and structured review of common assumptions through the working groups allows the PAs to collectively provide the best available data in a consistent manner. The PAs work together to standardize assumptions and approaches to various costs, savings, and benefits data. The PAs coordinate the application of the avoided costs from the AESC studies and evaluation results. In addition, the PAs collaborate to maintain similar data definitions, measure identifications, naming conventions in the screening models, reporting tables, and the Technical Reference Manual ("TRM").

Specific program assumptions are accounted for uniformly, and algorithms are applied in the same manner across the PAs, as set forth in the TRM. The TRM documents how the PAs consistently, reliably, and transparently calculate savings resulting from the installation of prescriptive energy efficiency measures. The TRM provides methods, formulas, and default assumptions for estimating energy, peak demand, and other resource impacts from energy efficiency measures. The TRM is an excellent example of how the PAs work together, share data and best practices, and work to develop common assumptions that reflect Evaluation, Measurement and Verification ("EM&V") results. For the 2025-2027 Plan, the PAs reviewed the TRM for each prescriptive electrification offering to ensure the accuracy of measure assumptions. The PAs have transitioned the paper TRM manual into an electronic version, which is available publicly, provides more search functions to aid users, and is user friendly. The TRM is attached as Appendix L: Technical Reference Manual.

Since the 2022 program year, evaluation results are applied on a prospective-only basis instead of being applied both retrospectively and prospectively. The PAs will update gross savings assumptions and net and gross impact factors each year of the 2025-2027 term based on the latest evaluation studies and apply them on a prospective basis to calculate savings in later years. At the beginning of each year, the latest TRM will be posted online.

2.2.3 Development of Goals

Introduction

The PAs engage in a collaborative and detailed planning process for setting goals and budgets. This process includes reviewing many conditions that affect savings goals and costs, such as regulatory requirements, the Commonwealth's goals, stakeholder input, program designs, including changes and related opportunities and costs, opportunities to improve access for select communities, barrier mitigation, market conditions, workforce availability, bill impacts, training, education, and marketing needs to support the programs, potential studies, and the energy efficiency and electrification needs and objectives of customers within each sector and service territory. The PAs also consider evaluation results including the findings from impact evaluations on claimable savings, and process evaluations to inform programs and goals.

Decisions that inform savings goals and budgets are made both at the individual PA level and at the statewide level, including work by the respective management committees, which help ongoing stakeholder input, continuous sharing of best practices, and consistency of offerings among the PAs. Ultimately, the results associated with the development of a PA's plan are PA-specific and the planning process for savings varies for each program and initiative; however, certain common processes inform the development of savings goals and facilitate regulatory review.

Process to Determine Goals

2025-2027 Plan Goals

GHG Goals

While there were many considerations affecting goal setting in this Plan, as a primary mandate, this 2025-2027 Plan was constructed to meet or exceed the GHG Goal set by the EEA Secretary per the 2021 Climate Act. The 2021 Climate Act does not provide a precise method for determining the amount of GHG emissions reduced from a three-year plan. Indeed, it contemplates that updates and revisions to the method of

calculating GHG emissions will be needed.[36] The Massachusetts Clean Energy and Climate Plan for 2025 and 2030 ("2025 CECP" and "2030 CECP", respectively) and the 2050 Decarbonization Roadmap ("2050 Roadmap") provide a method for calculating GHG emissions, which the EEA Secretary adopts in prescribing the GHG Goal.

The March 1, 2024, letter from the Secretary establishing the GHG Goal, attached as Appendix V: EEA Secretary Greenhouse Gas Goal Letter (the GHG Goal Letter) set the combined, statewide GHG Goal at 1.0 million metric tons of CO_2e by 2030, with 625,000 metric tons allocated to the electric PAs and 375,000 metric tons allocated to the gas PAs.[37] The GHG Goal Letter requires this goal to be achieved assuming a total statewide budget of less than $5.0 billion. The 2025-2027 Plan proposes to achieve XX million metric tons of GHG emissions reductions by 2030 with a statewide budget of $XX billion. The GHG Goal Letter also directed the PAs to model the achievement of a 2.2 million metric tons of GHG emission reductions by 2030, using the same equity to market rate ratio of investment.

The GHG Goal Letter calculates the amount of GHG emissions savings based on the amount of energy savings tied to a given measure. It multiplies the energy savings for each energy efficiency measure by an emissions factor based on the type of energy being saved, such as electricity or natural gas. The emissions factors for fossil fuels stay constant, but for electricity, the EEA's electric emissions factors assume significant electric grid decarbonization by 2030, thereby leading to reduced GHG savings over time. As a result, GHG emission reductions associated with electric energy savings measures tend to be lower than those associated with measures that displace fossil fuels. The GHG Goal Letter, however, does not foreclose the potential for the 2025-2027 Plan to target GHG reduction measures, even if those measures do not save energy. So, to achieve the GHG Goal, the PAs intend to target GHG reduction measures in the 2025-2027 term, even if they do not always save energy.

The PAs currently plan to offer measures that avoid emissions associated with non-combustion GHGs. Two measures the PAs plan to offer in the 2025-2027 term that fit this description are: (1) behind-the-meter natural gas leak mitigation and (2) refrigerant leak mitigation and retrofits. For behind-the-meter gas leak mitigation, the PAs will use a methane equivalent global warming potential ("GWP") value of 28 as defined by the US Environmental Protection Agency ("EPA").[38] For refrigerants, the PAs would follow the typical procedures

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[36] See G.L. c. 25, §21(d)(5) (requiring the Department to use updated methodology to calculate whether the Plan attains the GHG Goal).

[37] The GHG Goal Letter noted flexibility in the allocation of the GHG emission reductions by sector to facilitate the achievement of the overall goal. GHG Goal Letter at 2, n2.

[38] See US EPA, Emission Factors for Greenhouse Gas Inventories, last modified Feb. 13, 2024.

associated with custom projects; individual site-level estimates of GHG savings would be calculated by the PAs, utilizing the GWP factor published by the EPA for the refrigerant(s) in use at the site. Given the complexity of calculating these refrigerant savings, the PAs plan to work with the evaluation and technical teams to lay out a framework for this savings calculation, including determining baselines and measure lives, as well as establishing procedures for documentation and measurement protocols. Similar to how Custom savings are currently calculated; all savings would be subject to final evaluation results.

When calculating GHG emission reductions, the GHG Goal Letter also considers the life of the measure. The EEA Secretary decided that the measure lives as calculated effective March 1, 2025 shall be used as the basis for setting and assessing achievement toward the GHG Goal.

Significantly, when determining the cost effectiveness of program investments, the EEA Secretary requires the PAs to use a social discount rate of 1.5 percent for the social cost of carbon.

All-Available Cost-Effective Energy Efficiency

The 2025-2027 Plan balances achievement of the mandated GHG Goal with the GCA's continuing requirement to address capacity and energy costs for all customers through all available energy efficiency and demand reduction resources that are cost effective or less expensive than supply. There is no simple, algebraic method to evaluate whether the mandate of all available cost-effective energy efficiency has been met. As the Department has recognized, in the pursuit of all available cost-effective energy efficiency, the PAs must balance cost-effectiveness review with bill impacts, the prudent use of customer funds. Significantly, the PAs must also focus on program and delivery models that will result in equitable access to services and programs for select, underrepresented populations.

Indeed, the need to maintain reasonable bill impacts causes a tradeoff between securing all cost-effective energy efficiency with achieving the GHG Goal, which the PAs considered when setting the goals of achieving all available cost-effective energy efficiency. Against this background, the PAs' process considers many factors, including the assessment of savings opportunities in individual PA service areas (bottom-up), incorporation of recent evaluation study findings, and a collaborative consideration of statewide policy goals that balances the GHG and energy savings goals against the total cost and feasibility of capturing all energy efficiency (top-down process).

The bottom-up process involves determining savings measure by measure, including estimating quantities and customer incentives for every piece of energy-efficient equipment, and the type of technology or program service. The top-down process looks at the portfolio, evaluating the potential for achieving savings given the

markets in which the programs are operating, subject to overall cost. Evaluation results, including impact, process, and market assessment studies, are considered in both bottom-up and top-down planning and may drive other adjustments. The process to determine goals is appropriately fluid, flexible, and iterative, incorporating information the PAs learn throughout the planning process related to program design, evaluation, market conditions, costs, and other factors.

Considerations

In developing goals, the PAs took into account the requirement to reach the GHG Goals, as well as: (1) the need to plan for a sustainable effort in the continued delivery of energy efficiency, (2) consideration of new technologies and enhancements, (3) the results of avoided costs, and potential and evaluation studies, and (4) the need to design programs to address identified barriers. The PAs also prioritized program and delivery models that will result in equitable access to services and delivery of benefits for select communities and populations who have taken part in the programs at lower rates due to hard-to-address barriers. The PAs also considered a budget limit of $5 billion over the 2025-2027 term, as proposed in the EEA Secretary's Goals Letter. In sum, the Program Administrators considered many interacting factors, including, but not limited to, economic and environmental benefits, bill impacts, cost efficiency, integrated program delivery, contractor and market infrastructure, efforts focused on innovation, customer experience, changing market conditions and transformation efforts, and the need to set up an integrated effort that can be sustained over time.

In assessing the level of energy efficiency savings that can be achieved and sustained over the course of this and future Plans, the PAs considered the following: (1) quality of program implementation, (2) customer economic conditions, (3) bill impacts, (4) market conditions, (5) avoided costs (i.e., benefits), (6) market barriers, particularly for historically underrepresented customer groups, (7) commitment to equity, (8) the need to avoid "stops/starts" that send negative messages to the contractor community, (9) the capacity and reach of vendors and contractors, (10) the need to provide consistency over time to be able to capture time-dependent opportunities such as renovations and new construction, (11) the need to accommodate new technologies over time, (12) input and consideration of priorities articulated by the EEA, DOER, the AGO, the EEAC, stakeholders, and public commenters, and (13) the customer's experience.

The planning process for the 2025-2027 term included a focus on customers' experiences with the suite of energy efficiency and electrification programs, and in particular how to improve the experiences of moderate-income residential customers, tenants and owners of residential rental units, LOTE (Languages Other Than English) customers, small businesses (both tenants and property owners), customers living in mixed-income multifamily buildings, and for customers in select communities generally. Significant effort and expertise were

dedicated to the design of the Residential and Low-Income sector programs and initiatives to better serve customers who are energy burdened or qualify as low or moderate income. In addition, across all sectors, the PAs updated the design of programs and initiatives to enhance and expedite the delivery of electrification measures. These updates, will help maximize energy efficiency savings and benefits through electrification.

Bottom-Up Planning

As a foundation for each three-year planning process, the PAs examine historical data to gain insight into participation trends, savings achieved, and the costs to achieve annual and lifetime savings. The PAs also consider recent or pending changes in federal efficiency standards, state energy efficiency codes, local building climate and energy ordinances, as well as other third-party research on consumer adoption of new technologies. In parallel, each PA assesses what it individually can achieve over the next three years, while collectively collaborating to decide what changes, if any, need to be made to program offerings. For example, the PAs may decide to discontinue measures that have become standard efficiency practice, or to add new measures and services in response to improved technologies or identified consumer needs, subject to consideration of cost effectiveness. The value of energy benefits is determined through the 2024 AESC Study, which also guides the PAs as they strive to achieve all cost-effective energy efficiency opportunities.

The statewide planning work is undertaken at the respective management committees and working groups, ensuring input from stakeholders, continuous sharing of best practices, and facilitating consistency of offerings among the PAs. Each PA uses this information to deCotton24

Develop an estimate of energy efficiency and electrification that can be achieved in each sector and its unique service territory. The PAs consult with vendors to support or augment their estimates based on their own market intelligence. Manufacturers and contractors may also be consulted for insight into workforce capacity and technology availability and limitations.

Top-Down Planning

While bottom-up planning focuses on individual measures within each PA's service territory, top-down planning considers what is reasonable and achievable for the entire energy efficiency portfolio. This planning effort involves examining impacts to the markets the programs are targeting, as well as cost implications for the individual PA and its participating and non-participating customers. Among other things, the PAs use potential studies for top-down planning, which helps them to better understand the potential opportunity to achieve energy efficiency savings within their service territory. Potential studies typically provide the PAs with insight into three types of energy efficiency potential:

- Technical potential is defined as the complete adoption of energy efficiency and decarbonization measures that are technologically feasible without consideration of cost or likely consumer acceptance.
- Economic potential is a subset of technical potential consisting only of that technology that results in more estimated benefits than costs over the measure's life.
- Achievable potential is a further subset of economic potential and is limited to that which is attainable given customer barriers, market barriers, or other limitations.[39]

The PAs use the results of potential studies to gain valuable insight into the achievable, cost-effective energy efficiency potential for the Residential, Low-Income, and C&I sectors over a period of years. In advance of the 2025-2027 Plan filing, the PAs collectively undertook a statewide potential study with territory specific results in accordance with the Department's directives.[40] This method advanced the PAs' objective of utilizing a consistent set of measures and measure characteristics, while allowing for a presentation of findings using common definitions for the various levels of achievable potential, common benefit-cost inputs, and common savings assumptions for high-impact measures. Study results are therefore more readily comparable, yet also PA-specific. The overall consistency across the PAs' potential studies in terms of timing, presentation of results, and definitions enhances their value to the Department and stakeholders.[41]

The potential study considers a wide range of factors to estimate potential savings over time including, but not limited to, the size of the market, economic trends, modeled market penetration and saturation of specific equipment, adoption rates for efficient equipment, costs and benefits associated with efficiency upgrades, and market barriers. In general, the potential study relied on the most recent TRM available at the time of the studies and net-to-gross ("NTG") assumptions for the current term. The potential study is intended to provide a top-down estimate and is useful to inform high-level planning but is not designed to provide detailed assessments of potential at the municipal or geographic level (aside from service territory).

The potential study is based on models that estimate potential savings based on specific inputs related to measure costs and savings in various building types and is therefore not intended to suggest specific changes to programs or to model alternative program designs. In conjunction with other data sources and experience implementing programs, the PAs use the results of the potential study to gain insight into the remaining

39 Potential definitions are based on American Council for an Energy Efficient Economy ("ACEEE") definitions.

40 2016-2018 Three-Year Plans Order at 24-25; 2019-2021 Three-Year Plans Order at 38.

41 2019-2021 Three-Year Plans Order at 38.

achievable, cost-effective potential opportunity at the state and PA territory scale for energy savings and GHG emissions reductions over the next three-year period. The potential study is an important source to inform overall goals, expected energy savings trends, and areas of opportunity for investment.

The potential study, in addition to providing technical, economic, and achievable scenarios as described above, looks at several other scenarios of achievable potential to understand the sensitivity of achievable savings to inputs such as increased incentive levels and higher levels of spending on marketing and program awareness. The study generally includes statements of potential that range from looking at the "business as expected" or BAE case using current incentive levels, up to a "CECP" scenario, which was modelled to have the PAs achieve savings levels in line with the state mandated CECP GHG reduction levels. The PAs review these scenarios with an understanding of the need to minimize customer bill impacts, and the need to maintain sustainable energy efficiency and decarbonization efforts over time.

The PAs also consider any changes in market conditions, potential program design enhancements, policy directives at both the state and federal levels, and other information that may impact the estimates of available energy savings provided by the potential studies. The potential study materials are available at Appendix N: Studies of Remaining Potential.

Evaluation Results

As noted above, the PAs also utilize the results of independent third-party evaluations to inform proposed goals. As part of the statewide EM&V framework, the PAs collectively conduct many different types of evaluation studies, including impact evaluations, baseline studies, NTG studies, market effects evaluation, NEI studies, cost and measure life studies, market characterization, and process evaluations. For more information on each type of study please see section Four: Evaluation, Measurement, and Verification, Appendix S: Strategic Evaluation Plan, Appendix T: Evaluation Study Summaries, and Appendix U: Evaluation Studies.

Cost Driver Considerations

A final step in energy efficiency and electrification goal setting for the three-year term is to develop the budgets required to deliver the energy efficiency and electrification programs to the marketplace. This involves assessing the cost impact of the programs on participating and non-participating customers in support of "right sizing" proposed budgets. The cost of marketing, delivering, tracking, and evaluating ever more complex programs is expected to increase as the PAs pursue more complex and deeper opportunities, such as building and equipment controls, weatherization in the C&I sector, electrification of various types of buildings and end uses, and active demand reduction. More sophisticated efforts and higher incentives designed to serve

customers who have historically participated in the PAs' programs at lower rates will also contribute to increased costs.

To address these challenges and deliver cost-effective energy efficiency and GHG emissions reduction programs to their customers, the PAs have developed a thorough understanding of current and future cost drivers. Because each PA is affected to a different degree by each cost driver, variations in savings goals and the cost to achieve these goals are to be expected. Customer demographics, fuel mixes, economic conditions, differences in the built environment, and even contractor wages vary widely across the state and impact each PA's service territory differently. Each PA develops its goals and budgets based on its own unique service territory while considering the statewide goals for the term.

Additional details on key cost and savings driver considerations include the following:

- **Measure mix.** Given the focus on GHG reductions and electrification, the PAs are investing significantly more than ever before in incentivizing adoption of heat pumps, which are relatively expensive measures, and which increases the cost of achieving energy savings.
- **Equity.** The PAs note that equity is a driver of higher unit costs of savings; however, this priority is a worthwhile and necessary endeavor that aligns with the EEA Secretary's direction in their GHG Goal Letter and the EEAC's priorities.
- **Increased baselines.** As federal and state building codes and appliance standards become increasingly rigorous, the amount of claimable incremental savings from program-qualifying energy efficiency measure decreases (unless the efficiency of the program measures rise as well). This decrease in savings attributable to the programs results in a higher cost per unit of savings. Federal water heater and other appliance standards continue to increase baseline efficiency levels and therefore decrease program savings. New construction practices in Massachusetts are increasingly energy efficient due to the GCA requirement that Green Communities adopt stretch codes and the recent release and adoption of a new stretch code and specialized stretch code, aggressive outreach to new construction market actors by the PAs and increasing federal standards for various kinds of equipment and appliances.

  In addition to increasing efficiency required from updated codes and standards, markets are adopting more efficient practices due to innovation, enhanced technology, and evolution of industry standard practice. This naturally occurring market adoption of efficient equipment and practices is accounted for through evaluation studies, and savings attributable to the PAs are adjusted accordingly. While

these trends result in real savings for customers in the state, they reduce the incremental energy savings the PAs can capture and claim through their programs.

- **Strategies to foster greater participation and deeper savings.** As the PAs seek to increase participation in their programs across all customer groups, they will invest more resources in reaching customer groups who have historically participated at lower levels. This will continue to require financial investments in partnerships, enhanced marketing, more resources in additional languages, and more robust incentives, among other strategies. In addition, the PAs are committed to supporting the contractor network as they expand, diversify, and upskill the workforce. These investments are essential to the long-term success of the programs but do not produce directly claimable savings, leading to increases in the cost to achieve savings and benefits in the short term.

  An additional consideration is the transfer of $72 million in customer funds from the Mass Save programs to Massachusetts Clean Energy Center. This transfer is designed to support the equity-related workforce needs of the programs, that diverse trainees and businesses are given opportunities as available within the network of Mass Save contractors and vendors upon completion of their training, and that the PAs succeed in creating a more diverse workforce that better represents the communities in which they serve.

- **Cost effectiveness and avoided costs**. The 2024 AESC Study estimated lower wholesale natural gas and summer electric capacity avoided costs, but higher electric energy and delivered fuel avoided costs than the previous iteration (the 2021 AESC Study). On natural gas avoided costs, the study also assumed Massachusetts will achieve the GHG sub-limit targets propagated by the EEA Secretary, which would require reducing the emissions intensity of combustion fuels through blending with emissions-neutral alternatives, like green renewable natural gas.

  This policy assumption increased overall natural gas avoided costs. Further, updated guidance on the social value of GHG emission reductions from the EPA yielded a higher recommended value of the social cost of carbon compared with the previous iteration (the 2021 AESC Study). As a result, energy savings are assigned more-per-unit economic value than in the prior term, providing an economic signal for the PAs to pursue the ambitious goals detailed in this Plan. The PAs are pursuing new delivery options and technologies to capture untapped energy efficiency and decarbonization potential. However, these efforts are not without cost, which puts pressure on programs in the short term. Additionally, the Plan contains measures that reduce GHG emissions, but may not save energy or potentially increase energy usage.

- **Unique service area drivers.** Despite consistent program offerings, there are variations among PAs in savings goals and costs to achieve due to each PA's unique service territory. Each PA's territory has a distinct mix of customers, markets, and vendors. Contributing to these differences are varying customer demographics, different mixes of building and business types, penetration of natural gas and delivered fuels, economic conditions, depth of community engagement, and population density. Each PA's territory has unique commercial and residential demographics, which may result in differences in how each PA approaches program delivery.

  For example, the service territory of one PA may have a smaller percentage of commercial customers than the statewide average, and thus may not be able to benefit from the higher savings opportunities that tend to correspond with that customer segment. Similarly, a PA may have a higher proportion of lower-income residents, requiring greater coordination with the community and higher costs to serve. Unique characteristics of smaller territories are more apparent than in larger territories, which represent a broader array of customers and communities that make these unique characteristics less visible. Variances among the PAs' plans are therefore appropriate, consistent with sound regulatory policy, the GCA, and previous Department recognition of PA differences. In setting their goals, each PA has used knowledge of its unique service territory, and inputs and insights from its PA-specific results from the potential study to design programs that best meet the needs of its customers. All PAs are committed to achieving all available cost-effective energy efficiency and GHG emissions reduction goals in accordance with statute.

- **PA collaboration with stakeholders.** As part of developing goals and budgets, the PAs engaged in discussions with the EEAC's consultants on the assumptions that were used for bottom-up planning. The PAs also considered the multiple (and sometimes conflicting) priorities of the EEAC members and other stakeholders in planning for cost-effective savings opportunities in the 2025-2027 Plan. Finally, the PAs worked with the DOER and the AGO's Office to review all aspects of the 2025-2027 Plan, including savings and cost assumptions.

- **Technology development costs.** The PAs' Program, Planning, and Administration ("PPA") costs to develop innovative technologies, measures, and solutions for customers have grown significantly over the 2022-2024 term. These costs may or may not immediately lead to savings; however, they are required for the PAs to be proactive and leaders in innovation.

2.2.4 Cost Effectiveness and Benefits

Cost Effectiveness

The PAs have projected the expected benefits and costs associated with this statewide 2025-2027 Plan to be consistent with the requirements of the Guidelines and D.P.U. 08-50-A, in which the Department reaffirmed that "the Total Resource Cost ("TRC") test is the appropriate test for evaluation of the cost effectiveness of customer-funded energy efficiency programs."[42] The scope of the TRC test includes costs and benefits that accrue to the energy system and program participants, but ignores other societal costs and benefits.[43] A Plan is cost effective under the TRC test if the cumulative present value of each sector's benefits is equal to or greater than the cumulative present value of the costs associated with delivering that sector's programs.[44] Under the GCA, for the purposes of cost-effectiveness screening, programs are aggregated by sector.[45] As set forth in the Guidelines, an energy efficiency program and core initiative also should be designed to be cost-effective over the term.[46] To conduct the TRC test, the PAs have developed detailed benefit/cost-screening models, and use these models to reflect assumptions relating to program costs and benefits, the discount rate, the general rate of inflation, and avoided costs. The PAs identify and quantify costs and benefits needed to calculate the cost effectiveness of programs consistent with the TRC test.

Costs included in the TRC test include all PA costs and program participant costs. PA costs include program implementation expenses, evaluation costs, proposed performance incentives, and tax liability for performance incentives. Program-participant costs include initial costs incurred by customers resulting from their participation in the program, including, but not limited to: (a) the net cost of energy efficient equipment; (b) the cost to plan for and install energy efficient equipment; and (c) the cost of energy efficiency services, such as energy audits or inspections for proper equipment functioning.[47] The Department previously found that societal consequences of state and federal tax credits for energy efficiency equipment may be excluded

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42 See D.P.U. 08-50-A at 14.

43 See River Run Condominium Trust, D.P.U. 07-49, at 11 (2008). However, the TRC test includes calculations of the social value of GHG emissions reductions, except in the cases of conversions from fossil fuel heating and cooling to fossil fuel heating and cooling, as required by statute.

44 See Guidelines § 3.4.3.1.

45 See G.L. c. 25, § 21(b)(3), as revised by Acts of 2018, c. 227.

46 See Guidelines § 3.4.3.1.

47 See Guidelines § 3.4.5.3.

from the TRC test.[48] Thus, the net cost of energy efficiency equipment for participants should be reduced by the value of the tax credits claimed by the participant.[49]

While the Department has yet to opine on other types of subsidies, the PAs intend to similarly exclude from the TRC test of specific projects any subsidy or funding related to:

- Government and foundation grants, including the Massachusetts Renewable Energy Trust.
- Federal, state, and municipal economic development program funds, such as rebate and grant funding available under the Inflation Reduction Act ("IRA") and the Bipartisan Infrastructure Law ("BIL").
- Environmental impact/improvement program funds.
- Other incentive payments to the extent that these subsidies are not exclusively funded by customers.

Like state and federal tax credits, these subsidies are societal costs that fall outside the scope of costs to the energy system and program participants. However, the PAs will require proper documentation from the customer evidencing that these subsidies are known and will apply. Proper documentation will depend on the type of subsidy but may include an attestation from the customer that they applied for or will apply for the subsidy. The subsidy must also not be funded by charges on Massachusetts electric and gas bills and the incentive will never exceed the total resource cost. Accordingly, the PAs will incorporate these subsidies when calculating the net cost of energy efficiency equipment for participants when screening projects for cost effectiveness.

Benefits included in the TRC test are the value of avoided costs and NEIs resulting from a program over the lifetime of the measures. Benefit categories include resource benefits and NEIs (sometimes referred to as non-resource benefits). Resource benefits include avoided energy valued at different times, avoided capacity valued at peaking periods, avoided transmission, avoided distribution, and effects on energy market prices. Specifically, the PAs calculate the benefits associated with positive or negative electric, natural gas, oil, propane, water savings, and capacity savings, and energy and capacity DRIPE (demand reduction-induced price

[48] See D.P.U. 07-49, at 12.

[49] See D.P.U. 07-40, at 12.

effect).[50] NEIs are the values associated with the positive or negative effects attributable to energy efficiency programs apart from energy savings, such as reduced costs for operations and maintenance ("O&M"), longer equipment replacement cycles and productivity improvements, reductions in costs associated with reduced customer arrearages, service terminations, and reconnections, and other measurable benefits due to the installation of the energy efficiency measure.

In accordance with the Guidelines and the 2021 Climate Act, the calculation of program benefits includes calculations of the social value of GHG emissions reductions. The PAs engaged the 2024 AESC Study vendor to perform research to determine an appropriate value in advance of the final Plan filing. The 2024 AESC study is available at Appendix H: Avoided Energy Supply Components in New England: 2024 Report. The benefit/cost screening model uses this data to calculate the present value of the program benefits and costs, and then calculates ratios of these values to produce benefit-cost ratios. The present value of costs and benefits is calculated over the expected duration of the useful life of the measures installed in the program.

Benefit Analysis Components

Overview

The PAs developed methods to determine the appropriate manner to measure and verify the benefits associated with the energy efficiency programs. Important elements of this analysis include using the AESC Study, and assessing NEIs, market effects, and demand reduction initiatives, each of which are described further below.

Avoided Energy Supply Cost Study

To develop avoided supply costs, the PAs participate in the AESC Study process, which is a well-established regional and collaborative process. The AESC Study projects marginal energy supply costs that could be avoided due to reductions in the use of electricity, natural gas, and other fuels—as well as avoided environmental damages and compliance costs—resulting from energy efficiency programs. The AESC Study is prepared every three years for the AESC Study Group, which is comprised of the PAs, state agencies, and other interested parties throughout New England. To inform this initial draft of the 2025-2027 Plan, the 2024 AESC Study was completed on February 7, 2024. The 2024 AESC Study is available at Appendix H: Avoided Energy Supply Components in New England: 2024 Report.

[50] Demand reduction-induced price effect ("DRIPE") is a measurement of the value of demand reductions in terms of the decrease in wholesale energy prices, resulting in lower total expenditures on electricity or natural gas across a given system.

The AESC Study provides projections of avoided costs of energy in each New England state for a hypothetical future in which no new energy efficiency and electrification programs are implemented in New England (see Counterfactual #1). The 2024 AESC Study provides an updated assessment of avoided electricity, natural gas, and delivered fuel costs using a model that simulates the operation of the New England wholesale energy and capacity markets in an iterative, integrated manner. The 2024 AESC Study yielded increased avoided costs for energy savings, primarily resulting from increased estimates of the value of avoided GHG emission reductions. The 2024 AESC Study also provides a review of social cost of carbon methodologies, including a recommended value, which is higher than the previous iteration (2021 AESC Study). The recommended value is applied in the 2025-2027 Plan to all measures except fossil fuel heating and cooling measures implemented in a limited set of circumstances authorized by statute.

Non-Energy Impacts

An NEI is an impact (positive or negative) for participants in energy efficiency beyond the energy savings gained from installing energy-efficient measures. NEIs include benefits such as reduced costs for O&M associated with efficient equipment or practices or reduced environmental and safety costs. The Department has stated that NEIs are "a well-established component of the program cost-effectiveness analyses conducted by the PAs", and found that the benefits of the NEIs are quantifiable and flow to Massachusetts customers.[51] The Department has specifically stated that NEIs should be included in the calculation of cost effectiveness.[52] Consistent with Department precedent, the PAs have included the costs and benefits associated with NEIs established in evaluation studies in the program cost-effectiveness calculations.

For the 2025-2027 term, the PAs will include NEIs related to resilience of battery storage for low-income customers, which has not been filed in previous Three-Year Plans. The PAs are also planning to complete studies on NEIs related to C&I weatherization and C&I heat pumps during the 2025-2027 term. The PAs will also include NEIs historically applied only to the Low-Income sector to moderate-income customers statewide and to renters located in designated equity communities (see Strategic Enhancements portion of section 3.1.2: Residential Turnkey Services).

[51] See 2013-2015 Order at 61.

[52] See Guidelines at §§ 3.4.4.

Joint Electrification Funding and Delivery

The 2025-2027 Plan includes a joint approach to funding and delivering prescriptive heat pumps and other prescriptive electrification measures to market-rate residential and C&I customers. Customers will be served by a common "MassSave Electrification" umbrella for electrification-related work, regardless of their electric and/or gas PA. This will improve the customer experience because customers will be able to contact either their electric or gas PA for assistance with their electrification measure rather than only the PA who led on the equipment installation.

Collectively, the PAs will develop statewide goals for prescriptive electrification measures and associated costs will be allocated to each PA based on a distribution formula and customer base. Costs allocated include incentives, HEAT Loan costs, and STAT costs insofar as they are related to the measure (processing and Quality Assurance/Quality Control ("QA/QC") fees). However, PP&A costs will continue to be budgeted for and reported by each PA individually. There will be no specific split between electric and gas PAs by measure or customer location; rather, all heat pump and electrification measure costs will be allocated across all PAs. While the details of performance incentives have not yet been developed for either the portfolio or for this proposal, the intention for the prescriptive electrification pool would be to allocate both budgeted and actual performance incentives across Program Administrators by the same set allocation percentage, thereby motivating all PAs to drive heat pump adoption, regardless of location.[53]

For planning purposes, all prescriptive electrification measures will be grouped together and included under sector programs in a statewide benefit-cost model. This will not only minimize any cost-effectiveness issues, but the model will also mitigate potential bill impacts to select communities. Costs will be spread among PAs and across the state, and increased adoption in focused areas would not increase costs for a specific service territory. The PAs will also be encouraged to pursue electrification on a statewide basis, regardless of territory.

In municipal electric utility territories, gas customers will continue to be served by the statewide "MassSave Electrification" umbrella, assuming they have had natural gas service on site for at least two years.[54] Electric customers in municipal electric utility territories could be served by the Program Administrators' structure if the municipal electric utility enters into a memorandum of understanding with the PAs for their customers to

[53] The Compact does not receive performance incentives. Nonetheless, the allocation percentages for the other PAs will be the same when calculating performance incentives.

[54] This only applies to municipal electric utility customers where the municipal utility has not opted into being served by the programs.

be served. Municipal electric utilities will be charged for their customers' participation by the relevant lead vendor. The PAs will report installations in the statewide benefit-cost model and would "take credit" for installation counts.

To ensure that PAs are able to meet statutory minimum spend thresholds, no change to the current approach is suggested for the Low-Income sector programs. These heat pumps would continue to be claimed by individual PAs, and not subject to the combined statewide umbrella described for market rate. The PAs will also continue to include Low-Income sector heat pumps in PA-specific benefit-cost models.

Custom electrification projects will be led by the electric PA, with the costs and benefits allocated between the electric and gas PAs in a yet to be determined percentage. Alternatively, small gas PAs will have the right to refuse to fund electrification projects if they are exceeding their planned custom C&I electrification budget, in which case the electric PA would assume all responsibility for the project, including technical assistance, incentives, claimed benefits, and associated performance incentive. C&I custom electrification will be treated the same as other measures for the purpose of calculating performance incentive and would be reported in PA-specific benefit-cost models.

This structure is intended to be implemented for the 2025-2027 Plan under the agreed upon allocations for cost sharing and performance incentive. The intent of the design is to keep the framework for future three-year plans, while allowing for changes in cost sharing and performance incentive sharing in future three-year plans.

Demand Reduction

The 2025-2027 Plan includes active demand reduction programs. Unlike passive demand reduction resulting from energy efficiency measures, active demand savings and benefits accrue during specified and limited time periods. Under the proposed initiatives, active demand reduction measures will be called on to perform during specified dispatch events, and the claimed savings will be based on average customer performance during those called events. Due to these unique characteristics of active demand response measures, the Massachusetts PAs developed a methodology for appropriately accounting for costs and benefits in the TRC test, which was first utilized in the 2019-2021 Plan.

2.2.5 Cost Categorization and Budget Requirements

Overview

The PAs have developed consistent definitions and methods of assigning and allocating budget costs across all five program implementation cost categories. With respect to salaries and overhead, each PA has developed its own method to allocate these costs to appropriate cost categories. For vendor costs, the PAs utilize uniform practices to assign these costs based on cost-causation principles.

Program Implementation Budget Cost Category Definitions

The PAs developed and refined the program implementation cost category definitions over several years. The cost categories listed below are consistent with the implementation of the 2022-2024 Plan. For the 2025-2027 Plan, the statewide cost category definitions used by all the PAs will be:

- **Program planning and administration.** PP&A includes costs associated with developing program plans, including:
    - Market transformation plans.
    - Research, Development & Demonstration ("RD&D"), excluding RD&D assigned to Evaluation and Market Research.
    - Day-to-day program administration, including labor, benefits, expenses, materials, and supplies.
    - Overhead costs.
    - Any regulatory costs associated with energy efficiency activities.
    - Technology development costs, including database development and maintenance.
    - Energy efficiency services contracted to non-affiliated companies (e.g., outside consultants used to prepare plans, screen programs, improve databases, and perform legal services).
    - This category also includes internal salaries for administrative employees/tasks, including program managers who do not have direct sales and technical assistance contact with customers.
- **Marketing and advertising.** This includes costs for the development and implementation of marketing strategies and costs to advertise energy efficiency programs, such as television, radio, billboards, brochures, telemarketing, websites, and mailings. These marketing strategies are

designed to educate customers and trade allies regarding the existence and availability of energy efficiency programs and/or technologies, and to induce them to participate. These costs include internal salaries for employee functions related to marketing and advertising.

- **Participant incentives.** This includes funds paid by the reporting PA to or on behalf of customers or trade allies as rebates or in other forms. Participant incentives include costs that directly benefit customers, including permit fees, pre-weatherization and pre-electrification expenses, repairs, and interest buy-downs.
- **Sales, technical assistance, and training.** STAT costs include administration, sales, technical assistance, and training costs to motivate: (1) customers to install energy efficiency products and services, (2) retailers to stock energy efficiency products, (3) trade professionals to offer energy efficiency services, (4) manufacturers to make energy efficiency products, and (5) use of vendor services and suppliers that demonstrate benefits of energy efficiency. This category also includes costs not directly tied to savings, including residential assessments, technical assistance studies, project management services, technical sales assistance, contractor fees and performance bonuses, vendor cost of money, lead vendor fees, internal salaries for employees with direct customer sales and technical assistance contact, and the workforce development assessment from the Massachusetts Clean Energy Center.
- **Evaluation and market research.** These are costs associated with:
    - Cost-effectiveness evaluation.
    - Market research, such as baseline studies, market assessments and surveys, and technical potential studies.
    - Impact and process evaluation reports.
    - Cost-effectiveness testing.
    - AESC Study.
    - TRM maintenance and updates.
    - Other costs related to evaluations and market research, including tracking and reporting program inputs and outputs, funding studies, and other costs clearly associated with evaluating the program. This category also includes internal salaries for employee functions related to evaluating the programs.

At the time of this filing, the PAs have not encountered any costs that are difficult to assign to one of the five cost categories. Costs are assigned to the appropriate category within the relevant program, core initiative, or hard-to-measure program. Costs that are not assigned directly to a program are allocated among relevant programs on an appropriate basis and tracked accordingly. Costs related to Evaluation and Market Research are assigned to the Hard-to-Measure line item.

Breakdown of Program Implementation Budget by Cost Category

Historically, the majority of costs associated with program implementation are passed on directly to customers in the form of incentives designed to help them overcome financial barriers to investment in energy efficiency. This remains the case for the 2025-2027 term. Participant incentives help customers adopt high efficiency measures and are a primary driver of historic and continuing energy savings.

The second largest budget allocation is for the STAT cost category, supporting the activities of the PAs, vendors, contractors and other industry professionals. These investments are major contributors to the green economy in the Commonwealth. The remaining program implementation budgets are allocated across the three cost categories of Evaluation and Market Research, Marketing and Advertising, and PP&A.

Salaries

Consistent with Department precedent, all the PAs have developed allocation methods based upon cost causation principles to assign expenses to the appropriate budget category. For PA staff performing multiple functions, employee salaries are allocated across the appropriate budget categories based on the percentage of employee time spent on various functions within energy efficiency. The PAs treat salaries as follows: (1) assign salaries of staff performing a single function to the appropriate cost category in the appropriate program/sector, and (2) assign salaries of staff performing multiple functions to multiple cost categories across several programs and sectors, as appropriate, based on an allocation for each employee in accordance with assigned job tasks. The salaries of program managers with direct sales and technical assistance customer contact are allocated to STAT, while the salaries of program managers without direct contact are allocated to PP&A or other appropriate cost categories.

Allocation Of Overhead Costs

Consistent with past practice, the PAs allocate certain non-program specific costs to each relevant core initiative or sector. Many of the costs in the PP&A budget category are allocated across core initiatives. This includes costs such as overhead services and fees related to building maintenance, technology and software, finances, telephones, legal counsel, and other vendors. These costs are allocated to all core initiatives in all

relevant sectors. The PAs allocate these costs to non-hard-to-measure programs based on the core initiative's percentage of total planned costs. The PAs develop the allocation percentages based on planning assumptions and maintain those percentages for reporting purposes.

Vendor Cost Categories

The PAs also collaborate to use consistent vendor cost categories. The PAs consistently review new costs to determine the appropriate category. The PAs maintain a chart, showing vendor cost types and the related cost category to support consistency and serve as a guide. This list has remained consistent since the last three-year plan.

Sponsorships & Subscriptions Costs

Sponsorships and subscriptions support the energy efficiency market, encourage workforce education, attract skilled employees to Massachusetts, and promote innovation in both service delivery and the development and testing of energy-efficient technologies. Consistent with Department directives, the PAs developed a methodology for assigning costs related to sponsorships and subscriptions. Expenses paid to directly support a program are considered program expenses and are allocated to the appropriate programs/initiatives where benefits are expected to be realized. Sponsorship and subscription costs not linked to specific in-the-field measures or services are allocated to the Sponsorship & Subscriptions hard-to-measure line item. A cost may be included in program line items even if called a sponsorship or subscription because the expense is related to the program. Please see Appendix J: Sponsorships & Subscriptions Policy for more information.

Evaluation and Market Research Costs

During the 2019-2021 term, the PAs began to charge all EM&V costs to a hard-to-measure line item in the budget called Evaluation and Market Research. Consistent with contracting EM&V vendors into research areas, costs are allocated at the sector level and not to individual programs. This budget category includes costs associated with the EM&V budget, potential studies, the AESC Study, the TRM, acquisition of data sets, and other evaluation and market research costs. Evaluation and Market Research costs are allocated to one or more sectors as appropriate to the cost.

Antitrust

While the PAs coordinate throughout a three-year term on issues related to costs, the three-year plans do not raise antitrust concerns or unreasonable restraint on competition. The services subsidized under the three-

year plans constitute only a portion of all building construction and improvements within the Commonwealth and the pricing for three-year plan services is not uniform and varies by PA. Antitrust laws are also not applicable to "state action" and the comprehensive statutory mandate and regulatory oversight of the three-year plans as described above clearly constitute "state action."[55] Finally, the courts have consistently found that utilities engaging in policies that have anti-competitive impact were immune under antitrust laws, to the extent that they were promoting a state policy promoting energy conservation,[56] which is the case with this Plan and all three-year plans.

2.2.6 Performance Incentives[57]

Summary of Relevant Precedent and Guidelines

Pursuant to the GCA, the three-year plan must include a proposed mechanism designed to provide an incentive to distribution companies based on their success in meeting or exceeding certain performance goals. The Department has established Guidelines outlining the principles and requirements for the design of a performance incentive mechanism.[58] Pursuant to the Guidelines, an incentive mechanism must be:

- Designed to encourage PAs to pursue all available cost-effective energy efficiency.
- Designed to encourage energy efficiency programs that will best achieve the Commonwealth's energy goals.
- Based on clearly defined goals and activities that can be sufficiently monitored, quantified, and verified after the fact.
- Available only for activities in which the PA plays a distinct and clear role in bringing about the desired outcome.
- As consistent as possible across all electric and gas PAs.
- Avoid any perverse incentives.[59]

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55 Parker v. Brown, 317 U.S. 341 (1943).

56 Yeager's Fuel v. Pennsylvania Power & Light, 22 F.3d 1260 (3rd Cir. 1994); Transphase Systems v. Southern California Edison, 839 F. Supp. 711 (C.D. Cal. 1993).

57 As a public entity and municipal aggregator, the Compact does not participate in performance incentives. Accordingly, any reference to or discussion of performance incentives in this Plan does not pertain to the Compact. G.L. c. 25 § B.2.v. See D.P.U. 08-50-A at 51.

58 Guidelines § 3.6.2.

59 Guidelines § 3.6.2.

Further, the Guidelines specify that the amount of funds available for performance incentives should be kept as low as possible to minimize the costs to electric and gas customers, while still providing appropriate incentives for the PAs.[60] All PAs must calculate design level incentive payments based on projections of performance for the entire three-year term, not based on annual projections.[61] Both electric and gas distribution company PAs collect performance incentives through the Energy Efficiency Surcharge ("EES") at the design level during the three-year term.[62] The Department reviews each PA's performance based on the entire term of the Three-Year Plan and approves final performance incentives through the term report proceeding.[63] Each PA reconciles actual and design performance incentive payments at the end of each term as part of their respective EES filings.[64]

The Department has approved performance incentive mechanisms that include savings and value components based on benefits and net benefits.[65] Specifically, the DPU has found that uniform statewide payout rates for the savings and value components is consistent with the goals of the GCA and Department precedent, and because the rates do not vary by year, found that the payout rates were consistent with the D.P.U. 11-120-A, Phase II Order.

The Department requires that a proposed performance incentive mechanism must encourage the PAs to achieve savings where they exist to reach portfolio goals.[66] The Department has also approved performance incentive mechanisms that are designed to provide additional incentives where the PAs successfully deliver benefits to customers by overcoming barriers associated with a nascent market, such as active demand response and electrification.[67] To avoid double counting of benefits in this type of performance incentive model, the PAs must appropriately track and consistently allocate all savings associated with the market-specific measures to ensure they are not also counted as traditional energy efficiency savings.[68]

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60 Guidelines §§ 3.6.2, 3.6.3.

61 See Guidelines § 3.6.4; D.P.U. 11-120-A, Phase II at 7-8. Design level performance is defined as 100 percent of the PA's projected benefits and net benefits multiplied by the appropriate payout rate.

62 See D.P.U. 11-120-A, Phase II at 13 n.16.

63 See D.P.U. 11-120-A, Phase II at 13.

64 See Guidelines § 3.6.4.2.

65 See 2016-2018 Three-Year Plans Order at 67.

66 See 2016-2018 Three-Year Plans Order at 69.

67 See 2019-2021 Three-Year Plans Order at 96.

68 See 2019-2021 Three-Year Plans Order at 96.

Also, in D.P.U. 13-67, the Department determined that performance metrics, an incentive model designed to encourage PAs to undertake specific actions or meet specific goals, were no longer appropriate under the GCA. This is because the PAs are obligated to undertake activities targeted by performance metrics to satisfy the mandates of the GCA.[69] Further, the Department found that preparing and verifying performance of these metrics would divert PA and stakeholder focus from the successful implementation of the three-year plans and is inconsistent with the Department's obligation to fulfill its oversight responsibilities in an administratively efficient and effective manner.[70]

The Department affirmed these findings from D.P.U. 13-67 in the 2019-2021 Three-Year Plans Order.[71] In that Order, the Department rejected a proposed renter component designed to incentivize services to renters by awarding the electric and gas PAs with $20 for each renter served, in addition to any performance incentive earned in connection with the savings and benefits attributed to the measures installed for each renter.[72] The Department found that the renter component incentivized the PAs to undertake activities (i.e., serving renters) that they were already obligated to undertake under the GCA.[73] The Department also rejected the renter component because it would lead to the PAs achieving an incentive in multiple incentive components for a single action.[74] Finally, the Department rejected the renter component because it would allow the PAs to potentially collect performance incentives for activities that failed to achieve the special renter component threshold, as the PAs would still be eligible to collect performance incentives based on the measures installed for each renter regardless of whether they succeeded in serving a specified number of renters, thus "rendering the renter component threshold superfluous."[75]

Proposed Performance Incentive Mechanism

The PAs are still developing the Performance Incentive mechanism for the 2025-2027 Plan in conjunction with DOER, the Consultants, and the AGO. While the final details have yet to be fully resolved, the PAs expect that it will contain the following general characteristics. For the avoidance of doubt, the description below is subject to change after further discussions amongst the PAs, and with DOER, the Consultants, and the AGO.

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69 See D.P.U. 13-67, at 14-15.

70 See D.P.U. 13-67, at 13.

71 See D.P.U. 13-67, at 93-95.

72 See 2019-2021 Three-Year Plans Order, at 92-93.

73 Ibid. at 94, citing G.L. c. 25, § 21(a); D.P.U. 13-67, at 12.

74 Ibid. at 93.

75 Ibid. at 94.

The PAs anticipate that the Performance Incentive mechanism will have an equity component, an electrification component, and a savings component. There will also be a value component, as has been previously required by the Department. The equity component would generally include measures installed in select communities and for certain customers, such as low- and moderate-income customers. The electrification component would include a subset of electrification measures, and the savings component would be composed of all other measures not included in the aforementioned components. Exactly which measures would fit within each component has yet to be determined, including the value component. Achievement within the components would be benefits based, with the value component measuring net benefits.

The PAs also anticipate that there will be some "market transformation effects" aspects that may affect the Performance Incentive mechanism. This aspect could be incorporated directly via actions driven by PAs resulting in GHG emissions reductions or via another mechanism within the Performance Incentive framework. However, those details have yet to be determined and remain the subject of discussion among the PAs, DOER, the Consultants, and the AGO. Similarly, the PAs expect there to be thresholds of attainment for the Performance Incentive components, but those have not been determined, nor has the total Performance Incentive pool been determined.

2.2.7 Cost Recovery, Funding Sources, and Bill Impacts

Cost Recovery

Cost recovery is a critical element of the three-year plans. Cost recovery associated with the implementation of energy efficiency programs includes the recovery of a performance incentive.[76] For the PAs to pursue the aggressive goals set forth in this Plan, it is essential that the Department provide a full and fair opportunity for the PAs to be made economically whole for aggressively pursuing sales-reducing energy efficiency and demand reduction efforts and to earn a reasonable return on this investment based on their performance and achievement in driving electrification and ensuring that all Massachusetts residents and businesses are able to access and benefit from the programs. Although Department approval of the proposed Plan should ensure cost recovery of reasonable Plan-related costs, and performance incentives, if applicable, the details related to individual PA cost-recovery mechanisms will be addressed in separate Department proceedings.

[76] For a discussion of performance incentives, please see supra-Section IV.F. Note: The Compact does not receive a performance incentive.

Pursuant to the GCA, after reviewing a PA's proposed three-year plan, the Department must approve fully reconciling funding mechanisms, in addition to other statutorily specified sources, if the DPU determines that the three-year plan ensures that the PAs have identified and will capture all energy efficiency and demand reduction resources that are cost effective or less expensive than supply.[77]

Funding Sources

Introduction

The PAs seek to leverage available funding sources and financing initiatives to increase the benefits of Three-Year Plans and minimize customer bill impacts. For electric PAs, the GCA identifies four specific funding sources for energy efficiency programs: (1) revenues collected from customers through the System Benefit Charge ("SBC"), (2) proceeds from the PAs' participation in the Forward Capacity Market ("FCM"), (3) proceeds from cap-and-trade pollution control programs, including but not limited to the Regional Greenhouse Gas Initiative ("RGGI"), and (4) other funding as approved by the Department, including revenues to be recovered from customers through a fully reconciling funding mechanism (i.e., an EES).[78]

Consistent with the Department's Guidelines, the PAs allocate SBC, FCM, and RGGI revenues to each customer sector in proportion to the kilowatt-hour ("kWh") consumption of each class.[79] In approving other funding for electric PAs, the Department must consider: (1) the availability of other private or public funds, (2) whether past programs have lowered the cost of electricity to customers, and (3) the effect of any rate increases on customers.[80] The Department has determined that a bill impact analysis with a short-term perspective that isolates the effect of a proposed change in the EES is appropriate because it provides an accurate and understandable assessment of the impact that customers will experience on their bills.[81]

For gas PAs, the GCA does not identify multiple funding sources for energy efficiency programs and instead requires them to include a fully reconciling funding mechanism to collect energy efficiency program costs from

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77 G.L. c. 25, §§ 19, 21(d)(2).

78 G.L. c. 25, §§ 19(a); 21(b)(2)(vii).

79 The Low-Income sector is allocated at least 10 percent of the funds for electric energy efficiency programs and 20 percent of the funds for natural gas energy efficiency programs pursuant to G.L. c. 25, § 19(c).

80 G.L. c. 25, § 19(a).

81 See 2013-2015 Three-Year Plans Order at 122; D.P.U. 08-50-D at 11-12.

customers (i.e., EES).[82] In approving funding for the gas PAs, the Department must consider the effect of any rate increases on customers.[83] Below is a description of each funding source currently available to the PAs.

Non-EES Revenues

System Benefit Charge (electric only)

The System Benefit Charge ("SBC") is calculated consistent with G.L. c. 25, § 19(a) which states: "The [D]epartment shall require a mandatory charge of 2.5 mills per kilowatt-hour for all customers, except those served by a municipal lighting plant, to fund energy efficiency programs including, but not limited to, demand side management programs." Specifically, each electric PA calculates projected SBC revenues as the product of the statutorily mandated SBC of $0.0025 per kWh and projected sales for the applicable year.

Forward Capacity Market (electric only)

Pursuant to G.L. c. 25, § 19(a), the Three-Year Plans of the electric PAs shall be funded in part by "amounts generated by the distribution companies and municipal aggregators under the FCM program administered by ISO-NE."[84] Specifically, each PA calculates projected FCM revenues as the product of the clearing prices of the FCM in the applicable year and the energy efficiency capacity that is designated by ISO-NE as an FCM capacity resource for the year. The PAs propose to apply all net proceeds from the FCM to energy efficiency programs.

To minimize customer funding for energy efficiency efforts, each electric PA seeks to maximize FCM revenues for its customers. FCM bidding strategies are designed to strike an appropriate balance between maximizing revenues through participation in the FCM and avoiding the risks associated with FCM penalties for failure to deliver their capacity supply obligations. In addition, demand reduction resources must participate in the energy market if the resource has a capacity supply obligation in the FCM, which adds potential for additional revenues but carries the risk of penalties. Each PA employs its own individual strategy in bidding future capacity into the FCM.

The Department has recognized the challenges the PAs face in projecting (with precision over the term of a Three-Year Plan) the level of planned energy efficiency resources that will be installed before and during each FCM commitment period.[85] One of these challenges is driven by the timing of the FCM auction cycles, which

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[82] See G.L. c. 25, § 21(b)(2)(vii); see also G.L. c. 25, § 21(d)(2).

[83] See Guidelines § 3.2.2.2.

[84] See G.L. c. 25, § 19(a) as defined in section 1 of chapter 164.

[85] See 2013-2015 Order, at 119.

are conducted three years ahead and begin with a "show-of-interest" submission almost four years before the capacity commitment period.[86] Another is that there are financial penalties for failing to deliver on FCM supply obligations. However, each PA takes all reasonable steps to maximize FCM revenues during the term.

In developing a bid, each PA uses the best information available at the time and considers historic achieved annual peak period MW reductions from their energy efficiency programs, as well as ongoing studies and evaluations that may affect future savings potential. Given the difficulty in estimating the actual energy efficiency savings that will be eligible to participate in the FCM and the potential penalties, PAs typically do not bid into future FCM commitment periods the total amount of energy efficiency savings they expect to achieve. In making conservative FCM bids, the PAs avoid overpromising and thereby compromising future system reliability. In addition, the reconciling nature of the EES ensures that customers are made whole if PA FCM revenue projections are overly conservative and the PA ultimately collect additional FCM revenues.

Regional Greenhouse Gas Initiative (electric only)

Pursuant to G.L. c. 25, § 19(a), the Three-Year Plans of the electric PAs shall be funded in part by "not less than 80 percent of amounts generated by the CO_2 allowance trading mechanism established under the RGGI Memorandum of Understanding, as defined in subsection (a) of section 22 of chapter 21A, and the NOx Allowance Trading Program." Pursuant to G.L. c. 21A, §22(c)(1), DOER is responsible for distributing proceeds from the auction of CO_2 allowances under RGGI to specific statutory purposes. However, from 2019 to 2023, the legislature changed the allocation of RGGI funds under G.L. c. 21A, §22(c)(1), through several amendments to the state budget[87] to prioritize payments to the MOR-EV and Green Communities programs. Due to the uncertainty of forecasting quarterly auction proceeds and the specific annual allocations to other programs, DOER delayed payment of proceeds to the PAs. In 2023, DOER identified outstanding funds for Fiscal Years 2021 to 2023 and disbursed them to the PAs. DOER expects that future RGGI funding will be consistent with 2023 amounts.

[86] The next forward capacity auction, in February 2025, will be for capacity delivery in July 2028.

[87] See St. 2019, c. 142, § 95; St. 2021, c. 102, § 56; St. 2022, c. 126, § 123.

EES Revenues

The EES is a fully reconciling funding mechanism[88] that the Department approves for funding the Three-Year Plans.[89] On an annual basis, each PA submits an updated EES for Department review, based on: (1) the PAs' most recent projections of budgets, revenues for non-EES funding sources (for electric PAs), and sales for the current year, and (2) a reconciliation of any under- or over-recovery of costs from the previous year.[90] Electric PAs collect the EES through EERF tariffs.[91] For gas PAs, the EES is collected through the LDAC tariff in accordance with established Department practice.[92] The EERF and LDAC filings of the PAs are separate proceedings from the Three-Year Plan proceeding and are implemented on schedules that vary among the PAs.[93]

Carryover information

In determining its EES, an electric PA takes into account carryover funds. If the funding for a customer sector from SBC, FCM, RGGI, and other non-EES sources exceeds the customer sector's budget, the electric PA must carry over any excess funding to the customer sector's budget for the subsequent year. For the 2025-2027 term, the electric PAs have C&I carryover funds. Each PA may have an over- or under-collection from their respective EES, and these are reflected in the electric PA-specific funding tables in each PA-specific Exhibit.

Other Funding Sources

The PAs are consistently pursuing potential sources of significant, non-customer funds. The 2025-2027 Plan currently assumes $50 million in outside funding for Home Electrification Appliance Rebates ("HEAR Funds")[94]

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88 See The PAs collect funds related to RCS through their EES. 220 C.M.R. § 7.00 et seq. The Department reviews the reconciliation of any over and under collections of RCS funds in the LDAC filings for the natural gas PAs and in the Energy Efficiency Reconciliation Factor ("EERF") tariff filings for the electric PAs.

89 See G.L. c. 25, § 21(d)(2).

90 See 2016-2018 Three-Year Plans Order at 114.

91 See Guidelines §§ 2(9), 3.2.1.6.

92 See Guidelines §§ 2(9), 3.2.2.

93 With the exception of Compact, EERF filings are made coincident with each electric PAs' residential basic service rate change, creating a lag between energy efficiency program spending and collection. The Compact's rates are effective January 1 of each year, consistent with the 2013--2015 Order at 125, n.106. The natural gas PAs' LDAC filings are approved for effect November 1 each year. Due to the timing of these filings, the budget and revenue projections are based on the 12-month period starting on the effective date of each EES, rather than on a calendar year. Therefore, projected expenditures and revenues included in the respective EERF and LDAC filings will differ from the amounts included in the 2025-2027 Plan.

94 The federal Inflation Reduction Act provides the funding for the US Department of Energy's ("DOE") Home Electrification and Appliance Rebate Program ("HEAR").

and additional resources provided to low- and moderate-income customers associated with GRIP (Grid Resilience and Innovation Partnerships) funding awarded to Generac.[95] Achieving the state's ambitious GHG goals is infeasible using customer funds alone. First, achieving the Plan's electrification goals increasingly will require investment in more expensive measures and pre-electrification barriers, such as building structural reinforcements to handle heavy equipment, building electrical upgrades, and other costs associated with large building electrification efforts. Moreover, raising more funds for energy efficiency and electrification measures by increasing the EES would have the perverse effect of increasing the cost of electricity, which is a deterrent to customer adoption of electrification measures. Accordingly, the PAs expect that additional and significant outside funding will be required to achieve the Plan's electrification goals, so the PAs identify and pursue funding sources outside of the EES that will not result in increased electricity rates for consumers. The PAs are working to engage both private and public funds to finance energy efficiency and electrification measures.

The PAs have had considerable success leveraging private capital to work alongside customer-funded rebates and propose to continue this approach for the 2025-2027 term. To engage the local financial community, the PAs have established valuable partnerships with local banks and credit unions throughout the Commonwealth, a collaboration that has produced the Mass Save HEAT Loan. HEAT Loans offer interest-free financing opportunities for residential customers to install energy efficiency measures. The PAs use program funds to buy down the interest rate on loans offered by private banks and credit unions, offering considerable savings to customers given recent increases in interest rates. The PAs enhanced the HEAT Loan during the 2022-2024 term by extending its coverage to include the removal of pre-electrification barriers such as electrical panel upgrades. All told, in 2022, the PAs' collaboration with private lenders resulted in more than $192 million in HEAT Loans. During the 2025-2027 term, the PAs plan several refinements to the HEAT Loan terms to ensure broad availability of financing for energy efficiency and electrification upgrades while containing the costs to the program associated with the recent increase in interest rates.

Alternative sources of public funds also can play a significant role in accelerating the deployment of energy efficiency measures while minimizing customer burdens. Recent federal legislation, including the American Rescue Plan Act ("ARPA"), the BIL (Bipartisan Infrastructure Law), and the IRA (Inflation Reduction Act) have made available billions of dollars of federal funds for investments in decarbonization. The PAs are engaged in several efforts to obtain these funds (see below).

[95] The federal Bipartisan Infrastructure Law provides the funding for the DOE's Grid Resilience and Innovation Partnerships Program ("GRIP").

Inflation Reduction Act rebates

Under the IRA, the DOE is allocating almost $73 million to Massachusetts for HEAR Funds to support residential electrification. As the federally designated State Energy Office, DOER is responsible for designing the Commonwealth's program to distribute the HEAR Funds, consistent with DOE regulations. The IRA authorizes the use of HEAR Funds for low- and moderate-income customers, as defined by federal legislation, for specific electrification appliances and related efficiency upgrades. The figure below shows the maximum rebate per measure, with households eligible for maximum total rebates of $14,000. The DOE requires that more than 40 percent of HEAR Funds in Massachusetts be spent on customers earning up to 80 percent of AMI. Additionally, to be consistent with the Biden Administration's Justice40 Initiative, at least 40 percent of HEAR Funds must be spent in either federally designated Justice40 communities or select communities as defined by DOER and approved by DOE.[96]

The PAs have worked closely with DOER as it has prepared an application for HEAR Funds that builds on and works seamlessly with Mass Save programs. Low-income customers are already eligible for 100 percent incentives through Mass Save and leverage federal WAP (Weatherization Assistance Program) and HEARTWAP (Heating System Repair & Replacement Program) funding. Accordingly, because of restrictions in the IRA on the use of multiple sources of federal funds for the same measure, the HEAR Funds are better utilized as a supplement to the enhanced incentives for moderate-income customers. Specifically, the PAs anticipate that DOER will deploy these funds to support weatherization and electrification for moderate-income customers, including those who rent, in designated equity communities. For further details on the criteria for selection of these designated equity communities, please refer to the Strategic Enhancements portion of section 3.1.2: Residential Turnkey Services.

The HEAR Funds would total approximately $50 million over the term and would supplement Mass Save program dollars to provide moderate-income customers in select communities with no-cost weatherization, pre-electrification barriers, such as electrical panel and wiring upgrades, and electrification via a turnkey delivery model. These federal dollars will support total additional spending on moderate-income customers and in the select communities, while reducing the portion of these costs borne by customers. The PAs are grateful to DOER for their support and collaboration in helping to increase support for these customers.

[96] See Justice40 Initiative.

Bipartisan Infrastructure Law and Inflation Reduction Act program funding

The BIL and IRA created or expanded dozens of grant programs aimed at improving energy infrastructure and reducing GHG emissions, several of which relate to energy efficiency, building electrification, and decarbonization. For most of these programs, the PAs are not eligible to act as the primary applicant and grantee; however, the PAs seek out opportunities to partner with and support lead applicants. Exemplifying the potential for collaborative approaches to securing these federal funding programs, the PAs were pleased to support Generac Grid Services' successful application to DOE's GRIP (Grid Resilience and Innovation Partnerships) program, created by the federal BIL. On October 18, 2023, DOE announced its intent to fund this proposal, which will support the deployment of some 2,000 residential batteries in Massachusetts. These batteries will be paired with heat pumps and other efficiency measures funded through the Mass Save programs, resulting in both resiliency benefits and a substantial addition of controllable load.

Similarly, the PAs recently supported the City of Everett's application to the DOE's Buildings Upgrade Prize. The city was awarded $400,000 to work with community-based organizations to overcome linguistic and cultural barriers to electrification. The PAs guided and supported Everett in drafting and submitting its application. The PAs also continue to support applications led by state agencies. For example, the PAs submitted a letter of support in favor of DOER and the Massachusetts Clean Energy Center's application to the EPA's Solar for All program. These funds would support rooftop and community solar installations for low- and moderate-income customers and in select communities that would make the economics of operating electrified homes and businesses more attractive.

DOER Funding

In January 2024, the City of Gloucester was awarded a grant of $144,311 from DOER's Green Communities Division. This grant, approved as part of the Green Communities Competitive Grant program, will support a range of electrification and efficiency projects across various municipal buildings in Gloucester including the high school, visitor center, and fire station. These projects are expected to result in significant energy savings, reducing the city's annual energy costs by $17,000 and lowering GHG consumption by approximately one percent.

Bill Impacts

Consistent with directives of the GCA, the 2021 Climate Act, and the goal of the 2025-2027 Plan, the PAs have sought to develop a statewide energy efficiency and decarbonization plan that acquires these resources

with the lowest reasonable customer contribution.[97] The Department has determined that a bill impact analysis with a short-term perspective that isolates the effect of a proposed change in the EES is appropriate because it provides an accurate and understandable assessment of the impact that customers will experience on their bills.[98] The Department requires the PAs to submit traditional bill impacts for nonparticipants under the following scenarios:

- The current (i.e., 2024) EES to the proposed EES for the first year of the Three-Year Plan (i.e., 2025).
- The EES from the first year of the Three-Year Plan (i.e., 2025) to the proposed EES for the second year of the Three-Year Plan (i.e., 2026).
- The EES from the second year of the Three-Year Plan (i.e., 2026) to the proposed EES for the third year of the Three-Year Plan (i.e., 2027).
- The current EES (i.e., 2024) to the proposed EES for the third year of the Three-Year Plan (i.e., 2027).[99]

The Department also directed the PAs to submit bill impacts for participants, "where consumption is reduced for three levels of savings – low, medium, and high – and [to] provide a description of how these savings levels were determined."[100] The Department later clarified the bill impact requirements for nonparticipants by providing a spreadsheet to the PAs, directing them to use average monthly usage levels under the first and fourth scenarios listed above.

Accordingly, to calculate bill impacts for participants, the PAs will populate the Department's spreadsheet (with peak and off-peak rates on separate sheets), using the average monthly kWh and/or therm usage for nonparticipants for each rate class, and the percentages set forth below. To best approximate low, medium, and high annual savings consistent with the Department's directive in D.P.U. 08-50-D, the PAs collaborated on appropriate assumptions for the Residential, Low-Income, and C&I sector programs to develop statewide percentages that best approximate savings for those types of participants. The PAs determined that the percentages below would provide directional information on the bill impacts that a residential, low-income, or

97 See G.L. c. 25, § 21(b).

98 See 2013-2015 Three-Year Plans Order at 122; D.P.U. 08-50D, at 11-12.

99 See D.P.U. 08-50-D, at 12.

100 Ibid.

C&I participant may experience. The PAs have been using these percentages to best approximate low, medium, and high annual savings since the beginning.

The PAs determined that there is no low, medium, and/or high savings scenario for low-income participants. These participants typically receive a comprehensive "whole home" energy efficiency approach, meaning potential measures are installed in most cases (the work that can be done is completed). Similarly, the PAs determined that there is no low, medium, and/or high savings scenario for residential and low-income natural gas non-heating participants and street lighting. Accordingly, the PAs determined that the percentages in the table below best approximate savings for those types of participants.

Figure 16: Proposed Budgets

	Low	Medium	High
Residential (electric)	2%	10%	30%
Residential (gas)	2%	15%	30%
Residential (gas non-heating)	2%		
Low-Income (gas non-heating)	2%		
Low-Income	25%		
Street Lighting	10%		
C&I (electric)	1%	10%	20%
C&I (gas)	1%	10%	20%

Each PA will provide a traditional bill impacts analysis for all rate classes in its individual filing with the Department of Public Utilities in October. Additionally, the electric PAs developed participant bill impacts showing the range of potential electric bill impacts from electrification.

The PAs are sensitive to the resulting bill impacts and costs that these will place on customers, which underscores the importance of identifying alternative funding sources as a means to achieving these outcomes with reduced customer rate increases. In addition, it is important to emphasize that actual rate and bill impacts for customers associated with the 2025-2027 Plan will vary based upon a multiplicity of factors, such as the cost of service in a particular PA's service territory, the customer's actual individual usage, the level and quality of measure installation, and the availability of public or private funds other than those collected through the SBC for application toward energy efficiency expenditures, such as proceeds realized from the FCM or from

cap-and-trade programs (i.e., RGGI). Finally, bill and rate impacts will vary from the bill and rate impacts included in each PA's EES filings, which are done on a different time schedule from this filing and include up-to-date over- and under-collections.

PA-Specific Initiatives

The PAs strive for consistency in program offerings with the goal that customers across the Commonwealth can take advantage of comprehensive energy efficiency services. In some instances, however, individual PAs may provide additional services or unique incentive structures that are specific to their territory or to a targeted community or demographic group within their community. These offerings may be specifically related to the unique characteristics or conditions of a service area or be designed to advance equity goals. They may also be based on the governing structure of a PA, such as the Compact, a public entity that has a distinct role as a municipal aggregator. Finally, these efforts may be run as a test case by one Program Administrator, with the idea that the programming could be rolled out across PAs if proven successful and cost effective. The PA-specific initiatives are set forth in Appendix K: PA-Specific Programming and represent proposals of only the PA making the proposal.

SECTION THREE: STATEWIDE PROGRAMS

3.1 Residential Sector

The Residential sector programs drive energy efficiency and electrification improvements for new and existing homes across Massachusetts by interacting directly with individual customers and building owners. Historically, Massachusetts has been a national leader in energy efficiency with advanced program design and implementation strategies that have led to the achievement of weatherizing over 350,000 homes since 2013, leveraging an established weatherization contractor network of about 120 installers. These initiative designs offer delivery channels for customers that are unlike other programs and offer unprecedented results. That trend continued in the first two years of the 2022-2024 term, with more than 102,000 homes weatherized during that time.

During the first two years of the 2022-2024 term, the PAs also made significant progress on residential electrification, supporting the installation of heat pumps in almost 50,000 homes and exceeding their residential heat pump installation goals for those years. Rapid expansion and adoption of residential heat pumps is supported by the establishment of the Heat Pump Installer Network in 2022, which aims to support heat pump installers with the training, experience, and knowledge necessary to ensure properly sized and quality installations. The Heat Pump Installer Network has now grown to include over 1,600 companies including over 1,900 installers.

The Residential sector programs are critical to the achievement of the Commonwealth's GHG goals and overall success. Through their residential interactions, the PAs have tens of thousands of opportunities each year to directly assist and influence customers in their pursuit of energy efficiency and decarbonization.

To reach all their customers, the PAs must provide services that meet customers' diversity of needs, based on how they wish to engage, the kind of building they live in, whether they own or rent, their household income, what languages they speak, their geographic location, and other key demographic characteristics. The PAs recognize the need to design programs that support all customer needs especially those more time constrained or who may need additional assistance. Ensuring access to customers with such an array of unique needs and preferences requires constant refinement over time. The PAs provide services that address almost every residential building end use, including building envelope, HVAC and domestic hot water systems, small appliances and electronics, and the enrollment of connected devices in active demand reduction offerings. To effectively address all these end uses, the PAs' solutions must be available when customers make the decision to procure one of these services during the lifecycle of residential occupancy. Customers need decarbonization

solutions when building a new home, making renovations or upgrades to an existing home, replacing a failed piece of equipment, or purchasing a new appliance or electronic device. Addressing a wide set of end uses in different types of interactions is part of the PAs' strategy to ensure that all types of customers can find ways to benefit from programs that suit their specific circumstances.

In the 2025-2027 term, the PAs will aim to drive greater adoption of residential decarbonization measures and simplify the customer experience through three key enhancements. These enhancements include: (1) the expansion of Home Energy Assessments to include decarbonization opportunities, (2) providing seamless customer experiences via turnkey installations for customers going beyond weatherization and coordination to include facilitation of barrier mitigation and heat pump installations, and (3) a commitment to key customer segments including moderate-income customers and renters. These enhancements will be delivered through a suite of services that enable customer access and allow them to participate on their terms.

Focus on Decarbonization

In the 2025-2027 term, the PAs are expanding their emphasis on decarbonization across the Residential sector. Within the Residential Turnkey Services program, the PAs plan to expand the traditional Home Energy Assessment to include decarbonization opportunities. The PAs will leverage the assessment to collect additional home data points to identify, recommend, and facilitate relevant decarbonization options based on the customer's opportunities and needs. The enhanced assessments will evaluate the site-specific readiness and suitability (e.g., electrical service and panel capacity, electric distribution system, house orientation, etc.) for implementation of measures such as heat pumps, electric appliances, electric vehicle ("EV") charging, and renewable energy systems. By evaluating these additional areas and collecting this data, the Home Energy Assessment will provide the information necessary to support the customer with decarbonization options that match their interest and need. The PAs can assist with the connection to appropriate resources to support customers in taking action over the course of their decarbonization journey.

For customers who may not be interested in a facilitated experience, the Residential Rebates program offers rebates for heat pumps installed through the Heat Pump Installer Network. To further assist customers with eligibility questions, the PAs will offer customers the option to pre-approve their heat pump projects to ensure equipment qualifies for incentives prior to installation. Customers can leverage support through virtual decarbonization consultations. These consultations are designed to help customers with all their heat pump related questions including understanding the technology, interpreting the recommended configuration, guidance on comparing quotes from different installers, or exploring other decarbonization opportunities for their home such as heat pump water heaters and induction stoves.

To promote the electrification of new buildings in the Residential New Homes & Renovations program, the PAs will introduce a new All-Electric offer to optimize energy-efficient building practices coupled with electrification efforts. The standards for this offering will focus on advanced building shell techniques and mechanical systems to dramatically reduce heating and cooling loads and prepare these homes for carbon neutrality, while increasing occupancy comfort year-round, align their incentives, and provide education and training to customers and the workforce. As the program will provide all-electric offerings for new construction homes, the gas PAs will no longer have a Residential New Homes & Renovations program.

Deliver an Improved Customer Experience

To streamline the customer experience and reduce barriers to participation, the PAs plan to expand the turnkey services within the Residential Turnkey Services program beyond weatherization to provide barrier mitigation and heat pump installations, starting first with moderate-income homeowners and renters. The current turnkey approach provides customers with a full-service experience for their weatherization installation. The customer's experience begins with their Home Energy Assessment and proceeds to end-to-end project facilitation where work is provided to the customer at set pricing, customers receive instant incentives, and finally, the program offers quality control inspections post-installation to ensure all materials were installed according to the work scope and up to the program's installations standards.

Using that model as a framework, the PAs will introduce a turnkey delivery model to support barrier mitigation and electrification. Implementation of this expanded offering will focus initially on moderate-income customers, with plans to extend the offering to market-rate customers in 2027. The PAs are offering a variety of support resources to customers to assist with their decarbonization journey, and the Program Administrators anticipate reducing barriers to participation by offering an end-to-end installation experience for customers.

For customers who want to pursue electrification outside of a turnkey framework, the PAs will continue to offer incentives through the Residential Rebates program. The PAs will also continue to improve the rebate experience and support timely processing of rebates. As described above, the PAs will create an optional pre-approval step for customers pursuing electrification to help ensure customers understand and comply with each of the required components for successfully securing a rebate prior to submission of an application form. Additionally, the PAs will continue to work with their rebate processing vendor to further reduce the number of applications with missing information via enhancements to the online submission process and proactive outreach to affected customers. This outreach is in addition to the automated notifications customers already receive. Finally, the PAs are working to optimize and reduce the time required for inspections, while ensuring

appropriate levels of post-installation review. Together, the PAs expect these efforts to improve the rebate experience while ensuring that installed heat pumps achieve the expected energy savings and GHG reductions, and that ratepayer dollars are prudently deployed.

Commitment to Equitable Access

To ensure equitable delivery of Residential sector initiatives, the PAs will make several additional changes specifically designed to reduce barriers for moderate-income customers, renters, and Languages other than English (LOTE) customers and drive adoption of energy efficiency and weatherization improvements for these customer groups. For the 2025-2027 term, the PAs will reduce the barriers to qualification by expanding criteria based upon both state and area median income and by extending moderate-income offers to landlords whose tenants meet the income criteria. To reduce the financial burden of these improvements and eliminate out-of-pocket costs for moderate-income customers, the PAs will provide 100 percent incentives for weatherization, barrier mitigation, and heat pumps delivered via Residential Turnkey Services. The introduction of turnkey services for barrier mitigation and heat pump installation ensuring end-to-end project support and an additional navigator service to help moderate-income customers at each step along the way will reduce the logistical burden and time commitment for the customer. Additionally, the PAs will continue to leverage trusted local community representatives including their Community First Partners and Community Education Grants recipients to build awareness and reach this segment in culturally relevant ways.

To further support weatherization and electrification of renter-occupied and moderate-income households, the PAs and DOER collaborated to designated equity communities for the 2025-2027 term for targeted outreach and investment. Selected communities have a significant share of renter-occupied and low- and moderate-income households. In these designated equity communities, the PAs will identify key community stakeholders and other partners to identify target buildings or neighborhoods, develop a customized outreach plan, and engage these properties through the Residential Turnkey Solutions program. Offerings will include no-cost weatherization for all eligible residents and additional investment and end-to-end facilitated decarbonization services through the PAs' custom multifamily offering. For the custom multifamily offering, the PAs will focus on decarbonizing renter-occupied, multifamily buildings without increasing tenant energy burdens.

Understanding that customers in the PAs collective service territory speak languages other than English, the PAs are committed to improving their ability to serve LOTE customers. During the 2022-2024 term, the PAs commissioned a language access project to better understand language needs and recommendations to serve LOTE customers. The PAs plan to implement recommendations made through that research during the 2025-

2027 term. Additional information on the Language Access recommendations can be found in section 3.4.3: Language Access.

Residential Sector Overview

Core Program	Description
Residential New Homes & Renovations	This program supports the achievement of efficient, all-electric solutions in single-family and multifamily new construction and renovations markets, as well as construction practices and training to drive increased compliance with building and energy codes.
Residential Turnkey Services	This program (formerly known as Residential Coordinated Delivery) delivers Home Energy Assessments, turnkey weatherization, and barrier mitigation services.
Residential Rebates	This program (formerly known as Residential Retail) provides customer rebates for heat pumps, heat pump water heaters, and other energy-efficient equipment. A key focus of this program is continuing to develop a trained contractor workforce for heat pump installation through the Heat Pump Installation Network.
Residential ConnectedSolutions	This program aims to reduce system peak load by temporarily controlling behind-the-meter technologies owned by both residential and commercial customers in response to event signals from the PAs, thus reducing the customer's onsite load.
Residential Education	The Residential Education program offers educational outreach programs, encourages careers in the clean energy industry, and help increase awareness of the benefits of energy efficiency and decarbonization.

3.1.1 Residential New Homes & Renovations

The goal of the Residential New Homes & Renovations program is to encourage and support customers and their contractor teams in achieving efficient, all-electric solutions in single-family and multifamily new construction and renovations markets in a way that transforms those markets toward these solutions faster than would occur absent program interventions. The program encourages and supports the development, adoption, and implementation of increasingly stringent codes and standards and the demonstration and normalization of all-electric construction practices and supports the training of code officials, Home Energy Rating System ("HERS") raters, and builders to drive increased compliance with building and energy codes. In the 2025-2027 term, to continue to advance all-electric building practices in new construction and renovation

projects, the PAs will transition the evaluation framework of the program to a market transformation approach showing support for recent legislation and policy developments in Massachusetts.

Program Design

Customers who are building a new residential home that will be served by a Mass Save electric PA[101] are eligible for the Residential New Homes offer. For customers undertaking a major renovation, the Renovations and Additions offer is available to all customers who have an active residential account with a Mass Save electric PA. Residential multifamily buildings can be either individually metered or master metered. The program has two primary pathways: (1) Single Family and Small Multifamily (2-to-4-units), and (2) Multifamily—Master-Metered/High-Rise (5+ units). High-rise master metered projects are applicable to buildings with four or more stories or a centralized HVAC system. These two pathways provide tailored technical support, outreach, recruitment, training, verification, and incentive structures to encourage and support program participation from all residential new construction and renovation projects. Each pathway includes a standard offering coupled with two enhanced initiatives focused on advanced building practices and higher levels of electrification.

For the Single Family and Small Multifamily pathway, the PAs will continue working with the HERS rater infrastructure. HERS raters are the main contact point for all participants in these pathways and play a critical role in recruiting builders to enroll projects and in advising participants on the value of additional efficiency upgrades. Due to the importance HERS raters play in the program, the PAs, through their lead vendor, who manages customer and client relations and oversees enrolled projects, have worked to grow the community. The PAs have collaborated with local agencies, offered training, performed outreach, and offered HERS rater incentives. Due to these efforts, the PAs continue to see the number of HERS rating companies in Massachusetts grow year after year. HERS raters can directly enroll projects into the program via an online intake tool and provide verification of savings at project completion.

In the Multifamily—Master-Metered/High-Rise pathway, the PAs use a statewide, competitively procured PA-contracted vendor (lead vendor), who works directly with developers and trade allies to enroll projects in the program. This lead vendor supports the entire Residential New Homes & Renovations program portfolio across all PAs. The High-Performance Housing Working Group includes residential and commercial new construction technical experts from PA staff and the lead vendor. This working group assists in recruiting and

[101] Customers who are served by municipal electric utilities will not be eligible for the Residential New Homes offer.

defining performance targets while providing guidance on maximizing incentives, energy-efficient net zero construction practices, and high efficiency technologies and systems.

The Renovations and Additions offer provides customers with all the technical support of the Residential New Homes & Renovations program, including training and education for builders and connection of builders to the HERS raters. This support enables customers to leverage the most advanced building science and efficiency technologies and push for the highest efficiency in both the existing and renovated portions of their projects. For this offer, customers have the opportunity, while their builder and rater support are in place, to add building envelope, mechanical systems, appliances, HVAC systems, and other energy-efficient measures to their project, securing the maximum energy savings presented by the renovation opportunity. The savings are modeled, and incentives reward participants for each unit of energy savings secured.

Within each pathway, the Passive House and ENERGY STAR offers provide an option for builders and owners to achieve the highest building performance standard for any new residential construction project. To ensure early intervention and guarantee more design teams and owners are ready to make a commitment to Passive House projects (including single-family projects pursuing the standard All-Electric offering outlined below), the PAs will continue to offer subsidized trainings and certifications to develop the expertise needed to achieve certified buildings. In addition, the PAs will continue to provide outreach and education to other project stakeholders, such as architects and lenders, and provide hands-on building science technical trainings to installation contractors to ensure that all involved in the project have the information and skills necessary to achieve certification.

Also included within the Residential New Homes & Renovations program is the Codes and Standards Compliance and Technical Support initiative. This initiative includes education and outreach to the building industry to improve compliance with the current energy code and technical support to enable codes and standards to continue to improve and become more efficient. This initiative accelerates the adoption of more efficient codes and standards.

The program underwent a complete redesign that went into effect on July 1, 2024, to more clearly promote the use of highly efficient construction coupled with electrification building techniques. All buildings participating in the program will have to electrify all major end uses with an exception for multifamily hot water heating. The redesigned program enables projects to achieve high levels of electrification, coupled with efficiency. As the market adjusts to all-electric construction, these practices will be adopted in the base energy code. Many of the findings from the Residential New Construction Electrification Barriers Study Report

(MA21R44) were used to inform program design in these new offerings.[102] As builders and homeowners have become accustomed to and relied on the use of fossil fuels for their homes, the shift towards all-electric construction will pose some challenges that can be summed up by two major themes: cost and education. The cost refers to both the upfront cost of equipment and the ongoing operating cost of all-electric heating and water heating. The need for education is applicable to all segments of residential projects and varies by audience. While the homeowners may need to understand overall benefits of technology the workforce of builders, raters, designers, and code officials need to understand the technical aspects of designing for new equipment and achieve performance metrics.

The PAs employ a variety of marketing techniques to drive participation across offerings. A key component of low-rise marketing and customer acquisition are the HERS raters, who receive a referral fee for every project that successfully participates in the program. The PAs hold meetings every quarter with HERS raters from around the state to receive continuous updates on the program's progress, to communicate any programmatic changes, and to receive feedback. To acquire customers for the Multifamily—Master-Metered/High-Rise pathway, the PAs employ an outreach and engagement strategy to reach design and construction companies across the state to educate them on the benefits of participation.

As part of this outreach, the PAs' lead vendor includes a strategy to expand the number of developers, builders, and project teams who are aware of and participating in the Residential New Homes & Renovations program.[103] Beyond traditional marketing and outreach for the Multifamily—Master-Metered/High-Rise pathway, the PAs organize specially tailored marketing and outreach for the Passive House offering. The PAs hold Passive House 101 lunch-and-learn trainings multiple times a month, in both onsite and virtual formats, to educate the market about Passive House design and the PAs' offering. These lunch-and-learns are offered to architectural firms, builders, engineering firms, and other interested stakeholders. The PAs and their marketing vendor will also employ comprehensive digital marketing campaigns throughout the year. Digital marketing in social media and through paid search is particularly beneficial for acquiring customers in the Renovations and Additions offer. The PAs also use historical and current permit data for geographic targeting, annual recruitment, and engagement of design and construction companies across the state.

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[102] MA21R44, Residential New Construction Electrification Barriers Study Report.

[103] A lead implementation vendor is responsible for working with the PAs on the strategic coordination, outreach, development, and deployment of program-related messaging and services. The lead implementation vendor works directly with trade allies, builders, developers, architects, project teams, and other key industry stakeholders to help provide input on innovative new program design opportunities, which are then relayed to the PAs who determine how to best implement new strategies and program offerings centered around both policy and industry needs.

The PAs will align their incentives to promote electrification while providing education and training to customers and the workforce. Continuous education of the workforce is critical to the successful promotion of all-electric construction. The PAs will build trust in new technologies by providing training material including case studies of successful projects grounded in sound building science and will leverage their relationship with the rating community to further advance education efforts and identify workforce challenges. As cost remains a barrier to electrification, the PAs will continue to provide incentives to drive the market toward electrification through the program pathways that will be coupled with market transformation adders that provide additional incentives for certain technologies to drive participation in all-electric construction.

Strategic Enhancements

Enhancement #1: Introduce a standard All-Electric offering

For the 2025-2027 term, the PAs will introduce a standard All-Electric offer. This offer will optimize energy-efficient building practices coupled with electrification efforts, along with an easy-to-follow check list of advanced construction standards for smaller building projects. The standards for this offering will focus on advanced building shell techniques and mechanical systems to dramatically reduce heating and cooling loads and prepare these homes for carbon neutrality, while increasing occupancy comfort year-round, similar to other high-performance building standards, such as Passive House.

Participation in the All-Electric offer will require the installation of an additional 240-volt outlet and a larger electrical panel to enable readiness for an EV level 2 charger, allowing the owners to participate in demand reduction programs. With substantially reduced space conditioning requirements, homes built to the All-Electric offer's requirements will use less electricity for their energy needs and will be better positioned to achieve net zero performance, compared with homes built using current standard building practices. As with the PAs' current multifamily Passive House offering, the All-Electric offer will provide both financial and technical support, spread over key milestones of decision making and construction.

Enhancement #2: Level 2: Introduce an ENERGY STAR NextGen™ offering to the Single Family and Small Multifamily pathway

For the 2025-2027 term, the PAs will introduce an ENERGY STAR NextGen offer for the Single Family and Small Multifamily pathway. ENERGY STAR NextGen will be a 'Level 1' offering, one level above the standard offer for the Single Family and Small Multifamily pathway. The offer will require homes to meet the standard offer requirements as a prerequisite to program participation but will also align with the EPA's latest all-electric home standard (i.e., ENERGY STAR NextGen). ENERGY STAR NextGen certification is an additional,

optional level of recognition from the EPA for homes and apartments that incorporate leading-edge efficient electric technologies and EV charging capabilities to maximize energy and emissions savings, while delivering the comfort, quality, and durability that consumers expect from homes built to ENERGY STAR standards. The offering aligns well with the goals of the Residential New Homes & Renovations program, which seeks to transition the built environment towards higher efficiency, all-electric homes and apartment units. Unlike the standard All-Electric offer, fossil fuels are not allowed for lifestyle appliances.

Although many of the standards within ENERGY STAR NextGen align with the standard offer, there are several key areas where NextGen offers an improvement over the standard offering. First, within ENERGY STAR NextGen, the building envelope is roughly 10 percent more energy efficient than 2021 International Energy Conservation Code ("IECC 2021") building energy code. This is a modest improvement over the standard offering which does not have this requirement. Additionally, NextGen requires all installed air source heat pumps to meet ENERGY STAR Cold Climate criteria. Finally, perhaps the most notable difference, is the requirement for a National Rater Field Checklist in ENERGY STAR, which offers a higher level of commissioning for NextGen projects.

Along with the certification, the PAs will also establish minimum performance criteria for participation through the NextGen offering. These incentives may also be layered with additional market transformation adders (see Market Transformation section below).

Enhancement #3: Level 3—Expand Passive House (single-family and multifamily) offering

During the 2025-2027 term, the PAs will continue to expand the Passive House certification offering for both single and multifamily homes and dwellings. Regarding high-performance building practices, the PAs recognize Passive House as the premier program standard for the new construction market segment. The expanded Passive House offering will require homes to meet the standard requirements as a prerequisite to program participation, except domestic hot water in multifamily applications. Passive House will serve as the highest-level program offer for both single and multifamily buildings. For single-family projects, electrification of cooking, heating, and domestic hot water equipment will become a requirement for inclusion into a 'Level 2' Passive House offering. This Level 2 Passive House offering aligns well with the goals of the Residential New Homes & Renovations program, which seeks to transition the built environment toward higher efficiency, all-electric homes and rental units. These incentives may also be layered with additional market transformation adders (see Market Transformation section below). In addition, the PAs will continue to offer technical and design assistance for projects participating in the Passive House offering.

Enhancement #4: Introduce a Level 2 ENERGY STAR Multifamily New Construction certification

During the 2025-2027 term, the PAs will introduce an offering focused on ENERGY STAR certification for the Multifamily—Master-Metered/High-Rise pathway (5+ units). The certification will target ENERGY STAR Multifamily Version 1.2 as a tiered offering above the standard Multifamily—Master-Metered/High-Rise pathway, and require electrification of space heating, cooking, and clothes drying. However, the offering will carve out an exception for fossil fuel domestic hot water equipment, where necessary, that will allow the equipment to be included in the building; however, the PAs will not claim any savings.

Through this certification, the PAs hope to leverage the existing and trusted ENERGY STAR brand to advance high-performance building practices and reduce emissions in the new construction building sector. In addition to certification, the offering will set minimum performance criteria as a prerequisite for participation and earning incentives. The PAs will make additional Market Transformation incentive adders available and market actors will be allowed to layer them onto this certification offering. In addition, the PAs will consider offering technical and design support. This certification offering can also serve as an alternative to the Passive House offer (a Level 2 offering) for multifamily projects. Projects not meeting the stringent performance requirements may still be able to participate through the Level 1 ENERGY STAR Multifamily—Master-Metered/High-Rise pathway.

Enhancement #5: Introduce Market Transformation adders

In an effort to increase the adoption of all-electric building practices, the PAs propose to also implement Market Transformation adders, or additional incentives for performance beyond the program's minimum requirements. The goal is to increase participation in the single-family and multifamily all-electric offerings, by developing incentives encouraging the adoption of newer all-electric technologies. The PAs understand an all-electric building requires additional investment of time and money putting this building practice out of reach for some customers. The Market Transformation adders will be designed to alleviate some of the financial burden associated with these practices. To qualify for Market Transformation adders, participants will need to incorporate the technology or equipment identified in the Market Transformation adders' section of their respective program pathway.

Enhancement #6: Include an embodied carbon reduction component

In addition to the residential Market Transformation adders, the PAs propose to include an embodied carbon reduction component that aligns with the current new construction and renovation options, offering customers an option to minimize life cycle assessment carbon emissions. This proposed component would

include eligibility requirements and a three-tier avoided GHG emissions structure in residential buildings. Adopting embodied carbon reduction efforts will position Massachusetts as a national leader in the evolving landscape of whole-life carbon accounting. This adder places a strong emphasis on reporting methods, and commitment to accuracy, transparency, and continuous improvement in reducing GHG emissions associated with construction and renovation projects.

Incentive Levels

Figure 17: Residential New Homes & Renovations Program Incentive Levels

Measure	Criteria	Incentive Amount
Single Family (1-to-4 Units) Standard Offer	Pay-for-Savings ("PFS") ≥ 15% or HERS ≤ 45 All-electric heating, domestic hot water, cooking and appliances. Propane "lifestyle" auxiliary end-uses allowed	TBD
Single-family (1-to-4 Units) Level 1: Energy Star NextGen	ENERGY STAR NextGen HERS: 45 or PFS: 30% Air Leakage Rate: 1.5 ACH50 Ventilation: ERV/HRV Certification: ESFNC V3.2 + NextGen	TBD
Single-family (1-to-4 Units) Level 2: Passive House	Passive House Certification: PHIUS Core or PHI Classic	TBD
Single Family (1-to-44 Units) Market Transformation Adders	TBD	TBD
Renovations & Additions		
Multifamily (5+ Units): Standard	All-Electric (allowable FF DHW) Low-Rise: 15% PFS High-Rise: TBD Min Savings requirement	TBD
Multifamily (5+ Units): Level 1: ENERGY STAR MFNC V. 1.2	ENERGY STAR MFNC V 1.2 Certification: ENERGY STAR MFNC V 1.2	TBD
Multifamily (5+ Units): Level 2: Passive House	Passive House Standards Certification: PHIUS Core or PHI Classic	TBD
Multifamily (5+ Units): Market Transformation Adders	TBD	TBD

3.1.2 Residential Turnkey Services

Historically, the primary objective of the Residential Turnkey Services program (formerly Residential Coordinated Delivery) has been to deliver comprehensive Home Energy Assessments and weatherization installations. These assessments provide customers with energy efficiency recommendations to facilitate the weatherization of all residential building types and all market-rate customer segments (e.g., market-rate and moderate-income owners, renters, and landlords). While this remains a primary objective for the 2025-2027 term, the Residential Turnkey Services program will broaden its focus to promote the adoption of additional decarbonization measures through electrification including heat pumps for space heating and domestic hot water, EV charging, appliances (e.g., induction stoves, clothes washers and dryers, lawn equipment, etc.), battery storage, and onsite renewable energy. The program will expand its turnkey delivery model to address technical barriers to decarbonization and to support heat pump installation, starting first with moderate-income customers.

In support of these objectives, the PAs will expand the scope of the legacy Home Energy Assessment to provide a more decarbonization-themed experience for participants and promote the adoption of more decarbonization measures. The scope of the Home Energy Assessment will be expanded to gather additional site-specific data points related to suitability to implement program-eligible decarbonization measures, such as electrical service and panel capacity, electrical distribution, and house orientation. These additions will help produce a new Home Energy Assessment report to ensure customers are provided clear, prioritized next steps in their decarbonization journey. The expanded assessment will include new opportunities for customer education related to decarbonization measures and will provide updated information for customers to pursue decarbonization beyond the program's offerings.

The Residential Turnkey Services program includes incentives and support to enable residential customers to undertake decarbonization upgrades in existing homes, particularly through building envelope measures such as air sealing and insulation (collectively "weatherization"), and electrification measures such as heat pumps. A key function of the program is to streamline a customer's participation experience and the process of implementing decarbonization measures by offering turnkey services. Turnkey delivery ensures customers are supported from project origination to project completion by a single vendor managing the multiple steps and subcontractors throughout the process. The turnkey delivery approach also allows the PAs to provide instant incentives to the customer, reducing or eliminating out-of-pocket costs and potential incentive fulfillment delays. When applied across multiple project types (e.g., weatherization, barrier remediation,

electrification, etc.), the turnkey model can make decarbonization much more accessible for customers with varying motivations, financial situations, or expendable time and effort.

Turnkey weatherization will remain at the core of the program throughout the 2025-2027 term and turnkey services will be expanded first for moderate-income households to include heat pumps, as well as barriers to weatherization and electrification. The PAs will also work toward developing a turnkey option for heat pump installations for all market-rate customers during the term. When ready, the PAs will make DOE Home Energy Scorecards available for program participants who opt-in. The program supports participation of moderate-income customers, renters (through their landlords), and LOTE (Languages Other Than English) customers by offering specialized resources and incentives and through various engagement and implementation strategies.

Program Design

For program eligibility, customers must hold an active, residential electric or natural gas utility account with one or more of the PAs. Customers who reside in municipal electric towns must heat their home with natural gas from one of the Program Administrators. Note: low-use natural gas accounts do not qualify. Multifamily buildings must meet these requirements as well, though these buildings may have both residential and commercial accounts onsite. In these cases, customers are eligible for all cost-effective measures regardless of the account type.

Program Pathways

Residential Turnkey Services is implemented through the following two pathways:

- Single Family, a pathway that primarily serves residential buildings with 1-to-4-units, and
- Multifamily, a pathway that primarily serves residential buildings with 5 or more units.

Note: When appropriate, buildings with 5+ units that share construction or building design that are more similar to a single-family home may be served in the Single-Family pathway. Alternatively, buildings with 1-to-4-units may be served through the Multifamily pathway when a commercial meter or common heating system is on-site.

Both pathways provide enhanced offerings for moderate-income and renter-occupied units. The program's Home Energy Assessments serve as the primary entry point and mechanism for customers to engage and receive program information about relevant offers and how to move forward with facilitated program services. As the Residential Turnkey Services program increasingly shifts its focus to decarbonization, the PAs will evolve

the no-cost Home Energy Assessment to identify and support decarbonization opportunities for interested customers.

The assessment will retain traditional energy efficiency, energy reduction, and actionable recommendations prioritized by cost effectiveness as core principles. The process and outputs from the assessment will retain an immersive customer experience, relevant customer education, a customized action plan, and the ability to engage in turnkey services as core deliverables. The transition of the Home Energy Assessment to identify and support decarbonization will first include updated customer education, collateral, and resources. Then the assessment will integrate electrification measures into the prioritized action plan and will present opportunities to engage in additional turnkey services when appropriate.

The Home Energy Assessment will be flexible in scope, to align with customer objectives, but will be able to address all these components:

- Evaluation of existing conditions to identify technical opportunities for all Mass Save program offerings, with an emphasis on weatherization and electrification of space heating.
- Identification of barriers to decarbonization including health and safety barriers to weatherization and electrical panel capacity for electrification.
- Customer education regarding available rebates, incentives, and financing offers; which includes presenting the customer with the opportunity to move forward with turnkey services.
- Information on the opportunity and next steps for pursuing additional decarbonization measures not supported through turnkey services, such as heat pump water heaters, induction stoves, renewable energy and storage, and EV charging.

Single Family Pathway (1-to-4-units)

Through the Single-Family pathway (1-to-4-units), the PAs provide customers with flexible options for participation to support customer choice and to meet customers where they are on their decarbonization journey. Customers who are either beginning their decarbonization journey or who want to understand the full range of program offerings available to them would start with the assessment. Home Energy Assessments are provided by Implementation Lead Vendors and Home Performance Contractors. Implementation Lead Vendors provide the assessment and all its components, deliver the turnkey services of decarbonization measures, manage trusted subcontractors, provide QA/QC inspections, and remain a long-term program resource for the

customer. Implementation Lead Vendors subcontract weatherization work to Independent Installation Contractors.

Home Performance Contractors provide Home Energy Assessments, decarbonization solutions, and may offer additional services outside the program. Home Performance Contractors, Independent Installation Contractors, select Heat Pump Installer Network contractors, and other specialty contractors for barrier mitigation are all managed by Implementation Lead Vendors. The PAs contract with Implementation Lead Vendors who are selected through a competitive procurement process.

Implementation Lead Vendor

Implementation Lead Vendors are responsible for the overall management of the major components of the program including:

- Support customer intake through multiple channels with the objective of getting customers to the appropriate service that meets their needs and determine their eligibility for the most applicable and best possible program incentives.
- Complete Home Energy Assessments for eligible customers either directly or through their management of the Home Performance Contractors.
- Manage multiple contractor networks necessary for supporting turnkey delivery of decarbonization measures including:
- Independent Installation Contractors who complete weatherization projects assigned to them by the Implementation Lead Vendors as an outcome of the assessment, or who complete weatherization projects through the Direct Weatherization pathway without the Home Energy Assessment requirement.
- Home Performance Contractors who serve customers directly with Home Energy Assessments and decarbonization solutions. These contractors can also offer additional services outside of the program, such as hot water heaters, window replacement, and other non-program-related upgrades.
- Select among a participating subset of Heat Pump Installer Network contractors who provide heat pumps installations for eligible customers through turnkey delivery as an outcome of the Home Energy Assessment.

- Other trade allies such as electricians and other specialty contractors who provide evaluation and remediation services of pre-weatherization or pre-electrification barriers.
- Implement QA over the entire delivery process including QC inspections of completed projects.
- Provide program data tracking, evaluation, and reporting to support program monitoring and continuous improvement.

Home Performance Contractors

Home Performance Contractors provide Home Energy Assessments, turnkey decarbonization solutions, and may offer additional non-program related services and are managed by an Implementation Lead Vendor.

Independent Installation Contractors - Direct Weatherization

Independent Installation Contractors are weatherization installers managed by the Implementation Lead Vendor. These contractors are assigned weatherization projects or can bring self-generated weatherization referrals into the Residential Turnkey Services program. Some Independent Installation Contractors have opted into the Direct Weatherization pathway, which provides customers who are solely focused on weatherization with the most immediate access to turnkey services without needing the Home Energy Assessment.

Quality Assurance and Quality Control

The Residential Turnkey Services program uses a comprehensive QA/QC framework to maintain consistency and integrity. The program maintains detailed process and procedure documents to define expectations for critical program functions, such as completion of Home Energy Assessments and Material & Installation Standards for Weatherization. Implementation Lead Vendors, Home Performance Contractors, and Independent Installation Contractors must follow the procedures and processes detailed within these documents. QC inspections are conducted by a third-party QA/QC vendor as well as by the Implementation Lead Vendors. QC inspections are used to provide feedback to the energy specialists who deliver Home Energy Assessments and to installation contractors as a critical element that supports continuous improvement. The QA/QC framework assures work is completed to a consistent standard to assure high levels of customer satisfaction and persistence of savings and related benefits for customers and the Commonwealth.

Multifamily Pathway (5+ unit buildings)

Through the Multifamily pathway, the PAs provide flexible options for participation to support projects at multiple stages and originating from multiple sources. The primary pathway for participation is through the Multifamily Implementation Lead Vendor. Through the Implementation Lead Vendor, customers in multifamily

buildings receive no-cost building assessments, customized decarbonization offerings, and have the flexibility to bring along their own contractor or be provided a trusted subcontractor(s) for one or more phases of their decarbonization project. A secondary pathway is through the Small Business or Large Commercial programs.

These pathways apply to commercial metered buildings that typically have a single decisionmaker, such as a property manager and/or landlord. Regardless of which program a multifamily decisionmaker applies to, the offerings and incentives are consistent. There is an existing process in place to ensure that all energy efficiency and decarbonization opportunities are addressed through the program that is best suited to do the work. This may dictate that the same site benefits from multiple programs with the Implementation Lead Vendor acting in a general-contractor-type capacity to ensure the experience is seamless for the decision makers.

The PAs contract with Implementation Lead Vendors who are selected through a competitive procurement process. The Implementation Lead Vendors are responsible for overall management of the major components of the Residential Turnkey Services program including:

- Support customer intake through multiple channels with the objective of getting customers to the appropriate service to meet their needs and determine their eligibility for the most applicable and best possible program incentives.
- Complete building assessments for eligible customers.
- Manage multiple contractor networks necessary for supporting delivery of decarbonization measures:
    - Weatherization contractors who complete weatherization projects assigned to them by the Implementation Lead Vendors as an outcome of the building assessment.
    - HVAC contractors who provide heat pumps and other large mechanical system upgrades.
    - Customer-selected contractors with whom customers have engaged prior to the Implementation Lead Vendor.
    - Other trade allies such as electricians and other specialty contractors to provide evaluation and remediation services of pre-weatherization or pre-electrification barriers.
- Implement QA over the entire delivery process including QC inspections of completed projects.
- Provide program data tracking, evaluation, and reporting to support program monitoring and continuous improvement.

- Provide the technology solution(s) to screen multifamily projects for eligibility and determine incentives:
- In some multifamily buildings, sites with a mix of residential and commercial or retail space may receive service through both the Multifamily pathway and a C&I sector program. Each PA has a process in place to ensure that the site is addressed as comprehensively as possible and that there is coordination between programs. When multifamily building projects come through a C&I sector program, the PAs follow the C&I program process to ensure consistency.

Quality control

For multifamily buildings, the Implementation Lead Vendors pre- and post-inspect all sites for weatherization work and perform in-process inspections. Like the Single-Family pathway, Implementation Lead Vendors and any subcontractors who perform installations in the Multifamily pathway must follow the Material & Installation Standards for Weatherization. The third-party statewide QA/QC vendor also performs pre/post/in-process inspections at a minimum of 10 percent of all Multifamily pathway projects. As noted in the Single-Family pathway, the QA/QC framework assures work is completed to a consistent standard to assure high levels of customer satisfaction and persistence of savings and related benefits for customers and the Commonwealth.

Energy Efficiency Measures

The Single-Family pathway offers no-cost Home Energy Assessments with the objective of identifying and facilitating decarbonization opportunities. No-cost immediate savings measures are offered during the assessment and turnkey weatherization incentives are provided instantly. Pre-weatherization incentives may be provided instantly, up-front, or upon completion depending on customer and project eligibility. Pre-electrification and heat pump incentives are provided instantly through turnkey delivery for eligible customers. The Multifamily pathway offers no-cost building assessments with the objective of identifying and facilitating decarbonization opportunities. In-unit instant savings measures, weatherization, electrification, and large system controls are incentivized and supported through end-to-end project facilitation.

The program's turnkey delivery model and its intrinsic benefits include, but are not limited to, end-to-end project facilitation, instant incentive delivery, and sustained QA. The hallmark of the Residential Turnkey Services program is that it allows the PAs to provide comprehensive, energy efficiency and decarbonization solutions to participants through multiple stages of their decarbonization journey and providing them with a streamlined experience that reduces their time investment and minimizes risk.

Barriers to Participation

Customers may face both technical and non-technical barriers to participation in the Residential Turnkey Services program. Technical barriers typically take the form of health and safety issues present in the building and are identified during the Home Energy Assessment. Existing health and safety issues are disclosed to the customer and may be deemed a pre-weatherization barrier depending on the relationship between the issue and the weatherization opportunity. Existing conditions in the building infrastructure (e.g., electrical panel available capacity) may limit a building's ability to support electrification measures such as heat pumps.

The program provides incentives and services for the remediation of barriers to decarbonization; however, some buildings contain multiple, complex barriers which may impose more cost than the decarbonization opportunity can support and still remain cost effective. Single Family pathway weatherization is retrofit in nature, meaning qualifying weatherization methods and materials are applied to the existing structure without significant modification or renovation. As such, some buildings cannot be better weatherized through this offering if the weatherization opportunity they present would require a more invasive approach. Non-technical barriers to customer participation include limited financial flexibility, lack of expendable time or energy, and not understanding that program offerings apply to them. Many other non-technical barriers to participation exist and are highly situational and individual in nature.

Customer segments historically underserved by the Residential Turnkey Services program, including renters and moderate-income households (as outlined in the Executive Summary), often face multiple technical and non-technical barriers to participation. Given the overlap in between nonparticipant groups outlined in section 1.2.2: Moderate-Income Households (e.g., moderate-income renters), providing turnkey solutions that address cross-cutting barriers to participation for underserved customer groups is key to ensuring equitable program access and participation.

The PAs are employing multiple measures to address these barriers including the following:

Technical barrier solutions

- Renter-occupied units receive pre-weatherization barrier remediation incentives and no-cost weatherization services.
- Moderate-income customers, including homeowners and renter-occupied units, receive no-cost pre-weatherization and pre-electrification barrier mitigation, and no-cost weatherization and heat pump installation through turnkey delivery.

- All participants can receive pre-weatherization barrier evaluations at no cost for knob-and-tube wiring and combustion safety issues.
- Participants can address out-of-pocket costs for pre-weatherization barrier repairs through financing provided by the HEAT Loan.

Non-technical barrier solutions

- The turnkey delivery model addresses multiple non-technical barriers to participation through end-to-end facilitation of decarbonization projects.
- Home Energy Assessments focused on decarbonization organize multiple next steps and decision points for customers within a prioritized plan.
- Vendor-contracted pre-weatherization barrier repair, pre-electrification, weatherization, and heat pumps will eliminate the need for participants to spend time in pursuit of solutions on the open market.
- Vendor management of multiple project phases allows for proper sequencing and coordination of subcontractors, which will reduce logistical complexity for the participant.
- Incentives will be delivered instantly, which will reduce or eliminate out-of-pocket costs for participants.

In the Multifamily pathway, building typology often dictates a custom decarbonization approach (e.g., in most cases, the Single Family retrofit approach cannot be applied) which necessitates projects are screened and scoped individually for cost effectiveness. Custom projects may not be cost effective at this point and may require additional scoping or a modification of scope to achieve cost effectiveness. To the extent possible, the PAs will pull from existing programming and pathways for similar building typologies, such as the Single-Family pathway or C&I programming, to deliver streamlined incentives and benefits to customers. For example, an eight-unit building presenting similar characteristics and weatherization opportunities as those typically seen in the Single-Family pathway will be able to access similar incentives through the Multifamily pathway. The existence of multiple decisionmakers, lack of available decisionmakers, or misalignment between decisionmaker objectives and cost-effective technical opportunity may impose additional non-technical barriers to progress in multifamily settings.

The PAs are employing multiple additional measures to address these barriers in the Multifamily pathway including:

Technical barrier solutions

- Renter-occupied units receive no-cost weatherization and pre-weatherization barrier mitigation incentives will be determined on a case-by-case basis.
- Moderate-income units receive no-cost weatherization and pre-weatherization barrier mitigation incentives will be determined on a case-by-case basis.
- Moderate-income renter-occupied units will receive enhanced heat pump and pre-electrification incentives.

Non-technical barrier solutions

- The turnkey delivery model will continue to address non-technical barriers to participation for the Multifamily pathway and facilitate the decarbonization project life cycle.
- Multifamily buildings in designated equity communities (as outlined in the Strategic Enhancements section below) will automatically qualify for moderate-income incentives.

How the Program Addresses Plan Priorities

The program will promote education and the embrace of decarbonization, define a decarbonization "journey" for each customer or building, implement core decarbonization measures like weatherization and electrification, and prioritize recommendations for further decarbonization opportunities. The program will provide special incentives and support for renters and moderate-income customers.

Strategic Enhancements

Enhancement #1: Expand Home Energy Assessments to include decarbonization opportunities

Currently, the program's Home Energy Assessments involve traditional energy efficiency, an assessment of the building envelope to identify weatherization opportunity, and identification of HVAC and mechanical system upgrade opportunities. As the program transitions to focus on decarbonization, the PAs will aim to support customers with a more complete assessment of opportunities for pursuing decarbonization of their homes. For the 2025-2027 term, the standard offering will evolve to identify more electrification and decarbonization opportunities, with an early emphasis on converting fossil fuel heating equipment to heat pumps, ensuring that it is paired with building envelope measures for appropriate heat pump sizing.

The evaluation of site suitability and related implementation requirements for other decarbonization opportunities will phase in including recommending the replacement of gas cooking stoves with induction

stoves, discussing EV charging opportunities for interested customers, and providing residents with onsite renewable energy information. The assessment will continue to provide information on all available rebates such as eligible electric lawn equipment and household appliances.

An evaluation of pre-electrification barriers (e.g., electric service capacity, need for electrical panel and/or wiring upgrades, etc.) will also be necessary to convey a clear decarbonization journey for each home. Each of these incremental steps will require workforce training and collaboration with a broader network of trade allies. An immersive customer experience and high-quality customer education will remain core deliverables, with traditional energy efficiency and the prioritization of recommendations based on cost effectiveness remaining core principles.

Enhancement #2: Expanded turnkey delivery for moderate-Income and market-rate customers

The Residential Turnkey Services program has demonstrated success in the deployment of a full-service turnkey model for weatherization. This model established technical standards and best practices, provided structured pricing and instant incentive fulfilment, maintained QA/QC standards and systems, and developed a supporting workforce, all united by an end-to-end project facilitation approach that enables participation. Using that model as a framework, the PAs will provide turnkey services for barrier mitigation and heat pump installation. As described in Enhancement #3 below, the PAs will offer these expanded turnkey services to moderate-income households for the 2025-2027 term and will adapt the model as needed with the eventual goal to offer a Turnkey Heat Pump pathway for market-rate customers by 2027.

Based on lessons learned in 2022-2024, the PAs will establish technical standards and best practices in heat pump design and installation to support system performance and customer satisfaction. The PAs will establish structured pricing to provide cost-predictability and instant incentive delivery. The PAs will provide customer education, will support a QA/QC framework, and will provide ongoing support for customers who have electrified through this path. The PAs will develop and support a subset of the Heat Pump Installer Network who have opted to work within this path. Established technical standards, end-to-end QA, and project allocation will allow the PAs and Heat Pump Installation Network partners to positively influence pricing and capacity in the heat pump market.

Enhancement #3: Enhancements to moderate-income qualification, offerings, and delivery

Currently, the PAs offer enhanced incentives for moderate-income customers. Based on lower-than-expected volume, and the PAs' continued commitment to serve this market segment, the Program Administrators recognize the need for some implementation modifications. In collaboration with stakeholders,

the PAs have identified several improvements to reduce barriers to participation for moderate-income customers including changes to qualification, plus offerings and delivery.

Streamlining qualification

- **Area Median Income and State Median Income Qualification.** The Program Administrators will include both area median income ("AMI") and state median income ("SMI") in the moderate-income qualification criteria to expand the pool of eligible households. Through this enhancement, the PAs will maintain 60% SMI as the bottom threshold to avoid infringement on low-income eligibility standards but will observe the greater of 80% AMI/SMI as the top threshold. This change will better align the PAs' moderate-income definition with that of state and federal benefits programs and allow the PAs to better account for cost-of-living disparity across Massachusetts and to better align with categorical eligibility requirements of many federal benefits programs.
- **Self-attestation.** Customers can self-attest to their household income to qualify for weatherization incentives offered through the Residential Turnkey Services program. Customers who self-attest for weatherization incentives will still be required to complete income verification to pursue other moderate-income incentives.
- **Categorical eligibility.** Moderate-income qualification is performed through an income verification portal. To further streamline qualification, the PAs plan to add new functionality to allow customers to identify income-based benefits programs in which they are enrolled, in order to automatically qualify them for moderate-income offerings. Additionally, the PAs plan to explore data sharing agreements with benefit program administrators to pre-qualify customers and market moderate-income offerings directly to them.
- **Multifamily building pre-qualification.** The PAs are working on using the statewide multifamily census study along with additional data to identify multifamily sites that are part of census tracts that can be pre-qualified as moderate income. The PAs will review the resulting list of properties to identify those which can be pre-qualified at the building or unit level as moderate income. The PAs intend to use this data-based approach alongside the other moderate-income qualification enhancements to increase the number of customers qualified for moderate-income incentives, including extending these pre-qualifications to enhanced incentives under the Residential Retail program and exploring opportunities within deed-restricted properties housing moderate-income customers.

- **Multifamily moderate-income renter verification.** The PAs are considering utilizing rental application data gathered from property management to identify renter income and rent costs to determine a renter's moderate-income eligibility if their rental costs exceed 40 percent of their income, following the rule of thumb that rental costs should not exceed 30 percent of income.

Expanded offerings and delivery models

- **Turnkey delivery for moderate-income customers for weatherization, pre-weatherization barrier remediation, and heat pump installations.** Moderate-income qualified customers will be eligible for no-cost weatherization and no-cost pre-weatherization barrier remediation through turnkey delivery. Once a customer agrees to move forward with the recommendations, the program will completely manage the delivery from contractor allocation, to price management, to quality control. Additionally, customers will have the option to pursue no-cost pre-electrification barrier remediation and no-cost heat pump installations through a turnkey process. If a moderate-income qualified customer does not wish to participate in the no-cost turnkey process, they still would be eligible for the enhanced offers provided through the Residential Rebates program.
- **Navigator support.** Some PA Lead Vendors will employ dedicated "Navigators" who will provide prospective and qualified moderate-income customers with a single point of contact to assist them throughout their journey from income qualification through the implementation of site-specific improvements. Navigators will ensure that any customer questions are addressed, and that assistance, guidance, and coordination is provided as needed for each step in the program project life cycle. Navigators will conduct proactive outreach to customers who abandoned moderate-income qualification processes, who qualified but did not follow through with a project, or who did not qualify under SMI before but may qualify now when considering AMI.

Enhancement #4: New strategies to increase landlord participation for rental units in designated equity communities

To support greater decarbonization of renter-occupied and moderate-income housing units, the PAs and DOER collaborated on the identification of designated equity communities with a high share of renter-occupied and low- and moderate-income households. Selection of these 21 communities was based on renter population, percent of low- and moderate-income households, and other factors indicating significant target population and technical opportunity. The PAs' primary goal is to weatherize buildings given its beneficial impact on energy burden, occupant health and wellness, and building resiliency and value.

The PAs' secondary objective is electrification for two reasons: (1) Buildings must be sufficiently weatherized in order to optimize the performance of electrification equipment, and (2) Electrification of certain renter-occupied buildings may lead to increased energy burdens for the tenants, which is an outcome the PAs want to be careful to avoid for low- and moderate-income customers. The PAs believe that in order to provide equitable access to decarbonization, they must consider both technical best-practices, as well as the economic impact of the decarbonization measures that can be achieved given each building's and participant's unique situation. This will be achieved through the targeting and service delivery strategy described below.

With the understanding that customers face multiple non-technical barriers to participation, and the expectation that buildings in which the target population reside contain many technical barriers, the PAs developed a specialized strategy for achieving their objective in these designated equity communities. First, the PAs will identify key community stakeholders to identify target buildings or neighborhoods in each equity community. This targeting will focus on buildings or neighborhoods with majority renter and moderate-income populations, in which electrification will not result in increased energy burden for the residents. This will be achieved by targeting delivered fuels and electric resistance heat, and by working with landlords to ensure tenants are protected. Second, the PAs will collaborate with community stakeholders, Community First Partners, and others to develop a customized outreach strategy for these target properties.

This outreach could be any combination of grassroots, multimedia marketing, or other forms, and would be delivered in the appropriate language based on each customer's and community's unique needs. The PAs will also work with the Massachusetts Clean Energy Center to promote this opportunity through their programming including EmPower Massachusetts, the Building Electrification & Transformation Accelerator efforts, and the upcoming Building Energy Exchange. Third, the PAs will engage these properties through their Residential Turnkey Services Implementation Lead Vendors to provide end-to-end facilitated decarbonization services appropriate for each building's and resident's unique situation. This turnkey approach will reduce the time and effort required of participants, reduce or eliminate out-of-pocket costs for participants, and ensure high-quality decarbonization is paired with high-quality customer education and service. The PAs' Residential Turnkey Services Implementation Lead Vendors and Home Performance Contractors will already be established in these communities and will be able to deploy additional resources to support demand, further adding to the community awareness and engagement efforts. The PAs' Low-Income Implementation Lead Vendors and Community Action Program agencies will also be active in these communities, and through an advanced protocol will coordinate with Residential Turnkey Services vendors to provide seamless service to all mixed-income buildings.

In single-family settings, the PAs will support decarbonization for moderate-income households, including renters, through the statewide turnkey offers and will further enable access by automatically qualifying all households in the community for no-cost weatherization (barrier mitigation and electrification will still require income verification).[104] The PAs will provide service to multifamily buildings through a lead vendor, ensuring the most accessible, organized participation experience across this widely varying subset of building stock. The PAs anticipate that the majority of renters and moderate-income customers will reside in multifamily buildings, and thus will apply novel, custom solutions to implement weatherization and electrification while addressing the technical challenges inherent in this type of building stock. The PAs will, both through their collaborative targeting efforts and through the building data collected and customer relationships established by their common implementation lead vendor, be prepared to apply a number of solutions to the challenge of electrification without increasing energy burden.

The first two elements of this strategy (*targeting and identification, outreach and engagement*) will require intense, sustained coordination between the PAs and partners (e.g., community stakeholders, Community First Partnership, etc.). The third element—*implementing meaningful decarbonization without increasing energy burden for predominantly renter-occupied and moderate-income households*—will require a significant dedication of resources, experience and subject matter expertise, as well as dedicated coordination among the PAs themselves, the PAs' community partners, and trade allies.

The PAs anticipate each of the 21 communities (see the figure on the next page) will present a variety of different building typology and target population attributes, which will require both unique targeting strategies and awareness/engagement campaigns specifically tuned for cultural and socioeconomic relevance. The PAs anticipate each community will display varying levels of interest in (or embrace of) decarbonization and a varying level of community resource availability and existing decarbonization effort and investment. Developing a customized targeting and engagement strategy for 21 unique communities across the Commonwealth will be a significant undertaking, and the PAs will dedicate additional funding to support this valuable work. The value of this funding will be determined based on each community's target opportunity and administered in the pursuit of this opportunity as needed and as achieved.

[104] Unitil will make no-cost weatherization available to all households located within designated Environmental Justice census blocks within Fitchburg, as opposed to the entire municipality.

Figure 18: 2025-2027 Designated Equity Communities

Criteria*: At least 35% Renters, at least 8,000 renters, at least 50 percent low- and moderate-income.

***Note:** The Compact has a unique territory with different characteristics, and therefore the criteria for selection of Compact communities differed.

Community	EJ	Electric PA	Gas PA	Active Electric Accounts	% Renter Occupied Units (Veracity)	Renter Number	% House Heating Fuel: Delivered Fuel (ACS 2021)	Delivered Fuel (Count)	Delivered Fuel + Electric	Delivered Fuel + Electric (Count)	% Low + Moderate Income (Veracity, Based on AMI)	% Moderate Income (Veracity, Based on AMI)	CFP Town	Gateway Town	Cumulative Participation Rate (Since 2013)	Electric Heating	Gas Heating	% of Population 18 yrs and older enrolled in College or Graduate School (ACS 2022)
Chelsea	Yes, EJ	ES	NG	15,900	72%	11,417	12%	1,923	42%	6,624	71%	29%	No	Yes	40%	30%	57%	6%
Lawrence	Yes, EJ	NG	ES	31,100	69%	21,487	6%	1,849	28%	8,626	68%	17%	Yes	Yes	22%	22%	71%	8%
Boston	Yes, some zips	ES	ES & NG	337,300	65%	219,043	10%	33,826	39%	132,282	57%	23%	Yes	No	45%	29%	59%	18%
Fall River	Yes, EJ	NG	Liberty	44,700	64%	28,463	8%	3,629	19%	8,425	69%	18%	Yes	Yes	17%	11%	80%	6%
Everett	Yes, EJ	NG	NG	19,000	63%	11,895	16%	2,990	29%	5,481	70%	33%	Yes	Yes	24%	13%	71%	7%
New Bedford	Yes, EJ	ES	ES	45,600	61%	27,783	9%	4,206	17%	7,736	65%	16%	Yes	Yes	40%	8%	81%	6%
Malden	No	NG	NG	29,800	57%	17,066	19%	5,604	36%	10,863	60%	25%	Yes	Yes	29%	18%	61%	11%
Lowell	Yes, EJ	NG	NG	44,800	56%	25,021	8%	3,754	30%	13,471	56%	17%	Yes	Yes	22%	22%	68%	13%
Quincy	No	NG	NG	50,300	56%	27,986	18%	8,919	46%	23,144	58%	29%	Yes	Yes	28%	28%	53%	9%
Worcester	Yes, EJ	NG	ES	78,800	55%	43,567	18%	14,577	46%	36,375	60%	16%	Yes	Yes	28%	28%	52%	17%
Springfield	Yes, EJ	ES	ES	65,200	52%	34,047	17%	11,094	38%	24,491	71%	16%	Yes	Yes	45%	21%	59%	10%
Lynn	Yes, EJ	NG	NG	37,900	52%	19,691	22%	8,215	42%	15,743	71%	29%	Yes	Yes	30%	20%	57%	7%
Revere	Yes, EJ	NG	NG	25,100	49%	12,348	19%	4,669	38%	9,648	63%	25%	Yes	Yes	27%	20%	60%	7%
Salem	No	NG	NG	20,800	48%	10,048	21%	4,345	42%	8,664	63%	27%	Yes	Yes	40%	21%	57%	11%
Framingham	No	ES	ES	31,000	44%	13,751	23%	7,280	51%	15,741	54%	26%	Yes	No	54%	27%	47%	8%
Fitchburg	Yes, EJ	Unitil	Unitil	19,200	44%	8,423	30%	5,845	48%	9,298	60%	19%	No	Yes	38%	18%	48%	9%
Brockton	Yes, EJ	NG	ES	37,000	42%	15,679	28%	10,176	43%	15,771	53%	17%	Yes	Yes	35%	15%	56%	9%
Woburn	No	ES	NG	19,600	42%	8,272	36%	7,148	51%	10,054	52%	27%	No	No	49%	15%	48%	8%
Pittsfield	Yes, EJ	ES	Berkshire	22,400	36%	8,001	27%	5,966	37%	8,234	60%	18%	Yes	Yes	51%	10%	61%	7%
Oak Bluffs*	Yes, EJ	CLC	No gas	4,500	28%	1,249	73%	3,302	82%	3,708	40%	8%	Yes	No	29%	9%	11%	3%
Tisbury*	Yes, EJ	CLC	No gas	3,300	28%	915	75%	2,473	95%	3,143	50%	20%	Yes	No	40%	20%	0%	4%

Enhancement #5: Expansion of qualifying weatherization offerings

Weatherization will remain a core decarbonization strategy within the Residential Turnkey Services program, and eligibility for full heat pump incentives will continue to require verified weatherization. Currently, the program offers turnkey delivery of weatherization utilizing proven cost-effective methods and materials that meet the needs of most residential retrofit technical opportunities. The program will also support pathways for completing weatherization for instances where the turnkey weatherization offering, and technical approach are not applicable due to site-specific considerations. A simplified savings tool will be available to estimate savings and inform program rebates for non-traditional work scopes.

Enhancement #6: Incorporate Language Access recommendations to increase access for LOTE customers

During the 2022-2024 term, the PAs engaged with industry experts to help provide Language Access recommendations across all Mass Save programs. The PAs plan to incorporate these recommendations within the Residential Turnkey Services program to support LOTE (Languages Other Than English) customers' access, understanding, and participation. Language Access recommendations include a review of vital documents for translations, multilingual statewide contact center support services, and interpretation services for in-person visits. Continuity of translation services across PAs and vendors is also important to ensure customers have a seamless experience and are not missing key information about the program and their eligibility for incentives.

Incentive Levels

Figure 19: Residential Turnkey Services Program Incentive Levels

Measure	Criteria	Incentive Amount
Air Sealing	Decreasing outside air flow by sealing gaps in thermal envelope	100%
Duct sealing	Ductwork outside the thermal envelope	100%
Building insulation	Improve up to R-49 in attics and fill any closed cavities to capacity	75% for market rate, 100% for moderate income, rental units, and Whole Building projects
Duct insulation	Outside thermal envelope, less than R-2 existing insulation	75% for market rate, 100% for moderate income, rental units, and Whole Building projects
Pre-weatherization barrier evaluation	Barrier identified by Home Energy Assessment	Up to $250

Measure	Criteria	Incentive Amount
Pre-weatherization barrier remediation	Remediation of barrier in areas where proposed weatherization work is recommended or when barrier prevents any/all work from being completed	Market-rate customer eligible to use HEAT Loan Rental units up to $5,000/unit Moderate income 100% through turnkey path Rental units in select geographies 100% through turnkey path
Immediate savings measures	All customers receive a set of measures that are low-cost and a low-lift installation effort	100%
Programmable thermostats	Analog thermostat existing	100%

3.1.3 Residential Rebates

The Residential Rebates program provides a broad, integrated marketplace where energy-efficient products and equipment are positioned as attractive, primary choices for customers making purchasing decisions, whether online, in-store, or through independent contractors and distributors. The program offers education to help customers make informed decisions, incentives to make efficient choices more financially attractive, and training and support for the market actors, to help shift contractors toward more efficient, properly installed equipment.

One of the primary objectives of the Residential Rebates program is to encourage residential customers and plumbing, electrical, and HVAC contractors to electrify homes in Massachusetts while purchasing and installing the most efficient HVAC and water heating technologies. The program also seeks to ensure high-quality installations and encourage contractors to follow installation best practices by providing both technical and programmatic support. A positive customer experience is also a Plan priority and is imperative to the program's success. Maintaining a network of installers who perform quality installations and are well versed in the program eligibility requirements, program rules, and incentive levels helps to create a positive customer experience.

The program's HVAC incentives are often promoted in conjunction with Residential Turnkey Services offers, such as weatherization. The program also offers enhanced incentives for moderate-income qualified customers, as defined by 61-to-80 percent of the greater of state median income and area median income.

Program Design

The Residential Rebates program is comprised of eight subcomponents including:

Common Characteristic Subcomponents

Energy efficiency measures components

- **HVAC.** This subcomponent provides rebates to customers for installing eligible heating and cooling measures in their home and also offers incentives to distributors and customers for the sale and installation of eligible HVAC controls.
- **Domestic hot water.** This subcomponent offers incentives to customers through distributors for the sale and installation of eligible water heaters.
- **Products.** This subcomponent provides incentives through the Online Marketplace and to customers for purchasing eligible energy-efficient products, including home appliances and equipment. This offer provides incentives to customers through distributors for the sale of select products.
- **Appliance recycling.** This subcomponent provides rebates to customers for recycling eligible old and inefficient products and appliances.

Educational components

- **Customer education.** This subcomponent includes decarbonization consultations and electrification advocate training. The PAs will offer no-cost comprehensive virtual decarbonization consultations to residential customers. See the Strategic Enhancements section for more detail.
- **Contractor education and outreach.** This subcomponent includes management and support of the Heat Pump Installer Network, a network of HVAC contractors that deliver heat pump and heat pump water heater installations. Through the Heat Pump Installer Network, the PAs provide a wide range of resources and services, including exclusive access to residential rebates and financing for heat pump installations, training, marketing materials, sales tools, and periodic communications about important news and developments.

Income-based components

- **Enhanced heat pump incentives.** This subcomponent includes enhanced heat pump incentives for moderate-income qualified customers. Qualified moderate-income customers are eligible for no-

cost heat pump installation through the Residential Turnkey Services program. If a customer does not want to take advantage of the turnkey installation, they are eligible for enhanced heat pump incentives through the Residential Rebates program.

Quality control components

- **Quality Assurance/Quality Control.** The QA/QC subcomponent includes post-installation inspections. To maintain the integrity of the Residential Rebates program and be responsible stewards of customer funds, it is imperative that the PAs have a robust third-party QA/QC inspection process. Third-party inspections include randomly selected participants of the program. The percentage of projects randomly selected for inspection is based on incentive levels. The third-party vendor conducts onsite or virtual inspections of all equipment listed on the rebate form verifying existing conditions meet all rebate requirements and may also help gauge customer satisfaction, cross-promote other programs and/or offers, and collect participant feedback to be shared with the PAs.

Implementation / Delivery Pathways

Customers can access incentives via four different delivery pathways—Downstream, Midstream, Online Marketplace, and Instant In-store Discount.

- **Downstream.** Incentive is applied for by the customer after measure is installed, purchased, or recycled. Select measures that are part of the Products, HVAC, and Appliance Recycling subcomponents are offered via the Downstream pathway.
- **Midstream.** Incentive is administered at the distributor level for the sale of eligible measures. Depending on the measure, the PAs require that the rebate be passed through to the customer in the form of a discount on their invoice. Select measures that are part of the Products, HVAC, and Domestic Hot Water subcomponents are offered via the Midstream pathway.
- **Online Marketplace.** The incentive is applied at the point of purchase on the Mass Save Online Marketplace. Select measures that are part of the Products and HVAC subcomponents are offered via the Online Marketplace pathway.
- **Instant In-store Discount.** Incentive is applied for eligible measures at the point of purchase at participating retailers. Customers can fill out an online form to receive a QR code that is presented

at the point of purchase. Select measures that are part of the Products and Domestic Hot Water subcomponents are offered via the Instant In-store Discount pathway.

Program Eligibility Requirements

To be eligible for the Residential Rebates program, customers must hold an active, residential electric or natural gas utility account with one or more of the PAs. Customers who reside in municipal electric towns must heat their home with natural gas from one of the Program Administrators. Please note that low-use natural gas accounts do not qualify. There are additional eligibility requirements that vary by measure. As stated above, rebates are offered via this program for a variety of energy-efficient measures. These include HVAC, domestic hot water, products, appliances, and appliance recycling. See Appendix I: Description of Measures for a detailed description of each measure offered.

Program Barriers

The Residential Rebates program is designed to overcome a variety of barriers to heat pump adoption, which include high upfront cost, lack of customer awareness, lack of willingness to pair with weatherization, and contractor concerns. First, incentives are designed to lower the cost to the customer of purchasing and/or installing energy-efficient and program-eligible HVAC, domestic hot water, and products measures. Instant In-store Discount and Online Marketplace pathways are designed to lower the upfront cost to the customer, which can be a barrier to adoption.

Another barrier to measure adoption, more specifically electrification measures such as heat pumps and heat pump water heaters, is lack of customer awareness and knowledge of these measures, how they operate, and their benefits. Therefore, the program is designed to educate and provide guidance to customers at any point of their decarbonization journey. As previously mentioned, the PAs will offer no-cost virtual Home Energy Assessments and electrification advocate training to address this barrier. The PAs will also provide information about energy-efficient measures on MassSave.com. Ensuring use of a heat pump system during the heating season is key to achieving GHG emission reduction goals. To this point, customer and contractor education is key; however, the PAs will also enforce a pre-existing heating system disablement requirement for whole-home heat pump installations.

Continued contractor concerns regarding the reliability and effectiveness of heat pumps and heat pump water heater measures are also a barrier. As described above, the PAs are addressing this barrier through the Heat Pump Installer Network, which will continue to provide a wide range of resources and services, including exclusive access to residential rebates and financing for heat pump installations, training, marketing materials,

sales tools, and periodic communications about important news and developments. Another way the PAs will seek to address this barrier is the continuation of robust heat pump rebates. These rebates are not only designed to encourage customers to install heat pumps, but they are also a powerful sales tool for contractors. Robust rebates and a dedicated network of heat pump installers will help to transform the HVAC contractor community into heat pump champions.

Another barrier is customer willingness to undertake weatherization prior to installing their heat pump. To address this barrier, the PAs will continue to require the demonstration of sufficient weatherization to be eligible for the whole-home heat pump rebate. Sufficient weatherization can be demonstrated by satisfying at least one of the following requirements: (1) the home was built during or after 2000, (2) the decarbonization assessment report indicates less than $1,000 worth of weatherization recommended, or (3) the weatherization recommendations made within the last 10 years have been completed.

The PAs will also continue to educate customers and contractors about the importance of weatherization to a successful heat pump installation. Customers seeking to install weatherization and heat pumps who are looking for a more facilitated experience will eventually be able to participate in an optional Turnkey pathway, which will eliminate the need for customers to navigate two different pathways on their own.

How the Program Addresses Plan Priorities

The three Plan priorities, which include equity, decarbonization, and improved customer experience, are all at the core of the Residential Rebates program design. The PAs are dedicated to enabling customers of all socioeconomic backgrounds access to the benefits of energy efficiency and decarbonization and provide them with a seamless experience. As described in section 3.2: Low-Income Sector, all income-qualified moderate-income customers, can participate in a Turnkey pathway, which offers a single point of contact to assist them throughout their journey of receiving no cost weatherization and heat pumps. Customers who choose not to participate in this turnkey pathway will still be able to participate via the open market Residential Rebates program, giving the customer a choice as to how “hands on” they want to be. In addition, some PAs will offer customers the option of working with a dedicated Navigator. The Navigator will serve as their single point of contact to assist them throughout their journey to implement site-specific improvements, including the installation of heat pumps.

Other ways the Residential Rebates program seeks to improve customer experience are through the strategic enhancements described below. Customers can elect to participate in a Turnkey Heat Pump pathway via Residential Turnkey Services that includes a no-cost Home Energy Assessment, no-cost weatherization, and

direct referrals to participating Heat Pump Installer Network contractors. This pathway is designed for customers who seek more guidance along their journey. Another strategic enhancement designed to improve customer experience is providing optional pre-approval for prospective heat pump installations in the Residential Rebates program. Pre-approval will provide customers with a level of assurance with respect to equipment eligibility, incentive level, and provides a touchpoint with the customer prior to installation to set expectations about how the PAs expect the customer to operate their heat pump system. See the Strategic Enhancements section below for more detail.

The creation of an Electrification Advocate Network and the associated training curriculum is aimed at building decarbonization awareness in local communities, including environmental justice communities. The goal of the Electrification Advocate Network is to build capacity from within communities to help residents adopt clean energy solutions, drive meaningful and sustained increase in heat pump + weatherization adoption rates in participating communities, and focus on creating equity in environmental justice communities and select communities. See the Strategic Enhancements section below for more detail. Another way the customers will engage community members is to continue participating in community recycling events around Massachusetts, giving customers an opportunity to recycle their old dehumidifiers and engage in the Mass Save program.

Virtual decarbonization consultations will be offered at no cost and are aimed at providing guidance to customers as they begin or continue their decarbonization journey. Decarbonization specialists will aid customers in project planning, quote review and comparison, and provide ongoing support throughout the customer's journey. See the Strategic Enhancements section below for more detail. The PAs will also continue managing the Heat Pump Installer Network, which helps to ensure heat pump installers are adequately trained to perform quality heat pump installations and understand program rules and requirements. Nurturing this network of heat pump installers is integral in meeting decarbonization goals.

Strategic Enhancements

Enhancement #1: Continue to invest in an improved rebate processing experience

The PAs process approximately 300,000 rebates annually for commercial and residential customers. To support this demand and create a faster rebate process, the PAs engaged a new rebate processing vendor on July 1, 2023, and have worked diligently since that time to onboard them and continually improve the process. The PAs understand the significant challenges and frustration customers experienced related to rebate processing delays during the 2022-2024 term and have worked to eliminate these delays and improve the customer experience.

Enhancement #2: Other rebate processing enhancements

The PAs will continue to work with their rebate processing vendor to further reduce the number of applications with missing information via enhancements to the online submission process and proactive outreach to affected customers in addition to the automated notifications customers already receive. The Program Administrators will continue to maintain increased staffing levels at the rebate processing vendors to ensure that resources are available to meet these needs. Finally, the PAs are also working to optimize and reduce the time required for inspections, while ensuring appropriate levels of post-installation review.

Enhancement #3: Enhance customer education

Customers recognize the need to continue and enhance customer education as it pertains to electrification. As such, the PAs will offer no-cost comprehensive virtual decarbonization consultations to residential customers. There are four primary components of virtual decarbonization consultations.

- **Project planning.** Decarbonization specialists will work directly with customers to identify short and long-term decarbonization goals, set realistic expectations, and direct customers to participating Heat Pump Installer Network contractors.
- **Quote review and comparison.** Heat pump quote comparison review, which is meant to assist customers in understanding differences between solutions proposed by contractors, will be part of decarbonization consultations. Quote comparison services will enable customers to compare costs, equipment, efficiency, and GHG emissions impact of multiple heat pump quotes.
- **Continued assistance.** Through these personalized consultations, customers will be offered ongoing support and actionable customer education that prepares them to confidently adopt the best solutions for their needs. Decarbonization consultations will be available at any point in the customer journey, including providing operational/user tips to customers post-installation as needed.
- **Summary reports and surveys.** After the consultation, a personalized summary report email will be sent to the customer so that they have a reminder of the conversation for when they talk to contractors. Customers will also receive satisfaction surveys to inform program design and analyze program effectiveness. The PAs will also provide electrification advocate support by establishing a network of “electrification advocates” who will be trained to build electrification awareness in local communities. There are three primary components of electrification advocate support.

- *Webinars and outreach*. The PAs will build electrification program awareness with educational webinars to end-use residential customers. The PAs will also engage and support local communities and organizations who manage volunteer and coaching programs.
- *Local advocacy training*. The PAs will develop comprehensive training courses that can be given in-person or virtually to community advocates (also known as "champions" or "coaches"). Trainings will consist of comprehensive courses that can be attended in-person or virtually and will provide technical information (e.g., building science basics, best practices on heat pump design and installation), industry insights, and important soft skills for working with homeowners and contractors to achieve positive outcomes. Training will seek to build capacity from within communities to help residents adopt clean energy solutions, drive meaningful and sustained increase in heat pump + weatherization adoption rates in participating communities, and focus on creating equity in environmental justice communities and select communities.
- *Ongoing advocate engagement*. Once decarbonization consultations have been completed, a process will be developed/standardized to refer customers to community advocates that have received advocacy training and have installed decarbonization measures (e.g., weatherization, heat pumps, heat pump water heaters)/experienced the process firsthand). There will be monthly check-ins for local advocates either in-person or virtually.

Enhancement #4: Provide an optional pre-approval of residential heat pump projects

In the 2025-2027 term, the PAs will continue to improve the quality and completeness of submitted applications by creating an optional pre-approval step for customers pursuing both whole-home and partial-home heat pump rebates. This pre-approval option is designed to help ensure customers understand and comply with each of the required components for successfully securing a rebate prior to installation and submission of an application form. Pre-approval will be managed through an online pre-approval portal that will allow customers/contractors to input required information about their planned heat pump installation. By doing this, customers and contractors will be provided with a level of assurance that their heat pump model(s) are eligible for the program and will have greater certainty on the incentive level they can expect to receive. In order to receive a rebate, customers/contractors will still be required to submit their application after the heat

pump system has been installed. By pre-approving their planned heat pump project, expectations can be clarified prior to installation.

Pre-approval will also benefit the PAs by providing an additional customer touchpoint to identify and target weatherization opportunities and guide customers towards income-based offers and the optional Turnkey Heat Pump pathway as appropriate. The PAs will also have increased visibility into the heat pump project pipeline, which is integral to managing program budgets.

Enhancement #5: Make modifications to the heat pump incentive structure

The PAs have made several modifications to the heat pump incentive structure for market-rate customers participating in the Residential Rebates program. For partial home/season incentives, the PAs will transition the rebate from a dollar-per-ton to a dollar-per-outdoor condenser structure. The benefits of this transition are multifold. First, this revised rebate structure will encourage single zone designs for multi-split systems, which is a best practice that significantly increases system efficiency. Second, the revised design will also address continued feedback that the dollar-per-ton structure is encouraging oversizing of heat pump systems. Finally, the PAs anticipate that this revision will reduce confusion from contractors and customers around expected incentive amounts and will thus simplify rebate processing.

The PAs are continuing the whole home rebate structure; however, they will reduce the incentive amount on an annual basis starting in 2026 and will create a lower incentive for smaller dwelling units as noted in the incentive table below. Both of these whole home incentive amendments are meant to drive down heat pump installation costs. The PAs will also continue to require that the customer disable their fossil fuel heating system in order to receive the whole home rebates.

In addition to the whole and partial home season incentives, the PAs will provide a third, middle tier incentive option that is greater than the partial displacement incentive but less than the whole home incentive to accommodate customers who are not ready to disconnect their fossil system. This new rebate option would be designed to encourage customers to install heat pump systems capable of meeting the entirety of their home's heating needs, but who are not immediately ready to disconnect their pre-existing fossil fuel system.

Enhancement #6: Incorporate Language Access recommendations to increase access for LOTE (Languages Other Than English) customers

During the 2022-2024 term, the PAs engaged with industry experts to help provide recommendations for language access across all Mass Save programs. For the 2025-2027 term, the PAs plan to incorporate

recommendations within the Residential Rebates program to support LOTE customers' access, understanding, and participation. Language Access recommendations include a review of vital documents for translations, multilingual statewide contact center support services, and interpretation services for virtual interactions. Continuity of translation services across PAs and vendors is also important to ensure customers have a seamless experience and are not missing key information about the program and their eligibility for incentives.

Incentive Levels

Figure 20: Residential Rebates Program Incentive Levels

Measure	Criteria	Incentive Amount
Whole-home air source heat pump displacing natural gas, oil, propane, or electric resistance	ENERGY STAR 6.1	Standard: $10,000*,**, *** Enhanced: $16,000
Partial-home air source heat pump displacing natural gas, oil, propane, or electric resistance	ENERGY STAR 6.1	Standard: $2,000/condenser Enhanced: $16,000
Whole-home ground source heat pump displacing natural gas, oil, propane, or electric resistance	ENERGY STAR	Standard: $15,000 Enhanced: $25,000
Partial-home ground source heat pump displacing natural gas, oil, propane, or electric resistance	ENERGY STAR	Standard: $2,000/condenser Enhanced: $25,000
Air-to-water heat pump displacing natural gas, oil, propane, or electric resistance	Mass Save Qualified Products List	Standard: $10,000 Enhanced: $16,000
Integrated controls	Mass Save Qualified Products List	$500
Heat recovery ventilator		$500
Boiler reset control		$225 (gas), $100 (electric)
Electronically commutated motor pump		$100
Room-to-room response units		$75
Smart thermostat	ENERGY STAR	$100
Programmable thermostat	7-Day programmable	$25
Heat pump water heater	ENERGY STAR certified UEF 3.30	$750
Heat pump water heater (120volt/15amp circuit)	ENERGY STAR certified UEF 2.20	$750
Split-system heat pump water heaters	ENERGY STAR certified UEF 2.20	$1,500
Clothes dryers	ENERGY STAR	$50
Dehumidifiers	ENERGY STAR	$30

Measure	Criteria	Incentive Amount
Room air cleaners	ENERGY STAR	$40
Room air conditioners	ENERGY STAR	$40
Pool pump	ENERGY STAR	$350
Batter powered lawn mower	Battery powered	$75
Battery powered trimmer	Battery powered	$30
Battery powered chainsaw	Battery powered	$30
Battery powered blower	Battery powered	$30
Low-flow showerhead	Max flow rate between 1.5 and 1.7 GPM	$15
Low-flow showerhead with thermostatic valve	Low-flow showerhead (1.7 GPM) with integrated thermostatically actuated valve	$15
Thermostatic valve	Standalone thermostatic shut-off valve	$15
Induction stove	Possibly ENERGY STAR for 2025	$500
Clothes washer	ENERGY STAR	$150
Refrigerator recycling	Working condition	$75
Freezer recycling	Working condition	$75
Dehumidifier recycling	Working condition	$30
Heat pump dryer	ENERGY STAR Most Efficient Certified	$200
Windows	ENERGY STAR certified for the Northern Region and on the "Most Efficient" list	$75/window

*Incentive amount to decrease by $1,000 annually throughout the Plan term. The Compact reserves the right not to adopt this decrease if it is deemed necessary to keep incentives higher to meet goals.

** There will be a lower whole home incentive for homes below a specific square footage. The PAs are still in the process of developing this whole home rebate offer.

*** There will be a lower whole home incentive for customers who install a heat pump system that is sized to meet the home's heating load, but who do not disconnect their pre-existing heating system.

3.1.4 Residential ConnectedSolutions

ConnectedSolutions refers to the PAs' suite of active demand reduction ("ADR") offerings in both sectors, which is also commonly referred to as demand response, load flexibility, or a virtual power plant. The ConnectedSolutions program aims to reduce system peak load by temporarily controlling behind-the-meter technologies owned and controlled by both residential and commercial customers in response to event signals from the PAs, thus reducing the grid's load. The PAs reach residential customers through connected device manufacturers to reduce demand during periods of peak system demand. The ConnectedSolutions program provides system benefits by actively reducing the installed capacity requirement (calculated through regression by ISO-NE), transmission, and distribution costs that are borne by all customers.

Currently, residential and low-income customers can participate in ConnectedSolutions offerings by enrolling their communicating thermostat connected to central cooling devices, either air conditioning or heat pumps, and/or by allowing the PAs to discharge their battery during peak times. The program is designed to reward participants for allowing the PAs to make small adjustments to their temperature setpoints to reduce their electricity demand during times of system peak demand. Likewise, qualified batteries are dispatched during times of peak demand, with events called more frequently because customer comfort is not impacted.

Program Design

ConnectedSolutions provides incentives to customers to enroll eligible equipment in the program. Once residential or low-income customers are enrolled, the PAs, through their distributed energy resource management system ("DERMS") provider(s), will send signals to a customer's equipment to reduce consumption or discharge during peak periods. Eligible technologies in the Residential sector include:

- Wi-Fi enabled thermostats connected to central air conditioners or heat pumps.
- Behind-the-meter energy storage (batteries).

To participate in ConnectedSolutions, a customer must own an eligible communicating device connected to an active PA electric account. This eligibility is based on whether the technology is included in the offering (e.g., thermostats connected to central air conditioning or heat pumps and batteries connected to homes and which are located behind the meter) and whether the device manufacturer is participating in the offering. In addition, enrolled devices must be able to integrate with the PAs' DERMS vendor(s) to assist the PAs in enrolling, communicating with, dispatching signals to, and collecting data from these devices.

The PAs continue to offer an energy efficiency incentive for a customer to purchase a communicating thermostat, an annual incentive for thermostats, and a performance-based incentive for batteries that participate during called ADR events. Customers can override these signals and choose not to participate, however, those participating with storage opting out may impact their average performance over the course of the performance period and therefore affect the level of incentive they receive. There are no penalties for non-performance.

Central air conditioning represents one of the largest controllable loads in residential homes and use of air conditioning is highly coincident with ISO-NE system peaks, making it an ideal end use for ADR programs. By adjusting the temperature settings on a connected thermostat during peak periods, the PAs can deliver substantial reductions in demand. Several management strategies, such as setting a maximum temperature and pre-cooling, can help maximize savings delivered across a portfolio of connected thermostats while maintaining comfort and safety. The increasing customer adoption of both connected thermostats and central air conditioning (including heat pumps) make this a key area of continued growth for ADR and demonstrates how efficiency, decarbonization, and ADR programs complement each other.

Battery storage is also an ideal candidate for ADR. A majority of batteries are attached to photovoltaic systems and currently there are no demand charges on residential customers, meaning there is little incentive for customers to charge and discharge their battery during normal operations.[105] Currently, this results in valuable but otherwise underutilized assets that are typically only providing backup power during an outage. By enrolling residential batteries in the ConnectedSolutions program, the PAs can send dispatch signals that cause batteries to discharge, which offsets the customer's load and sends power back to the grid during peak periods, providing a valuable benefit.

Further, unlike adjusting thermostat settings, there are no direct impacts to customer comfort or convenience when controlling a battery (unless there happens to be an outage during or just after an event, in which case the customer could opt-out of participation). Behind-the-meter residential batteries can deliver substantial demand reductions compared to the demand reductions from communicating thermostats, and the PAs expect continued growth in residential storage installations and enrollment of batteries in the ConnectedSolutions program.[106] The PAs expect the external funding sourced through the Generac grant

[105] Should residential time-of-use ("TOU") rates become an option after AMI has been widely deployed, customers may have financial motivation beyond ConnectedSolutions dispatches to charge/discharge their batteries at certain times and the PAs may have to reassess this resource type.

[106] Unitil will continue to monitor the other PAs' residential storage efforts to determine if an offering of this type is warranted for its unique service territory.

(described in section 2.2.7: Cost Recovery, Funding Sources, and Bill Impacts), will dramatically increase the number of communicating devices able to participate in the ConnectedSolutions program among low- and moderate-income customers.

To encourage the system designs that can maximize the reduction of grid loads at peak times, encourage customers to maintain an internet connection to their battery storage system, and to account for various battery storage system sizes, the ConnectedSolutions program offers customers who have enrolled batteries the ability to earn a pay-for-performance incentive. The rate of this incentive ($/kW-average performance per year) is locked for the first five years of participation to give customers enough certainty to undertake the upfront cost and effort of a battery installation. Customers are also eligible to apply for a HEAT Loan for the cost of the battery storage system.

Most customers learn about and enroll in the PAs' ADR offerings through their device's original equipment manufacturers ("OEMs") or their installation contractors. For instance, many customers installing communicating thermostats controlling central air conditioning are prompted to sign up for ConnectedSolutions while they are setting up their device, via an email or in-app notification from the thermostat manufacturer. Follow-up messaging can occur through the device itself or through communications from the OEM to the customer. The PAs have found this to be an effective means of reaching and enrolling customers. In the case of battery storage, most customers will learn about the ConnectedSolutions program from their installer. The PAs also market outside of these pathways but have found manufacturer and installer outreach to be the most effective. With the passage of the IRA, residential standalone storage is now eligible for tax benefits even if they do not install solar under the Residential Clean Energy Credit, I.R.C. Section 25D, and the PAs have updated MassSave.com to provide customers interested in battery storage with information on the availability of tax benefits.

ConnectedSolutions program offerings are implemented through a PA's DERMS vendor(s). The DERMS vendor establishes integrations with the manufacturer of the equipment, or, in instances of some storage technologies, the system integrator, or operator. This allows the DERMS to connect to customer equipment to reduce demand during peak events, without the customer needing to take any action. While it is preferred that manufacturers integrate with the PAs' DERMS vendor(s) when they begin participating in the program, not all manufacturers are willing or able to complete this process. Since there is a cost to the PAs or the DERMS vendor(s) associated with enrolling in a manufacturer's device, projected market share of a

manufacturer's device is considered. The PAs also note that EV Managed Charging is no longer offered within the ConnectedSolutions program.[107]

Program Barriers

The ConnectedSolutions program has experienced continued growth since its launch in 2019. Since the program was established, the PAs have endeavored to improve the customer experience, expand the number of eligible OEM communicating devices, and better integrate with the portfolio of efficiency and decarbonization offerings for customers. However, ADR programs have limitations and barriers to ubiquitous customer eligibility and participation. Some include the following:

- Accessibility for low-income customers remains a challenge. Stable Wi-Fi internet connection and control of central cooling equipment or the installation of a battery storage system is required for customers to participate in the program.
- Landlords may not be willing to install smart technology in rental properties over concerns that smart thermostats may be more difficult for renters to operate. There is also the issue of who the incentive should go to, given that the landlord owns the device and property, but the renter would be directly experiencing the change in temperature and is likely paying the electricity bill. Currently, incentives are sent to the electric account owner.
- Behind-the-meter battery storage, despite recent cost declines, is an expensive technology to purchase and install.

How the Program Addresses Plan Priorities

The program impacts equity, decarbonization, and improved customer experience. First, by lowering the ISO-NE system peak, overall costs are reduced for all electric customers and residential and low- and moderate-income customers who are participating in the program receive direct benefits through the incentives provided by the program. In addition, reducing the ISO-NE peak results in fewer carbon-intensive power plants from being called upon to meet demand, which directly reduces carbon emissions during the peak periods over the entire system. As climate change becomes more of a top-of-mind concern for customers, bringing them into programs that help reduce emissions provides them with a positive experience.

[107] EV Make Ready and managed charging program incentives for Eversource, National Grid, and Unitil are addressed in DPU dockets 21-90, 21-91, and 21-92, respectively. National Grid currently offers an off-peak incentive program that compensates customers for charging their EVs during off-peak times, defined as 9 PM to 1PM. This time period incorporates the demand response event window of 3 PM to 8 PM.

The PAs may work to quantify the GHG savings from ConnectedSolutions for inclusion in a future AESC study. Lastly, the program is one of the few incentive streams available to customers to earn any sort of return on investment for utilizing some capabilities of behind-the-meter battery storage, making substantial customer investment pencil out in some cases.

Strategic Enhancements

Enhancement #1: Continued enrollment growth and availability for more customers

The PAs are planning for growth in the number of enrolled and participating customers as well as in total demand reductions. As mentioned above, the cross-promotion across many of the Residential sector programs increases the opportunities for enrollment of new customers and the continued emphasis on heat pumps will lead to more controllable equipment coincident with the current system peak periods for the PAs to target and recruit. The PAs expect the external funding sourced through the Generac grant (described in section 2.2.7: Cost Recovery, Funding Sources, and Bill Impacts), will dramatically increase the number of communicating devices able to participate in the ConnectedSolutions program among low- and moderate-income customers.

Enhancement #2: Expand eligible communicating devices to appeal to more customers, including low and moderate-income

Recent preliminary screening of new direct load control measures for communicating window air conditioning units or heat pump units and communicating electric water heater units (resistance or heat pump), have shown initial promise for the following key criteria:

- OEMs include on-board communication capabilities on equipment and have developed application-based customer facing portals for control.
- Efficiency programs could incentivize the installation of communicating equipment on an energy savings basis, if cost effective; this is similar to the synergies that exist presently for communicating thermostats which receive an upfront energy efficiency incentive for initial purchase and installation and can then be followed up with ConnectedSolutions ADR recruitment.
- Lower price points for equipment may mean more low- and moderate-income housing customers have access to them in their spaces.
- Low per device connection costs through a PA's DERMs vendor(s).
- Similarities with existing ConnectedSolutions direct load control offerings.

While these measures were not typically cost effective under the 2021 AESC, the PAs will investigate whether with the new 2024 AESC Study values these potential measures screen and can be offered to customers before the 2025 summer performance season.

Enhancement #3: Continued exploration of cost-effective strategies for gas and winter electric demand reduction and effective use of future advanced metering infrastructure ("AMI") capabilities

ISO-NE and the electric distribution companies' long-term forecasts indicate that the system will transition from a summer peaking system to a winter peaking system possibly within the next 10 years. The gas system is also winter peaking. The PAs will continue to work with EEA and ISO-NE and continue to follow Electric Sector Modernization Plan and Climate Compliance Plan developments, to identify cost-effective strategies for statewide offerings for gas and winter electric demand reduction.[108,109]

The electric distribution companies have widescale AMI deployment either planned or in place, which overlaps with the 2025-2027 term. The PAs anticipate future AMI capability will allow the ConnectedSolutions program to offer different program designs to incent customers to reduce demand during system peak times, however the exact capability and the precise numbers of customers is not yet known. During the 2025-2027 term, the PAs anticipate they may have the capability to run whole-home or whole-small business technology agnostic performance-based ADR offerings, instead of device specific currently. If any novel program designs are identified, the PA will continue to implement a demonstration following the current DPU guidance on demonstrations, as detailed in section Seven: Research, Development, and Demonstration.

Enhancement #4: Increased incentive for income-eligible customers on a low-income electric rate

As mentioned above, there are unique challenges for income-eligible customers to participate in the thermostat-based demand response measure. To partially address these challenges, some or all of the PAs may offer income-eligible customers on a low-income rate a higher enrollment incentive than market-based rate customers.

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[108] Eversource, in compliance with the EGMA settlement and not a part of the three-year plans, is running gas demand response pilots/demonstrations using communicating thermostats and customer behavior appeals. Eversource regularly shares the experience and findings of these offerings with the other PAs.

[109] The PAs ran a limited C&I winter electric demand reduction offering during 2019-2020 while trying to ascertain the potential cost-effectiveness of such an offering. The PAs recruited roughly 50MW with 15MW of that total being diesel generators. The offering was ultimately shut down due to a lack of cost effectiveness.

Enhancement #5: Leveraging thermostat manufacturer native offerings for load reduction

Several major thermostat manufacturers (OEMs) who allow customers to participate in ConnectedSolutions also allow customers to opt-in to settings that optimize customers' thermostats around different parameters, such as when marginal operating emission rates are high, when the grid is at peak loading, or when there is a solar eclipse depressing solar generation. A higher proportion of customers opt-in to these OEM-driven offers than traditional utility demand response programs, like ConnectedSolutions. The PAs think there is value to collaborating with OEMs and the PAs' DERMS vendor(s) to incorporate these native OEM offers into the ADR portfolio. While the temperature offsets and associated curtailment per device allowed in the OEM offers are generally lower, the cumulative effect could be significant considering the large number of customers already enrolled. The PAs also see this as a customer on-ramp to enable greater participation in the full ConnectedSolutions thermostat program. Some of the PAs may look to utilize customers enrolled in the OEM native offerings to increase load reductions.

Incentive Levels

Figure 21: Residential ConnectedSolutions Program Incentive Levels

Measure	Criteria	Incentive Amount
Communicating thermostat	Communicating thermostat connected to central air conditioner unit or heat pump unit	Market-based Rate Customers $50 enrollment (one time) / $20 performance-based (annually) Income-eligible Low-Income Rate Customers $100 enrollment (one time) / $20 performance-based (annually)
Battery storage	Behind-the-meter battery storage system < 50kW	$275/kW average performance

3.1.5 Residential Education

The objective of the Residential Education program is threefold: (1) to offer K-12+ educational outreach programs, (2) to offer technical training and industry certifications to high school students to encourage careers in the energy efficiency and clean energy industry, and (3) to enhance consumer education and

marketing strategies to help increase awareness of the benefits of energy efficiency and decarbonization, thereby encouraging greater participation in Mass Save programs.

Through the program, the PAs provide educators, students, and residents with Mass Save program information, curriculum, and materials on energy efficiency, sustainability, decarbonization, energy conservation, and efficient technologies as well as to create awareness around clean energy career opportunities. The Residential Education program also offers support for undertaking industry training and certifications focusing on green jobs to students in high schools across Massachusetts. This support is a critical component in fostering customer engagement and creating knowledge in the communities around energy efficiency, decarbonization, and Mass Save program benefits.

The PAs collaborate to offer energy efficiency curriculum and training to Massachusetts educators. Educators receive ongoing support for implementing energy efficiency and decarbonization programming in the classroom. Curriculum enhancements during the 2025-2027 term will include expanding career exploration starting in the middle school grades, technical training, and industry certification opportunities for both high school students and educators. In addition, efforts directed at consumers will focus on educating customers on the benefits of investing in decarbonization and energy-efficient products and services available to them through Mass Save. Consumer education will be available in various languages that are widely spoken across Massachusetts, namely Spanish, Portuguese, Haitian-Creole, Mandarin, and Cantonese.

The PAs are also determined to continue to focus this program on environmental justice communities and equity populations such as low-income customers, renters, and LOTE (Languages Other Than English) customers. These customers are marketed to first and often by various means. The program's vendor invites these schools, via emails, calls, and in-person visits, to participate in the Residential Education program offers. Participation in the Residential Education program is available to all educators, school districts, students, and customers in participating PA territories.

Program Design

Residential Education program offerings are available to all educators, students, and families through Massachusetts K-12 schools and technical high schools. Locations vary depending upon the specifics of the offer and are available across the state. Additional outreach to environmental justice and designated equity communities is a priority.

Program Offerings

The Residential Education program reaches students, community-based organizations, and educators through a variety of channels. Educator resources include workshops and curriculum on various energy efficiency, decarbonization, and sustainability topics, as well as career development. There is an array of curricula on all topics of energy that is available to educators to utilize too.

Professional development workshops for educators

The PAs support six to eight professional development workshops offered in different areas of Massachusetts to effectively accommodate educators from across the Commonwealth. There are two to three virtual workshops offered per year as well, at least one on a Saturday, to reach educators who cannot attend the in-person workshops. In addition to the school year workshops, the PAs currently offer a three-day summer workshop to Massachusetts educators. Educators are encouraged to apply early as the summer workshop has a limited number of spots. The summer workshop is more in-depth and offers educators a chance to learn more about a particular subject area. Educators are provided with kits and materials to implement lessons in their classrooms and receive professional development credits/continuing education credits for their participation.

Career exploration workshops

These workshops are available to all middle school and high school educators and students and are designed to introduce them to careers in the energy efficiency and clean energy industry and what education, skills, and certifications are needed to qualify for these careers. Various speakers from the PAs' vendors and industry partners address the students and activities related to the career are conducted with the students. The PAs have also developed a Careers in Energy Efficiency and Green Jobs booklet that outlines different careers in this industry and what education, or certifications are needed to qualify for the job.

Student workshops

Resources for students include science fair project ideas, energy information and resource guides, and youth participation and leadership opportunities. In addition to the resources, the PAs utilize hands-on, interactive exhibits and games at community events in their service territories to further engage K-12 students and customers.

Massachusetts Green STEP (Sustainable Technical Education Program)

The MA Green STEP provides each participating school with trainers to teach and administer the program's certifications and technical training. The PAs work with each school and trade to provide the certifications and technical training that will best meet the needs of the students. Certifications can include, but are not limited to:

- Urban Green Council GPRO (Green Building Professional) Fundamentals of Building Green.
- Building Performance Institute ("BPI") Building Science Principles.
- BPI Health Housing Principles.
- BPI Building Analyst Technician.
- BPI Infiltration Duct Leakage.
- US Green Building Council Leader in Energy and Environmental Design Green Associate.
- RESNET – Home Energy Rating System Professional Rate.

Technical trainings can include, but are not limited to:

- Weatherization and blower door hands-on training.
- Duct blasting and duct sealing hands-on training.
- Heat pump, heat pump water heater, and geothermal hands-on training.

The program will facilitate career fairs with vendors who are looking for employees in the energy efficiency and sustainability sector on an annual basis. The Residential Education program will try and partner with other career fairs at the school and bring in vendors in the area. The program is currently reaching out and securing school participation for the 2024-2025 school year and will expand in future years. MA Green STEP will also work with the Clean Energy Pathways program to promote both offerings and provide a pipeline for interested students to enter the program.

Strategic Enhancements

The PAs are committed to continuous improvement and updates to the Residential Education program and to build upon past successes. The program continues to complement what educators are currently teaching and provide relevant energy education curriculum and training that is not available to educators. During the 2025-2027 term, the PAs will deploy the following strategic enhancements and updates to the program.

Enhancement #1: Enhanced focus on reaching school districts and students where there is a lower-than-average participation in the PAs' programs and in environmental justice communities

The PAs will encourage school districts to participate in workshops as a district and not on a teacher-by-teacher basis so that all educators and students receive the same opportunities and programs in each district. Securing buy-in from a district superintendent and requiring participation in the workshops ensures that all students receive the same opportunities.

In support of the PAs continued focus on equitable services, outreach will be focused and increased to schools in environmental justice communities, as well as those communities identified with lower-than-average historical participation in the Mass Save programs. The PAs will achieve this through broader outreach to these communities with telephone calls, emails, social media, and in-person visits to schools to inform them regarding what Mass Save has to offer their schools. The program will also seek out champion teachers in these districts who have participated in the Mass Save programs and ask them to be an advocate to encourage district participation. Individual teachers or schools will also have the opportunity to participate in the PAs' offerings regardless of whether their school district participates.

Enhancement #2: Expand MA Green STEP

In the 2025-2027 term, the PAs will support industry training and certifications in high schools with an enhanced focus on technical high schools. This new initiative was launched in the 2023-2024 school year as MA Green STEP and will be expanded in the 2025-2027 term. MA Green STEP offers training and industry certifications to educators as well as students to better prepare them for careers in energy efficiency upon graduation.

The PAs will collaborate with their vendor network to support trainings offered through this program and facilitate a hiring pipeline for the students by encouraging vendors to participate in a career fair organized through MA Green STEP held annually in the spring. The career fair will also offer soft skills training to prepare students for interviews. This school year, MA Green STEP will be offered to Massachusetts technical high schools; however, the program will be expanded to all Massachusetts high schools with the addition of after school and summer program offerings in future years.

Enhancement #3: Create a pipeline to the Clean Energy Pathways program

Students participating in MA Green STEP are excellent candidates for the Clean Energy Pathways program. MA Green STEP prepares students to participate in the internship program focusing on hands-on training and can lead to long-term employment opportunities in the weatherization and HVAC industry. The Clean Energy

Pathways program will be promoted to MA Green STEP participants and assistance provided for those interested in engaging and applying. The PAs hope this conduit will further boost participation in the Clean Energy Pathways program, supporting the development of a robust clean energy workforce.

Enhancement #4: Promote career development for clean energy and energy efficiency jobs

The program offers professional development and student workshops on careers in the energy efficiency and clean energy industry to middle school, high school, and post-high school educators and students. Additionally, in the 2025-2027 term, all educator professional development starting with Grade 1 will include information on these job sectors and how the educators can incorporate introducing these careers into their lessons. This will introduce students at a younger age to opportunities available to them later in life.

3.2 Low-Income Sector

For the Low-Income sector, the PAs provides a comprehensive set of energy efficiency services designed to enable low-income residential customers to pursue improvements to their homes that reduce their energy burden and environmental impact. Ensuring access to program benefits for low-income customers has been a core focus of the Low-Income sector since its inception. The Low-Income program is structured around the PAs' partnership with LEAN (the Low-Income Energy Affordability Network), the group of local Community Action Program agencies delivering low-income energy services in Massachusetts and is designed to leverage federal LIHEAP (Low-Income Home Energy Assistance Program) and WAP (Weatherization Assistance Program) funding and to blend that funding with the Mass Save program funds to maintain sector-level cost effectiveness. These federal programs are administered in Massachusetts by the EOHLC (Executive Office of Housing and Livable Communities), which works closely with the PAs and LEAN to maintain effective implementation offerings.

Since 2010, the PAs have invested over $1.1 billion dollars working with more than 470,000 low-income customers, including a record $350 million in combined electric and natural gas investment for low-income customers during the 2022-2024 term. During 2022 and 2023, approximately 20,000 low-income housing units were weatherized and heat pumps were installed in over 3,600 low-income households.

The PAs are also leveraging their robust investment in the Low-Income sector electrification to obtain federal funding. For example, in 2023, Generac Grid Services secured a $50 million grant from the DOE's Grid Resilience and Innovation Partnerships program to deploy up to 2,000 batteries to low- and moderate-income households. These batteries will be paired with heat pumps, with the PAs' heat pump incentives providing the

local matching funds for the federal investment, as described further in section 2.2.7: Cost Recovery, Funding Sources, and Bill Impacts.

In the 2025-2027 term, the PAs and LEAN will explore a mechanism for income verification to augment existing means-tested enrollment, to increase program access for low-income customers. This mechanism will enable customers who do not receive means-tested benefits or who may not possess documents to participate in federal assistance programs, to still participate in the Low-Income program through income verification according to standardized income guidelines (at or below 60% SMI (state median income)). This income verification mechanism may also allow the PAs to use AMI as an additional qualifier for receiving energy efficiency services in the program's Single-Family pathway.

3.2.1 Low-Income Eligibility Requirements

Customers with a household income at or below 60% SMI and living in single-family (1-to-4 units) residential buildings are eligible for program services through the Single-Family pathway. Residents in multifamily buildings with 5+ units where at least 50 percent of the units are occupied by residents whose household income is at or below 80% AMI (area median income) are eligible for program services through the Multifamily pathway. Customers who demonstrate eligibility for the utility discount rate automatically qualify for the Low-Income program. Program eligibility can also be demonstrated if the customer qualifies for LIHEAP or other means-tested programs such as Supplemental Security Income, Transitional Aid to Families with Dependent Children, Emergency Aid to the Elderly, Disabled, and Children, and/or food stamps.

Low-income customers remain some of the most vulnerable customers in the Commonwealth. These customers are more likely to live in rental properties, experience high energy burdens, and lack expendable time and resources to dedicate to program participation. As required by statute, in the 2025-2027 term, the PAs will continue to work with the network of local Community Action Program agencies to deliver no-cost, facilitated low-income energy services with a focus on:

- **Continuation of the LEAN Statewide Client Services Center.** In 2023 the PAs supported the creation of a Statewide Client Services Center, operated and managed by ABCD (Action for Boston Community Development) on behalf of LEAN to enhance customer experience. The Statewide Client Services Center supports intake of leads and customer inquiries through multiple channels such as the Community First Partnership, website engagement, and participating vendors. The Statewide Client Services Center currently provides live customer service representatives who can support intake and inquiries in Spanish, Portuguese, Haitian-Creole, and French.

- **Maintain supplemental contractor capacity across Eversource and National Grid territories.** In the 2022-2024 term, the PAs and LEAN aligned on the deployment of Home Performance Contractors in the Low-Income program to increase program capacity and ensure timely service to low-income customers. This change allows LEAN to onboard qualified program contractors to deliver energy efficiency services under the Single-Family pathway in territories where there is increased demand for services that would exceed the local Community Action Program agency's capacity. In the 2025-2027 term, the PAs and LEAN will continue to monitor the effectiveness of this approach and refine it to ensure continued timely service for low-income customers.
- **Expand access to year-round income verification services.** Historically low-income customer enrollment occurred primarily from November to March through the fuel assistance program - outside of fuel assistance season, enrollment options were limited. The PAs and LEAN will provide an income verification mechanism to bridge this seasonal gap in enrollment opportunity and augment the existing options for demonstrating discount rate eligibility. This mechanism will also directly address the obstacles many immigrant or other customers may face in producing required paperwork for federal means-tested programs.
- **Convert heating systems to heat pump technologies in situations that will not result in increased energy burdens for customers.** The PAs will prioritize the delivery of electrification technology, such as heat pumps, to low-income customers only in situations where the customer energy burden will not be increased – such as moving from delivered fuels. In the 2025-2027 term, the PAs will adopt a strategic outreach plan to low-income customers who have received a fossil fuel system replacement through the program to explore electrification opportunities, especially for systems near the end of their measure lives. This approach also allows PAs to minimize emergency fossil fuel replacements and electrify more low-income customers on delivered fuel and electric resistance.

Since 2008, the PAs have worked in close partnership with LEAN to deliver energy efficiency services to low-income customers with a focus on reducing customer energy burdens and making their homes safer and more comfortable. This will continue in the 2025-2027 term, with an evolved focus on decarbonization where energy burden will not be increased, and the PAs will remain committed to exploring new decarbonization measures to improve and expand service to low-income customers.

3.2.2 Statutory Budget Requirements

Allocation of Funds for Low-Income Sector Programs and Education

Commonwealth legislation mandates that energy efficiency funds shall be allocated to customer classes in proportion to their contributions to those funds, and "at least 10 percent of the amount expended for electric energy efficiency programs and at least 20 percent of the amount expended for natural gas energy efficiency programs shall be spent on comprehensive low-income residential demand side management and education programs."[110] The electric and natural gas PAs have allocated sufficient budgets to Low-Income sector programs to meet or exceed this mandate.

3.2.3 Low-Income Program Design

Low-Income program services are implemented through a network of local Community Action Program agencies and Implementation Lead Vendors (who are also acting Community Action Agencies in their home territories) and are integrated with resources from the EOHLC WAP (Weatherization Assistance Program) and HEARTWAP (Heating System Repair & Replacement Program) programs. The PAs work with Implementation Lead Vendors and Community Action Program agencies to engage with community-based organizations as part of their marketing strategy. To continue to align with leveraged funding sources and as stated within the GCA, the Low-Income program will preserve existing implementation strategies as described below.

Low-Income Single-Family Pathway

In the Low-Income Single-Family pathway, low-income residential customers living in one-to-four-unit buildings receive in-home energy assessments from their local Community Action Program agency or select vendors managed by Low-Income Implementation Lead Vendors. These assessors evaluate the home for weatherization opportunity, mechanical system upgrade, general energy efficiency, and (for electric PAs only) appliance upgrade opportunity. Assessments include an evaluation of the home's health and safety conditions to determine suitability for the implementation of energy efficiency and/or electrification measures. The Community Action Program agency or Implementation Lead Vendor then arranges for all applicable measures and services to be installed by a qualified contractor, as agreed to by the customer. The pathway is delivered in coordination with the EOHLC WAP and HEARTWAP programs. All available funding streams are leveraged and offered jointly to low-income residents to enhance services and customer experience, and to manage program costs.

[110] G.L. c. 25, § 19(c).

Low-Income Multifamily Pathway

In the Low-Income Multifamily pathway, low-income customers living in 5+ unit multifamily buildings (in which at least 50 percent of the units are low income) are provided with a whole building and in-unit assessment and fully facilitated project scope that targets both electric and natural gas end uses. Assessments and services for multifamily buildings going through the refinancing or capital improvement process are coordinated with relevant stakeholders to maximize the role of program offers within larger projects and to provide financial clarity early in the process. Once a property is deemed eligible, an initial assessment is coordinated by the Implementation Lead Vendor. Assessments evaluate the building for weatherization opportunity, mechanical system upgrade, general energy efficiency, and (for electric PAs only) appliance upgrade opportunity. Assessments include an evaluation of the building's health and safety conditions to determine suitability for the implementation of energy efficiency and/or electrification measures.

The Implementation Lead Vendor arranges for all applicable measures and services to be installed by qualified contractors and coordinates with the building's ownership and residents to implement measures in individual dwelling units, as well as in the common areas of the building to ensure maximum benefits to the residents. All available and applicable funding streams from each program are leveraged and offered jointly to income-eligible residents.

Low-Income Multifamily Deep Energy Retrofit Pathway

The PAs' Low-Income Multifamily Deep Energy Retrofit pathway offers low-income building owners the opportunity to pursue decarbonization projects that result in more significant energy savings than traditional retrofit approaches would achieve, or that are incorporated into more intensive refinancing or capital improvement renovations. These projects integrate a range of high-performance building technologies that go beyond the programmatic scope of a typical retrofit project, such as but not limited to structurally insulated exterior cladding, continuous insulation or targeted exterior air sealing, ventilation with energy recovery ventilators, variable refrigerant flow systems, heat recovery ventilators, and heating system conversions from delivered fuels or natural gas to heat pumps. In all cases, these projects maintain energy burden protections for low-income residents as a core requirement, regardless of the technical scope of work.

To qualify for the Low-Income Multifamily Deep Energy Retrofit pathway, owners must agree to a scope of work that will result in at least 40 percent reduction in energy use intensity, achievable through energy reduction (traditional retrofit direct-installs, air sealing, insulation, etc.) and electrification (heat pumps, induction stove, etc.), but not including onsite renewable energy production. The PAs and LEAN have developed an offer letter to provide to low-income building owners who wish to pursue a Deep Energy

Retrofit. This letter confirms modeled savings and energy reduction, incentive parameters, the final modeling of reductions, and the savings associated with the incentive amount for each project.

Quality Control

As mandated by EOHLC, all projects that receive DOE funding must receive post-installation QA/QC inspections from the supporting Community Action Program agency to ensure that all work is performed to the EOHLC guidelines. The Community Action Program agencies and Implementation Lead Vendors also perform 100 percent post-installation inspection (including a minimum of 50 percent in-process inspection) of all program projects regardless of leveraged funding. EOHLC Technical Field Monitors perform another level of visual inspection for 20 percent of all DOE-funded projects; 10 percent of these total units also receive a full QC Inspection that includes complete testing on the dwelling. During these inspections, EOHLC reviews both DOE and Program Administrator-funded work. Also, the Program Administrators have an independent third-party vendor perform QA/QC inspections on five percent of all projects exclusively funded by the PAs.

Description of Measures to be Offered

Offerings

The following measures are provided at no cost to Low-Income Single-Family pathway participants with or without leveraged funding. For Low-Income Multifamily pathway participants, cost-effective projects are fully subsidized by the PAs with or without leveraged funding. In some Multifamily pathway cases, PAs will fund projects or measures to establish dollar limits where applicable. In all cases, any additional sources of funding (WAP and HEARTWAP for Single Family pathway, federal monies for Multifamily pathway) are utilized and the PAs ensure low-income customers do not incur any out-of-pocket costs.

The measures available to low-income customers include:

- Insulation (attic, wall, foundation, pipe, and duct) and air sealing (single family traditional retrofit and multifamily retrofit and in-unit), collectively “weatherization.”
- Heating system replacement, including both like-for-like upgrades (e.g., upgrading to a high efficiency version of the existing equipment type) and electrification measures (e.g., upgrading a fossil fuel system to a heat pump) where appropriate and where energy burden will not be increased by the change in technology.
- Domestic hot water system replacement, such as indirect and heat pump water heaters.

- Immediate savings measures such as programmable and smart thermostats, advanced power strips, pipe wrap, lighting, and water-flow devices such as showerheads and faucet aerators.
- Appliance upgrades, including refrigerator and freezer replacement, second refrigerator removal, clothes washer replacement, dehumidifier replacement, and window air conditioner replacement.
- Single to triple-pane window upgrades, where applicable.
- Repairs and barrier remediation when required for weatherization or electrification (e.g., knob-and-tube re-wiring, mold remediation, asbestos, vermiculite, roof repair, electrical panel upgrade, etc.), when cost effective.

In multifamily applications specifically, mechanical systems upgrades include:

- Energy management systems and building controls.
- Motors and drives (variable frequency drives).
- Refrigerant management (variable refrigerant flow), chillers.
- Other large mechanicals such as air compressors, ventilation system repair adjustment or replacement, heat recovery ventilation/energy recovery ventilation, redistribution systems, and temperature building controls.

Program Barriers

Low-income customers may experience multiple barriers to participation both technical and non-technical in nature. Technical barriers in low-income building stock are often the result of deferred maintenance due to the high cost to repair or replace outdated or failing building components. Technical barriers may impose health and safety risks to occupants, contractors or both, and may limit the applicability or threaten the durability of program measures if installed without prior remediation. Technical barriers include active knob and tube wiring, mold and moisture damage, combustion safety issues, structural and roofing issues, and vermiculite or asbestos-like materials. Non-technical barriers stem from customers' ability to dedicate time and energy to engaging with the program, from their awareness of the program and trust in what it has to offer them, and from their ability to interact with the program in their preferred language.

Many low-income customers are renters, which means they lack the authority to make capital improvements to their homes and their participation in the program is highly dependent on their landlord. The PAs provide the following solutions to these technical and non-technical barriers to participation.

Technical barrier solutions

- Repair or remediation of existing technical barriers is considered in the scope of every Low-Income program project in which a barrier(s) exists. The PAs will fully fund these repairs along with the associated decarbonization measures, if the overall project is cost-effective.
- The PAs have expanded the operating budget for repairs in the Low-Income Single-Family pathway and established an allowance for repairs in the Low-Income Multifamily pathway (where such repairs historically depended on refinance or capital investment projects on the part of the building owner).

Non-technical barrier solutions

- LEAN employs a quarterbacking model in their implementation of the Low-Income program. This model ensures end-to-end project facilitation and customer support, reducing the time and energy commitment required of customers to participate. The PAs now allow all units in 2-to-4-unit multifamily buildings to be served through the Low-Income program if more than 50 percent of the units are low-income, including landlord-occupants. This expansion includes HVAC and appliance upgrades for all units (where historically only weatherization applied) and buildings where landlords pay the PAs for their income-eligible tenants.
- Low-income marketing and awareness campaigns span all media types, grassroots efforts, and leverage relationships with community-based organizations to increase program awareness and establish trust with low-income customers. The PAs and LEAN will provide standalone income verification services for low-income customers to gain access to the program outside of historical eligibility and enrollment processes subject to seasonality.
- The PAs and LEAN provide in-language support for low-income customers through the LEAN Statewide Client Services Center and the Community Action Program agencies, and the PAs will incorporate Language Access recommendations. Lead vendors will have trans-created/transcribed marketing materials as well as a technical dictionary explaining customer facing terminology in five languages.

How the Program Impacts Plan Priorities

Equitable delivery of energy efficiency services to low-income customers in Massachusetts is related to the PAs' commitment to equity in the 2025-2027 term. To achieve these goals, the PAs and LEAN coordinate

program delivery design and continuous innovations including recently integrated changes like the Lead Implementation Vendor model and LEAN Statewide Client Services Center throughout the 2025-2027 term. The PAs continue to work toward focusing on electrification in delivered fuels customers who are eligible for the Low-Income program offerings. The Program Administrators will work with LEAN and Community Action Program agencies to identify and act on capturing any decarbonization opportunities to provide a healthy and safe home for the customers and facilitate an equitable clean energy transition in Massachusetts.

Strategic Enhancements

The PAs, in close collaboration with LEAN, plan to build on the customers access of the Low-Income program by taking steps to further improve and streamline the customer experience, offer more opportunities for greater energy savings for both single and multifamily income-eligible customers, and provide customers in all building types with equitable energy efficiency services. The PAs are focused on developing program delivery enhancements that best reflect the implementation insights and strategic priorities for equitably serving vulnerable customers.

Enhancement #1: Proactive electrification of fossil fuel systems

The PAs will explore a pathway to proactively reach out to customers with aging fossil fuel systems to evaluate opportunities for conversion to heat pumps. The outreach will assess the need for equipment replacement, evaluating not only the equipment's efficiency, but also its age and condition. This approach is also intended to mitigate the number of emergency replacements for low-income customers. Lack of electrification readiness due to building conditions or infrastructural barriers has been one of the factors leading to emergency replacements for delivered fuel customers in the Low-Income program. This strategy of identifying customers who have received fossil fuel replacements, or for whom existing data indicates aging fossil fuel equipment, for proactive strategic electrification, can help the PAs and LEAN accelerate electrification efforts in the Low-Income sector and avoid potential missed opportunities.

The PAs will focus outreach on customers with fossil fuel systems nearing the end of life, either known through date of previous replacement or through documented age from a prior assessment. Outreach will prioritize oil and propane systems first and will consider previously replaced systems over 12 years old but still within their measure life, as well as systems not previously replaced but nearing an age and/or condition at which reliability will become a concern.

Enhancement #2: Support comprehensive assessments

The PAs will continue to support and strive for a singular comprehensive assessment to address customer time constraints as a participation barrier. These assessments should include all energy efficiency (e.g., appliance assessment, weatherization scoping, heating system assessments), and additional decarbonization opportunities in a single visit to the customer's home. This visit will also promote customer awareness and education about program offerings, and what electrification and decarbonization provide in terms of health and safety, environmental impact, and comfort/quality of life, as well providing information regarding operational cost and setting expectations on the shifting of those costs from one energy source to another.

Comprehensive assessments will:

- Assess all energy efficiency and decarbonization opportunities in a single customer visit.
- Improve customer education on the benefits of decarbonization.
- Enable decision-making by providing all recommendations clearly with prioritized next steps.

Enhancement #3: Opportunities for additional energy-saving measures

The PAs will continue to evaluate savings potential and benefits of energy efficiency measures that are supported through other programs to determine if they can be eligible measures for customers through the Low-Income program. The PAs have been working with LEAN to evaluate additional offerings such as gas-to-heat pump water heater, heat pump clothes dryers, induction stoves, and ground source heat pumps. This will support the program goal to be responsive and adaptable to market changes and needs of the customers and will allow for flexibility and innovation in serving them throughout the 2025-2027 term.

Enhancement #4: Barrier mitigation budget for the Multifamily pathway

The PAs support barrier mitigation and pre-electrification at no cost to the customer. However, as the PAs continue to serve more customers in equity and environmental justice communities, the presence of increasingly complex barriers to the installation of energy efficiency services has emerged, especially in small multifamily buildings with low- and moderate-income renters. The PAs will include barrier mitigation funding for small multifamily units in the budget for the 2025-2027 term. This will help reduce barriers and streamline the process of serving small multifamily buildings.

Additionally, the PAs will remove pre-weatherization barriers for multifamily building owners**.** A number of small multifamily building owners of 5-to-25-units do not have access to capital to address pre-weatherization

barriers. Currently, the PAs have supported pre-weatherization barrier support for 1-to-4-unit homes. For the 2025-2027 term, the PAs will update their protocols to contribute up to $10,000 per project to address pre-weatherization barriers for the 5-to-25-unit building group.

There are some cities and towns (e.g., Lawrence) that will not issue permits for weatherization and/or heating where there is an outstanding municipal lien (usually real estate taxes and/or water bills). Some cities and towns have recognized that removing such barriers to weatherization and heating improvements will increase a landlord's ability to pay down such arrears. Negotiating the removal of such municipal lien barriers will thus allow increased renter participation. The PAs will contribute to efforts by LEAN and EOHLC to address this barrier.

Enhancement #5: Replace double-to-triple pane windows

The PAs will replace single-pane windows with triple-pane windows in customer homes as a weatherization measure. The PAs are also exploring along with LEAN to offer replacements of double-to-triple pane windows as an additional weatherization measure.

Enhancement #6: Launch an income-verification process

The PAs are working with LEAN to launch an income-verification service that will allow customers to qualify year-round for energy efficiency services and not just in fuel assistance season. This service also aims to alleviate obstacles that immigrant customers may face in producing required paperwork for federal means-tested programs.

The PAs and LEAN will implement a mechanism for income verification in addition to the means-tested benefit enrolment as a way of increasing access to the program offerings. This will enable customers who may not be on any means-tested benefits or may not possess documents to participate in federal assistance programs, to still participate in the program through income verification according to standardized income guidelines (at or below 60% of SMI or AMI). This mechanism may also allow for using AMI as an additional qualifier for receiving energy efficiency services in the Low-Income Single-Family Pathway.

Enhancement #7: Offer heat pump operations and maintenance services

The PAs currently offer heat pump O&M services for customers who have received air source heat pumps through the Low-Income program. The PAs will continue to support this and offer it to customers who want to switch from natural gas equipment to air source heat pumps.

Enhancement #8: Implement language access

The PAs will implement comprehensive language access strategies to better serve LOTE (Languages Other Than English) customers, focusing on the five priority languages identified in the Language Access recommendations: Mandarin, Haitian-Creole, Portuguese, Spanish, and Cantonese.

Incentive Levels

The Low-Income program covers 100 percent of the cost for qualified customers. Customers can receive appliance replacements as well as heating system replacement by leveraging LIHEAP funding or PA funding.

Figure 22: Low-Income Program Levels

Measure	Criteria	Incentive Amount
Air sealing	Decreasing outside air flow by sealing gaps in thermal envelope	100%
Appliances	Replacing old inefficient appliances for low-income customers in 1-to-4-units or multifamily properties.	Refrigerators, deep freezer, window A/C
Building insulation	Improve up to R-49 in attics and fill any closed cavities to capacity	100% weatherization for low-income rental units and multifamily units that are over 50% low income
Duct insulation	Outside thermal envelope, less than R-2 existing insulation	100% for rental units, and Whole Building projects that are 50% or greater low-income qualified
Duct sealing	Ductwork outside the thermal envelope	100%
Immediate savings measures	All customers receive a set of measures that are low-cost and a low-lift installation effort	100%
Programmable thermostats	Analog thermostat existing	100%
Repairs	Remediation of barrier in areas where proposed weatherization work is recommended or when barrier prevents any/all work from being completed	Barrier mitigation is covered if a pre-weatherization barrier exist, covers knob-and-tube, mold, asbestos, and vermiculite
Windows	1-to-4-units or multifamily low-income properties	Single to triple pane

3.3 Commercial & Industrial Sector

For more than two decades, the Massachusetts PAs have been national leaders in designing and implementing award-winning C&I energy efficiency programs that have served as a model for other programs across the country. Notably, the PAs pioneered the Small Business Turnkey pathway, built one of the largest and most successful midstream delivery pathways in the country, launched a next generation new construction program design, and helped lead the transformation of the lighting market.

Historically, the success of the C&I programs hinged heavily on lighting. Now, the PAs have shifted their focus toward other opportunities such as HVAC controls and equipment (including heat pumps), insulation and envelope improvements, and refrigeration measures. In the 2025-2027 Plan, the PAs propose an ambitious vision to help the Commonwealth meet its decarbonization goals, developed in partnership with stakeholders statewide. This vision combines proven approaches to energy efficiency with a new strategy for preparing the C&I sector to electrify their fossil fuel-based heating and hot water systems, the introduction of a new class of measures focused primarily on reducing GHG emissions, an overhaul of the PAs' approach to existing building commissioning, and refinements to numerous other C&I programs. The PAs will also no longer support new natural gas equipment except in limited circumstances.

In crafting a new approach to the C&I sector, the PAs have relied on building blocks and lessons learned during the 2022-2024 term, particularly related to electrification and HVAC control systems. During this period, the PAs have expanded, diversified, and upskilled the energy efficiency workforce across Massachusetts. This includes leveraging the Heat Pump Installer Network to implement C&I projects and partnering with vendors with demonstrated expertise in heat pumps, control systems, and other technologies. Likewise, the PAs have developed new pathways and incentive offerings to support controls systems, electrification, and weatherization. While these efforts have begun to bear fruit, the PAs will make several other major changes to build on these initial efforts in te next term, as described below.

Leading the Way on Greenhouse Gases

Electrification

In general, electrifying commercial buildings requires different strategies than electrifying a residential building. For example, commercial buildings in the Commonwealth are less likely than residential buildings to rely on delivered fuels for heating, with just 16 to 25 percent of commercial buildings across all building types

using delivered fuels as their primary heat source.[111] In the 2025-2027 term, the PAs will take a bifurcated approach to electrification in small versus large buildings. There are more near-term opportunities to electrify smaller buildings, because there are often "drop-in solutions," meaning existing technologies can be installed without the need for large-scale changes to facility infrastructure. The PAs will continue targeting electrification measures in smaller buildings primarily through the rapidly expanding Heat Pump Installer Network and through the Small Business Turnkey Retrofit program.

The PAs have established deliberate, long-term strategies to electrify large commercial buildings. Larger buildings are generally harder to electrify using current technologies. They typically require modifications to ventilation, hot water distribution systems, and building controls. Without these modifications, there are often no readily available efficient electric heating solutions. During the 2022-2024 term, the PAs established a consistent technical approach to helping large C&I customers understand the feasibility and steps necessary to electrify a building. In the 2025-2027 term, the PAs will expand on this approach by conducting these studies for entire building portfolios. The goal is to prioritize which facilities and building upgrades to address, establish a phased approach to implementing these upgrades, and track progress over time toward customers' long-term decarbonization plans.

Even with this new approach, C&I electrification remains extremely challenging due to the high upfront capital investment needed to cover installation costs, minimal opportunity for operating savings, currently available technology, a growing but still limited workforce with expertise in large building electrification, limited customer understanding and confidence in the technology, and disruptions to building occupants imposed by time-consuming retrofits of heating and cooling systems. While some customers are motivated to electrify to meet climate goals, many are highly price sensitive and can only afford to make investments if they result in near-term financial benefits.

Greenhouse Gas-Centered Measures

The PAs are introducing a new class of measures designed primarily to reduce GHG emissions, with energy consumption reductions as a secondary objective, including:

- Refrigerant emissions mitigation for grocery stores.
- Carbon capture and sequestration from combined heat and power facilities.

[111] DNV GL, "Massachusetts Commercial and Industrial Existing Buildings Baseline Study." Not yet published.

- Embodied carbon reduction in new construction.
- Behind-the-meter gas leak remediation measures.

What differentiates these measures is that while some have marginal energy benefits, the primary benefits arise from emissions reductions achieved at a low cost per unit of CO_2e reductions. Similarly, the PAs will support the mitigation of behind-the-meter natural gas leaks and claim the global warming potential benefits with methane emissions.

Existing Building Commissioning

Existing building commissioning ("EBCx") is a process in which buildings undergo an intensive installation and operational verification. The PAs will introduce a new approach to supporting EBCx, involving the recruitment of specialized commissioning agents and a streamlined process for reporting savings, with the goal of initiating the commissioning of 500 to 1,000 facilities this term. This process will identify deeper energy savings and decarbonization potential. The new EBCx approach will cover both one-time retro-commissioning and continuous or "monitoring-based commissioning." The process will begin with a study that includes an in-depth assessment of building systems by an EBCx provider, followed by implementation of measures identified by the study, typically beginning with low-cost, system-tuning opportunities. This effort will drive near-term savings by optimizing the performance of existing controls and equipment, while identifying opportunities to implement new capital measures, most notably controls upgrades, envelope improvements, and heating, cooling, and ventilation retrofits.

Enhancing Program Access for All

The PAs will introduce the following enhancements, primarily in the Small Business Turnkey Retrofit program:

- Expanding the Customer Directed Option to recruit new installers and streamline offers statewide.
- Coordinating between the PAs and lead vendors so customers are served by a single vendor and standardizing the assessment and proposal process.
- Engaging with commercial landlords through enhanced incentives, increased outreach and marketing efforts, new landlord and commercial renter-facing resources, and coordinating decision making between commercial renters and landlords.

- Offering enhanced incentives to select tax-exempt entities, including but not limited to charities, religious organizations, and veterans' organizations, to promote comprehensive energy measures. The PAs will also enhance outreach strategies in the community.

Beyond the efforts described above, the PAs will build upon the success of past Main Streets efforts and continue to focus on environmental justice communities and enhanced community outreach strategies. Main Streets events are coordinated efforts to get many small businesses in a particular community to complete energy assessments and upgrade their facilities. In the 2025-2027 term, the PAs will reduce the number of events to ensure vendors have bandwidth to conduct more comprehensive assessments and interventions. The Program Administrators will also implement elements of the Language Access recommendations developed in collaboration with the Equity Working Group.

In addition to small business efforts, the PAs will undertake several supplier diversity activities, described in section 3.4.4: Workforce Development. Finally, the PAs will increase support for schools located in environmental justice communities. Although the details are still being finalized as of this April 1st draft of the Plan, they are likely to include additional technical or administrative support as well as enhanced financial incentives. The PAs have an ongoing collaboration with DOER and other public sector entities to finalize this approach.

Deliver a State-of-the-Art Customer Experience

The PAs are taking several steps to improve the experience for participating customers and contractors. One area of focus is ensuring consistent program delivery. Although the Program Administrators generally provide a consistent experience, inconsistencies arise in some circumstances. For example, custom projects inherently require project-specific treatment. The PAs have developed standard project guidelines, processes, and tools to improve consistency, which will be reinforced and implemented under new governance practices in the new term. Another source of inconsistency results when individual PAs experiment with new strategies to drive innovation. This is a great strength of the PAs' implementation model because as successful strategies mature, they are adopted statewide. Examples in the 2025-2027 Plan include Eversource's Small Business supplier diversity effort, National Grid's monitoring-based commissioning approach, and the Compact's offer for charitable organizations.

The PAs are also making strides to coordinate with common vendors, especially in split territories, where customers are served by different electric and gas PAs. This includes a shared stable of technical assistance vendors who can provide support for both electric and gas measures and projects. The PAs continue to introduce new custom express tools and prescriptive tools to calculate savings and incentives, easing the

process of quantifying energy savings. The PAs are also working toward an online platform to host these calculators. The net effect of the efforts described above will lead to higher customer satisfaction, increased speed and accuracy of energy efficiency and decarbonization projects, improved customer support, and ultimately increased program adoption.

C&I Program Overview and Eligibility

The C&I programs provide incentives, technical assistance, and other services to all non-residential customers, including businesses, public agencies, multifamily properties, and institutional customers, both large and small.[112] Customers consuming less than 1.5 GWh per year of electricity or 40,000 therms of gas qualify for the Small Business Turnkey Retrofit program.[113] The PAs serve C&I customers through the five programs shown below.

Figure 23: 2025-2027 C&I Core Programs

Core Program	Description
ConnectedSolutions	Provides system benefits by reducing the long-term capacity, transmission, and distribution costs by offering incentives to encourage active demand response, both on peak days (Targeted Dispatch) and throughout the summer season (Daily Dispatch)
Equipment Rebates & Instant Incentives	Focuses offerings on equipment and product categories that will benefit large groups of commercial, industrial, and municipal customers with financial support to buy down equipment costs at the distributor level (Instant Incentives) and after purchase (Equipment Rebates)
Existing Buildings	Provides incentives, technical assistance, and other services to help customers reduce their energy costs and decarbonize their operations. All non-residential customers are eligible, including commercial, industrial, institutional, and public agency customers – with a focus on mid-to-large customers
New Buildings & Major Renovations	Encourages and supports customers and their design/contractor teams in achieving all-electric, low energy-use building solutions to transform the market practices and speed up adoption of these solutions
Small Business Turnkey Retrofit	Addresses the unique needs of small and microbusiness customers in achieving energy efficiency goals by providing technical assistance/site assessments, installation services, and incentives through contractors selected by either the PAs (Small Business Services vendors) or customers (Customer-Directed Option).

[112] Multifamily properties with commercial meters are also eligible for the C&I programs. These customers follow the standard rules for each core program, with the budgets and savings reported as a separate program.

[113] For Unitil customers, the Small Business Turnkey Retrofit cap is 1.0 GWh per year.

3.3.1 New Buildings & Major Renovations

The goal of the New Buildings & Major Renovations program is to encourage and support customers and their design/contractor teams in achieving all-electric, low energy use building solutions in the commercial, industrial, institutional, and municipal new construction and major renovation markets. This is implemented in a way that transforms those markets toward these solutions faster than would occur absent program interventions and enables energy code to require them. As the Program Theory and Logic Model included in the *C&I New Construction Program Planning & Market Effects/Spillover Study* conducted by NMR and EMI (dated April 15, 2020) states, the program is comprehensive in nature, bringing together customer incentives, technical support, and education/training with the combined intent of transforming the way commercial buildings are designed and built in the Commonwealth.

Project types that PAs serve with this program include ground-up new construction of whole buildings or additions, major renovations of entire buildings, or substantial alterations in connection with events like tenant or space-use changes. The program is the PAs' primary vehicle for leading customers and the Massachusetts C&I design, construction, and developer community toward net zero, zero carbon, and low Energy Use Intensity ("EUI") building outcomes. The PAs' vision is to empower building developers, design teams, contractors, and end-use customers to create buildings that perform exceptionally, have the most efficient non-emitting energy systems, and deliver indoor environments that support happier and healthier occupants and higher productivity for the Commonwealth's businesses and institutions.

Starting in 2025, new buildings must have all-electric energy systems to participate. All ground up new construction projects participating in the program are required to be fully electric for space and ventilation air heating, domestic hot water heating, and kitchen equipment with only limited exceptions for natural gas connections. The program shifted to prohibit natural gas use in participating new buildings started in January 2024; however, the PAs note that some major renovation projects may still include some natural gas equipment in the 2025-2027 term.

The PA support and communication with customers and design teams in the program pathways has always been handled in an integrated, streamlined fashion. When there are two PAs serving a customer, the electric PA takes the lead in enrolling the project, securing vendor support, and leading communications with the project team. While each PA issues its own incentives, the program support, like the program offers itself, is holistic and integrated.

In support of its market transformation mission, the New Buildings & Major Renovations program includes direct customer incentives and design team support as well as education and training efforts, all geared toward accelerating the pace of learning and executing design and construction practices that, at this time, are new to most market actors, familiar to some and led by a few.

Program Design

Eligible projects include commercial, industrial, institutional, or municipal new buildings or major renovation projects of any size[114] or level of complexity. New buildings must have all-electric energy systems in order to participate, with limited exceptions, and must be served by an electric PA.[115] Major renovations could still have some gas equipment, and, therefore, any customer with an existing active account with an electric or gas PA is eligible. Multifamily projects are supported through the Residential New Homes & Renovations program (see section 3.1.1).

The PAs work with customers on new buildings and major renovations to help them achieve the lowest GHG emissions and EUI outcomes possible. EUI is a measure of a building's predicted or actual annual energy use divided by its square footage. Dividing by square footage normalizes energy use so that the performance of similar buildings (i.e., schools or offices) can be compared to one another. EUI is a quite simple metric and it is similar to the miles per gallon metric that most people understand, except instead of miles and gallons, it is building energy use and square footage where the lowest possible EUI is best (e.g., a 25 EUI is considered optimal for K-12 schools and a 30 EUI is excellent for an office building). The *C&I New Construction Program Planning & Market Effects/Spillover Study* conducted by NMR and EMI (dated April 15, 2020) laid the groundwork for using EUI as the foundational element in the multi-pathway approach to the New Buildings & Major Renovations program support that the PAs launched in the summer of 2020. That report affirmed that "Charrette discussions, focus groups, and IDIs [in-depth interviews] with market actors and industry experts expressed overwhelming agreement that using EUI is the best step forward, calling it a "pure metric" and "*the* approach."

Project teams who set and work toward optimal target EUIs that represent decarbonized building outcomes can more easily stay on track for successful operational outcomes. Importantly, a low EUI target optimizes the building design in three critical ways with a single number that: (1) helps project teams design for the lowest

[114] Projects under 10,000 sq. ft. are only eligible for Path 3.

[115] New buildings that will be served by a municipal electric utility will not be eligible for the New Buildings & Major Renovations program.

possible energy need or load, (2) forces electrification if the EUI target is set low enough, because only electric buildings can meet ultra-low EUI targets and on-site combustion typically increases EUI, and (3) forces the highest energy efficiencies for equipment specified to meet the building's load. Finally, beyond helping to optimize the design, EUI is measurable. Project teams can measure a rolling one-years' worth of energy use and divide it by square footage, thereby checking over time to make sure the building is operating at the energy levels and efficiencies the project team intended, year over year.

Program Pathways

The New Buildings & Major Renovations program has three participation pathways aimed at comprehensive all-electric and energy-efficient whole building solutions and long-term market transformation. New buildings may only participate if they include all-electric systems. Only limited exceptions for fossil fuel use are allowed as noted in the pathway descriptions below. The exceptions simply allow fossil fuels to be included in niche situations. The PAs will not support fossil fuels with incentives or any other assistance in any of these instances.

The all-electric requirement for new buildings is an important pillar of the market transformation framework of the program. The PAs promote all-electric systems in directional alignment with, but in advance of, current state base energy code, Stretch Code, or even Specialized Code requirements. By providing important financial support, technical assistance, and the education/training needed to accelerate market adoption of fossil fuel free new construction, the PAs, along with other policy drivers, help enable future fossil fuel free code mandates and thereby lay the groundwork for all new buildings in the Commonwealth to be constructed fossil fuel free in the future.

The three New Buildings & Major Renovations program paths are described below.

Path 1: Net Zero & Low EUI Buildings

"Path 1" is the flagship New Buildings & Major Renovations participation offer, where the PAs offer the highest incentive rates of any of the three pathways, explicitly promote decarbonization, set the lowest absolute EUI targets, offer a per-ton heat pump adder, and work with customers through a one-year post-occupancy period to ensure buildings execute their low EUI target and carbon goals in operation. A project team[116] participating in Path 1 commits to designing and building with all-electric systems (they may use fossil

[116] A project team includes the project owner or developer and the design team, which is led by the architect, but also includes electrical, mechanical and plumbing engineers, sustainability consultants, energy modelers and possibly other players like commissioning agents and lighting designers.

fuels for emergency generation and for instructional purposes in science labs) and sets an ultra-low site EUI target commensurate with net zero aspirations early in the design process. A low site EUI combines load reduction, energy efficiency, and decarbonization strategies all in a single, easy to understand, easy to remember number that a project team can work toward and measure progress against at multiple intervals throughout design and later while the building is operating.

Customers and project teams in Path 1 are unconcerned with baselines and percentage reductions. They strictly focus on one all-encompassing single EUI and advance their design, construction, and operation activities toward achieving this goal. Because of the structure of the path, project types eligible to participate all have generally known load profiles (i.e., unlike speculative "core and shell" buildings where tenants are unknown or hospitals with highly variable and unknowable process loads). Typical Path 1 project types are municipal buildings of any kind, college or university (non-lab) buildings, dorms, hotels, offices, and nonprofits.

Customer incentives in this path are paid in two phases, at construction completion (Construction Incentive) and after a year of operation (Post-Occupancy Performance Incentive). The Construction Incentive is based on whether the building is built in accordance with the design, which was modeled to achieve a specific EUI outcome. The Post-Occupancy Performance Incentive, payable at the end of the one-year period of operation, is based on whether the building's operational energy use is at or below the predicted EUI.

The PAs provide several supplemental elements of support in Path 1, including the following: (1) technical assistance from a net zero expert to help optimize the design for energy efficiency and zero carbon (i.e., low EUI), (2) an additional Verification Incentive during the one-year post occupancy period for extra commissioning services that help customers assess ongoing performance and compare it to modeled predictions, taking corrective action along the way, (the Verification Incentive is intended to prevent a customer from reaching the end of the one-year performance period and being surprised at less than optimal performance), and (3) a small stipend for customers wishing to pursue certain net zero, low carbon or Passive House certifications for their projects.

Path 2: Whole Building EUI Reduction

Like Path 1, "Path 2" supports low EUI buildings, offers the same heat pump adder incentives, and, for new buildings and additions, requires all electric systems as a prerequisite to participation, with limited exceptions: (1) highly ventilated buildings (as defined in Stretch Code) or health care facilities (as defined by the Department of Public Health) where natural gas can only be used for limited space and ventilation air heating, (2) labs or vocational technical schools where natural gas can only be used for scientific research or

instructional purposes, and (3) emergency facilities where natural gas can only be used for emergency generation (diesel may be used otherwise). Buildings with existing natural gas connections can still participate in the Major Renovations offer, but PAs will not offer support for new fossil fuel equipment or count efficiency gains in fossil fuel equipment toward EUI reductions.

Project teams are required to set and design toward an EUI target, but there is no post-occupancy performance component for this path as there is in Path 1. The per-square-foot incentives in Path 2 are offered based on modeled EUI reduction (percent reduction) beyond a project-specific baseline with deeper percent reductions yielding higher incentive rates. Total incentives are paid upon PA verification that installed equipment matches the project design and energy model (this is different from Path 1, where total incentives include a component based on a year's worth of actual building performance). Path 2 is a necessary supplement to Path 1, because it enables support for projects with unknown tenants at the time of design (e.g., speculatively built commercial buildings) and projects with highly variable and difficult to predict equipment loads. These projects cannot be held in operation to absolute EUI targets established in early design (an essential element of Path 1) when much about tenant and equipment loads remains unknowable.

The PAs pay customer incentives in this path at the end of construction in one lump sum, unless they decide per each PA's policy to retain a portion of the incentive pending review of trend data or commissioning reports. Incentives are set up in tiers, with higher incentive rates available for deeper EUI percent reductions over baseline. Projects with greater degrees of electrification, load reduction, and energy efficiency yield lower EUIs making them eligible for higher per square foot incentive rates. Heat pump projects are also eligible for per ton heat pump adders, which further promote and support electrified equipment and systems.

The PAs provide supplemental support in Path 2, including technical assistance. An expert technical assistance vendor provides energy and carbon saving suggestions early in design. At the mid-design stage, the technical assistance vendor develops an energy model and interim report to inform the project team of its projected incentive. The mid-design review also presents an opportunity for PAs and the vendor to further persuade the project team to execute deeper efficiency measures that will unlock higher incentive tiers and additional incentive dollars. The technical assistance vendor produces a final energy model based on a completed project design, which is the basis for calculating the PA's incentive offer.

Path 3: High-Performance Buildings

"Path 3" is the only one of the three paths not centered on EUI reductions. Path 3 is available for tenant fit outs (e.g., retail, office, lab fit outs that are not themselves whole buildings but still fit the definition of new

construction/major renovation), small projects under 10,000 sq. ft. in size that as such are ineligible for Paths 1 and 2, projects with large process loads such as indoor agriculture or industrial facilities where setting an EUI target does not make sense, projects where customers engage PAs too late for participation in the other paths, or projects where customers do not wish to set EUI targets necessary for the other paths and may just want incentives for specific measures.

Path 3 offers customer support with a lighter touch than is available through Path 1 and Path 2; the duration of customer engagement with PAs in Path 3 is usually quite a bit shorter versus the other paths and the depth of PA technical support is also less. While Path 3 is a measure-based path, the PAs still look at the entire building design and work with customers as their interest allows them to engage in energy and carbon savings related to all end uses. This path equally promotes decarbonization with the same dollar-per-ton incentive rates as the other two paths, and for new buildings, Path 3 requires full electrification with the same limited exceptions as Path 2. If customers with small buildings (i.e., under 20,000 sq. ft.) seek only heat pump incentives, the PAs have a special application that makes support for that measure quick and easy.

In Path 3, the PAs pay customer incentives at the end of construction in one payment, unless a PA determines that holding back a portion of savings and incentive is necessary per its own policy (this procedure is the same as in Path 2). Technical assistance is available in Path 3 on a limited basis, for example, if a project team is engaging early or has unique custom measures, the PAs will bring a vendor in to help the customer with calculations and decision-making. Projects with heavy process loads, such as agricultural or industrial projects, have unique measures and usually require some technical assistance. Projects that engage late in design may access technical assistance, but PA cost sharing is limited.

Program Subcomponents

Charrettes

The PAs offer all Path 1, Path 2, and early engaging Path 3 projects as an opportunity to participate with a PA-provided technical assistance vendor in an energy charrette, which is an energy and carbon focused brainstorming session. A project team participates with the PAs and the technical assistance vendor in this deep-dive session where PAs review the incentive opportunity and participation process, and technical assistance vendors walk through each energy system in detail and review strategies to reduce EUIs and promote electrification.

Design-based technical sssistance

The PAs offer technical assistance a little differently in each program path, but the fundamental principle is the same. The PAs provide expert support to help project teams understand energy and carbon savings opportunities and make decisions about equipment and systems. Technical assistance vendors typically help conduct the design charrettes mentioned above and provide mid-design quantitative feedback to aid in customer decision-making and encourage deeper savings. These vendors also provide final reports that document the energy and carbon savings customers can expect and that PAs will claim. The PA and technical assistance vendor combination also weaves in information for customers regarding other energy-related offerings, such as EV-supported ADR (active demand response). The PAs see their role more broadly as brokers of any information, Mass Save-related or otherwise, that can help customers make decisions on energy or carbon-saving equipment and systems. To that end, PAs make customers aware of IRA tax credits and deductions that, in combination with Mass Save support, can sway decision makers.

Customer incentives

The incentive structure varies by path. Base incentive rates for both Paths 1 and 2 are based on a dollar-per-square-foot framework to intentionally give customers clarity early in design on the incentive potential for their project and to holistically drive energy reduction and decarbonization. The dollar-per-square-foot incentive framework contrasts with offering incentives based on predicted energy savings which take longer to calculate, especially for large, complicated projects. Since Path 3 is not an EUI-based offer, the incentives for that path are measure based and are all semi-custom. The PAs offer set $/kWh and $/therm rates in Path 3. However, since most Path 3 projects have fairly simple energy systems, an energy model is not required in this path, and technical assistance vendors can provide much faster spreadsheet-based energy savings calculations the PAs can use to assign incentives and influence projects.

In all three paths, the PAs offer the per-ton heat pump incentive rates, which also provides upfront clarity to customers regarding incentive potential so that they can use incentive support to make early design decisions. In addition to the core program incentives, these additional incentive adders are available:

- **Verification incentives.** The PAs offer verification incentives for Path 1 and Path 2 projects. They are intended to support the effort needed to evaluate building performance once construction is complete and compare that performance to predicted or modeled EUI performance. Specifically, Verification incentives support fees associated with having a vendor pull equipment trend data and building energy use data at multiple intervals after construction is complete. Vendors analyze the data and coordinate corrective action with subcontractors, commissioning agents, and the

owner. This work is intended to bring operational results in line with predicted or modeled expectations. It is a tool that the PAs and project teams can use to ensure persistence of savings.

- **Certification incentives.** The PAs provide a small stipend for Path 1 projects to encourage customers to pursue formal certifications for net zero, zero carbon, and Passive House status.
- **Codes & standards.** Also included within the New Buildings & Major Renovations program is the CSCS (Codes and Standards Compliance and Support Initiative). The CSCS offering includes education and outreach to the building industry to improve compliance with the current energy code and technical support to accelerate the development and adoption of more efficient codes and standards.

Program Barriers

Training and experience

Architects, engineers, and contractors are not all experienced in delivering all-electric, energy-efficient buildings. The New Buildings & Major Renovations program tackles this barrier with its pathway incentive support and technical assistance, aiding project teams as they gain experience one project at a time. In addition, PAs have provided education, training, and case study opportunities that improve overall market actor knowledge and broadly increase awareness of and confidence in newer technologies and design practices. PAs developed and delivered many of the educational and training sessions in collaborating with other influencers, such as the Massachusetts Clean Energy Center, Built Environment Plus, the Massachusetts School Building Authority, and several other organizations.

Increased first costs

Customer incentives are designed to offset a significant portion of the incremental capital costs associated with fully electric, low EUI buildings compared to baseline buildings.

Electricity is not the cheapest fuel

Heating is more expensive with electricity, even efficient electricity, than natural gas. The higher operating costs of even efficient electric buildings relative to fossil fuel buildings is a fundamental barrier to full market transformation.

Skepticism regarding accessibility of Inflation Reduction Act tax credits

The federal IRA tax credits, particularly for ground source heat pumps, are a game changer in the new construction space, particularly with the new direct pay option that makes tax credits accessible to non-tax-paying entities. K-12 schools, other state and municipal projects, and nonprofits may now access very sizable tax credits once a ground source heat pump system is placed in service. Combined with PA support, the IRA tax credit makes ground source heat pumps financially viable. However, the detailed requirements laid out in the IRA, the slow roll out of regulatory guidance, and the fact that no one has yet seen these tax credits flow to a traditionally tax-exempt entity mean that project teams are hesitant to rely on them as they make HVAC system selection decisions today.

The PA role in this space is to make sure that the New Buildings & Major Renovations program offers align with the IRA tax credits and that customers understand their availability. The PAs have developed workshops alone and in coordination with other market influencers (e.g., Massachusetts Clean Energy Center, Built Environment Plus, etc.), bringing in tax experts who provide as many details as are available on how to calculate potential tax credit dollar amounts and how/when to access and file for the credits. The PAs also raise IRA tax credits in design charettes and advise project teams to include IRA tax credits as well as Mass Save incentive support into life cycle cost analyses that inform decision making.

Program complexity

Some customers do not wish to have extended, multi-year relationships with the PAs and may prefer an energy conservation management-based engagement that is quick and easy. While the program is fundamentally a holistic offer centered on looking at all building energy systems and optimizing them as an integrated unit, the PAs understand that some customers, especially those with small projects, may not desire that type of detailed and often lengthy engagement. With that in mind, PAs continue to make Path 3 available. Path 3 is an energy conservation measure-based path where customers can participate a la carte on a measure-by-measure basis. In Path 3, customers can seek incentives for just one or multiple measures. The PAs recently added a dedicated application for heat pumps to facilitate engagement with projects under 20,000 sq. ft. where customers may only seek heat pump incentives.

How the Program Impacts Plan Priorities

The PAs seek to deliver the New Buildings & Major Renovations program to any available and eligible new buildings and major renovations, combing construction data bases, mining industry newsletters, and building relationships with architects, engineers, developers, and customers to do so. The PAs require participating new

buildings to be all electric. Major renovations may still include some gas equipment; however, PAs offer sizable heat pump incentives on a per-ton basis for all program projects to move customers toward full electrification regardless of project type. The new building electrification requirement deepens PA commitments to building decarbonization. In addition to focusing on space heating heat pumps, the PAs also emphasize heat pump water heaters as that equipment also reduces EUIs for Path 1 and 2 and can garner an equipment-based incentive in Path 3 as well.

The Massachusetts PAs steer New Buildings & Major Renovations participants to EV charging and demand response programs during the charrette process, de-siloing the various offers and bringing them together for customers in a centralized fashion.

Strategic Enhancements

Enhancement #1: Promoting all-electric new buildings

As noted, in a move that positions the PAs to unambiguously focus on zero carbon new buildings, all ground up new construction projects participating in the New Buildings & Major Renovations program are required to be fully electric for space and ventilation air heating, domestic hot water heating, and kitchen equipment with only limited exceptions for natural gas connections. Even for the largest exception (for highly ventilated buildings, such as lab buildings), the PAs require a minimum amount of heat pump space and ventilation air heating electrification. Other exceptions to the prohibition on natural gas use are for limited gas use situations that are deemed necessary or where there are no alternatives (examples include natural gas necessary for research purposes in labs and natural gas for emergency generation in buildings designated as emergency facilities). The program shift to prohibit natural gas use in participating new buildings started in January 2024. Major renovations may still include some natural gas equipment.

Enhancement #2: Embodied carbon

The PAs propose to include an embodied carbon reduction incentive adder, offering customers a tiered incentive structure that matches the support framework offered elsewhere in the program, to support avoiding whole-life carbon emissions. The proposal promotes percentage reductions in GHG emissions in a building's structural elements, its enclosure, and interior walls. For these building elements and subject to further research, PAs envision offering increasing incentive support for projects that achieve 10, 20, or 30 percent reduction in carbon. Offering support for embodied carbon reduction will position the PAs as a leader in the evolving landscape of whole-life carbon accounting. The adder places a strong emphasis on reporting

methods and benchmarking, committing to accuracy, transparency, and continuous improvement in reducing GHG emissions associated with new construction and major renovation projects.

Enhancement #3: Grid-interactive efficient buildings

The PAs are developing an approach to promote grid-interactive efficient buildings that can curtail and/or shift load during demand events. The best time to enable these strategies for a new building or major renovation is during design. The PAs intend to promote early consideration of solar interconnection and battery storage alongside other curtailment strategies. Enhanced technical assistance will feature prominently in this offer of support.

Enhancement #4: Education and training

The long-term strategic goal of the New Buildings & Major Renovations program is that all new buildings will be designed as zero carbon and low energy use buildings. The program dovetails with code advancements in the Commonwealth that are moving in that direction. Programmatic support historically has underpinned municipalities' willingness to adopt and maintain the Stretch Code and more recently the Specialized Energy Code. Program support increases customer ability to implement the added requirements that Stretch and Specialized Codes present. As the PAs look ahead to a probable net zero base code in the near future, PAs plan to continue to support individual projects one at a time, but also help ensure that the design, construction, and contractor community is prepared and has experience with design and construction practices that will become necessary and commonplace by 2030 and beyond. To this end, the PAs will explore opportunities during the 2025-2027 term to identify training needs for the design and construction community and will work toward partnering with outside organizations to deliver training that fills those needs.

Figure 24: New Buildings & Major Renovations Program and Incentive Summary Table

	Path 1: Net Zero & Low EUI Buildings	Path 2: Whole Building EUI Reduction	Path 3: High-Performance Buildings
Objective	Promote and support fully decarbonized buildings that seek net zero or net zero ready status with ultra-low EUI as measured after a year of operation	Promote and support decarbonized buildings with the greatest percent EUI reduction possible by setting a design based EUI target, working with project teams toward that target, and ensuring buildings are built in accordance with the design	Promote and support decarbonized and energy efficient buildings with a nimble measure-based approach to savings and incentives

	Path 1: Net Zero & Low EUI Buildings	Path 2: Whole Building EUI Reduction	Path 3: High-Performance Buildings
Eligibility/target building sizes	Building projects that have 10,000 sq. ft. or greater heated and cooled space. Customers are interested in full electrification of their building, wish to set an EUI target, and want to measure performance in operation	Building projects that have 50,000 sq. ft. or greater heated and cooled space. Projects in this path cannot meet the ultra-low EUI targets required for Path 1 or are projects where future loads are unknowable such that an absolute EUI target cannot be determined, and a percent reduction metric is more suitable	Projects of any size that engage too late to participate in Path 1 or 2, projects where customers are only interested in or only qualify for incentives for one or two measures (e.g., heat pumps), customers who do not wish to set and work toward a comprehensive EUI target, projects where process loads savings offer the main opportunity for incentives, tenant fit outs
Fossil fuels allowed?	No. The only exceptions are for emergency generation or propane in science labs.	New buildings must be fossil fuel free unless they meet limited exceptions	New buildings must be fossil fuel free unless they meet limited exceptions
Example project types	Municipal buildings, university academic buildings, dorms, hotels, offices	Vocational Technical K-12 schools that can't meet the ultra-low EUI targets for Path 1, speculatively designed commercial real estate projects where future tenants are unknown (e.g., lab/office projects), hospitals or other buildings with unpredictable or unknowable process loads	Cannabis or other grow facilities, a 5,000-sq. ft. new building where customer solely wants a heat pump incentive, lab or retail/restaurant fit outs in new buildings or where there is a change of tenant in an existing building, buildings of any kind where the customer engages with PAs late in design
Construction incentives	Offices, K-12 Schools, libraries, hotels, and public safety buildings have two tiers available to them and can achieve either $1.50/square foot or $2.00/sq. ft. depending on the tier. All other building types require a project specific EUI target and are eligible for the $2.00/sq. ft.	Four percent reduction tiers (percent reduction brackets vary by building type). Tier 1: $1.25 per sq. ft. Tier 2: $0.75 per sq. ft. Tier 3: $0.50 per sq. ft. Tier 4: $0.35 per sq. ft.	All measures other than heat pumps supported at $0.35/kWh and $2.00/therm

	Path 1: Net Zero & Low EUI Buildings	Path 2: Whole Building EUI Reduction	Path 3: High-Performance Buildings
Heat pump incentives	• Air source heat pumps: $800/ton • Variable refrigerant flow ("VRF"): $1,200/ton • Ground source heat pumps: $4,500/ton	• Air source heat pumps: $800/ton • VRF: $1,200/ton • Ground source heat pumps: $4,500/ton	• Air source heat pumps: $800/ton • VRF: $1,200/ton • Ground source heat pumps: $4,500/ton
Embodied carbon incentive	Three tier incentive offering: • Tier 1: 10% reduction (tCO_2e) • Tier 2: 20% reduction (tCO_2e) • Tier 3: 30% reduction (tCO_2e) ***Incentive amounts TBD**	Three tier incentive offering: • Tier 1: 10% reduction (tCO_2e) • Tier 2: 20% reduction (tCO_2e) • Tier 3: 30% reduction (tCO_2e) ***Incentive amounts TBD**	Three tier incentive offering: • Tier 1: 10% reduction (tCO_2e) • Tier 2: 20% reduction (tCO_2e) • Tier 3: 30% reduction (tCO_2e) ***Incentive amounts TBD**
Post-occupancy performance Incentives	$1.50/ sq. ft. plus additional 5 cents per sq. ft. for each EUI point below the target EUI	N/A	N/A
Certification incentives	$3,000 available to projects that receive formal net zero or Passive House certification from program-designated bodies	N/A	N/A
Verification incentives	50% of fee up to $10,000	50% of fee up to $10,000	N/A
Technical assistance	50% of fee up to $10,000 for net zero vendor support in early design, 100% coverage of fees for modeling necessary to document PA savings, and 100% coverage of fee associated with true up of energy savings upon collection of operational data after a year of occupancy	75% of fee up to $20,000 supports the services of an energy expert who provides advice during design, offers mid-design feedback and develops the energy model that will inform customer decisions and determine the project's percent EUI reduction for incentive purposes	Up to $7,000 of fee covered without customer cost share if project team engages PAs early in design and project exceeds 10,000 sq. ft. Up to $4,000 of fee covered with late engaging projects that are still in design and are 10,000 sq. ft. or greater. Fees in excess of these amounts are split evenly between customers and PAs

3.3.2 Existing Buildings

The Existing Buildings program provides incentives, technical assistance, and other services to help customers reduce their energy costs and decarbonize their operations. All non-residential customers are eligible, including commercial, industrial, institutional, multifamily, and public agency customers, with a focus

on mid-to-large customers. The program offers a menu of incentives and technical services to encourage building owners to replace existing equipment with more efficient options, replacing fossil-burning equipment with electric alternatives, implement energy-saving facility improvements, optimize systems and processes, and deploy other strategies to reduce energy consumption and GHG emissions. The program is designed to guide and support customer purchasing decisions through clear and simple program requirements, meaningful and dependable incentives, and technical support.

Program Design

The Existing Buildings program offers prescriptive incentives for more common and scalable technologies, and custom incentives when a unique characteristic of the customer, site, or process requires project-specific analyses of energy savings and installed costs. All cost-effective opportunities to reduce natural gas, delivered fuels, and electric energy and demand are considered, as allowed by law.

Customer engagement process

Customers typically begin the engagement process in three different ways:

1. PA reaches out to customers to explore opportunities.
2. Customer reaches out to PAs to explore opportunities.
3. A vendor or other trade ally initiates the engagement process.

Once the engagement process has begun, the details of the engagement vary widely depending on the needs of the customer. The first step is typically an assessment of a facility, a system, or a specific measure that a customer or vendor is seeking to implement. Specific study details are described in the Technical Assistance section below. The customer or vendor then completes an incentive application form, the PA typically provides a letter committing an incentive to the customer, provided the customer completes the project within a specified timeframe. The customer then works with a vendor to complete the project, after which the PA inspects the project to ensure it conforms with all stated requirements. In some cases, the PAs will also monitor the project to verify operation or conduct a follow-up visit to identify and correct any issues with project operation. Then the PA pays the incentive.

Prescriptive Incentives

The Existing Buildings program incentivizes measures that provide predictable energy savings relative to industry standard practice and result in cost-effective savings over the life of the measure. Incentives are available for the installation and optimization of a long list of measures, including lighting with controls, HVAC

equipment and controls, motors and variable frequency drives, spray valves, steam traps, and electric forklifts. Prescriptive incentives often serve as the customer's initial exposure to the PAs' efficiency programs and may lead to more complex custom projects. Prescriptive measures have demonstrated predictable savings across a wide universe of applications and can therefore be offered to customers through a simplified application and approval process that relies on deemed savings calculations.

Custom Incentives

The program also offers incentives for projects implementing measures that are not covered by the prescriptive offers, meaning there are project-specific savings calculations. Due to the successes of the C&I incentive programs over the years at transforming the market, especially with lighting, to continue helping customers save energy and reduce their GHG emissions, the PAs will need to pursue an increasingly complex measure mix in the 2025-2027 term. Many of these measures require site-specific evaluations to assess their merit and energy saving potential. The PAs evaluate the energy impacts and costs to implement these projects to determine appropriate incentive levels for custom projects. Where PAs see similar custom projects repeatedly, new prescriptive offerings may be developed to better support these measures and improve the customer experience when implementing them.

The PAs provide customers with access to expert technical assistance, using both their own technical staff and preferred engineering vendors (independent energy advisors) drawn from a pool of private-sector engineering consultants that meet the PAs' criteria for expertise and experience. Technical assistance is leveraged to help customers wherever they are in their energy saving and decarbonization journey, from high-level planning for the future to scoping studies that quickly assess the feasibility of efficiency and decarbonization opportunities at a site to detailed calculations and reporting on impacts of implementing specific measures.

Delivery Pathways for Existing Buildings

Serving medium and large customers - Managed account approach

The managed account approach is focused on learning the customers' unique needs and opportunities and connecting customers to the resources and offerings best suited to their circumstances. All PAs offer managed account services for some sub-set of larger C&I customers. Most medium and large customers have access to Program Administrator representatives and trade ally networks.

The PAs have built up internal staff with direct experience and engaged vendors with expertise in the manufacturing and industrial space, commercial real estate, healthcare, hospitality, grocery, institutional, and other distinct business segments. Specialized vendors and program staff help customers identify and solicit pricing from contractors, determine incentive levels, complete savings calculations, and manage program documentation. The PAs have also built networks of pre-approved design and installation contractors. These services are especially employed by municipal customers that receive Green Communities funding. The PAs have continued to learn the language of their customers, improving the experience for customers while deepening their ability to work with facility managers across the spectrum of sectors and segments to identify, scope, and specify projects.

Memorandum of understanding

For the largest customers, including large manufacturers, university campuses, cities, and large healthcare systems, the PAs encourage the use of multi-year memorandums of understanding ("MOUs") to facilitate longer-term energy efficiency projects that achieve greater depth and comprehensiveness and align with customer long-term goals and vision. The MOU identifies shared goals, defines the relationship between the customer and the PAs, and outlines a plan to achieve the shared goals. It may also specify incentive structures. These large customers have resources and management-planning horizons that allow for this more intensive shared partnership. Often, there are larger complex opportunities available in these customers' facilities that offer significant energy and cost savings opportunities. The maturity of the relationships and the multiple projects completed with these larger customers over preceding plan periods means much of the efficiency savings potential from these customers' facilities may already have been secured. However, the relationship continues to help these customers pursue measures that can reduce the amount of fossil fuels burned at their facilities.

The success of MOUs translates into savings for these large customers. In addition, the creative and innovative approach that is inherent in shared explorations and project development with these large customers provide the PAs with insights that can be applied to medium-sized and smaller customers in the same segments whether through the Account Management pathway or a tailored segment-delivery path. There can even be payoffs for businesses that use the Small Business pathways as new technologies are proven in the field and are added as prescriptive offerings to turnkey delivery.

Incentive application forms

The incentive application forms must be completed for a customer to receive an incentive. These forms are designed to be simple and clear to allow customers to easily submit the required information needed for the Program Administrators to provide incentives. These forms set project eligibility requirements, collect customer/vendor/project information, establish program rules, and convey important terms and conditions related to program participation. The PAs update these forms regularly to continually improve their effectiveness and ease of use. The measures covered by the Existing Buildings program are processed by internal staff or as outsourced by individual PAs.

Incentive application forms are completed prior to commencement of measure implementation of energy efficiency or decarbonization measures. After the completed form is submitted, the PAs will review and address any issues, and provide an official commitment to provide an incentive on the condition of completed work. For measures whose impacts depend on proper accounting of existing conditions, the PAs may opt to conduct a site inspection. Once the measures are implemented, the customer will notify the PA by resubmitting the completed incentive application form, signing the section affirming measure installation and noting any changes that may have occurred. The PAs will confirm measure implementation through document review and site inspections as needed. The PAs will then notify the customer and pay the incentive.

Customers seeking custom incentives would complete the custom application form. This form requires a written project description including a detailed write-up of the baseline conditions as well as the conditions of the proposed design. The energy and demand impacts from implementing the measures, the non-energy impacts (e.g., maintenance cost savings), and implementation costs are also requested on this form. Additionally, the custom application includes a Minimum Requirements Document requiring the submitter to describe in detail what equipment must be installed, and the operational parameters needed to satisfy the requirements of the custom project implementation. The operational parameters may include the sequence of operation as well as any trended data or metering that may be required after installation to demonstrate proper implementation. The Minimum Requirements Document provides the customer with clear instructions of what must be implemented and verified in order to realize the project savings and receive the custom incentive. All cost-effective energy savings measures are considered for a custom incentive. Custom incentives are determined by the PAs after evaluating the installed costs and energy savings relative to a project benefit-cost ratio screening that considers project costs, energy savings, and non-energy savings impacts.

Projects seeking prescriptive incentives must complete the relevant prescriptive application form. Prescriptive application forms include a collection of simple, repeatable measures. These forms require a

simple set of inputs to determine the incentives available for the project. A list of prescriptive measures in the Existing Buildings program is provided in Figure 26 below. The PAs are constantly evaluating the measures offered through the program and will adjust incentives and remove or add measures as required to meet market needs.

Non-energy reducing greenhouse gas saving measures

The PAs are committed to helping customers reduce site energy consumption through energy efficiency and electrification of space heating and other end uses as this remains the most effective path towards reducing GHG emissions in the built environment. Concurrently, the PAs are uniquely positioned to support other strategies to directly reduce the volume of harmful gases being released into the atmosphere from customer facilities. These efforts allow the PAs to remain a trusted partner for customers searching for near-term decarbonization solutions, especially for those without a feasible path toward electrification in the short term. The PAs will offer three measures for existing buildings in the 2025-2027 term that may or may not reduce site energy use but will result in significant reductions in GHG emissions per dollar of spend.

- **Carbon capture, utilization, and sequestration.** Carbon capture refers to technologies that capture CO_2 directly from the exhaust stream of equipment burning fossil fuels. This CO_2 can be liquefied and transported to industrial facilities to either be used in an existing process, such as in the beverage industry, or permanently stored in a medium, such as the concrete industry, where the CO_2 will never make it to the atmosphere. The PAs will target customers with significant barriers to electrification, particularly those with large or recently installed combined heat and power or fuel cells.
- **Behind-the-meter gas leak mitigation.** The PAs will offer support to identify and repair natural gas leaks on the customer side of the meter. This will be offered to customers with large natural gas distribution systems on their property and the identification and repair of these leaks go beyond the routine maintenance. While this measure will not affect the amount of natural gas consumed by fossil fuel-burning equipment at the site, it will reduce the amount of natural gas supply required at the site. Natural gas is predominately made up of methane, which is estimated to be between 27 and 30 times more potent than CO_2, a byproduct of burning natural gas, in terms of global warming potential.[117]

[117] See US EPA, "Understanding Global Warming Potentials," last updated Apr. 18, 2023.

Gas leaks are identified through a survey using portable infrared lasers and optical gas imaging cameras. Leak rate is quantified through use of an optical-based high-flow natural gas sampling device, which pulls air from around the gas leak to measure flow rate and methane concentration. Engineering data (including direct measurements of pipe diameter, air/gas pressure) and facility gas usage can be used to corroborate and calibrate leak results from the sampler equipment. After the survey is completed, leaks are repaired through welding broken pipe or replacing broken pipe segments or fittings. Custom incentives are paid per estimated leaked therm, reflecting energy savings achieved after leak repair, capped at the cost to repair leaks.

- **Refrigerant emissions mitigation.** Most grocery store refrigeration equipment relies on high GWP (Global Warming Potential) refrigerants. Because of the large quantity of refrigerant used in many grocery stores in refrigerated food displays, storage areas, and the amount of piping required to move the refrigerant through the store, grocery systems are particularly prone to refrigerant leaks. These leaks may represent over 70 percent of a typical grocery store's GHG emissions, even when they are compliant with EPA refrigerant leak rate requirements. During the 2025-2027 term, the PAs will support customers mitigating these significant emissions and improve system energy performance through two proposed measures.

  First, the PAs will provide incentives for detailed leak detection surveys and leak repairs, intended to reduce leak rates for locations using high GWP refrigerants. Second, the PAs will offer incentives to customers to retrofit their high-GWP refrigerants with compatible, low-GWP alternatives. These retrofits may be completed with minimal changes to the existing system, equipment and layout. To fully account for the emissions savings from these measures, the PAs will report the refrigerant emission savings as non-energy GHG savings with the Social Cost of Carbon applied.[118]

Technical assistance

The Massachusetts PAs offer an array of technical assistance to help customers understand the impact of implementing energy efficiency and decarbonization measures at their facilities. This assistance is aimed at helping customers make informed decisions by exploring implementation costs, operating costs, energy

[118] On May 26, 2023, National Grid filed a petition for approval of a mid-term modification of its 2022-2024 Three-Year Energy Efficiency Plan to support refrigerant emissions mitigation and quantify the benefits using global warming potential as the social cost of carbon. Additional detail on refrigerant emissions mitigation can be found in that filing.

savings, emission reductions, and other considerations. The PAs offer assistance for individual sites as well as for customers managing a portfolio of buildings.

- **Comprehensive building assessments.** The PAs will offer customers a high-level assessment of the current state of their building's systems and energy consumption. This assessment will identify potential energy efficiency measures and explore options for electrification of fossil fuel-burning equipment at the site. High level in nature, these assessments will provide customers with information to help decide how to proceed in reducing their energy consumption and reduce their carbon emissions. After completing a comprehensive building assessment, customers may implement measures by completing an incentive application form or proceeding with another technical assistance offering including EBCx (existing building commissioning) or a focused study.
- **Existing building commissioning studies.** The PAs will offer support for EBCx to help customers optimize the performance of their building's systems. This process will typically be initiated as a result of a comprehensive energy assessment that recommends the customer pursue EBCx to identify potential opportunities to optimize the performance of HVAC equipment and controls, lighting and lighting controls, hot water systems, refrigeration equipment, or other processes. The PAs will offer a flexible EBCx pathway where customers can be served with a scope most appropriate for their specific building(s).
- **Focused studies.** Focused technical assistance studies analyze the impacts of implementing single energy efficiency or decarbonization measures. They provide a detailed description of the affected building systems including the existing and/or baseline conditions to which the measures will be compared. Energy savings, implementation costs, and operating cost impacts are presented to give the customers confidence to go forward with implementation. These studies also provide the necessary components for completing a custom application, including the Minimum Requirements Document detailing precisely what needs to be installed and how it must be operating to realize predicted energy savings and secure an incentive. The results of a focused technical assistance study can be used to complete a custom incentive application form.
- **Specialized studies.** The PAs offer specialized studies for specific measures such as compressed air leak, steam trap repairs, commercial refrigeration, and other industrial processes. Specialized studies provide benefits to the customer by identifying niche energy saving opportunities, often providing a streamlined path towards implementation and incentives.

- **Portfolio prioritization plans.** The PAs will offer high level studies to help customers prioritize buildings within their portfolio for electrification. These plans will leverage virtual audits or brief site visits along with customer provided information about the age and condition of key building components to quickly determine where the customer should focus their decarbonization efforts in both the near and long terms. The completion of a portfolio prioritization plan will often lead to comprehensive building assessments and EBCx studies at one or more buildings within the portfolio.

- **Decarbonization roadmaps.** The PAs will offer support to customers taking a long-term approach to reducing the GHG emissions at their buildings, including those motivated by Boston's Building Emission Reduction and Disclosure Ordinance or other similar ordinances. Larger commercial buildings cannot be electrified in a cost-effective manner without proper foresight and planning. Generally targeted at customers with a portfolio of buildings, these roadmaps may also be available for customers with a single complex facility. This is a more extensive effort than the portfolio prioritization plans, requiring in-depth site assessments and collaboration with the customer to ensure sustainability goals remain in focus.

  Customers engaging in these roadmaps will often explore decarbonization strategies not directly relevant to the objectives of the Program Administrators, such as the installation of onsite renewable or purchasing renewable energy credits to offset their emissions. The PAs recognize the importance of exploring and including these strategies to paint a complete picture; however, the PAs support will be limited to those strategies that align with the objectives of the Existing Buildings program. Following the completion of a roadmap, customers may engage in existing building commissioning, a focused or specialized study, or move directly to implementation through the Custom or Prescriptive pathways.

- **Custom express calculators.** The PAs offer custom express calculators that are posted to MassSave.com. These calculators provide insight as to the energy savings derived from implementing or optimizing equipment or sequences of operation. By minimizing and standardizing the inputs required to derive energy savings outcomes, there is easier access and understanding of the parameters driving the energy savings outcomes of custom projects.

Deep Energy Retrofit offering

The Program Administrators launched the Deep Energy Retrofit offering during the 2022-2024 term specifically to help C&I customers target and upgrade buildings with significant opportunity to reduce GHG

emissions and save energy. The Deep Energy Retrofit offering operates as a complementary layer on top of the other offerings in the C&I sector (excluding the New Buildings & Major Renovations program). The offer provides participating customers with technical assistance, planning support, benchmarking, and an additional financial incentive to help them reduce their energy consumption and meet their climate goals. The Deep Energy Retrofit offering is available to nearly all commercial customers with an existing building that meets program eligibility requirements.

Multifamily buildings and buildings participating in the Major Renovations path are not eligible. Buildings must be occupied and operational for at least one year prior to engagement with no planned changes to how the building will be used. Customers must have a strong motivation and a feasible path toward significantly reducing building energy consumption and the site GHG emissions to participate in the Deep Energy Retrofit offering. Customers will have five years to reach a 40 percent reduction in GHG emissions through the implementation of energy efficiency and decarbonization measures. Reductions due to onsite renewables will not count toward reaching the Deep Energy Retrofit emissions reduction target.

Strategic Enhancements

Enhancement #1: Simplify and standardize technical review processes

The PAs recognize the need to improve the technical review process, especially for custom projects. During the 2022-2024 term, the PAs captured feedback from customers and program vendors through the C&I Working Group, a custom process evaluation, and numerous other discussions on this topic. These discussions informed the PAs' efforts to improve the experience of customers and vendors participating in the C&I programs. The PAs have made strides on this front during the 2022-2024 term and will expand on this progress in the upcoming three-year term.

To support these efforts going forward, the PAs will establish a governing body within Mass Save to coordinate technical review practices across all PAs. The charter of this body will include standardizing savings calculation tools, engineering requirements, project documentation, and both pre- and post-installation inspections and savings validation processes. This work will be done with an eye toward improving the experience of customers and vendors participating in the Existing Buildings program by providing a consistent experience, developing guidance documents, and eliminating unnecessary efforts where possible. Specific focus areas under discussion include:

- In 2024, undertaking a statewide solicitation for technical services to help ensure more consistent delivery of technical services and minimize duplicative efforts in the 2025-2027 term.

- Expanding the number of customer express tools used by all PAs and making these available to all program vendors and PA engineers on a common website or SharePoint.
- Standardizing Minimum Requirements Document guidelines, including monitoring practices, required documentation, and methods for system operating parameters.
- Establishing consistent pre- and post-installation inspection processes that improve customers' project outcomes while balancing the need to minimize the burden on customers.
- Forming a working group to improve project-level collaboration among engineers from different PAs in split electric/gas service territories, building on the work completed in 2024 in collaboration with the C&I Working Group.

Enhancement #2: Support existing building commissioning

EBCx (existing building commissioning) is a process in which building systems undergo intensive installation and operational verification. The result of these investigations is a list of energy conservation measures that when implemented will realign the building's operations with design intent and optimize system operation and energy savings outcomes. Properly commissioned buildings can result in customer benefits beyond energy savings, including enhanced safety and O&M savings.[119] Since commissioning is a process, it can be applied to all systems within a building including HVAC equipment and controls, lighting, envelope, water systems, and other processes on site.

The PAs recognize existing building commissioning as an important piece of driving energy savings in routine building operation and integral to building decarbonization and electrification. To assist customers in fully understanding their building, systems, and optimization opportunities, including potential capital improvements, the most effective EBCx investigations will couple energy efficiency assessments with comprehensive commissioning of all major building systems. Effective program support of EBCx must provide enough flexibility to allow for the significant variation in customer goals, buildings, systems, and optimization methodologies needed for improving energy savings outcomes. At the same time, program support must be structured and defined enough to drive consistent outcomes and market development.

The PAs envision a flexible EBCx pathway that includes energy assessments as well as discrete, structured technical requirements for common building systems, drawing on learnings and tools from other jurisdictions across the country. Under this approach, each set of system commissioning requirements may work as an

[119] See Building Commissioning Association. "About Us." Accessed Dec. 12, 2023.

independent module, allowing for the programs, customers, and market actors to assemble modules appropriate for each building. Customers pursuing comprehensive EBCx will take advantage of the offer across all building systems, but those interested in smaller studies or staging system commissioning investigations over time can avail themselves of commissioning modules as needed. Whether comprehensive or system specific, program staff and market actors will have consistent requirements within each module. Program financial support should scale with the number of systems investigated to encourage comprehensiveness. Building out the reliability and consistency of PA support for EBCx will allow a more robust market to develop, driving vendor support and customer demand. This more comprehensive and consistent approach to EBCx investigation is intended to ease participation and increase the number of studies and resulting energy savings opportunities.

Another aspect of customer participation beyond *the depth* of the investigation is the *frequency* of investigation. Commissioning may occur once as a single retro-commissioning instance or on an ongoing basis with the use of continuous commissioning and monitoring based commissioning, both of which deliver the same fundamental benefits of retro-commissioning but extend the investigation over time to capture more opportunities and provide more value to the customer. The PAs will update the Monitoring-based Commissioning offering to ease program delivery for vendors and improve the customer experience. Aspects of these improvements may include changes in incentive support, improved technical and participation guidance for vendors and customers, and training.

For a robust and effective EBCx process within the Commonwealth, the offer must work in concert with other Existing Building program pathways to ensure identified measures are implemented and supported, whether they be low-cost tuning measures or capital building improvements. The PAs will consider how EBCx can act as a catalyst to participation in other existing programs, which are already designed and calibrated to support capital measure implementation in particular, as well as ways that EBCx can be used more directly to facilitate low-cost tuning measure implementation and program participation. The PAs will consider how the EBCx investigation, process, and studies may be used to directly provide cost and savings estimates for low-cost tuning measures so they can be implemented and incentivized directly. The PAs believe that capital improvements will necessarily require additional planning and design, which can be referred to in the other program pathways for development.

The PAs will help cover cost of the EBCx investigation, process, and studies, provided the vendor and customers meet all pre-defined parameters of the initiative. The PAs have budgeted for EBCx at 1,000 facilities

statewide during the 2025-2027 term at an average cost of $75,000. Costs to implement measures identified will be covered by incentive funds, as show in Figure 26: Existing Buildings and Incentive Summary Table.

Enhancement #3: Support long-term electrification planning

While the PAs have experienced growing success in electrifying smaller buildings, larger buildings are far more difficult and costly to retrofit with electric heating and hot water equipment. Doing so requires a long-term approach, with building upgrades phased in over time. These often include electrical service upgrades, modifications to internal distribution and ventilation systems, and partial electrification achieved by replacing equipment nearing the end of its useful lifetime. To make the most cost-efficient use of customer funds in preparing customers to electrify their buildings, the PAs will offer the following mix of electrification studies:

Figure 25: Electrification Studies

Study Name	Objective
Portfolio Prioritization Plans	Help customers that own a portfolio of buildings (e.g., municipalities, real estate owners, universities, etc.) to prioritize buildings to potentially electrify, using a light-touch approach based on brief site visits
Decarbonization Roadmap	Conduct an in-depth assessment to help the owner of a large building or portfolio of buildings to meet carbon reduction goals, including an in-depth assessment of electrification needs and alternative strategies

The PAs will cover the full study cost up to $2,000 per building for Portfolio Prioritization Plans and up to $13,000 per building for Decarbonization Roadmaps. At the PAs' discretion, this amount may be increased in specific circumstances, such as large complex facilities, more robust studies, or customers in equity communities.

During the 2022-2024 term, the PAs began offering electrification scoping studies. These studies were designed to identify what measures would need to be taken in order to electrify a building's heating and hot water systems over the long term. The studies capture information on current HVAC and hot water systems, as well as electrical service capacity and demand, and anticipated building upgrades required to electrify. Beginning in 2025, the PAs will support master planning efforts for customers with a portfolio of buildings with two different offerings.

Portfolio Prioritization Plans offer a high-level approach to helping customers establish a long-term, phased approach to electrifying their buildings. They will incorporate basic information, such as HVAC equipment lists. Decarbonization Roadmap studies will be targeted to municipalities in particular, though other customers who

own portfolios of buildings in Massachusetts are eligible, such as real estate developers, colleges and universities, and retail and food service chains. In addition to the standard scoping study elements, a Decarbonization Roadmap will:

- Recommend a prioritized approach to decarbonizing the portfolio based on current building performance (EUI or energy use intensity), building characteristics, and estimated lifetime costs to electrify the buildings.
- Assess the impact of other anticipated infrastructure changes that would substantially impact site load and drive the need for electrical service upgrades, such as building expansions or EV charging stations. This assessment will be coordinated with utility EV and distribution planning teams as needed.
- Explore networked geothermal options for campuses or other clusters of facilities. The Department's Order in Docket 20-80-B notes district geothermal pilots as a decarbonization option is to be deployed by local distribution companies (gas).[120]
- Be entered into PA tracking systems to be revisited over time, improving the PAs' ability to help facilitate customer electrification efforts over time.

The PAs will support a portion of the study costs. Customers may opt to expand their studies beyond the elements described above to explore other decarbonization strategies, such as onsite solar or renewable energy credits, however, the PAs will only fund the portion of scope described above.

Enhancement #4: Enhance measure performance and persistence

The Program Administrators will continue to apply and expand methods for improving the performance and persistence of measures implemented by customers, particularly those associated with building controls. To ensure that improvements are thoughtful, data driven, and encourage project development and implementation best practices among PA staff, vendors, and contractors, the PAs will strive to further improve communication between the evaluation, implementation, and technical teams. The evaluation framework has produced hundreds of site evaluations, including detailed documentation of performance and persistence issues. This information can be leveraged to identify systemic areas of further improvement for the Mass Save programs. Similarly, implementation teams have tremendous depth of knowledge in what is required to

[120] See D.P.U. Order on Docket 20-80-B, p. 72, Dec. 6, 2023.

develop and complete thousands of projects a year. Knowledge sharing practices will be developed to provide guidelines for improved awareness prior to, during, and after project development.

Based on what is currently known about program performance and savings persistence, the PAs have identified strategies to improve performance and persistence. The PA strategy divides the improvements into two parts: improvement of initial system implementation and improvement of savings persistence beyond initial implementation. The PAs support improving the quality of the initial system installation to improve the long-term performance and persistence of measures. Some strategies to improve the initial implementation include:

- **Identify and support best practices during installation of controls.** Evaluation and program research in other parts of the country have identified specific program requirements and implementation best practices that directly result in improved persistence for control and commissioning activities. Best practices may include programming improvements, such as automatically resetting schedules and setpoints after manual overrides and limiting control system access via security features. These activities, if required or incentivized, can more regularly be built into the vendor's scope of work. The PAs will consider if and how these types of activities can be incorporated into program design and incentive structures.
- **Improved customer engagement.** Engagement has also been identified as an important factor towards persistence and may be achieved by multiyear engagements, the adoption of new or updated standard operating procedures to include recurring operations and maintenance activities, and proactive program reminders to retro-commission systems that have participated in the programs in the past. To improve the performance of implemented projects and enhance customer understanding of the project parameters driving the energy savings, the PAs will incorporate additional incentives for vendors to train facility staff on the operation of their building systems. Clear and concise guidance will be provided to ensure the training and support documentation includes updates to operator manuals and vendor or manufacturer instruction on the operation of the equipment to support the persistence of the project energy savings. Of particular focus for this type of support are projects impacting lighting controls, building management systems, and equipment-level controls to ensure longer term operational integrity.
- **Vendor and contractor training support.** The PAs will further enhance the workforce development opportunities available to vendors, contractors, and PA staff to include manufacturer and vendor training focused on verification and operational performance. The PAs will also continue to

encourage the pursuit of other professional certifications like the Association of Energy Efficiency certifications and the Building Operator Certification. Finally, the PAs will also continue to subsidize and promote trainings for controls contractors, on topics like ASHRAE Guideline 36 training for Best-in-Class HVAC Control Sequences to develop industry and contract awareness around the implementation and operation of highly efficient building systems.

- **Improved quality and consistency of Minimum Requirement Documents.** The Program Administrators will continue to incorporate Minimum Requirement Documents in statewide shared custom express tools and technically complex prescriptive offers, like the Building Management Systems offer. The PAs will also continue to strive toward standardized approaches to data collection and verification in custom project Minimum Requirements Documents that are not associated with custom express calculators. The Minimum Requirement Documents will continue to be used as the standard by which projects will be verified for completion and compared against for the persistence of energy savings. The PAs will also consider not just the quality of the Minimum Requirements Documents, but the ways in which these documents are used by staff and vendors to ensure energy savings of the installation. The PAs will develop process improvements, as needed, to ensure Minimum Requirements Documents are high quality and effectively utilized for project savings verification.

  The PAs strongly believe that improvements to initial project implementation will improve system performance, savings persistence, and customer satisfaction, but issues may be missed or may develop after the project is complete. Improving persistence in these cases requires incremental effort on the part of the PAs, customer, and vendor to both identify and resolve the issue.

- **Proactive identification of performance concerns.** The PAs will expand and standardize, where possible, strategies for identifying customers and measure performance concerns after implementation. These strategies will balance the need for system performance with the costs and burden placed on customer facilities staff associated with strategies such as monitoring, as well as the delays to project timelines – the top concern cited in a recent evaluation of the custom process. The PAs will build off existing strategies used to ensure persisting performance, such as identifying large or complex projects that will require additional verification after implementation to ensure performance, or sampling past participants to analyze performance persistence and offer solutions to identified shortcomings.

Additional strategies to identify post-implementation performance concerns will be considered as well. The proposed EBCx process described above is another opportunity to identify system deficiencies. Through these and other strategies, the PAs will take a proactive approach to revisit past projects and work with the customer to review operation and performance. This effort would align with longstanding industry practices requiring the demonstration of persistent operation aligning with design intent in places like laboratories, pharmaceuticals, healthcare, and manufacturing facilities.

- **Corrective action pathway.** After project completion, if discrepancies are found between the intended design performance and the onsite operation, the PAs shall implement a workflow to needed corrective action with the customer and/ or vendor to maximize the benefit of the customer and customer investment. The corrective action pathway must consider how best to reengage vendors who are still under project warranty to return to the facility to make necessary adjustments for improved savings and customer outcomes.

Enhancement #5: Modifications to the Deep Energy Retrofit offering

In 2022, the Program Administrators launched the Deep Energy Retrofit offering to help customers achieve a substantial reduction in the GHG emissions at their site. Since then, there has been significant interest in the Deep Energy Retrofit offering, particularly from municipal customers. The PAs aim to increase the impact of the offering by reducing the barriers to participation. First, the PAs will increase the Deep Energy Retrofit term from three to five years. The Deep Energy Retrofit term is the amount of time a customer has to implement the measures needed to reach the GHG emission reduction target. Early market feedback has indicated that a three-year term presents a challenge for customers interested in participating in the Deep Energy Retrofit offering. As previously mentioned, municipal customers are showing the most interest in this offering and these customers tend to have longer procurement and funding approval processes. It is important that the term is long enough to work with project development cycles and lead times for equipment deliveries. The PAs believe extending the Deep Energy Retrofit term to five years helps alleviate these concerns.

Additionally, the Massachusetts PAs are removing requirements that customers implement any specific measures. In the previous plan, customers were required to electrify space heating in their building, either fully or partially. While the PAs will continue to encourage electrification, and it is inherently encouraged with the significant 40 percent reduction in GHG emissions target, electrification will no longer be a required measure for participation in the Deep Energy Retrofit offering. Similarly, the PAs are removing the requirement that customers either improve their building envelope (with insulation and/or air sealing measures) or reduce

the ventilation load or its associated heating load with a heat recovery system. The PAs would like to support customers in their path towards achieving these deep savings in the manner that makes most since for their building. It is expected that most projects taking advantage of the offering will need to incorporate these measures to reach the Deep Energy Retrofit target, but there is no value in requiring the measures in those cases where it is not necessary. Although electrification will not be explicitly required, customers purchasing new fossil fuel equipment will not be allowed to participate in the Deep Energy Retrofit offering. The PAs are focused on delivering outcomes, namely a significantly more efficient building.

Enhancement #6: Incentivize non-energy greenhouse gas-reduction measures

As detailed in the measure overview above, the PAs will expand the services provided to customers and the bounds of GHG reductions from customer interventions beyond just energy related GHG reductions. This will create more opportunities to deliver value to customers and increase opportunities for claimable benefits, potentially at a far lower cost per ton of carbon equivalent than could be delivered through current means. Specifically, the PAs will offer the following measures:

- Carbon capture of point-source emissions.
- Behind-the-meter natural gas leak detection and repair on customer-owned equipment and gas networks.
- Refrigerant emissions mitigation.

Each of the interventions described above would be custom as they are highly site specific.

Enhancement #7: Improve trade ally support

The PAs have teams dedicated to partnering with distributors, contractors, and other trade allies involved in C&I projects. Current efforts to collaborate with distributors and heat pump installers are described under section 3.3.3: Equipment Rebates & Instant Incentives. PA-approved design and installation contractors have also been longstanding trade allies, and their role in the programs is described above in the 'Program Design' Section. Enhancements to program design include:

- **Hiring dedicated liaisons for additional trade ally groups.** This includes: (1) mechanical, electrical, and plumbing firms, which are critical to electrification and HVAC upgrades, and (2) controls contractors and EBCx vendors. The role of these liaisons will be to recruit additional trade allies, educate them on relevant incentives and processes, help connect them with appropriate PA staff

(namely customer-facing account representatives and technical staff), and solicit vendor feedback to share with PA program staff.

- **Expanding and diversifying the list of PA-approved design and installation contractors.** Historically, the majority of these PA-approved design and installation contractors (such as National Grid's Project Expeditors and Eversource's Business Energy Advantage contractors) have focused heavily on lighting. During the 2022-2024 term, the PAs made a concerted effort to recruit vendors with expertise in a broader range of technologies, encourage existing vendors to recruit staff with additional skillsets, and upskill existing staff in areas of focus. The PAs have prioritized skills in HVAC (including heat pumps), building and equipment controls, weatherization, and refrigeration, as well as decarbonization measures such as EV charging and solar photovoltaics, which are often of interest to customers even if they are not supported under the PA framework. These efforts will continue in the next term.
- **Better aligning C&I trade ally initiatives among the PAs.** This is particularly for National Grid's Project Expeditor network and Eversource's Business Energy Advantage network. Both networks provide a similar set of services and typically target mid-sized customers, especially municipalities.

Enhancement #8: Revise lighting strategy to phase out uncontrolled lighting

During the 2025-2027 term, the PAs will not support uncontrolled lighting measures through the Existing Buildings program. Only lighting controls and controlled fixtures will be supported. Lighting incentives are now designed to cover most of the incremental cost between an uncontrolled fixture and a comparable fixture with controls. Beginning in 2024, as recommended in an evaluation study, the PAs introduced a performance testing process for luminaire-level lighting controls. This process is designed to ensure that controls work as intended, resulting in greater customer savings, coupled with a greater incentive amount to cover the cost of the additional work required. The effectiveness of this approach will be reassessed and potentially modified in collaboration with the evaluation consultants to maximize its effectiveness.

The PAs will continue exploring opportunities to reduce lighting power density, also known as "de-lamping," in buildings with excess lighting. Although this type of effort can currently be funded as a custom project, the PAs hope to develop a more streamlined approach.

Enhancement #9: Support energy efficiency and electrification improvements in schools in equity communities

The Massachusetts PAs look forward to working with DOER and other stakeholders on collaborative initiatives to support decarbonization of schools in equity communities. The PAs currently anticipate that they will offer services targeted to schools and other public buildings, with an emphasis on equity communities, to support building decarbonization and electrification, with an energy efficiency first approach. The Program Administrators will work in collaboration with state agencies involved in funding schools, especially DOER, the Massachusetts School Building Authority, the Massachusetts Clean Energy Center, and the Massachusetts Department of Elementary and Secondary Education to create a pipeline for existing school decarbonization and a streamlined school district/municipal experience.

Advancing these schools toward decarbonization might mean helping communities identify sources of funding to assist with needed repairs resulting from years of deferred maintenance. It will also be important to layer and/or blend funding from various agencies and grant resources and to do so in a way that advances projects toward decarbonization. Specific PA support for schools in coordination with these state agencies could include support for municipal energy managers, including resources shared across communities as appropriate, decarbonization roadmap support, other technical assistance, enhanced incentives, assistance for communities in applying for federal and state funding, and equipment training for facilities staff to schools and other public agencies.

Incentive Levels

Figure 26: Existing Buildings Program and Incentive Summary Table

Measure	Application Form	Incentive
Linear lamp/Ballast replacement	Lighting—Systems and Sensors	$5 - $45/unit
Indoor luminaires and indoor retrofit kits		$40 - $250/unit
Outdoor luminaires and outdoor retrofit kits		$150 - $300/unit
Sensors and control systems		$25 - $90/unit
Low-cost tuning measures	ESPO - Track: Low-Cost Tuning Measures	Varies

Measure	Application Form	Incentive
Monitoring-cased commissioning ("MBCx")	ESPO - Track: Monitoring-Based Commissioning	$0.17/kWh $1.20/therm
Retro-commissioning ("RCx")	ESPO - Track: Targeted Systems and Whole-Building and Process Tuning	$0.17/kWh $1.20/therm
Air cooled w/condenser, electrically operated / Remote condenser (split system)	Chiller	$30 - 32/ton (base) $2.20 - $4.00/ton/unit (performance)
Water cooled, electrically operated, positive displacement		$22 - 25/ton (base) $4.50 - $5.00/ton/unit (performance)
Water cooled, electrically operated, centrifugal		$20 - 30/ton (base) $4.50 - $5.50/ton/unit (performance)
Air compressor	Compressed Air	$100 - $200/HP
Storage		$2.75/gallon
Refrigerated dryer		$5.25/CFM
Zero-loss condensate drain		$2.75/drain
Low pressure drop filter		$0.80/scfm
Engineered air nozzles		$20/nozzle
Variable speed drives	Variable Speed Drive (New Equipment)	$1,000 - $2,600/drive
Variable speed drives	Variable Speed Drive (Existing Buildings)	$1,000 - $8,500/drive
Motors and variable speed drives	Motor and Variable Speed Drive	$1,250 - $10,950/drive
Building management system ("BMS")	BMS	$0.10 - $0.20/$ft^2$
Battery powered electric forklift	Commercial Battery-Powered Forklifts and Forklift Battery Chargers	$6,000/unit
High frequency battery charger		$550/unit

Measure	Application Form	Incentive
Custom measures	Custom	Case-by-case basis considering project cost, energy savings, and other project attributes

3.3.3 Equipment Rebates & Instant Incentives

The Equipment Rebates & Instant Incentives program (formally known as Midstream) program focuses offerings on equipment and product categories that will benefit large groups of commercial, industrial, and municipal customers. An "incentive" is any financial support the PAs provide. It can take the form of an instant (point-of-sale) discount when purchasing energy-efficient equipment through participating equipment wholesalers or a rebate received after buying or installing approved energy-efficient items. In addition to offering rebates and instant incentives, this program encompasses market engagement, including relationship building with influential partners that sell and install these products, such as equipment distributors, who participate in the Instant Incentives offerings and installation contractors who participate in the Heat Pump Installer Network.

Many customers engaged through the pathways described in the Existing Buildings program ultimately receive incentives through the Equipment Rebates & Instant Incentives program. "Equipment Rebates" refers to customers receiving an incentive after the product is purchased, installed, and the rebate form is submitted to the rebate fulfilment vendor. In this program, "Instant Incentives means energy efficiency measures in which the customer's motivation is a prescribed reduction in product cost at the time of sale, generally at the location of a distributor, for the customer or its installer that is purchasing the product. For the Instant Incentive offerings, the PAs are generally not involved in the day-to-day sales consulting of energy-efficient products but play a higher-level role of managing the offer. For all equipment rebates and instant incentives processed, a certain percentage of all projects are inspected by a statewide third-party inspection vendor.

Program Design

The Equipment Rebates & Instant Incentives program is designed to overcome a variety of barriers. First, incentives are designed to lower the cost to the customer of purchasing and/or installing energy-efficient and program-eligible HVAC, domestic hot water, and lighting controls and lighting with integrated controls measures. Instant and prescriptive rebate delivery pathways are designed to lower the upfront cost to the customer, which can be a barrier to adoption. Customers often have competing needs for their capital and

base decisions on a calculation such as simple payback. Incentives drive down the cost portion of a decision-making calculation.

Another barrier to measure adoption, more specifically electrification measures such as heat pumps and heat pump water heaters, is lack of customer awareness and knowledge of these measures, how they operate, and their benefits. The Heat Pump Installer Network and distributor relationships built as part of the Equipment Rebates & Instant Incentives program is therefore designed to educate and provide guidance to trade allies who are influential in the design and installation of energy efficiency and decarbonization measures. The PAs also provide information about energy-efficient measures on the MassSave.com webpage.

Lack of contractor comfort with installing heat pumps and heat pump water heater measures is also a barrier. To address and as described above, the PAs created a Heat Pump Installer Network. Through the Heat Pump Installer Network, the PAs will continue to provide a wide range of resources and services, including exclusive access to residential rebates and financing for heat pump installations, training, marketing materials, sales tools, and periodic communications regarding important news and developments. Lastly, some heat pump installations can have a high cost with long paybacks. Customer education of the benefits and access to incentives and financing could mitigate some of these concerns.

How the Program Impacts Plan Priorities

The PAs are dedicated to enabling C&I customers of all sizes access to energy efficiency and decarbonization project measures and provide them with an improved experience. The availability of prescriptive and instant incentives for any size customer using an installation vendor of their choice enables the PAs to reach far more customers.

Program Eligibility Requirements

Qualifying customers (who are billed for energy efficiency fund charges) are commercially metered customers such as municipalities, school districts, colleges, institutional, and multifamily facilities with five or more units. All customers may participate in this program even if they could have chosen to participate in other programs such as New Buildings & Major Renovations, Small Business Turnkey Retrofit, or Existing Buildings as a custom measure (though they may not receive incentives from multiple programs for the same equipment).

Implementation / Delivery Pathways

Equipment Rebates offer

The Equipment Rebates offerings are implemented by a third-party vendor who fulfills rebates after a customer has submitted a properly filled out rebate form. The customers are required to install equipment and/or weatherization materials that meet the PAs' specifications. Customers can determine the eligibility of products based on the PAs' specification and whether that product appears on a Program Administrator-chosen Qualified Products List. Some of these lists are created and maintained by industry associations such as the Air Conditioning, Heating & Refrigeration Institute ("AHRI"). As an illustrative example, the following is a portion of the Massachusetts TRM (Technical Reference Manual) citing the International Energy Conservation Code for the baseline specification for an air source heat pump system or air conditioning system.

Figure 27: IECC Code (from TRM)

Equipment Type	Unit Type	Tier	Size Category	Category	Full Load Cooling Efficiency	Seasonal/ Part Load Cooling Efficiency	Heating Efficiency
Air Cooled	Air conditioner or heat pump	1	< 65 kBtuh (<5.4 Tons)	Split or Package System	12.0 EER	15.0 SEER	9.0 HSPF
		2			12.0 EER	16.0 SEER	9.0 HSPF
		3			12.0 EER	17.0 SEER	9.0 HSPF

Subcomponents of Program

Prescriptive rebates

Prescriptive rebates are implemented by a vendor chosen from a group of vendors who bid on an RFP. The PAs design and distribute incentive forms via email, mail, and that are downloaded from MassSave.com. The incentive forms contain information about the program, spaces that need to be filled in by the customer, and they also act as marketing collateral. These forms list the requirements of the offerings, the incentive amounts, and which equipment is eligible for the customer to receive an incentive. A number of prescriptive rebates are available to commercial customers including heat pumps and other products as described in the chart below. A Qualified Products List is a list of products that have met the minimum qualification requirements stated by the PAs' applicable specifications for each measure type.

The PAs determine products' specifications in several ways: (1) results from an evaluation, (2) federal and/or state codes or regulations, (3) energy usage compared to an established baseline, and/or (4)

publications from national and international organizations such as the International Energy Conservation Code. The rebate processing vendor processes rebate requests only for equipment that meets the program requirements. Sometimes submitted rebate documentation is not complete, and the vendor will need to contact the customer to request the missing information before processing the rebate payment.

A listing of prescriptive rebated equipment is as follows:

- Air source heat pumps.
- Ground source heat pumps.
- Variable refrigerant flow heat pumps.
- Lighting with integrated controls.
- Lighting controls
- Lawn equipment.
- Weatherization for buildings 8,000 sq. ft. or less.
- Controllable thermostats, aerators, steam traps, and shower heads.
- Air curtains.

Description of Measures to be Offered

Rebates

- **Heat pump eligibility**.
    - Electric equipment displacing natural gas eligible only for commercial or industrial metered customers receiving natural gas service from a PA, including those in municipal electric territories.
    - Electric equipment displacing oil, propane, or electric resistance eligible only for commercial or industrial metered customers receiving electric service from a PA.
    - Equipment must be listed on the Mass Save Heat Pump Qualified Products List.
    - Equipment must be installed by a licensed contractor.
    - For heating equipment, equipment must be used for heating to supplement or replace existing oil, propane, natural gas, or electric-resistance systems.

- If existing fossil fuel heating equipment will remain in place, customer must either install an integrated control from the Mass Save Qualified Products List or must certify that an existing building control system is capable of operating both the heat pump and existing heating equipment in parallel, subject to the stated switchover temperature. Documentation of control sequence may be required.

- **Air source heat pumps.** Air source heat pumps extract heat (via a refrigeration process) from the air outside and distribute it inside. During warmer months, this process is reversed to provide cooling. These highly efficient systems can cut heating and cooling costs by up to 30 percent. Air source heat pumps can achieve 300 percent efficiency compared to fossil fuel equipment that can achieve 97 percent efficiency. The types of air source heat pumps offered are:
  - *Heat pump packaged terminal heat pump.* Generally, it replaces a Packaged Terminal Air Conditioning unit, which has electric resistance heat. The packaged terminal heat pump is a single heating and cooling unit often utilized in a hotel room. It is ductless and attached to an outside wall. Air flows from the unit to conditioned space.
  - *Split system*. The compressor is outside the building and the refrigeration coil is built into the air handling (fan) equipment that is connected to the compressor by a refrigeration line. Air flows from the air handler through ducts to conditioned space.
  - *Ductless mini-split system*. The compressors are outside the building and there are indoor fan units connected to the compressor by refrigeration lines. Air flows from the indoor fan unit to conditioned space.
- **Ground source heat pumps.** Ground source heat pumps extract heat from the ground during cold weather and distribute it throughout a customers' building. During the warmer months, this process is reversed to provide cooling. This system is the most efficient type of heat pump.
- **Variable refrigerant flow systems.** This heat pump serves as a great solution for businesses where installing ductwork is not possible. Using a single outdoor condensing unit to connect with one or more indoor air handlers, this option provides clean heating and cooling.
- **Lighting controls and lighting fixtures with integrated controls.** With the decreased cost of LED lighting and the advances in technology, the PAs propose a higher level of installation of lighting controls and lighting with integral controls in the 2025-2027 term. With the market transformation of stand-alone LEDs, the PAs' focus will be on projects that can bring low wattage high-quality LED lighting retrofits that have the capability to decrease the customers' lighting energy usage by 20

percent to 40 percent. LED lighting has long-lasting lifetimes, reducing maintenance costs versus fluorescent and high intensity discharge lighting. These controls include the following:

  - *Remote-mounted occupancy sensors.*
  - *Daylight dimming systems.*
  - *Occupancy-controlled step-dimming systems.*
  - *Wall-mounted occupancy sensors.*
  - *Wall-mounted vacancy occupancy sensors.*
  - *Photocell sensors (lighting systems on 24/7).*
  - *High bay occupancy controls systems.*

- **Lighting with integrated controls.** Customers can choose to install controls capability without installing a separate module (control listed above), which would need to be hardwired to each fixture. Lighting equipment with added modules is less expensive to purchase than lighting with integrated controls, but the installation costs are higher. An additional benefit to lighting with integrated controls is they offer a level of control on a fixture-by-fixture basis versus whole area or room control from adding separate modules.
- **Lawn and tree-cutting equipment.** Battery-powered motors are more energy-efficient, reduce carbon emissions, and typically require less maintenance than gas-powered equipment. The PAs offer incentives on equipment, including:
  - *Lawnmowers.*
  - *Leaf blowers.*
  - *String trimmers.*
  - *Chainsaws.*
- **Air curtains.** Air curtains covering large overhead doors can help a business save energy without interrupting operations. When overhead doors are opened to allow for deliveries or other vehicular traffic, valuable energy generated to heat the indoor space is lost to the outdoors. Air curtains turn on when the door is open, creating a seamless wall of air across the doorway opening. This prevents the mixture of indoor and outdoor air, keeping heat inside, saving energy.

- **Weatherization for buildings under 8,000 sq. ft**. Insulation and air sealing work hand in hand to make a building more energy efficient and comfortable. By adding more insulation to a building and sealing drafty air leaks, customers can greatly reduce heat loss and save energy in their building. For buildings under 8,000 sq. ft., the PAs offer incentives to upgrade insulation in attics, basements, and walls, seal air leakage in attics and weatherstripping. The PAs will continue to engage with weatherization installers to ensure these rebate offerings are known and taken advantage of for customers. Weatherization for larger buildings is handled on a case-by-case basis outside of the Equipment Rebates offerings.

Instant incentives

Instant Incentive offerings are administered at the distributor level for the sale of eligible measures. Depending on the measure, the PAs require that the incentive be passed through to the customer in the form of a discount on their invoice. Select measures that are part of the lighting, HVAC, and domestic hot water sub-components of the Equipment Rebates offerings are offered in the Instant Incentives delivery pathway.

- **HVAC equipment.**
    - *Unitary air conditioners.*
    - *Dual enthalpy economizer controls.*
    - *Circulator pump.*
    - *Air source heat pumps, water source heat pumps, geothermal heat pumps, and variable refrigerant flow systems.*
    - *Air conditioning.*
- **Other equipment.**
    - *Heat pump water heaters.*
    - *Cold storage equipment.*
    - *Food service and refrigeration equipment.*
    - *Vending machine controls.*
- **Lighting controls and lighting with integral controls.**
- **Heat pump water heaters.** Heat pump water heaters use electricity to move heat from one place (surrounding air) to another (water inside the unit) instead of generating heat directly. Therefore,

they can be two to three times more energy efficient than conventional electric resistance water heaters.

- **Vending machine controls.** Vending machines typically use electricity 24 hours a day, even if no one is around to use them. Vending machine controls use motion sensors to automatically power vending machines down when the surrounding area is unoccupied and power them back up when a person approaches the machine. They also contain temperature sensors that power the vending machine back up as needed to keep drinks cold.
- **Food service and refrigeration equipment.** Old, outdated kitchen equipment can create high energy bills, more maintenance issues, and a bigger impact on the environment. Using energy-efficient equipment in commercial kitchens can improve energy performance without sacrificing service, quality, or comfort. In many cases, fossil fuel equipment can be replaced with electric equipment in order to increase efficiency and reduce carbon dioxide emissions. The PAs offer incentives on a variety of equipment, including but not limited to:
    - *Conveyor broilers.*
    - *Combination and convection ovens.*
    - *Fryers.*
    - *Dishwashers.*
    - *Refrigerators and freezers.*
    - *Induction cooktops.*

The PAs propose to continue to offer instant rebates on ENERGY STAR certified cold storage products. For participating commercial customers, this means more affordable, energy-efficient models and savings on operating costs. This includes the following measures:

- Lab-grade high-performance refrigerators, ranging from 6 to 44 cubic feet.
- Lab-grade high-performance freezers, ranging from 6 to 22 cubic feet.
- Ultra-low temp freezers, at least 6 cubic feet.

Strategic Enhancements and Major Innovations

Enhancement #1: Incentivize a wider range of heat pumps

Many businesses currently have gas-fired packaged rooftop units and are also looking to pursue heat recovery. The PAs will ensure there is a product offering easily accessible to incentivize qualified rooftop units. Adding these units to the Qualified Products List will allow for easy access by customers and their trade allies to know which units qualify for the program. The roof conditions and existing distribution system make these measures important to promote to trade allies and customers, as other retrofit options are not typically economically and physically feasible. The PAs will actively promote these units in trade ally communications. The PAs are continuing to explore opportunities to create new prescriptive incentives for additional equipment as well.

Enhancement #2: Enhance Heat Pump Installer Network

The PAs are leading the way in decarbonizing buildings across the state by supporting the electrification of heating and hot water systems. By joining the Heat Pump Installer Network, eligible contractors can help make these technologies more affordable and accessible to Massachusetts residents and businesses while helping reduce GHG emissions across the state.

MassSave.com currently features a customer-facing search tool to identify Heat Pump Installer Network participating heat pump installers serving their area. The PAs will revamp this search tool to better differentiate installers and more easily help customers locate installers in their area. The PAs will actively promote this tool to customers through statewide marketing efforts. One such enhancement will be to showcase the installation and/or design capabilities of installers who have taken variable refrigerant flow manufacturer training. Currently, the tool features MWVBEs (minority-owned, women-owned, and veteran-owned business enterprises) as a filter category. The PAs will continue to push for qualified MWVBEs to join the program and market to customers how to locate ones serving their area for their heat pump installation needs.

Another enhancement to encourage Heat Pump Installer Network participation of commercial installers is to feature an annual award program to showcase the most influential installers in the network. The likely award categories will be based on PA territory, total customers who received a rebate, environmental justice community customers who received a rebate, and other categories to be discussed. A potential avenue for presenting the awards is during the annual Heat Pump Installer Network Appreciation Event.

Enhancement #3: Issue customer satisfaction surveys

In order to better understand customer satisfaction with the installation quality of heat pump projects, the PAs will hire a third-party vendor to complete customer satisfaction surveys for commercial heat pump projects. Data will be synthesized to identify top performing installers as well as areas where more training and/or education may be needed.

Enhancement #4: Broaden product training opportunities for existing vendors

In order to reach more customers to participate in the Equipment Rebates & Instant Incentives program, it is important for the PAs to ensure that Heat Pump Installer Network contractors and other vendors that support the installation of products in this category are aware of the product offerings as well as comfortable installing them. This will be facilitated through the continuation of a statewide contractor newsletter as well as the launch of a statewide RFP for a vendor to support training support services for the PAs. The vendor will be responsible for organizing training, in person or virtual, to promote the rebate programs through product training. Example training could include electrification sales tactics, heat pump product types, lighting control systems, weatherization installation best practices, energy audits, building controls, and others.

Incentive Levels

Products and incentive levels subject to change pending evaluation result changes and program need changes.

Figure 28: Equipment Rebates & Instant Incentives (Downstream) Summary Table

Measure	Product Type	Incentive
Downstream Rebates		
Air curtains	Air curtains	$20/square foot
Air source, Heat pump	Heat pumps	$2,500/ton $100/unit distributor stipend
Air Source, Variable refrigerant flow		$3,500/ton $500/unit distributor stipend
Ground source heat pump		$4,500/ton $500/unit distributor stipend
Lawnmower, Retail-Grade	Lawn equipment	$75/unit

Measure	Product Type	Incentive
Leaf blower, Retail-Grade		$30/unit
String trimmer, Retail-Grade		$30/unit
Chainsaw, Retail-Grade		$30/unit
Lawnmower, Professional-Grade		$3,500/unit
Leaf blower, Professional-Grade		$100/unit
String trimmer, Professional-Grade		$100/unit
Chainsaw, Professional-Grade		$100/unit
Wireless-enabled thermostats	Controls	Up to $100 each
Programmable thermostats		Up to $25 each
Steam traps		$50/each
After-market boiler reset controls		$225/unit
Showerheads		Up to $20/unit
Faucet aerators		Up to $8/unit
Attic insulation	Weatherization	$0.10 per R-value added per square foot
Wall insulation		$0.16 per R-value added per square foot
Basement insulation		$0.17 per R-value added per square foot
Attic air sealing		Up to $115 per hour of air sealing work
Exterior door weatherstripping		$11 per linear foot of door weatherstripping

Figure 29: Equipment Rebates & Instant Incentives (Midstream) Summary Table

Measure	Product Type	Incentive
Midstream Incentives		
Refrigerated chef base	Food service	$500/unit $50/unit distributor stipend
Induction cooktop - Electric resistance replacement		$750 /unit $25/unit distributor stipend
Commercial dishwashers		$125 - $2,000/unit up to $100/unit distributor stipend
Fryer (Electric)		$750/unit $100/unit distributor stipend
Griddle (Electric)		$500/unit $25/unit distributor stipend
Hot food holding cabinets		$600 - $900/unit $50/unit distributor stipend
On-demand commercial electric hand wrap machine		$100/unit $10/unit distributor stipend
Ice machines		$100 - $300/unit $25 -$50/unit distributor stipend
Ovens (Electric)		$400 - $4,000/unit $100 - $250/unit distributor stipend
Refrigerators		$150 - $350/unit $25/unit distributor stipend
Steamer, (Electric)		$1,500/unit $200/unit distributor stipend
Freezers		$150 - $250/unit $25/unit distributor stipend
Electric infrared conveyor broilers		$2,000 - $3,000/unit $100/unit distributor stipend
Water source, Variable refrigerant flow	HVAC	$250/ton up to $350/ton $500/unit distributor stipend
Packaged terminal heat umps		$500/unit $50/unit distributor stipend

Measure	Product Type	Incentive
Air source, A/C		$50-$150/ton $50-$100/unit distributor stipend
Water source or evaporatively sourced, A/C		$50/ton $100/unit distributor stipend
Water source, heat pump		$80-$200/ton $100/unit distributor stipend
Outside air economizer utilizing 2 enthalpy sensors		$250/unit $25/unit distributor stipend
Electronically commutated motor ("ECM") circulator pumps		$100 -$400/unit $10 - $40/unit distributor stipend
Constant speed PEI rated water pump		$0.5 - $5 ($HP/ER) $40/unit distributor stipend
Variable speed PEI rated water pump		$0.2 - $1.5 ($HP/ER) $40/unit distributor stipend
High efficiency condensing units (HECU) for refrigeration		$200 - 400/Horsepower $50/unit distributor stipend
Laboratory grade high-performance freezers	Lab equipment	$600 - $1,200/unit $50/unit distributor stipend
Ultra-low temperature freezer (-80 C)		$2,000/unit $50/unit distributor stipend
Lighting measures with controls	Lighting controls	Varies
Vending misers	Vending misers	$45 - $115/unit
Heat pump water heaters	Water heating	$1,000 - $2,200/unit $50/unit distributor stipend

3.3.4 Small Business Turnkey Retrofit

The Small Business Turnkey Retrofit program addresses the unique needs of the smallest segment of commercial customers to reduce their energy consumption, and in turn their costs and carbon footprint. The Small Business Turnkey Retrofit program is undergoing two major shifts, which began during the 2022-2024 term and will continue this term. These include a focus on weatherization and enhanced efforts to ensure equity. These two focus areas are reflected throughout all aspects of the offering. The program offers a

turnkey service where a lead vendor performs a no-cost comprehensive energy assessment, develops projects, explains costs and benefits to customers, installs the projects upon customer approval, handles all data reporting to PAs, and provides warranty service. The program is designed to be easy, accessible, and equitable while streamlining administration.

Customers who wish to use their own contractors may do so through the Customer Directed Option. Under this option, the customer chooses their contractor who will scope the project. Their contractor then works with the Customer Directed Option lead vendor to calculate and submit savings analyses and incentive requests. If the project moves forward, the Customer Directed Option lead vendor handles all data administration and payment to the customer (or contractor, at the customer's request).

Program Design

There are two major subcomponents of the Small Business Turnkey Retrofit program—Small Business Services and the Customer Directed Option.

Small Business Services

In the Small Business Services pathway, the PAs directly contract with vendors to perform comprehensive energy assessments at small businesses and either do the installation of identified energy-saving measures or act as a general contractor and subcontract the installation work out. For most of its existence, the Small Business Services pathway has focused on lighting; however, in the 2022-2024 term this offering has seen a major shift toward comprehensively serving all energy end uses in small businesses. Building on the work of the 2022-2024 term, the PAs will continue to ramp up production of non-lighting measures in the 2025-2027 term. The PAs are equipping turnkey vendors with the tools needed to quickly assess and quantify energy savings from a variety of measures.

The PAs will continue to create and expand custom express tools and training available for their vendors, as they have done with weatherization in the current term. The custom express tools allow vendors to quickly develop an estimation of savings, which reduces the time required to scope a project and gives customers information needed to make a decision in a timely manner. Adding new tools will help drive more comprehensive projects for small business customers. Additionally, heat pumps will be promoted by all PAs through the Small Business Services pathway in the upcoming term.

In the 2025-2027 term, the PAs will add two new components to the Small Business Services pathway—an increased offer for charitable nonprofit organizations and a new delivery approach and enhanced offer for renters and landlords. For select tax-exempt entities including but not limited to charitable nonprofit

organizations, religious organizations, and veterans' organizations, the PAs will offer up to 100 percent of the project cost for energy efficiency projects, an increase from the standard up to 70 percent offer. The PAs also plan to have the nonprofits supported by the program share their experience with their organization's members to help drive more participation in the Mass Save programs.

In the past, small businesses that rented their buildings have participated similarly to businesses that own their facilities as lighting offered a short payback. However, as lighting opportunities decline, and the PAs focus on more complex energy efficiency measures like weatherization and HVAC, which have longer paybacks and often require building owner approval, the PAs recognize the need to develop a new approach to serving this customer segment. Therefore, the Massachusetts PAs are launching a new offer with higher incentives to help renters and landlords understand the benefits of energy efficiency in their buildings.

Customer Directed Option

The second major subcomponent of the Small Business Turnkey Retrofit program is the Customer Directed Option. This pathway was developed to encourage participation for customers who have their own vendor or contractor that they prefer to work with. This has traditionally contributed a small portion of the savings from the small business offering and has predominantly been used for lighting. The PAs contract with a vendor to manage the Customer Directed Option and they are responsible for conducting inspections to ensure the work is done to the standards required by the program and all necessary data is captured. In the 2025-2027 term, the Customer Directed Option vendors will conduct a comprehensive energy assessment when they complete the inspections. This will drive more comprehensive projects and help to better serve our small businesses' energy efficiency needs. Additionally, the PAs will shift toward an outbound marketing approach to actively engage more vendors to participate in the Customer Directed Option.

Program Implementation

Both the Small Business Services and Customer Directed Option pathways are currently available. Enhancements to these offerings will be implemented throughout the 2025-2027 term. The PAs plan to launch the increased incentive support for charitable nonprofit organizations and renters in Q1 of 2025. In association with the launch of these enhancements, awareness campaigns, and a buildup of support will occur throughout the first year of the 2025-2027 term.

The joint PA delivery enhancement has multiple components, which will be implemented in phases as quickly as possible. The ultimate goal of joint procurement and management of Small Business Services vendors in dual PA territories will go into effect in 2027 as existing contracts extend through 2026. However,

starting in Q1 of 2025, the PAs will set up processes for easier vendor participation in joint territories. This includes aligning on documentation, having a consistent comprehensive assessment format, using the same calculators for custom projects, and piggy-back contracts where applicable. The Customer Directed Option enhancements will start in Q1 2025 and are expected to be fully implemented by Q1 2026, as existing contracts expire at the end of 2025. Starting in 2025, the PAs will align on the Customer Directed Option structure so vendors can work across territories in a seamless fashion. Additionally, Customer Directed Option lead vendors will work to recruit new contractors to the programs.

Program Eligibility

The Small Business Turnkey Retrofit program is open to PA customers using less than 1.5 million kWh in annual electric usage or less than 40,000 therms annually on natural gas bills; however, exclusions do apply.[121] Customers that are part of a parent account, national account, or government account are not eligible for this initiative. Buildings eligible for the Renter and Landlord offering are commercial buildings in which the tenants meet the program criteria, the building owner occupies less than 50 percent of the occupied space, and tenants are responsible for paying their energy costs.

The eligibility requirements for the enhanced incentive offer for charitable nonprofits are:

- Select tax-exempt entities, including charitable organizations, religious organizations, and veterans' organizations (to be determined 501 criteria).
- Have operated in Massachusetts for at least five years.
- Own, or have a long-term lease in, the building in which it operates.
- Have an active electric or gas account in its name in a PA's territory.
- Meet small business usage thresholds.

Description of Measures

The PAs will support all cost-effective energy efficiency and electrification measures through the Small Business Turnkey Retrofit program. These measures include, but are not limited, to the following end uses:

- Compressed air systems.

[121] Unitil allows customers using up to 1.0 million kWh per year of electricity to participate in the Small Business Turnkey Retrofit program.

- Hot water systems.
- HVAC systems and controls.
- Lighting and lighting controls.
- Motors and drives.
- Pipe insulation.
- Process.
- Refrigeration.
- Weatherization.

Program Barriers

There are numerous barriers to serving small business customers in Massachusetts. There are several hundred thousand C&I customers eligible for the Small Business Turnkey Retrofit offerings. Reaching all of these customers with relevant messaging is a challenge. Marketing and customer outreach is essential to reaching these customers. The PAs perform extensive marketing across the state and have numerous strategic engagements with community partners to reach these small businesses. Furthermore, several program enhancements outlined below focus on customer engagement.

Additionally, customers in this segment are generally more price sensitive than larger customers, making it more difficult for these customers to implement efficiency projects. As a result, these customers receive higher incentive rates than other C&I customers. Enhancements being proposed for the 2025-2027 term include further increased incentives for specific customer categories like nonprofits and renters. Another challenge is that small business owners typically have many responsibilities, leaving them little time or attention to dedicate to facility or energy management. Therefore, the PAs offer comprehensive energy efficiency assessments to address all of the customers' needs in a single engagement.

Approximately two-thirds of small businesses lease their space and are not able to implement recommended deeper measures (like weatherization or HVAC) as it would be the decision of the landlord to provide approval to move forward with recommendations. The PAs began addressing this split incentive issue during the 2022-2024 term by offering enhanced renter incentives for weatherization. Split incentives are when capital improvements are made that result in energy savings, one party is typically paying for the improvements while the other party receives the benefits of reduced energy costs. The Renters and Landlords initiative detailed below builds on this experience to drive adoption in leased spaces. Lastly, measures that

disrupt business operations (like weatherization) may not be considered by some businesses as they feel they can't close their business in order to implement the work. The PAs and their vendors are flexible in when the work can be done and make efforts to accommodate the customers' schedules whenever possible.

How the Program Impacts Plan Priorities

Improving service to small and microbusinesses addresses each of the Plan priorities of equity, decarbonization, and improving the customer experience. Adequately providing energy efficiency and electrification opportunities for small and microbusinesses is a key element of equity in the C&I sector. Additionally, because small businesses represent the largest category of C&I customers and often occupy older building stock, there is substantial opportunity for electrification and weatherization. As discussed above, small business owners often lack the time and resources to pursue energy efficiency opportunities, so seamless access to the PAs' programs is essential.

Small Business Weatherization

Weatherization is an incredibly important measure in the program and the PAs view it as a major growth opportunity. However, weatherization is not a strategic enhancement in and of itself, because it is woven into all four of the strategic enhancements below. Part of the first strategic enhancement will require Small Business Services to lead vendors to look for weatherization opportunities at every assessment they complete. Furthermore, since weatherization can deliver both electric and gas savings, having a joint PA delivery with a single vendor by territory means the customers will have a seamless experience. The second strategic enhancement will drive more weatherization projects by having the Customer Directed Option lead vendor looking for weatherization opportunities when customers are implementing other energy efficiency projects.

Additionally, the Customer Directed Option lead vendor will engage weatherization contractors to get them to participate in the program offering. The third and fourth strategic enhancements below are designed to help small business customers with needs that make long payback measures like weatherization more challenging. Increasing incentives for renters and charitable nonprofits, when combined with the first two strategic enhancements, will result in these segments of the small business customers doing greatly higher numbers of weatherization projects. Scaling up the weatherization offers and building on the foundations laid during the 2022-2024 term will be an incredibly important component of decarbonizing the C&I sector for the 2025-2027 term

Strategic Enhancements

Enhancement #1: Joint PA program delivery

In the prior three-year plans, customers have noted some differences in experiences between the PAs; therefore, the PAs seek to improve customer experiences in the 2025-2027 term. Specifically, in the short term, the PAs will coordinate toward assigning program vendors collaboratively. This practice has already begun with Main Streets vendor assignments and will continue with individual customer projects. This will ensure that a customer is served by a single vendor who is expected to provide thorough, comprehensive energy efficiency services. The longer-term plan (2027) is to solidify this practice coordinating on a statewide RFP to hire a lead vendor to administer statewide Customer Directed Option activities, and a group of lead vendors to deliver Small Business Services. This delivery will be coordinated by territory so that each customer will be served by a single vendor.

To further streamline the customer experience, the PAs intend to standardize several elements of the assessment and proposal process, including creating a list of common required elements for all proposals, implementing an updated standard checklist to ensure comprehensiveness in assessments, and supporting plans for a statewide phone number that will direct customers to appropriate PA staff. Through this process the PAs intend to ensure high-quality proposals that are easy to understand and are focused on educating the customer and leading them toward comprehensive energy efficiency improvements.

Enhancement #2: Expand the Customer Directed Option

In order to better achieve program goals and bolster equity efforts, the PAs plan a dramatic expansion of the Customer Directed Option offer. This will include actively recruiting independent contractors who may not have felt they were ready to compete in a Request for Proposal (“RFP”) for lead Small Business Services vendors. The PAs will also require Customer Directed Option lead vendors to attempt to develop comprehensive (multi-measure) projects from any single-measure project that is submitted, either through an inquiry to the submitting contractor or through a comprehensive small business services assessment.

The PAs anticipate that expanded Customer Directed Option efforts will be a vehicle to diversify the mix of contractors and measures in the Small Business Turnkey Retrofit program, and to prepare a wider cohort of contractors to fill lead vendor roles. In the spirit of increasing consistency and improving customer experience, the PAs intend to move selection of the Customer Directed Option lead vendor to a statewide RFP process rather than individual request for proposal (“RFPs”) issued by PAs.

Enhancement #3: Introduce a renters and landlords offer

The shift away from lighting and toward longer-payback measures, such as heat pumps and weatherization, has exacerbated the "split-incentive" problem often seen between landlords and renters. Incentives applied to short-payback projects are often enough to overcome this dynamic, but electrification and weatherization projects tend to have longer payback periods and are therefore more difficult for either the renter or landlord to accept. From a landlord's perspective, coordinating with multiple renters and multiple PAs can discourage participation.

This initiative is designed to address leased commercial space from two fronts: the renter and the landlord. In addition to increased incentives and enhanced outreach and marketing efforts, it includes specific approaches for each group. For landlords, PAs will develop a consistent set of measures and incentives on a statewide level, simplifying participation across territories. The PAs will also establish a process for incentivizing projects that benefit multiple accounts at a single facility, streamline the process for renters to assign the incentive checks to the landlords, and provide landlords with marketing and information packets on energy efficiency offers available to renters. The PAs will develop a Renters webpage on MassSave.com with a collection of resources for renters, including resources on approaching landlords to discuss capital intensive energy efficiency measures, resources on short payback measures, and information on lease structures that help with the split incentive barrier.

Enhancement #4: Prioritize support for community-based organizations

In the 2025-2027 term, the PAs are prioritizing support for community-based organizations, by increasing outreach and equity to more members of the community. The PAs intend to offer enhanced incentives to eligible charitable nonprofit organizations, including but not limited to 501(c)3, veterans' organizations, and houses of worship. The PAs expect to offer incentives of up to 100 percent to qualified nonprofits, depending on the achievable savings. Success will be measured through increased participation and quantifiable growth of the targeted audience. Comprehensiveness is at the forefront of this offer and vendors will be required to look for multiple measures at each facility, to ensure participants can get up to 100 percent of the costs covered. This offering aims to overcome limitations faced by charitable nonprofits in accessing financial support to reduce their energy usage, helping them stabilize their finances and serve more community members, thereby extending benefits beyond the facilities where improvements occur.

A key element in implementing this offer will be to continue the successful Main Streets approach and Community First Partnership. Building on those successes in the 2025-2027 term, the PAs will include specific focus on enhancing outreaching strategies in the community. Some examples of organizations the PAs will

target include houses of worship, chambers of commerce, and industry associations. This strategic enhancement is centered around fostering community engagement and equitable growth. This focus will foster stronger relationships and brand trust within the communities and increase participation rates.

Incentive Levels

The PAs offer a variety of incentive levels through the Small Business Turnkey Retrofit program. Businesses that rent their space and are responsible for their energy costs and eligible charitable nonprofit organizations will receive enhanced incentives up to 100 percent of the project cost. Businesses who participate in a Main Street effort will receive incentives up to 90 percent of the project cost. These enhanced incentives are above the standard incentive offering of up to 70 percent for small businesses. Additionally, PAs occasionally offer time-bound promotions throughout the term with special offers for certain measures or sectors when they see an opportunity to drive increased savings.

Figure 30: Small Business Turnkey Retrofit Program Incentives

Measure	Measure Criteria	Incentive
Standard energy efficiency ("EE") offer	Any and all cost-effective energy efficiency measures allowed by the PAs' enabling authority. These include but are not limited to weatherization, HVAC, refrigeration, motors and drives, compressed air systems, building controls, pipe insulation, process equipment, water heating equipment, and lighting	Up to 70% of the total measure cost
Standard EE Main Streets offer		Up to 90% of the total measure cost
Standard EE Renter offer		Up to 100% of the total measure cost
Standard EE Nonprofit offer		Up to 100% of the total measure cost
Heat Pump offer	Equipment must be on the qualified product list and be used for heating, and either partially or fully displacing an existing electric resistance, oil, propane, or natural gas system.	• $2,500/ton for air source heat pumps • $3,500/ton for variable refrigerant flow • $4,500/ton for ground source heat pumps
Instant saving measures	• Water-saving measures • Programmable thermostats • Smart power strips	100% of the total measure cost

*The Small Business Turnkey Retrofit program pays up to a certain percentage of the measure cost assuming the cost of savings does not exceed the budgeted $/net lifetime savings value for the initiative. Those values vary by year and PA, depending on the mix of measures budgeted.

3.3.5 C&I ConnectedSolutions

ConnectedSolutions is the name of the PAs' suite of ADR (active demand reduction) offerings in both the C&I and Residential sectors. The ConnectedSolutions program aims to reduce system peak load by leveraging behind-the-meter technologies owned and controlled by both residential and commercial customers in response to event signals from the PAs, thus reducing grid load during peak periods. The PAs reach C&I customers through Targeted Dispatch and Daily Dispatch offerings intended to incentivize customers to reduce demand during periods of peak system demand. The program provides system benefits by actively reducing the installed capacity requirement (calculated through regression by ISO-NE), transmission, and distribution costs that are borne by all customers.

Program offerings are outcome based and technology neutral; they generally do not limit how or what technology customers could use when responding to event calls. Customers can participate in ConnectedSolutions with a wide range of technologies and strategies. While not exhaustive, the PAs expect customers to respond with changes to HVAC and chiller system sequences and controls, production and shift scheduling, lighting switching and dimming, refrigeration and process equipment scheduling, and energy storage.[122] Some customers prefer to develop automated response sequences, while others prefer to engage in manual adjustments to facility systems on equipment during events, and the PAs performance-based approach in both the Targeted and Daily Dispatch offerings flexibly allow for the customer preference.

Program Design

The program's Targeted Dispatch offering pays C&I customers with interval metering capability for actual, measured curtailment of load during events called during periods of likely ISO-NE system peaks. The PAs work with customer facility staff and Curtailment Service Providers ("CSPs") to identify peak load curtailment opportunities that can be utilized during up to eight targeted events lasting three hours each. Customers can participate in the Targeted Dispatch offering a wide range of technologies and strategies including battery energy storage.

Customer performance during each event is assessed using a site-specific baseline (with the exception of battery storage), and at the end of the season, incentives are paid on a per-kW basis based on average overall performance across all events. During the 2025-2027 term, the PAs will provide ADR offerings for the summer performance seasons, corresponding to peak system loads. Additionally, large C&I customers who have chosen

[122] The 2022-2024 Plan phased out incentives for fossil fuel generators participating in the C&I ConnectedSolutions program. Starting in 2023, fossil fuel generators are no longer eligible to participate in ADR offerings, including Daily Dispatch or Targeted Dispatch.

third-party supply rates are subject to installed capacity ("ICAP") fees and can potentially reduce those fees by participating in ConnectedSolutions and by working with their CSP. The annual ICAP hour is determined as the highest demand (MW) hour in a given ISO-NE Capacity year. Since program events target peak demand days on the ISO-NE grid, customers aim to reduce energy during the ICAP hour. ISO-NE uses a customer's actual demand during the ICAP hour to determine capacity needs for the upcoming year and assess charges accordingly. Some C&I customers also choose to participate through their CSP in the ISO-NE market, thereby further increasing the revenue customers can earn from being able to reduce load when called upon.

The C&I ConnectedSolutions Daily Dispatch offering pays customers an incentive for responding to an increased number of events (up to 60 events per summer). This offering gives customers the flexibility to curtail or discharge electricity in a way that works best for the customer. Customers can participate in ConnectedSolutions Daily Dispatch offering using a wide range of technologies and strategies. While not exhaustive, the PAs expect customers to respond with thermal storage from large refrigeration systems, energy storage, and in some cases HVAC controls.[123] As with the Targeted Dispatch offering, Daily Dispatch incentives are paid based on average performance at the end of the season relative to their baseline (except for battery storage).

Participation in the Daily Dispatch offering is open to any customer, not at a wholesale rate, who can achieve a reduction in loads on the grid for up to 60 two-or-three-hour events per summer. To be eligible for this offering, a customer must shed load at their facility and/or allow the PAs to discharge the customer's battery energy storage system ("BESS"). A BESS must be a behind-the-meter asset. "Behind the meter" means a facility that serves an onsite load other than parasitic load or station load utilized to operate the BESS. The D.P.U. has made the following ruling: "The Department emphasizes the importance of designing energy efficiency measures that aim to primarily decrease onsite load rather than increasing export to the grid."[124] Because of this ruling, the PAs clarified during the 2022-2024 term that Daily Dispatch performance measurement for determination of incentives for customer-utilizing BESS would be capped at 150 percent of site load, absent any charging of the BESS. Each customer's cap will be revisited each year and adjusted to reflect any significant load growth or contraction. The PAs, in consultation with DOER, the AGO, and the EEAC consultants, settled on 150 percent of site load to allow customers some flexibility in battery sizing.

[123] In some cases, the PA's DERMS providers can send dispatch signals directly to the customers' CSP, who then sends dispatch signals directly to customer-owned devices, such as batteries and other participating equipment. This machine-to-machine communication makes it easier for customers to participate.

[124] See D.P.U. 22-137 Ruling re: Petition of the Cape Light Compact JPE for Approval of a Strategic Electrification and Energy Optimization Demonstration Project Pursuant to St. 2022, c. 179, § 87A., issued Jan. 11, 2023.

As part of the Department's approval of the ConnectedSolutions program in July 2020, the PAs were authorized to offer a five-year incentive lock for participants intending to install battery storage. The purpose of the incentive lock was to provide prospective developers and customers interested in investing in a battery with a degree of certainty with respect to the incentive rate that the customer could expect to receive by performing in response to Daily Dispatch events. In response to stakeholder feedback requesting additional details on how the lock will be applied and administered, the PAs have made the following clarifications:

- The "five-year lock" represents a lock on the incentive rate at which the PAs will compensate participants for performance in the Daily Dispatch offering. It is not intended to offer a revenue guarantee that a customer who enrolls will receive in any given year or over the duration of their participation.
- To the extent the definition of "performance" may change in response to both changing market conditions and other incentive programs, the PAs need to maintain the ability to modify their programs to ensure that customer funds are used to maximize additional or incremental reductions in capacity, beyond what would have occurred in the absence.
- The PAs recognize that there may be other sources of value available to owners and operators of BESS assets including SMART adders, Clean Peak Energy Certificate generation, demand charge management, reliability concerns, and that may influence how they choose to charge and discharge their batteries.
- The five-year lock, while identified as a key component of certainty for securing project financing by developers during the initial Daily Dispatch offering development, has not been observed to drive a significant number of customer's BESS installations. The PAs are currently studying the impact of the five-year lock on project development through an ongoing EM&V study. If the study reveals modification or cessation of the five-year lock is recommended, the PAs will plan for any transition accordingly.

In response to developer feedback leading up to the 2022-2024 term, the PAs began offering a two-year construction lock regarding the time required to propose, finance, construct, and interconnect a commercial BESS, which can take multiple years. This process can substantially cut into the five years of performance-based incentive rate lock from initial enrollment at a known fixed rate for eligible commercial BESS (behind-the-meter assets greater than 50 kW). The customer or developer can, upon submission of a completed application for interconnection from their electric distribution company, request a commitment letter from their PA that grants the customer or developer two years from the date of issue to enroll in the

ConnectedSolutions Daily Dispatch offer for a further five years of participation in Daily Dispatch at the incentive rate in effect at the time the offer letter was issued. Any time in excess of two years until the customer enrolls will be counted as part of the five years of participation. In this proposal, the PAs seek to balance future risk of recovering customer funds for program costs many years into the future, with a desire from developers to have increased certainty in their project proposals.

Delivery of the C&I ConnectedSolutions program relies heavily on existing energy efficiency sales teams who regularly conduct outreach to customers to develop efficiency projects. While customers can participate directly, experience to date suggests that most customers prefer to work with a CSP to assess curtailment potential, advise on control strategies, and help implement potential upgrades or equipment that may facilitate greater performance during events, as well as provide additional value to their customers. It should be noted that qualified equipment installed to facilitate load reduction during peak events is fully eligible for incentives through "traditional" equipment-based pathways for HVAC controls, lighting controls, process controls, and more. Similarly, the PAs' staff can work with customers and installation contractors to leverage energy efficiency projects for additional value through the ADR offerings where appropriate. Energy efficiency and ADR efforts offer two distinct incentives for differing but complementary purposes.

Smaller commercial customers may have HVAC systems which are controlled by the same communicating thermostats most commonly found in residences but lack interval meters such that could measure demand reductions. To the extent that these customers have connected air conditioning loads, they will be targeted by the same marketing efforts that the device manufacturers apply to their residential customers. As with residential customers, the PAs will work to increase the number of communicating thermostats installed in commercial buildings with compatible systems and to encourage enrollment.

Program Barriers

The C&I ConnectedSolutions program has experienced continued growth through subsequent plans after being started in 2019. Since the program was established, the PAs have endeavored to improve the customer experience and better integrate with the portfolio of efficiency and decarbonization offerings for customers. The PAs stress that the ADR programs have limitations and barriers to ubiquitous customer eligibility and participation. Some include:

- A swath of customers that may be missed with the current go-to-market strategy consists of those whose demand is too small for detailed demand reduction strategies to be developed, but too large to be motivated to participate in thermostat-driven offerings.125
- Behind-the-meter BESS equipment costs have declined in recent years; however, soft costs such as permitting, and interconnection have increased. For most installations, these soft costs now make up the majority of the cost of a BESS project. This skews the economics to favor larger BESS installations because the soft costs remain essentially unchanged for smaller commercial-scale battery systems and large-scale battery storage systems, while the revenue and savings a BESS system can generate scale with system size. Except for the largest of customers, the Daily Dispatch incentives these larger BESS systems can earn is limited by the 150 percent cap. It may take time for equipment and soft costs to decline enough so that smaller BESS systems, which can be supported by the site load of smaller C&I customers, to become economical.
- A current lack of automated curtailment programed into customer's building management systems ("BMS"). While automated curtailment actions make it easier for sites to perform in the program, BMS control changes can be complex and costly and may discourage customers from enrolling. The PAs are coordinating with other C&I offerings for BMS upgrades to incentivize pre-programming of ADR sequences when systems are upgraded.
- The incentive gained from participating in ConnectedSolutions may not be enticing enough to warrant adjustments to the customer's general operations.

How the Program Impacts Plan Priorities

The C&I ConnectedSolutions program impacts equity, decarbonization, and improved customer experience. First, by lowering the ISO-NE system peak, overall costs are reduced for all electric customers and provides direct incentive benefits to both large and small C&I customers who are participating in the program. In addition, more less-efficient and carbon-emitting power plants are deployed when the ISO-NE peak occurs, so peak reduction helps to decarbonize the entire system. As climate change becomes more of a top-of-mind concern for customers, bringing them into programs that help reduce emissions (not to mention costs) provides them with a positive customer experience and a clear measure they can point to when discussing

125 For smaller customers with utility interval meters, yet too small for significant curtailment, Eversource and Unitil are allowing those sites to enroll without having the CSP interval data streamed from the site to lower the cost to enroll. Eversource and Unitil will use their own interval meter data for settlement of those customers post season. National Grid allows all customers to participate without having CSP interval data streamed from the site.

their environmental, social, and governance initiatives. Lastly, the program is one of the few incentive streams available to customers to earn any sort of return on investment for utilizing some capabilities of behind-the-meter battery storage, making substantial customer investment more economically attractive, in addition to any reliability benefits provided by storage systems.

Strategic Enhancements

Enhancement #1: Continued enrollment growth and availability for more customers

The PAs are planning for and targeting continued ADR growth in customers participating and demand reduced. As mentioned above the cross promotion across many of the C&I programs increases the opportunities for enrollment of new customers and the continued emphasis on heat pump promotion means there will be more controllable equipment coincident with the current system peak periods for the PAs to recruit.

Enhancement #2: Better integrate C&I ConnectedSolutions program with other C&I programs

The PAs will incentivize preprogrammed demand reduction control sequences through other C&I programs. Enhanced incentives to automate demand response sequences using an "easy button" will ready these customers to participate in ADR programs and improve their performance during events. An "easy button" will make it easier for existing customers to participate consistently and help recruit customers when the building management system is already being modified for upgrades, retro-commissioned, or first constructed. There are three parts to the plan to integrate ADR and energy efficiency projects:

- **For BMS upgrades and RCx (retro-commissioning) projects** that apply for incentives, when BMS vendors are actively programming a customer's building management system, the strategy is to get them interested in ADR, bring in a CSP, and give them a bonus to the energy efficiency program so a BMS curtailment plan can be established and programmed while the system is being upgraded. This will lower cost and complexity for customers and get them ready to enroll in the ADR program.

  Enrollments and performance in Targeted Dispatch have declined in recent years. This may be partially due to the lower clearing prices of ISO-NE's Forward Capacity Market. Most C&I customers who participate in ConnectedSolutions also participate in the wholesale markets through their CSP to stack benefit. As the benefits customers can receive from ISO-NE have decreased, so have customers participating in ConnectedSolutions. To partially account for this, some PAs may offer a larger incentive for Targeted Dispatch during the 2025-2027 term.

- **For new construction projects**, the PAs are working to include a review by the design team during the design development phase so demand reduction sequences of operations can be written into the specifications to new construction sites are ready to enroll in the program when complete. This will also allow customers to actively manage their own demand to lower their costs.
- **Continued exploration of cost-effective strategies** for gas and winter electric demand reduction and effective use of future AMI capabilities.

Enhancement #3: Higher annual incentive for small and medium-sized business customers

As mentioned above, small and medium-sized businesses often cannot curtail enough load to pay for the metering costs needed to participate in Targeted Dispatch or Daily Dispatch. Also, the detailed and customized services CSPs offer are hard to justify for smaller customers. Small and medium-sized business customers can participate in ADR events through a supported Wi-Fi thermostat, just like residential customers. However, the incentive rate of $50 enrollment and $20 per year does not adequately compensate small and medium-sized business customers for their larger curtailment. Some or all of the PAs may offer small and medium-sized business customers a higher thermostat-based demand response incentive.

ISO-NE and the electric distribution companies' long-term forecasts indicate that the system will transition from a summer peaking system to a winter peaking system, possibly within the next 10 years. The gas system is also winter peaking. The PAs will continue to work with the EEAC and ISO-NE and to monitor the Electric Sector Modernization Plan and D.P.U. 20-80 plan developments in order to identify cost-effective strategies for statewide offerings for gas[126] and winter electric[127] demand reduction. The large electric distribution companies both have wide-scale AMI deployment planned, with much of the work slated for completion by the end of the 2025-2027 term. The PAs anticipate future AMI capability will allow ConnectedSolutions to offer different program designs to incent customers to reduce demand during system peak times; however, the exact capability and the precise numbers of customers with AMI capability is not yet known.

During the 2025-2027 term, the PAs may have the capability to run technology-agnostic, performance-based ADR offerings for small and medium-sized businesses, instead of the current measure-specific approach.

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[126] Eversource, as part of the EGMA settlement, is currently running gas demand response demonstrations for both the Residential and C&I sectors. Eversource is sharing learnings and findings with the PAs as these demonstrations are ongoing.

[127] During the 2019-2021 term, the PAs offered a winter electric ADR offering while awaiting a cost-effectiveness determination. The offering was limited to C&I customers and ultimately recruited approximately 50MW of customer demand reductions, of which roughly 15MW was comprised of diesel generators. The offering was ultimately not cost-effective and ceased. The PAs have revisited the benefit-cost calculation using updated AESC values and found no material changes in the cost-effectiveness of a winter ADR approach at this time.

If any novel program offerings or designs are identified, the PAs will plan to implement a demonstration following the current DPU guidance on demonstrations as detailed in section 7: Research, Development, and Demonstration.

Incentive Levels

Figure 31: C&I ConnectedSolutions Incentive Program Incentives

Measure	Criteria	Incentive Amount
Targeted dispatch	Measured performance	$35 / kW
Daily dispatch	Measured performance	$200 / kW
Small and medium-sized businesses on a G-2 rate	Flat incentive	$200 per thermostat per year and $50 per thermostat per enrollment

3.4 Hard-to-Measure Initiatives

The PAs classify some of their undertakings as "Hard-to-Measure." This set of work describes activities that contribute to or facilitate the PAs' achievement of their goals, but do not, by themselves, directly produce savings. Each sector has Hard-to-Measure Initiatives which are listed below.

- **Statewide Marketing – All Sectors.** The budget in the Statewide Marketing Hard-to-Measure Initiative is used to support general statewide marketing efforts and the statewide brand, Mass Save. Program marketing is included in each of the program's budgets. See section Six: Marketing for more information.
- **Statewide Data – Residential, Low-Income, and C&I.** The budget in this category is used to support database and data review and sharing efforts, including costs associated with vendors developing and improving Mass Save Data, the PAs' statewide energy efficiency database, as well as the PAs customer profile dashboard managed by the PAs Statewide data management vendor. Statewide database efforts will affect all sectors, with funds budgeted for each sector. Please refer to section Five: Statewide Data and Data Transparency for more information on the PAs' data and reporting efforts.
- **DOER Assessment – Residential, Low-Income, and C&I.** The DOER Assessment represents an annual budget for DOER that is assessed. Please refer to section 9.1: DOER Assessment for more information.

- **Evaluation & Market Research – Residential, Low-Income, and C&I.** This budget category includes costs associated with the EM&V budget, potential studies, the AESC Study, the eTRM, related labor costs, and other evaluation and market research costs. This research provides value across programs, and costs will be allocated to one or more sectors as appropriate for each activity. Please see section Four: Evaluation, Measurement, and Verification for more information.
- **Outside Consultants – Residential, Low-Income, and C&I.** The EEAC Consultants' budget is managed by DOER and used to support the retention of expert consultants by the EEAC and reasonable administrative costs, in accordance with G.L. c. 25, § 22(c). The EEAC must annually submit to the Department a proposed budget for the "retention of expert consultants and reasonable administrative costs. The AGO Consultant is retained by the AGO, and "reasonable and proper expenses" as defined in G.L. c. 12, § 11E(b). Please see section 9.2: Council Consultants for more information.
- **RD&D and Demonstrations – Residential and C&I.** In their continued efforts to explore new technologies, measures, and solutions available for customers, the PAs set forth this budget to pursue research and development for new technologies, measures, and solutions that may or may not immediately lead to savings. This allows the PAs to be proactive and leaders in innovation. Costs associated with research and development into areas of interest are charged to this category. The PAs will seek to identify demonstration project (meeting the definition and intent of the Department's Energy Efficiency Guidelines) candidates during the Plan's development or propose them within a Plan term through a mid-term modification.
- **Sponsorships & Subscriptions – Residential, Low-Income, and C&I.** Sponsorships and subscriptions support the energy efficiency market, encourage workforce education, attract skilled employees to Massachusetts, and promote innovation in both service delivery and the development and testing of energy-efficient technologies. In accordance with the Department's Order regarding the 2019-2021 Plan and general accepted practice, each sponsorship and subscription expense must be reasonable, prudently incurred, and provide a direct benefit to Massachusetts customers. For additional information, please see Appendix J: Sponsorships & Subscriptions Policy.
- **Workforce Development, Massachusetts Clean Energy Center – Residential, Low-Income, and C&I.** The PAs work with the Massachusetts Clean Energy Center ("MassCEC") to coordinate clean energy equity workforce development programs offered by the center using the $24 million in

ratepayer funding provided annually to MassCEC through the Mass Save programs. G.L. c. 25 § 19(d); G. L. c. 23J, § 13(c). This $24 million annual funding represents a doubling of the current budget for MassCEC's essential and innovative workforce development efforts, consistent with the core focus of the 2025-2027 Plan on decarbonization, equity, and an enhanced customer experience.

As required by law, these MassCEC-led programs are designed to support participation and employment of MWBEs (minority-owned and women-owned business enterprises), residents of low-income and environmental justice communities, federal and state tribes, fossil fuel workers, and other underrepresented businesses or communities in the energy efficiency and clean heating and cooling industries. G. L. c. 23J, § 13(a). These efforts are fundamental to meeting the Commonwealth's energy efficiency and electrification needs and supporting a just clean energy transition, and the PAs are grateful for the leadership, expertise, and support of MassCEC in driving these efforts.

Given the importance of this effort to the success of the programs, the PAs and MassCEC are implementing several changes to their collaborative approach for the 2025-2027 term. First, the PAs and MassCEC will meet regularly to discuss specific equity workforce needs of the Mass Save programs, strategies for meeting these needs, and promote specific employment and business opportunities within the Mass Save programs following training. DOER will participate in these meetings.

Areas of focus are likely to include training for contractors who speak languages other than English (LOTE) and connecting these contractors with LOTE customers, business development and skills support for MWBEs, as well as transportation support for employees, among others. Second, MassCEC will also be an accountable partner and provide regular reporting to the EEAC and the Department on their efforts, including through quarterly reports and key performance indicators. The PAs will work MassCEC, DOER, and the Equity Working Group over the coming months to develop key performance indicators for MassCEC leadership efforts to be included in the final draft of the Plan. This will help ensure that the $72 million in customer funds transferred from the Mass Save programs to MassCEC are designed to support the equity-related workforce needs of the programs, that diverse trainees and businesses are given opportunities as available within the network of Mass Save contractors and vendors upon completion of their training, and that the PAs ultimately succeed in creating a more diverse workforce that better represents the communities in

which they serve. For further details on MassCEC's workforce development efforts, see Appendix M: MassCEC Equity Workforce Funding Levels (FY25-FY27).

- **Residential HEAT Loan – Residential.** The Residential HEAT Loan budget includes costs to buy down the interest due on the loan and the cost to administer the loans.
- **Residential Education – Residential.** The budget in the Residential Education Hard-to-Measure initiative is used to support public energy efficiency education efforts. For more information on Residential Education efforts, please see section 3.1.5.
- **Residential – Residential Conservation Services ("RCS").** RCS includes costs related to the energy assessments for residential participants in accordance with the Department's directions and the RCS statute. This line also includes the RCS Assessment as issued by the DOER. See 220 C.M.R. § 7.02; St.2012, c. 209, § 32.
- **Low-Income Energy Affordability Network – Low-Income.** LEAN and the PAs work together to comprehensively serve income-eligible households across the state. LEAN delivers energy programs to income-eligible customers and also represents them in legislative discussions and regulatory proceedings in the state. The LEAN budget is used to pay for their administrative and personnel costs related to program implementation. For more information on LEAN, please see section 3.2: Low-Income Sector.

3.4.1 Statewide Contact Center

For residential and small business customers, the Massachusetts PAs will launch a new statewide contact center to provide comprehensive support for all decarbonization offerings under the programs.[128] The statewide contact center will provide a single point of entry for residential and small business customers to engage with the Mass Save programs. Center support will include guidance for customers at the beginning of their journey who want information on where and how to start and the range of potential decarbonization solutions available for their home, as well as customers who have already started their decarbonization journey and are engaged with the programs.

[128] The Compact already maintains a call center that provides comprehensive customer support for its customers. The Compact will continue to maintain its own call center and through the interactive voice response, customers that call into the statewide number will be transferred to the CLC call center as is done currently. Additionally, low-income customers will also continue to be served through the LEAN Statewide Client Services Center. Low-income customers who call into the statewide number will be transferred to the LEAN Statewide Client Services Center either by selecting that option on the interactive voice response or via a warm handoff from Statewide Contact Center staff to the LEAN Statewide Client Services Center.

The statewide contact center will be staffed by program specialists who are knowledgeable of all Mass Save offerings and who can assist with topics such as program guidance and eligibility information, Home Energy Assessments, decarbonization consultations, HEAT Loans, relevant tax credits or federal incentives, and the status of a rebate. Center staff will also be trained and equipped to help customers access incentives and get started with decarbonization efforts outside of the Mass Save programs, such as EVs and distributed solar installations. Initially, program specialists will be trained to provide a general overview and field basic questions on these topics and to facilitate a warm hand-off to specific vendors where they have a particular need. For example, if a customer's rebate application shows that it is missing information then a program specialist would be able to provide background on the status of their application and provide a warm hand-off to the rebate processing vendor to help the customer upload the necessary information to complete the rebate application. Over time and based on experience with implementation, the PAs will work to limit the number of hand-offs where possible.

Customers will be able to access these comprehensive resources via phone, chat, and email—enabling customers to engage with program specialists in the mode of their choice. Program specialists will also be equipped to provide customers with language services as needed. Additionally, as part of the statewide contact center, the PAs will also create a centralized platform for tracking ongoing customer engagement, participation, and resolution across all PAs and programs. This will provide the foundation to drive further improvements to customer experience and support automated alerts in subsequent terms.

3.4.2 Community Outreach

Community First Partnership

The Community First Partnership is a cornerstone initiative aimed at promoting equity and participation in energy efficiency programs by leveraging relationships with trusted community partners to promote residential weatherization and HVAC, small business turnkey services, and serving financially constrained customers, renters, and LOTE (Languages Other Than English) customers. The Community First Partnership provides eligible municipalities and community groups an opportunity to apply for partnership with the PAs to receive funding to support increased awareness and participation of Mass Save offers. The PAs understand that the most effective way to reach communities is to fortify these relationships and community-specific insights. The program aims to arm communities and Energy Advocates with program knowledge to share with community residents. The PAs work closely with community partners to understand the needs of communities and customers, leading to improvements in processes and services.

Interested municipalities and community groups submit the program application for participation for a specified term. Priority is given to environmental justice communities, LOTE customers, low- and moderate-income customers, and small businesses. Community partner applicants are asked to include their planned goals and activities to support these objectives, as well as a detailed budget of how program funds will be allocated. Once selected, community partners are required to attend an orientation and several other technical and program-related training sessions throughout the duration of their partnership.

A critical aspect of the Community First Partnership is the Energy Advocate role. All community partners are required to hire an Energy Advocate. The Energy Advocate is a representative from the community who is a point of contact for the partnership and is responsible for:

- Promoting Mass Save and energy efficiency offers awareness throughout the community.
- Working with the competitively procured Lead Implementation Vendor and PAs to track and record participation barriers.
- Actively communicating with customers to guide them through the process, and broker communication with stakeholders to reduce program participation barriers.
- Working to ease barriers or confusion by supporting coordination between program vendors and customers.
- Manage administration of a community-based social marketing campaign for increased awareness and adoption of energy positive behaviors.
- Providing language support services.
- Providing community-specific feedback to the PAs for continuous improvement.

Through ongoing communication with community partners during the 2022-2024 term, the PAs have identified areas for improvement. For the 2025-2027 term, the PAs will incorporate some changes to help support existing barriers, contribute to equity goal achievement, and position the program for impactful and inclusive participation. The multifaceted approach aims to address the unique needs of diverse communities. The PAs' planned enhancements include:

- **Partnership structure modifications.** The PAs plan to adjust a Community Partner's term to be three years.
- **Increased funding for Energy Advocates.** Initial feedback during the 2022-2024 term indicated additional funding should be considered to support Partners' efforts in their communities. Areas of

need focused on additional funding for Energy Advocate salaries to help reduce turnover, and additional support for marketing and campaign carve-outs.

- **Streamlined marketing processes.** The PAs are committed to developing a streamlined process for community partners to access approved marketing materials, and to allow for more flexibility for piloting new messaging and marketing approaches to leverage their unique experience with their own residents and small businesses, beyond pre-approved "a la carte" list of materials.
- **Additional marketing support.** According to community partner feedback, customer experience improvements have emerged from pilot marketing programs.
- **Improving data access.** The PAs are committed to working with community partners to provide consistent and reliable data reporting,
- **Coordinating Community First Partnership and small business efforts.** The PAs will review Small Business Services vendor staff capabilities and requirements for equity-focused small business campaigns and align Main Streets marketing assets with the program's equity focus.

Community Education Grant

For the 2025-2027 term, the PAs plan to continue the Mass Save Community Education Grant to support environmental justice communities and bring energy efficiency education programs to their residents in new and exciting ways. The Community Education Grants are designed to allow community-based organizations more flexibility to test their own outreach approaches. The grants can range from $5,000 to $25,000 based on the proposal received and the proposed impact by the outreach efforts. The PAs prioritize increased engagement with local communities through energy efficiency educational programs to promote grass-roots engagement with community members. Outreach efforts funded by this grant can include but are not limited to hosting energy efficiency community events, and collateral distribution in unique ways such as giveaways, through food pantry partnerships, advocacy trainings, and house of worship events.

Grant applicants must meet certain eligibility requirements, and acceptance is subject to review and approval of submitted applications. Community Education Grant recipients are responsible for ongoing check-ins with the PAs as well as providing frequent reporting on progress. The grant allows municipalities and participating community groups the flexibility to provide creative outreach solutions to residents primarily in environmental justice communities. Recipients have additional community reach and can help promote awareness of Mass Save program available to the residents of their communities.

3.4.3 Language Access

The PAs recognize the importance of ensuring that language is not a barrier to accessing Mass Save services and have undertaken language access research during the 2022-2024 term for key recommendations to better serve residential and small business customers in their preferred language. In the 2025-2027 term, the PAs will build upon the findings from this work and integrate the language access recommendations into the various programs. The intended outcome will provide language access policies and protocols as well as other tools, services, and guidelines to serve the residential and business customer populations of the five most commonly spoken languages other than English, including Spanish, Portuguese, Haitian-Creole, Mandarin, and Cantonese.

The language access work will provide actionable recommendations to ensure Mass Save initiatives can effectively align with strategic Language Access Policy standards. Language Access Policy standards identify recommended standards across the initiatives and supporting procedures; thereby identifying specific actions that the programs and stakeholders can take to achieve these identified needs. The PAs are committed to language access and establishing a systemwide strategy for ensuring meaningful access for current and prospective participants, across many customer touchpoints and communications and addresses how program resources can meet existing and future language access needs.

Language access includes:

- Identifying language needs and its incorporation into service delivery.
- Assessing identified language needs.
- Training and resources available for program staff and stakeholders.
- Quality control of language assistance services.
- Monitoring and evaluating program usage.
- Language access customer resolution process.
- Strategic recommendations and opportunities to improve language services.

In 2024, the PAs will review the principles of language access and plan to integrate the recommendations (issued in May 20240 for the 2025-2027 term. The PAs will include additional information in the final Plan.

3.4.4 Workforce Development

The PAs are committed to promoting a just transition to a clean energy future, which includes supporting a robust diverse workforce that truly reflects the needs of the communities they serve in. In the 2025-2027

term, the PAs plan to build on the successes and lessons learned for workforce development efforts in the 2022-2024 term and continue to promote opportunities for education, training, awareness, and access to energy efficiency careers. Over the 2025-2027 term, the PAs will host Supplier Diversity Summits, provide funding for Mass Save Workforce Training Grants and continue to work towards connecting diverse suppliers with their existing vendors and program opportunities through direct outreach and networking. Eversource and National Grid will also continue to support the Clean Energy Pathways program.

Clean Energy Pathways

The Clean Energy Pathways program is a full-time, paid internship that aims to promote interest and participation in the energy efficiency workforce in designated regions across Massachusetts. The integration of more individuals from environmental justice communities into the energy efficiency workforce, particularly in HVAC and weatherization jobs, is imperative for advancing the principles of Justice40.[129] The Clean Energy Pathways program aims to create a sustainable pipeline of qualified professionals for high-demand careers in the energy efficiency industry, to increase the diversity and equity of the workforce by recruiting participants from environmental justice communities across Massachusetts, and to ensure program participants are equipped with the skills necessary to deliver current and future energy efficiency programs. Building on the 2022-2024 term, Eversource and National Grid plan to continue the current model of the Clean Energy Pathways program, building on key lessons learned in the 2025-2027 term.

The Clean Energy Pathways program is delivered through several implementors including a competitively procured Lead Implementation Vendor, community-based organizations, Business Partners, and training providers.

- The **Lead Implementation Vendor** is responsible for overall program management including recruitment of community-based organizations, Business Partners, and training providers.
- **Community-based organizations** have rich networks in their communities and leverage these connections to access local people. The Clean Energy Pathways program works with these community-based organizations to recruit prospective interns, support interviewing and resume development, and provide wraparound support services for the duration of the internship.
- **Business Partners** are local Mass Save participating HVAC or weatherization contractors who have signed on to accept Clean Energy Pathways interns for on-the-job training experience. Business

[129] See Justice40 Initiative.

Partners are encouraged to hire Clean Energy Pathways interns for full-time positions after the internship has concluded.

- **Training providers** are responsible for providing the expertise, knowledge, and career-readiness training for new entrants in the energy efficiency workforce.

Since its inception in 2021, the Clean Energy Pathways program has made significant gains in helping the PAs invest in their communities and the energy efficiency workforce learning and consistently adapting to support the needs of interns and business partners. Introducing new and diverse entrants to these fields not only bolsters the workforce but also champions a more just and balanced approach to environmental sustainability, thereby contributing to the realization of a cleaner, greener future for all.

Recruitment

Recruitment for the Clean Energy Pathways program is conducted locally, with the majority of applicants being recruited directly by community-based organizations. Applicants who are interested in the Clean Energy Pathways program must complete an online application on MassSave.com. The Lead Implementation Vendor then conducts interest checks with all eligible applicants to ensure they understand the program, are available to work full time, and are still interested in exploring a career in HVAC or weatherization. From there, eligible applicants will complete an interview with the Lead Implementation Vendor and Business Partners who will select applicants to extend internship offers.

To enhance program success in the 2025-2027 term, the PAs propose several changes including extended and intensive career readiness training for participants, establishing long-term contractual relationships with partners for multiple cohorts, and shifting program focus to regions with strong partnerships and identified needs. In addition, the PAs plan to focus on only one region per cohort, which will allow for simplified coordination and recruitment, more opportunities for in-person training, and decreased transportation costs. Finally, increased support for supervisors involved in participant training is suggested to make participation more attractive. These proposed changes aim to address challenges and create a more sustainable, impactful workforce development program.

Successes and lessons learned

The collaboration with community-based organizations proved instrumental in fortifying the Clean Energy Pathways program. By strategically partnering with a community-based organization that specializes in teaching interpersonal skills, the program successfully addressed and mitigated drop-out rates. The incorporation of a community-based organization, led by a public speaker and mental health advocate,

brought a holistic approach to the program. This collaboration went beyond the traditional academic framework, focusing on challenging and dismantling limiting mindsets. The workshop series facilitated by the community-based organization covered a comprehensive range of skills, including fostering a growth mindset, developing emotional intelligence, enhancing financial literacy, and building meaningful relationships. The integration of these essential life skills significantly strengthened the overall effectiveness and impact of the program.

Mass Save Workforce Training Grant

The PAs recognize training new and diverse candidates may require additional investments in resources to reduce barriers to training and entering the energy efficiency workforce. The Mass Save Workforce Training Grant will provide funding annually for energy efficiency training and certification programs. The grant seeks to increase the sustainability of the energy efficiency workforce by supporting training and transitioning new workers into the energy efficiency workforce. This grant is centered around reaching environmental justice communities and will prioritize supporting diverse individuals within these communities. This grant supports increased training and certification completion rates amongst diverse program participants by alleviating the financial hardship that may pose as a barrier to participation.

The PAs welcome applications from individuals and/or organizations who can support the training of individuals. The Mass Save Workforce Training Grant will provide funding to training programs and community colleges to subsidize the cost of energy efficiency training and/or certifications for a group of applicants. It will also provide funding for individuals who wish to complete energy efficiency training and/or certifications. Interested parties submit an application and attend an orientation.

Diversity, Equity, and Inclusion Education and Training

Building upon a planned 2024 training, the PAs intend to offer a Diversity Equity, Inclusion, Belonging, and Justice training for all PAs, lead vendors, and other participating partners annually throughout the 2025-2027 term. It is critical for all Mass Save partners to have a common baseline understanding of diversity, equity, and inclusion to ensure it is at the root of the PAs' strategy and delivery of energy efficiency programs.

Supplier Diversity

The PAs understand that supplier diversity serves as a catalyst in advancing energy justice, economic justice, grid modernization, and environmental justice. Intentionally diversifying the pool of suppliers can rectify disparities in energy efficiency, ensuring underrepresented businesses have equitable access to economic opportunities in the sector. The intentional inclusion of diverse suppliers contributes to the

economic empowerment of environmental justice communities, aligning with broader diversity, equity, inclusion, belonging, and justice goals. Moreover, as the energy landscape evolves toward grid modernization, diverse suppliers will bring fresh perspectives, fostering innovation and ensuring the fair distribution of economic benefits and opportunities.

During the 2025-2027 term, the PAs plan to host a series of networking and educational events to promote participation channels and connect diverse suppliers with available opportunities including Supplier Diversity Summits, matchmaking, contractor development pathways, and a creation of a vendor network. The Program Administrators will continue to focus on supplier diversity through targeted outreach and partnerships to identify minority and women-owned enterprises that provide services or equipment that are likely eligible for Mass Save contracts, subcontracts, or incentives. This includes direct outreach to certified minority and women-owned enterprises listed in the Massachusetts Supplier Diversity Office's Directory of Certified Businesses, and promotion on MassSave.com. The information will be available on MassSave.com for ease of access for statewide minority and women-owned enterprises and diverse suppliers.

Supplier Diversity Summits

These events are designed to inform diverse suppliers of opportunities that exist within the Mass Save ecosystem and encourage networking amongst the PAs and existing vendors. During the 2025-2027 term, the PAs will continue to host Supplier Diversity Summits annually in centrally located areas to ensure geographic inclusivity, with considerations for access to public transportation. Over the last two years, the summits have grown attracting 100 participants in 2022 and over 150 in 2023. Targeted outreach has been conducted to minority and women-owned enterprises statewide with a description of services related to HVAC technicians, electricians, and weatherization service providers. Throughout the term, the PAs plan to engage with diverse suppliers to support these events aligning with their commitment to inclusivity in both content and execution.

As a learning opportunity for future endeavors, the PAs recognize the need to expand involvement of the supplier diversity ecosystem. This involves actively engaging other stakeholders within the diversity and inclusion space, encouraging them to participate and leverage their networks to amplify the impact of future summits. The PAs intend to implement a structured matchmaking component to foster collaborations between diverse suppliers and the Mass Save lead vendors. This will help to create business relationships that transcend Supplier Diversity Summits. This approach not only maximizes the opportunities for minority-owned and women-owned business enterprises to connect with the Program Administrators but also contributes to the overall growth and sustainability of the diverse businesses in the energy efficiency ecosystem and beyond. The matchmaking process will contribute to advancing the goals of supplier diversity.

Matchmaking Initiatives

The purpose of Matchmaking Initiatives is to connect diverse suppliers with lead vendors and other entities with whom they can partner. Throughout the 2025-2027 term, the PAs plan to incorporate intentional matchmaking activities into their supplier diversity initiatives. Matchmaking plays a crucial role in advancing supplier diversity by fostering meaningful connections between diverse suppliers and procurement opportunities, and existing vendors with workforce needs. The deliberate pairing of minority-owned, women-owned, veteran-owned, or other diverse businesses with the PAs, and contracted vendors not only promotes economic inclusion but also enhances the overall business landscape. Through intentional matchmaking, the PAs can ensure a diverse pool of businesses join the various existing contractor networks and compete for contracts. This not only brings innovation and unique perspectives to the supply chain but also contributes to the development and sustainability of underrepresented businesses. By fostering intentional connections, the PAs can create a more equitable marketplace, drive economic growth in marginalized and environmental justice communities, and build a foundation for long-term business success grounded in diversity and inclusion.

Diverse Vendor Network

In the 2025-2027 term, the PAs plan to develop a Diverse Vendor Network to provide on MassSave.com and to facilitate upskilling within that network through virtual resources and virtual training offers. This platform could include a calendar of training opportunities supported by the PAs for new entrants and for upskilling existing staff, provide information for contractors interested in being involved directly with the PAs' programs who are not currently involved, share links to in-person and virtual trainings, and provide information to connect new entrants with the stakeholder ecosystem in hopes of growing their businesses.

Contractor Development Pathways

In addition to the summits to inform diverse suppliers of opportunities, matchmaking to connect them to lead vendors, the PAs are exploring partnership opportunities with other organizations to establish a Contractor Development Pathways offer. The aim is to present opportunities for upskilling diverse suppliers with the tools needed to be part of the Mass Save contractor network.

The goal of the Contractor Development Pathways offer is to:

- Increase the number of MWBE (minority-owned and women-owned business enterprises) in the clean energy workforce.

- Provide access to information about opportunities within Mass Save. Connect the vision of Contractor Development Pathways to Supplier Diversity Summits.

For this opportunity, the PAs are hoping to work collaboratively with other key players in the workforce development field in Massachusetts to develop an equitable pathway to contractor development, with a focus on MWBE contractors.

3.4.5 HEAT Loan

The PAs have seen continued interest and participation in the HEAT Loan since its initial offering in 2006. The HEAT Loan has proven to be popular as it has allowed customers to finance approved energy efficiency measures at a zero-percent interest rate. Over the years, the PAs have made adjustments to the HEAT Loan offering such as expanding the list of eligible measures and periodically adjusting the loan cap. As the PAs have worked toward advancing electrification goals, there has been greater interest and participation in the HEAT Loan for measures with higher costs. Given the increased volume of loans, rising interest costs, and expansion of 100 percent coverage for moderate-income customers, the PAs sought to redesign the HEAT Loan offering for the 2025-2027 Plan. For the 2025-2027 term, the Mass Save HEAT Loan will offer zero-interest financing opportunities up to $25,000 with terms up to five years for the installation of specified energy efficiency and decarbonization measures. The HEAT Loan is designed to help alleviate the financial burden and upfront capital cost obstacles for customers when installing energy efficiency measures.

Program Design

All PA customers with an active residential account are eligible to apply for a HEAT Loan on qualified measures. HEAT Loans are available for a variety of energy efficiency purchases. Eligibility criteria and borrowing limits are set for each type of purchase. The PAs work with a network of over one hundred participating HEAT Loan lenders. Loan agreements are between the customer and the selected HEAT Loan Lender, and therefore, receipt of a HEAT Loan is contingent upon approval by the selected lender.

The HEAT Loan is delivered through a network of over 100 participating banks, credit unions, and other lenders. This expansive list of lenders allows many customers to receive their loan from a local institution or the lender with whom they already do their banking or select a lender that meets their needs for the application process or approval timelines. The loan provides financing for the installation of the following energy efficiency measures:

- Program-eligible weatherization.

- Specified pre-weatherization barriers.
- ENERGY STAR certified replacement windows (must be done in conjunction with weatherization, if weatherization is recommended).
- Residential batteries enrolled in ConnectedSolutions.
- Heat pumps are installed to support space heating and cooling.
- Heat pump water heaters.

HEAT Loan eligibility is determined during a Home Energy Assessment, and customers are provided with the necessary intake information. Next, customers can solicit quotes for their project work (as needed), and once they have selected a proposal that information is submitted to the Residential Turnkey Services Lead Implementation Vendor for review and approval. Once approved, the customer receives an authorization form with the total eligible loan amount, which includes the cost of the project, less any eligible rebates or incentives, that they can take to their preferred lender for approval.

Lending approval is subject to an individual lender's approval criterion. Once the lender approves the customer to receive a HEAT Loan, the PAs pay the lender to buy down the interest rate to zero percent for the customer and the customer then repays the loan at zero percent directly to the lender. The process for applying for a HEAT Loan is described in detail at https://www.masssave.com/en/saving/residential-rebates/heat-loan-program/

Customers may learn about the HEAT Loan program in several different ways:

- **Energy Specialists.** During the Home Energy Assessment, Energy Specialists promote the HEAT Loan to customers with an opportunity for an eligible measure**.**
- **Heat Pump Installer Network.** The HEAT Loan is particularly attractive to customers financing expensive installations, such as new heating and cooling equipment, and for that reason, this offer is also often promoted by the PAs' Heat Pump Installer Network.
- **Community First Partners.** Community partners participating in the Community First Partnership also promote the HEAT Loan along with other program incentives and services.
- **Participating Lenders.** Many lenders promote the HEAT Loan themselves, providing another pathway for customers to enter the PAs' programs.

Any savings or costs associated with installing energy efficiency measures due to the availability of the HEAT Loan are included in the programs under which the measure was installed. For example, savings for a heat pump submitted by a downstream rebate would be accounted for within the Residential Rebates program, and savings from a heat pump facilitated through the turnkey offering would be accounted for within Residential Turnkey Services. The PAs arrange for payment to the lender to buy down the interest rate to zero percent for the customer.

HEAT Loans have been administered by the electric PAs, except for instances in which a gas PA serves a customer in a municipal electric utility territory, in which case the gas PA would offer the loan. Starting in the 2025-2027 term, HEAT Loan funds will be shared between electric and gas PAs. The PAs collaborate with the Massachusetts Bankers Association to provide procedures for banks to participate in the Residential sector programs, and schedule check-ins to provide updates and collect feedback. The PAs will also work with the Massachusetts Community Climate Bank and other institutions to identify ways to reduce the costs of HEAT loan payments on customers.

SECTION FOUR: EVALUATION, MEASUREMENT, AND VERIFICATION

Evaluation, Measurement, and Verification ("EM&V") has been an integral component of the efficiency programs in Massachusetts since their inception. The robust EM&V framework has supported the development and continuous improvement of demand side management programs as they adapt to changing markets. As these programs continue to evolve from strictly traditional energy efficiency offerings to more holistic decarbonization programs, EM&V will need to focus on the effectiveness of PAs' efforts to improve the customer journey toward decarbonization and align with the Commonwealth's GHG emissions reduction goals.

Evaluation plays an essential role throughout the program lifecycle, from conducting research to inform new program designs and provide insight into key priorities such as equity and electrification, as well as assisting implementation in developing program theory, assessing demonstration projects for new offerings, and ultimately verifying claimed savings and benefits from mature programs. Importantly, evaluation practices are evolving to track progress toward market transformation and assessment of the PAs' role in shifting markets toward more efficient standard practices. Through Mass Save, Massachusetts has invested heavily in EM&V research and leads the country in terms of comprehensive, in-depth evaluations.

The key purposes of EM&V are to support continuous program improvement and program innovation, ensure accurate and credible impacts, assist in determining cost effectiveness, and support timely regulatory reporting to the Department and ISO-NE. These purposes are interactive, mutually reinforcing, and critical to the continued success of the programs.

4.1 EM&V Framework

Consistent with previous Three-Year Plans and Department precedent, the PAs propose to continue the evaluation framework that has successfully featured nation leading, third-party EM&V efforts in Massachusetts. It is critical that the Commonwealth's energy efficiency programs be evaluated, measured, and verified in a way that provides confidence to the public at large in the results of the programs. The EM&V efforts enable the PAs to report savings to the Department with full confidence. Additionally, it is critical to ensure both the reality and the perception of the independence and objectivity of EM&V activities. Accordingly, the EEAC will continue to have an oversight role over the EM&V activities of the PAs, which will help ensure consistency, timeliness, and credibility of the results. The EEAC's oversight role will be accomplished through the EEAC's EM&V consultant ("EM&V Consultant"), a third-party expert consultant who has primary responsibility for working with the PAs to plan and implement robust EM&V in Massachusetts.

The PAs and the EM&V Consultant will continue to work diligently to reach consensus on evaluation issues throughout the 2025-2027 term. If there are areas of difference that arise that cannot be resolved through consensus during the ongoing interactive process between the EM&V Consultant and the PA evaluation staff, authority for decision making will reside with the EM&V Consultant and the EEAC.

To enable the PAs to fulfill their responsibility to report program savings to the Department with full confidence, an appeals process has been established, through which the PAs may bring decisions made by the EM&V Consultant to the EEAC for review and resolution. This process is implemented through the formation of an evaluation appeals committee (Appeals Committee) of the EEAC, whose responsibility in this area is to hear the matter under dispute and rule so that the study may proceed in a timely way. In general, it is expected that this review process will be completed within 72 hours once an issue is elevated to the Appeals Committee.

The Appeals Committee consists of three voting members of the EEAC, including DOER. Consistent with general EEAC proceedings, the Appeals Committee will include and consult with, in both deliberations and decision making, a representative of both the PAs and the EEAC's consultant team, neither of whom shall have a vote in the Appeals Committee. The Appeals Committee will review the issues related to the disputed matter, hear from the PA evaluation staff and EM&V Consultant, and make a determination on the outcome of the matter. The decision will be recorded, along with a description of the applicable issues. The participants in the appeal will sign the record of the decision, indicating their acceptance of the representation of the issues and of the decision.

In exceptional cases, where the PAs perceive there to be significant risk to their ability to manage the energy efficiency programs in the near term, the PAs will note their disagreement with the decision of the Appeals Committee on the record of the decision and reserve the right to immediately petition the Department. The PAs shall be able to submit any such documents to the Department in conjunction with the filing of the Three-Year Plans, mid- term modifications, plan-year reports, and term reports. The Department will be able to review the record of this decision in its review of Three-Year Plans, mid-term modifications, plan-year reports, and term reports.

To date, the EM&V Consultant and PA evaluation staff have been able to resolve areas of differences specific to evaluation without proceeding to the Appeals Committee. This is a testament to the professionalism, hard work, and collaborative engagement of the PAs and the EM&V Consultant. The PAs are continuously looking for opportunities to improve evaluation processes and address new issues that arise and may suggest updates to the EM&V framework in the future if needed.

The PAs will maintain a statewide focus to the maximum extent possible and review EM&V budgets with the EM&V Consultant. In addition, the PAs will integrate electric and natural gas evaluation efforts to the maximum extent possible. In addition, where possible, the PAs and EM&V Consultant will collaborate on evaluation studies conducted in conjunction with nearby jurisdictions in order to reduce costs. For example, during the 2022-2024 term, Massachusetts participated in regional studies related to C&I demand response programs and residential heat pump performance and usage.

The PAs are responsible for contracting with independent evaluation contractors and ensuring that they meet all required terms and conditions in order to protect customers' safety and property, as well as the privacy and security of customer data. Each PA signs contracts with each independent evaluation contractor in order to ensure its contractual requirements to protect customers are satisfied.

4.2 Evaluation Management Committee

The PAs and the EM&V Consultant established the Evaluation Management Committee ("EMC") as a steering committee for statewide evaluation issues, providing guidance and direction to each of the evaluation research areas. The EMC works to plan, prioritize, and delineate the research studies to be undertaken over the Three-Year Plan term. The EMC meets monthly and serves as a forum to coordinate evaluation studies and related tasks, resolve issues, and set strategic direction.

The PAs and the EM&V Consultant have worked to consistently improve the EM&V process over time. The EMC has established working groups to review and address new topics, areas of concern, or disagreement. For example, the EMC requested that the C&I independent evaluation contractor host a monthly Baseline Advisory Group, which includes the PA evaluation staff and the EM&V Consultant, to discuss and build consensus on baselines and measure lives for complex measures that come up in custom evaluations or ex-ante reviews.

4.3 Descriptions of Research Areas

Consistent with experience since the establishment of the GCA, the EMC worked collaboratively to develop and refine four market research areas for the 2025-2027 term. These research areas are organized as follows: (1) Residential Energy Efficiency, (2) C&I Energy Efficiency, (3) Active Demand (both electric and natural gas demand for the Residential, Low-Income, and C&I sectors), and (4) Special and Cross Cutting. The Special and Cross-Cutting research area includes topics covering more than one research area, as well as specialized topics for which it is particularly important to ensure consistency across research areas and markets. Examples of Special and Cross-Cutting topics include codes and standards, education and training, market effects, marketing, customer profile studies, and net-to-gross studies.

More details regarding these research areas and specific research topics can be found in Appendix S: Strategic Evaluation Plan.

4.4 Types of Evaluation Functions

EM&V includes the following types of studies:

- **Impact evaluation** refers to the measurement of gross energy and demand (electric and natural gas) savings, as well as GHG emissions reductions, achieved within program populations. Impact evaluations may also include the study of key impact factors to estimate savings and benefits, such as in-service rates and other resource savings, including water and non-utility fuels (propane and oil).
- **Net-to-gross ("NTG") studies** refer to specific research that quantifies program influence by estimating free- ridership and the various components of spillover (i.e., participant and/or nonparticipant).
- **Baseline studies** refer to specific research to determine baselines, such as industry-standard practice baselines. Baseline research is sometimes conducted concurrently with impact evaluation research.
- **Measure life studies** research equipment life and the effects of measure persistence. Equipment life is the number of years that a measure is installed and will operate until failure. Measure persistence takes into account business turnover, early retirement of installed equipment, and other reasons measures might be removed or discontinued.
- **NEI studies** refer to research that estimates NEIs of demand-side management measures, including participant and utility benefits. These impacts include changes such as O&M, comfort, productivity, and avoided arrearages.
- **Cost studies** include research to determine the total and incremental costs of demand-side management measures.
- **Market effects evaluations** refer to the measurement of the long-term effects programs or measures have on the structure and functioning of their target markets (e.g., changing product availability and pricing). Historically, the Mass Save programs have been resource acquisition programs, which typically have short-term savings goals (e.g., within three years), although market effects can be an important side effect. As the PAs shift from traditional energy efficiency to

decarbonization, EM&V will seek to support market transformation initiatives where appropriate by tracking, measuring, and evaluating interim and long-term indicators of market penetration and structural changes, program attribution, and cumulative energy impacts over a longer-range timeframe.

- **Market characterization** refers to the systematic assessment of product and service markets for the purpose of improving the design and effectiveness of programs targeting those markets.
- **Process evaluation** refers to the systematic assessment of programs for the purpose of documenting their operations and developing recommendations to improve their effectiveness and design. It may also include marketing studies to understand the effectiveness of various marketing approaches.

4.5 Evaluation Planning and the Strategic Evaluation Plan

The EMC seeks to establish a more strategically targeted view of EM&V for the 2025-2027 term to quickly respond to program changes including the expansion of program offerings, streamlining the customer experience, and a greater focus on equity. The EMC will focus its efforts on working more closely with the PAs' implementation teams to solve programmatic problems as they arise and better support continuous program improvement. The EMC worked with implementation staff, EEAC consultants, and evaluation vendors, and focused on lessons learned from past studies to develop priorities for future research. The Strategic Evaluation Plan (Appendix S) summarizes the currently known planned topics of evaluation research in the 2025-2027 term.

4.5.1 Evaluation Budgets

In the 2025-2027 term, the PAs intend to dedicate approximately $47 million to EM&V studies. This budget includes funding for independent third-party evaluators to conduct research managed by the EMC and reflects an intention to focus EM&V research on plan priorities, while de-prioritizing measures and initiatives that are no longer a key focus of the Plan, have been evaluated recently, and are not expected to meaningfully change, or are not expected to make a material difference to overall program savings. For more details on the Evaluation budget, see Appendix S: Strategic Evaluation Plan.

The EM&V study budget is included in the Evaluation and Market Research Hard-to-Measure line item, along with other evaluation and market research costs, such as potential studies, the AESC Study, maintenance of the Technical Reference Manual ("TRM" or "eTRM"), internal PA staff labor and expenses related to EM&V, non-study consultant costs, and market research undertaken by the PAs.

4.5.2 Evaluation and Implementation Feedback Loop

One of the purposes of EM&V is to provide information that supports continuous improvement of energy efficiency and decarbonization programs. Evaluation can contribute to program improvements at all stages of the program lifecycle, from initial program design and formulation to small scale testing, full scale implementation, and refinements of mature programs. The EMC has always strived to engage program implementers at the earliest stages of program development or redesign and will make this a priority in the 2025-2027 term by focusing on embedded evaluations.

This type of evaluation coordinates with implementation as a program or intervention is being designed rather than looking back on what has already been done, as is the case for retrospective evaluation. Embedded evaluation ensures a new program's design is tied to measurable outcomes and outputs and that proper data collection methods are employed. It also facilitates shared learning between implementers and evaluators so the theory of change and associated activities can be amended in close to real time, thus accelerating adaptation and improvement. Rapid feedback, which enables implementers to make quick changes to program strategy or administration if challenges are encountered with the initial design, is critical during periods of change or uncertainty. While embedded evaluation will be a focus, EM&V will continue to provide essential information for program design by providing data on baseline efficiencies, market conditions, verified savings, and program participation levels.

The PAs have developed a formal feedback loop to ensure the results of evaluations are communicated to program implementers, who can then use those results to enhance and refine the programs. The feedback loop has many steps, from the initial consideration of a study to completion. Before a study is commenced, multiple teams, including evaluation, implementation, contractors, stakeholders, and consultants, convene to identify research questions across the statewide portfolio. The EMC then works with contractors and consultants to create a plan based on these identified research questions. As evaluation studies are scoped and planned out, the work plan may be shared with implementation to ensure that the EMC is asking the most appropriate research questions, and that timely results and recommendations will be available to support improvements to implementation. Evaluators also provide advanced notice of evaluation activity, such as customer on-sites and staff interviews. The implementation team is often interviewed as part of an evaluation study, particularly for process and market studies. Implementation and engineering staff may also be consulted about detailed project information and customer contacts for projects selected for evaluation.

Once a draft report is available, the draft findings and recommendations are shared with implementation, consultants, evaluation, and other stakeholders to give interested parties the opportunity to review and

provide feedback. When a study is complete, final findings and recommendations are shared with the Residential Management Committee ("RMC") and Commercial and Industrial Management Committee ("C&IMC") and their respective working groups where relevant, to consider recommendations and determine whether it is appropriate and feasible to adopt and implement. If the PAs determine that it is not feasible or appropriate to adopt a recommendation, the decision and reasoning is clearly documented. A spreadsheet containing specific EM&V recommendations and PA responses is provided to the Department as part of the Term Report filing. Final impact results are also reviewed and incorporated into the TRM by PA evaluation staff and into the BCR model by the Common Assumptions Working Group.

Information on EM&V continuously flows in both directions between implementation and evaluation, allowing the implementation teams to seek guidance from EM&V, and the EMC to ensure it is researching topics of importance to the programs. An EMC liaison participates in RMC and C&IMC meetings to inform the management committees of studies about to commence, seek input from implementation when it is needed, and to explain results and recommendations. Also, the three management committees meet quarterly in Tri-Management Committee meetings to discuss various topics, including evaluations. Finally, PA evaluation staff practice consistent communication with implementation staff to stay current on program offerings and suggest relevant data and findings from program evaluations that can inform strategy and design.

4.5.3 Evaluation Studies

From the beginning of the 2022-2024 term to November 1, 2024, the PAs completed over 100 studies. These studies include a wide range of evaluation topics in the Residential, Low-Income, and C&I sectors, as well as Special and Cross-Cutting sector evaluation areas. For studies completed since [the 2023 PY report filing] a summary is included in Appendix T: Evaluation Study Summaries and the full set of studies are provided in Appendix U: Evaluation Studies. All currently completed studies are also available on the EEAC's website.

SECTION FIVE: STATEWIDE DATA AND DATA TRANSPARENCY

5.1 Overview

A primary focus for the 2025-2027 term will be efforts to make data more accessible and create a more streamlined user experience. This section is organized to discuss the reporting that is currently in place, available data sources and dashboards, the PAs' vision for an improved data experience, spending, proposed changes and clarifications to data privacy standards, and new town-level reporting. The PAs provide transparent reporting on their energy efficiency activities in numerous presentations, reports, and electronic data platforms. Audiences for this data include, but are not limited to, the EEAC and its consultants, the general public, academic institutions, municipalities, state agencies, media, the Massachusetts Legislature, and industry organizations such as the ACEEE (American Council for an Energy-Efficient Economy) and eSource. Providing regular communications allows the public and other stakeholders to receive up-to-date information regarding energy efficiency investments and savings, as well as progress toward the PAs' climate goals for the building sector.

The PAs provide three main categories of data:

- Planned data focusing on approved three-year plan data points.
- Customer participation and demographic information, including data stored on the Mass Save Data website and Veracity Customer Profile Dashboard.
- Progress in implementing the Plan as reported via statewide and PA-specific annual reports and data tables, quarterly reports and data tables, Key Performance Indicators ("KPIs"), and monthly data dashboards.

Customer-Specific Data and Privacy Considerations

To increase transparency, while remaining protective of customer privacy, the PAs are proposing changes to the Department's data aggregation standards. Please refer to section 5.7 on Data Aggregations Standards for additional details on these proposed changes. All customer data reported by the PAs, including for the data sources discussed below, are aggregated according to Department standards.

The PAs have a legal obligation to protect the confidentiality of customer-specific data absent customer authorization.[130] In particular, the *Act Establishing the Massachusetts Residential Conservation Service* (the "RCS Statute") explicitly limits disclosure of "the name of a customer or the contents of an energy audit report prepared for such customer" without customer authorization, with few exceptions.[131] The PAs are thus generally limited to sharing aggregated customer information pursuant to standards articulated by the Department in D.P.U. 14-141.

These standards require that:

- C&I data is displayed only when there is a minimum of 15 customers, with no single customer accounting for more than 15 percent of electric or natural gas usage.
- Residential and Low income data is displayed only when there is a minimum of 100 customers.

5.2 Report Types

The PAs provide formal reporting as required by the GCA and the Department, including the three-year plan, plan-year reports, term reports, annual EES filings, and quarterly reports to the EEAC. Additionally, the PAs provide monthly data dashboards and present regularly to the EEAC, maintain a detailed energy efficiency database (called Mass Save Data), and make detailed residential and C&I customer profile data available on a web-based platform with dashboard functionality.

5.2.1 Three-Year Plan

The Three-Year Plan includes multiple parts that, taken together as an integrated whole, describe the Program Administrators' strategy for acquiring GHG emissions reductions, cost-effective energy efficiency, and demand reduction resources through a sustained effort while also considering short-term customer bill impacts.

5.2.2 Plan-Year Report

The PAs file annual plan-year reports with the Department to allow the Department to review the effectiveness of the programs. The plan-year report includes fully evaluated implementation results for each program year, which is later incorporated as part of each PA's term report. The plan-year reports include

[130] See, e.g., D.P.U. 12-76-B at 36 ("Customer-specific data cannot be shared without customer authorization."); G.L. c. 164, § 1F(7) (requiring confidentiality of customer records held by a distribution company).

[131] G.L. c. 164 app. Section 2-3(c).

updated data tables comparing planned, preliminary, and evaluated results. Each PA provides detailed explanations of variances in budget, lifetime savings, total benefits, and total costs. These reports also include information on cost effectiveness. In the event of a non-cost-effective program or initiative, a PA must provide a detailed explanation of the reasons why the program is not cost effective, and how the PA expects to proceed with the program (e.g., modify program implementation, modify program budget, terminate the program) and why this course of action is appropriate. The plan-year report is filed following the first two program years of a three-year plan.

5.2.3 Term Report

At the conclusion of a Three-Year Plan term, the PAs file a term report with the Department documenting performance over the entirety of the term. The term report contains similar data and variance explanations to the plan-year report but for all three years of the term, along with other information to demonstrate compliance with the approved plan and statutory requirements. The Department reviews each PA's term report in a publicly noticed adjudicatory proceeding. At the conclusion of the proceeding, the Department provides final approval of program expenditures, performance incentives, and lost base revenue, if any.

5.2.4 Quarterly Report

By statute, the PAs are required to provide quarterly reports to the Council assessing progress in implementing the Three-Year Plan.[132] These reports are provided following the end of each quarter and include key metrics showing progress towards annual and three-year term goals, including expenditures, participants, savings, GHG reductions, and benefits, as well as a narrative component detailing energy efficiency activity in each sector and associated with EEAC priorities. There are also sections that detail the latest marketing activities, evaluation highlights, regulatory updates, and relevant case studies. This data is reported on a cumulative basis throughout the year (e.g., the Q3 report includes the most up-to-date values from the start of the program year through the end of Q3), as well as cumulatively over the three-year term. Finally, the quarterly reports also include individual PA and aggregated statewide data tables and KPIs.

Starting with 2025 data, the PAs are also required to report annually, as part of a quarterly report, for each municipality served:[133]

- Total number of customers.

[132] G.L. c. 25, § 22(d).

[133] G.L. c. 25, § 22(d).

- Total energy efficiency surcharge dollars paid by customers as part of their utility bills.
- Total incentives provided by the program, categorized by PA and sector, including Residential, Low-Income, and C&I.

5.2.5 Annual Energy Efficiency Surcharge Filings

Pursuant to G.L. c.25, § 19(a)-(b), the annual Energy Efficiency Surcharge ("EES") filings calculate additional funds needed for approved energy efficiency programs when the cost of implementing those programs exceeds other funding sources. The EES calculates: (1) collected costs associated with the implementation of an energy efficiency program in excess of other funding sources, and (2) reconciliation of over- and under-recovery of costs by customer sector from the previous year's program implementation.

5.3 Data Sources and Dashboards Available

For the 2025-2027 term, a key data management objective will be to make data more accessible and to create a more streamlined user experience. There are a lot of data sources available, and the PAs realize it can be challenging to navigate them and know where to find the information being sought. To this end, the PAs plan on providing clarification by creating a data user map, a frequently asked questions section for common requests, user guides (such as YouTube videos), and updated versions of Mass Save Data and the Customer Profile dashboards for an improved user experience. The PAs would like to make it easier to navigate and understand the purpose of the data sources and variations in the data that can be found in different sources.

5.3.1 Data Framework

The data framework is intended to include cataloging of data available from primary data sources, as well as information on frequency of updates, granularity of data, and what is being reported. Mass Save Data will at a minimum include links to all of the available data sources even if the data is not all stored there.

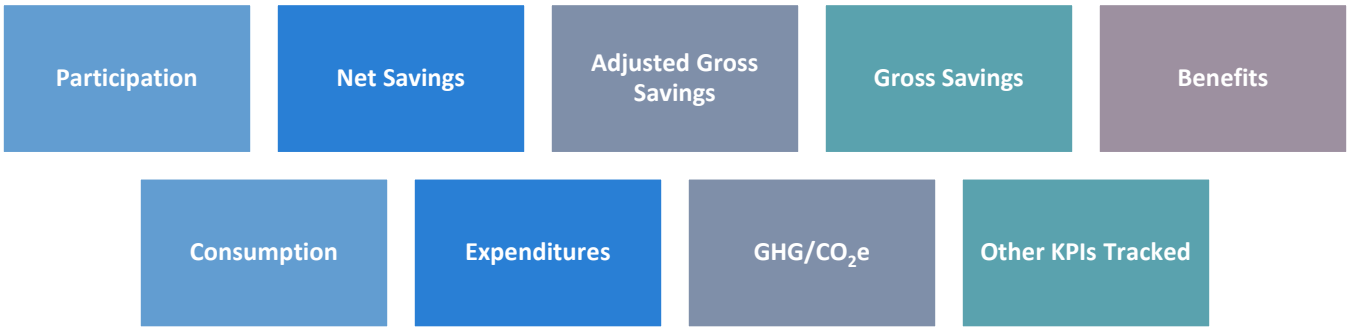
There are four main components to this Data Framework:

1. **What the PAs track.** This refers to the type of data that is tracked in the PAs' energy efficiency programs such as participation, savings, benefits, and spending.
2. **How data is displayed.** This refers to the different lenses by which the data can be viewed such as by sector, by fuel, and by PA.
3. **When it is shown.** This refers to how the data is presented, for example as a time series or at a point of time.

4. **How often it is updated.** This refers to how often the data is updated and reported on, for example, monthly, quarterly, or on an annual basis.

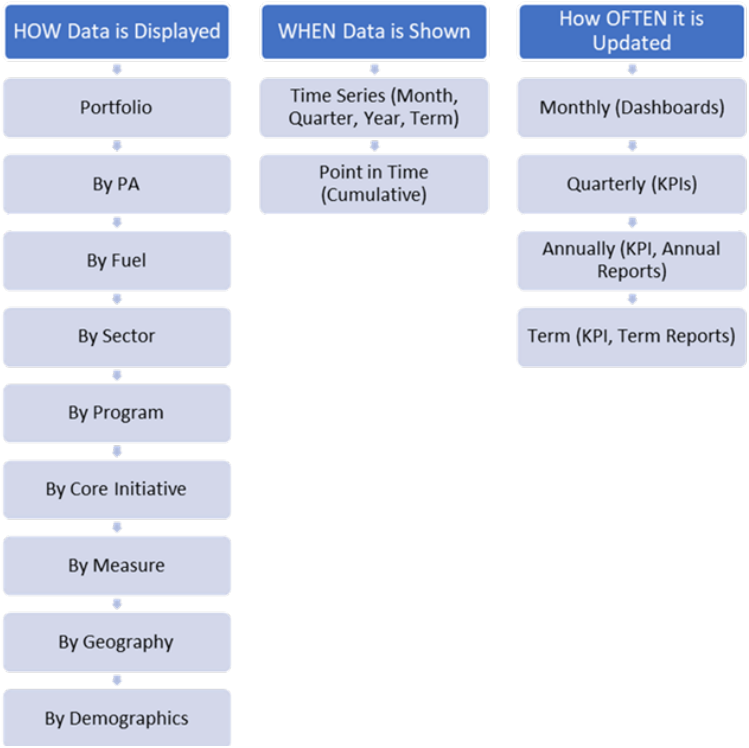
The following two figures detail the four main components of the framework. The first figure shows the types of data available for the Mass Save programs.

Figure 32: What the PAs Track, Data Types



The figure below shows that depending on the type of data shown, these are the different ways that data is displayed. Not all combinations are possible for everything tracked.

Figure 33: Data Framework



The data sources included in this Framework are briefly summarized below and explained in more detail in the following section.

Figure 34: Data Sources Framework

Overarching Data	Portfolio and PA-Specific Progress to Plan
Data sources house all of the types of data the PAs track with the ability to view by different filters and time periods. Sources include:	***Data sources provide insight into progress to plan with filed numbers. Sources include:***
Mass Save Data Website • Most up-to-date source for YTD production data tracked. Some updated monthly, quarterly, annually. • Plan to link to all existing sources of data on homepage. **DNV Veracity: Customer Profile Studies and Data Dashboards** • Updated annually, includes information by geography including town and census block group, and ties in relevant census data for analysis.	**Statewide and PA-Specific Annual Reports / Data Tables** • Narrative of progress to Plan with Excel workbook that reflects annual expenditures, participants, savings, benefits, GHG emission reductions, spending, benefits, and savings. **Quarterly Reports, Data Tables, KPIs** • Narrative of progress to Plan with Excel workbook, reflects quarterly expenditures, participants, savings, benefits, GHG emission reductions, and spending. **Monthly Data Dashboards** • Excel workbook, similar to what is provided alongside Quarterly report, reflects costs, participants, savings.

While the PAs have made an extensive quantity of data available, stakeholders have shown particular interest in town/municipal and ZIP code level data. The figure below is an easy reference guide to what data is available at two levels: (1) from which data source (sources described in section below), and (2) at what frequency.

Figure 35: Data Availability by Geography Type

Reporting source and how often it is reported	Municipal Level			ZIP Code Level		Census Block Group
	Mass Save Data Annual[1]	PA Reports to EEAC Bi-Annual[2]	DNV Veracity Customer Data Dashboards Annual[3]	Mass Save Data Annual	PA Reports to EEAC Bi-Annual	DNV Veracity Customer Data Dashboards Annual
Residential and Low-Income sectors	Annual usage, savings, and incentives, Usage by month	N/A	Number of participants Savings, including upstream and non-upstream savings	Annual usage, savings, and incentives	Number of participants, including income eligible and moderate income[4]	Number of participants Savings, including upstream and non-upstream savings
C&I sector	Annual usage, savings, and incentives Usage by month	N/A	Number of participants Savings, including upstream and non-upstream savings	Annual usage, savings, and incentives (Boston only)[5]	N/A	Number of participants Savings, including upstream and non-upstream savings

[1] Annual geographic data for Mass Save Data, the PAs' energy efficiency database, is updated 8-14 months after calendar year end.

[2] Biannual geographic data is provided as part of the Q2 and Q4 EEAC Quarterly reports submitted by the PAs. For the most recent Bi-Annual Reporting, see file titled: 2nd Quarter 2023 Program Administrators' KPIs; see tab Bi-Annual No. 6.

[3] Annual geographic data on the DNV Veracity Platform is updated 8-14 months after calendar year end. This database is accessible via a link with no sign-up required.

[4] This spreadsheet (see footnote 2) includes the number of participants (excluding upstream and behavior) by zip code broken out by: (a) total income-eligible participants, (b) total non- income-eligible participants, (c) single-family/attached low-rise participants (not moderate income), and (d) single-family/attached low-rise participants (moderate income).

[5] For the C&I sector, ZIP code data is shown for neighborhoods of the city of Boston but is not available in other municipalities due to customer privacy protections.

5.3.2 Current Data Sources and Future Plans for Enhancements

The PAs make a number of data tables and dashboards available to the public and stakeholders that detail implementation progress for the Mass Save programs. These include a monthly data dashboard, statewide data tables for quarterly and annual reports, the Mass Save Data database, Community First Partnership / Municipal data sharing, customer profile studies and data dashboards available on a web-based platform, and quarterly and bi-annual KPIs.

Monthly Data Dashboard

The Monthly Data Dashboard is an Excel workbook, similar to what is provided alongside the Quarterly Report, which reflects costs, participants, and savings and is published following the end of any month that is not the end of a quarter (i.e., January, February, April, May, July, August, October, and November). Data is provided by individual PA by fuel and sector on a cumulative basis throughout the year from the start of the program year through the end of the most recent available month. Data is presented in statewide summary tables broken down by fuel, sector, and PA to show progress toward annual and three-year term goals. Data is delivered on a two-month lag (e.g., the October Monthly Data Dashboard includes the most up-to-date values through August of the program year and over the three-year term). On the months at the end of the quarter (March, June, September, and December), similar data at a more granular level is provided in statewide data tables sent alongside the Quarterly Report. All data is also available on Mass Save Data. While these dashboards have historically presented costs, participants, and savings, the PAs are considering updating these dashboards for the 2025-2027 term to include information more frequently requested by stakeholders, such as progress toward heat pump and weatherization deployment goals.

Statewide Data Tables for Annual and Quarterly Reports

The Statewide Data Tables are provided as an Excel workbook provided alongside the Quarterly and Annual Reports. Data is provided by individual PA by Fuel and Sector at the core initiative level reflecting expenditures, participants, savings, benefits, and GHG emissions reductions. Statewide summary tables also detail Spending, Benefits, and Savings progress to goal. This data is reported on a cumulative basis throughout the year (e.g., the Q3 report includes the most up-to-date values from the start of the program year through the end of Q3), as well as cumulatively over the three-year term. All data is also available on Mass Save Data.

Mass Save Data

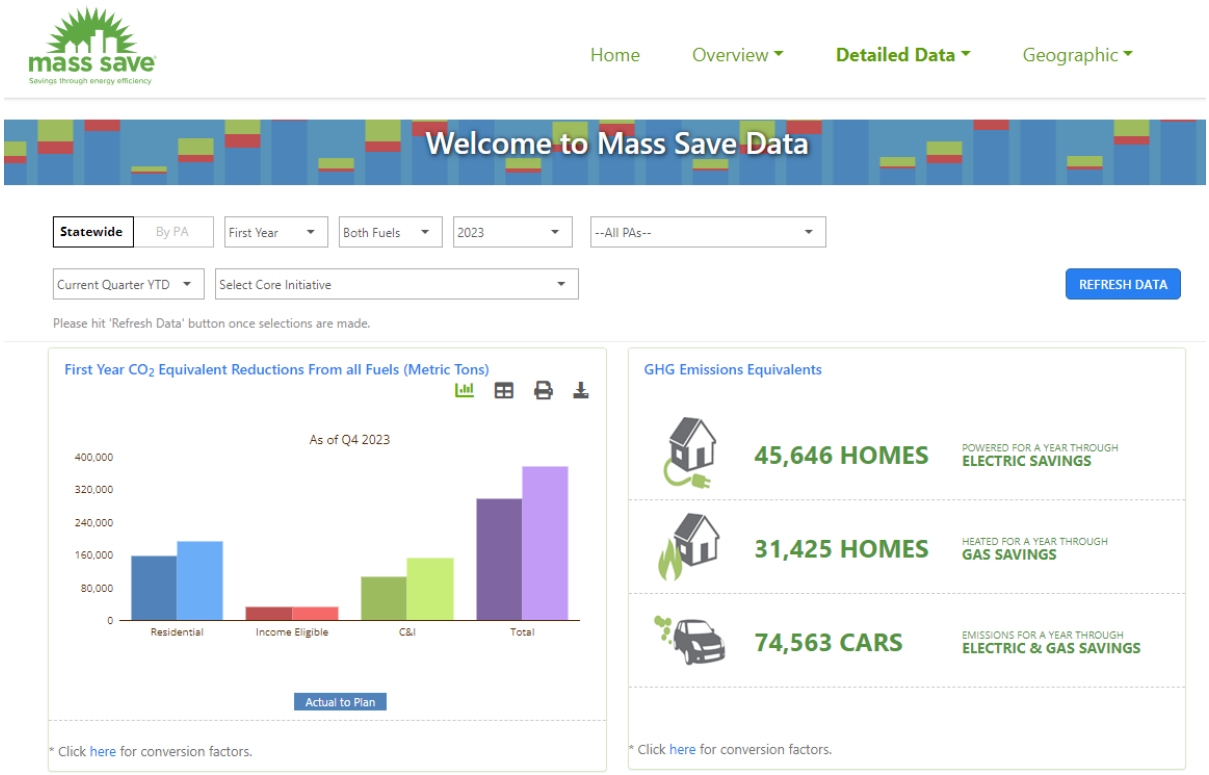
Current State

The PAs develop and maintain a publicly accessible statewide energy efficiency database, Mass Save Data. This online statewide database improves public and stakeholder access to the extensive data already reported by the PAs, as well as additional information and presentations of data. The database provides a single, reliable, and timely data source for currently reported data on an individual PA and statewide basis that can be accessed at any time. Mass Save Data enables users to export data to Excel or PDF formats for further analysis and queries. The PAs designed Mass Save Data to export data easily for those stakeholders like the EEAC and DOER who prepare data-driven reports on energy efficiency and, at the same time, to display data in a user-

friendly, understandable manner for those users who prefer charts and graphs. Mass Save Data has been implemented in a manner that is cost efficient and protects customer privacy. The platform provides accessible, meaningful information to customers, municipalities, and stakeholders over time.

Mass Save Data provides quantitative data similar to that provided in the PAs' public reports, including information related to participants, expenditures, annual and lifetime savings, electric capacity savings, and benefits. The database includes data at the sector, program, initiative, and measure levels. In addition to the PAs' specific data, Mass Save Data also provides savings, usage, and incentives data on the geographic tab at the county, town, and ZIP code level. This data allows municipalities to see the effects of energy efficiency in their town and other areas. Following a request from several municipalities, the PAs are now providing usage data by town by individual month on an annual basis. The PAs have updated Mass Save Data and provided new information and views based on input from members of the EEAC and other stakeholders. Mass Save Data tabs and sections include overview sections such as time series, performance overview, monthly reporting, and sales and savings, detailed data such as performance details, cost to deliver, HEAT Loan, GHG emissions reductions, measure details, and geographic information including savings, usage and incentives by county, town, and ZIP code. There are also reference materials such as a glossary and the link to the TRM. The PAs update Mass Save Data with various data sets on a monthly, quarterly, and annual basis.

Figure 36: Mass Save Data



A municipal mapping tool is also available that leverages the Google Earth platform and combines data on historical participation in energy efficiency programs with statistics and hard-to-reach populations such as renters, income level, LOTE (Languages Other Than English) customers, and small business counts. These maps, which can be viewed at a street level, can be used as a tool to geographically target the PAs' energy efficiency offerings.

Figure 37: Municipal Mapping Tool

Future Planned Enhancements

In 2024, the PAs will refresh and modernize Mass Save Data (MSD 2.0) to make it even easier for stakeholders to access the data they need. This refresh will focus on:

- **Centering key metrics on the homepage.** The PAs are looking to showcase front and center key metrics that are of interest to external stakeholders such as number of weatherization jobs and number of homes with heat pumps installed by customer types such as residential, income eligible, moderate income, and small business by ZIP code or town.
- **Looking to modernize technology.** The PAs are looking to update Mass Save Data such that updated technology will support full customization and versatility to improve data visualization and mapping capabilities to accommodate future program changes and/or reporting needs.

- **Improving the user experience.** Given the large amount of data collected and complexity of the programs, the PAs are looking to update Mass Save Data to be constructed in such a way that it is visually pleasing, with data organized where users would naturally look for it.
- **Aligning with KPI reporting requirements.** The PAs intend to use pages of the dashboard on Mass Save Data to showcase required KPIs for an easier, more streamlined reporting solution.
- **Improving visibility to other statewide reporting requirements.** Where possible, the PAs would like to use the Mass Save Data landing page as a detailed roadmap for the various types of data collected to make it easier to find that data even if it is housed outside of the MassSaveData.com website, using the Data Map referenced earlier in the section as a guide. A few examples:
- If someone visiting the website is interested in seeing the latest quarterly report, an easy link to where the quarterly reports will be visible.
- If someone visiting the website is interested in seeing socioeconomic data from the US Census that is currently housed in the Veracity tool (more described below), an easy link to that tool will be provided.

Community First Partnership

Current State

Providing data to community partners is critical to empowering them to effectively reach and engage customers in their communities. The PAs are currently able to provide a significant amount of data aggregated at the community level (and according to the Department's standards), while remaining protective of customer privacy. For a detailed discussion of data aggregation standards, please refer to section 5.7 below. The PAs currently make data available to Community Partners via a Lead Vendor. This data includes information on the number of Home Energy Assessments, weatherization jobs, and heat pumps installed (by fuel replaced) within each community.

Future Planned Enhancements

The PAs have been working with the Lead Vendor to survey Community First Partners to better understand their additional data needs. At a high level, there are three areas for which communities have expressed an interest in expanded data, including the following:

1. **Outreach.** Reaching and signing up people who could benefit from energy efficiency.

2. **Customer engagement.** Following up with customers to encourage participation and ensuring they have the right contacts and information.
3. **Outcomes.** Understanding impact and using it to inform future outreach.

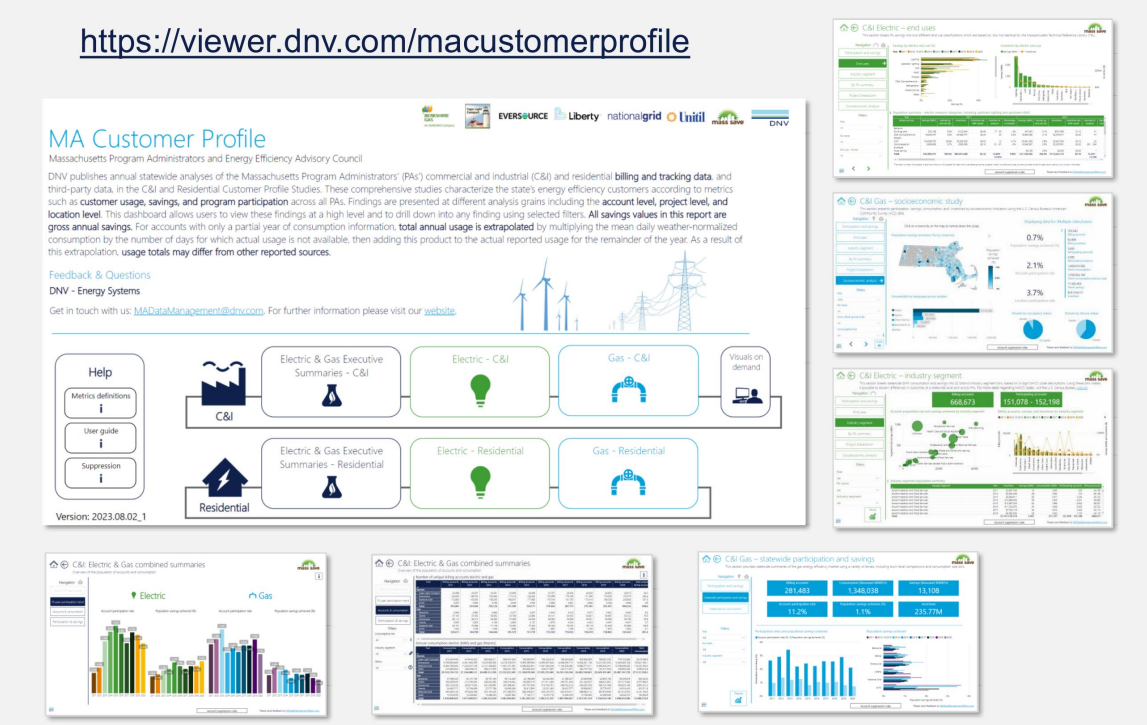
For the 2025-2027 term, the PAs are exploring opportunities to establish an authorization process whereby the customer would authorize the PAs and their vendors to share their customer-specific data with Community First Partners, subject to a non-disclosure agreement and Department approval of this concept. Such an approach, if approved, would mean that Community First Partners would be able to access customer-specific data on their current Home Energy Assessments and recommended improvements, weatherization jobs, and heat pumps installed for those customers that provide authorization. All historical data related to program participation would continue to be aggregated according to Department standards. Pending resolution to the recommendations highlighted in section 5.7 below, the Program Administrators anticipate utilizing Mass Save Data to include additional town-level data.

Customer Profile Studies and Data Dashboards

Current State

Accessible through Mass Save Data, the Residential and C&I Customer Profile Dashboard is a web-based platform with dashboard functionality. The platform was developed using aggregated customer usage and energy savings data and presents data visualizations and extracts data previously available via paper-based Customer Profile reports in a transparent and easy-to-use web-based format while maintaining existing customer confidentiality rules. The annual profile studies offer diverse views of participation, savings, and geographic dynamics across the PAs' energy efficiency programs.

Figure 38: Customer Profile Dashboard



Future Planned Enhancements

The PAs' current Customer Profile Studies and Data Dashboards were developed to take reports 100+ pages long and make them easier to understand and click into. Over the years, the PAs have expanded their efforts and created a large repository of data that is available for the public to view without the need for logging in. In the PAs' quest to make the data available for the programs more digestible and user friendly, the Program Administrator have coordinated with their vendor DNV to determine how best to update the dashboard to ensure it easily serves the needs of its users. During the 2025-2027 term, the PAs intend to refresh the general layout of the Customer Profile Data Dashboards, to ensure:

- More insightful and clear-to-read visuals, providing important information for users.
- More intuitive navigation will allow everyone to browse through the dashboard easier and find information more efficiently.
- Improved filtering system, allowing users to define the scope of analysis more precisely and dig deeper into the data.
- Modified suppression system, improving data clarity and causing less trouble with export.
- Other important modifications will ensure a better experience for the users.

Here are a few illustrative screenshots to show how the PAs anticipate meeting the above objectives for the tool.

Figure 39: Dynamic Layout, Improved Navigation

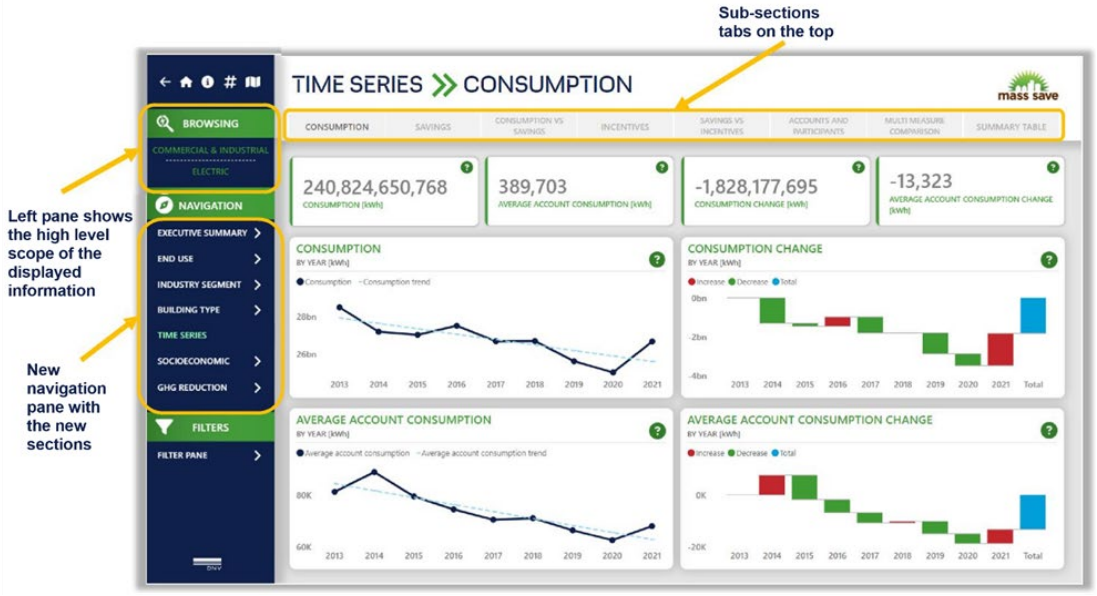
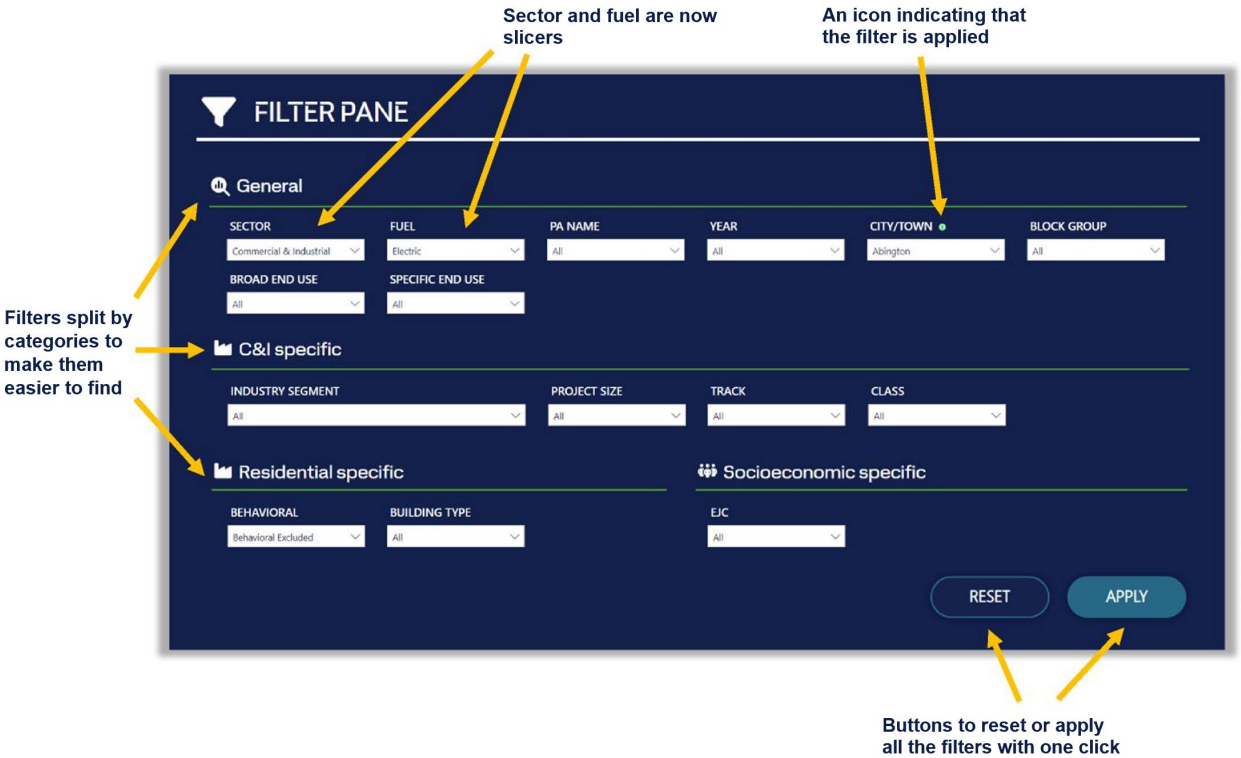


Figure 40: Improved Filtering



5.4 Operational Metrics and Key Performance Indicators

The PAs are working in collaboration with DOER to provide the Council, the public, and interested stakeholders with valuable and easy-to-understand information on the programs that help measure progress toward our Plan goals. While a significant volume and variety of data is currently published on regular intervals (see sections 5.2 and 5.3 above), existing reporting can be difficult to interpret. Reformatting and refining the structure and interface for that information will better serve the Council, the public, and interested stakeholders, streamline data administration processes, and thus minimize the administrative costs of responding to ad hoc data requests as required by G.L. c. 25, §§ 19(a), (b).

During the 2025-2027 term, the PAs will publish the measure-level outputs of each PA's benefit-cost models on a quarterly basis and provide ZIP Code level production and incentives for major measures, including weatherization and heat pump installations, on a biannual basis. These granular datasets will enable stakeholders the flexibility to conduct a variety of analyses.

Further, the PAs will provide summary tables, primarily derived from the above-mentioned data, for frequently requested operational metrics, including:

- GHG reductions impacting 2030 compared with the EEA Secretary's goals.
- Weatherization and heat pump installations and incentives by income-qualification status, single-family/multifamily buildings, renter status, and specifically for heat pumps, the displaced fuel and full/partial displacements, both statewide and within the designated equity communities.
- The number of homes receiving weatherization recommendations with barriers, and the number of barrier mitigation jobs and incentives by income-qualification and renter status, both statewide and in the designated equity communities.
- Average conversion rate on weatherization recommendations and time-to-serve for Home Energy Assessments.
- Total spending in the designated equity communities, including incentives, technical assistance, and community funding, by income-qualification status and renter status for Residential sector programs and isolating small business weatherization investment for C&I sector programs.
- Community First Partnership communities and awards by partner organization.
- Metric on PA supplier diversity efforts to be developed following completion and release of the supplier diversity study.

- Metric on language access to be developed following completion and release of the Language Access plan.
- Thermostats rebated through market-rate and low-income offerings.
- ConnectedSolutions participants and savings by measure.
- C&I Custom electrification and non-electrification projects, energy savings, and GHG savings.
- C&I existing building commissioning and decarbonization planning study enrollments, completions, and resulting projects, grouped by small, medium, and large buildings by square footage.

Beyond these summary tables, the Program Administrators will collaborate with stakeholders in designing a lean and cohesive set of KPIs to measure progress toward a set of 12-15 strategic priorities for the 2025-2027 term. Each indicator will be a single datapoint measured against a target and compared with baseline/historical practice. This approach will provide a common framework for stakeholders to assess progress toward strategic plan priorities. Further analysis on these priorities and their operational underpinnings will be enabled by the datasets and summary tables described above.

5.5 Council Data Request Process

The PAs' reporting and data sharing outlined in the above sections are meant to provide the EEAC Councilors and interested stakeholders with valuable information on the programs and the PAs' progress toward attaining the goals for the 2025-2027 Plan. It is also meant to reduce the administrative costs of developing responses to ad hoc requests for data. To that end, the PAs intend that the majority of data requests from the Councilors and stakeholders are resolved through the regular reporting outlined above.

However, there may be requests for data from the Council that the PAs' reporting do not answer. In these situations, the PAs, DOER, and the Council agreed to a Data Request Process, which was submitted to the Department for its review during the 2022-2024 Plan term. The Department approved that process, with modifications.[134] The PAs and DOER appreciate the Department's careful review and, after considering its Order, provide the description of the Council Data Request Process below.[135]

[134] There is a pending Motion for Reconsideration of the Department's Order.

[135] The PAs are authorized to state that this description has been agreed to by the DOER. Additionally, the process directed herein does not preclude the AGO from issuing data requests to the distribution companies pursuant to its statutory authority under G.L. c. 12, § 11E(c).

Data requests from the Council, and/or its individual members, to the PAs shall be submitted in writing to the Council Chair (DOER), or its designee.[136] Requests shall include an explanation of the purpose of the request along with any supporting information that would help the PAs better understand that purpose and an explanation as to why the inquiry cannot be adequately addressed using existing information. The Council Chair will coordinate with the Council's Consultants and the PAs to determine whether the request cannot be adequately addressed using existing information. If not, the Council Chair, Council's Consultants, and PAs will review the data request to ensure that the administrative cost to produce the data is justified by its informational value of helping the Council to implement its statutory duties under G.L. c. 25, § 22(b).

To ensure transparency, the PAs and Council Chair will make this decision by the next monthly Executive Committee meeting following the request. If the PAs and the Council Chair disagree on whether the value of the data is appropriately balanced with the cost to provide it, the Council Chair may bring the decision to a vote at the Council. In the event of continued disagreement following a vote at the Council, the PAs reserve the right to immediately petition the Department of Public Utilities to appeal the determination.

The PAs and the Council Chair will maintain a tracking list of all active and completed data requests. Data request results will be disseminated to the full Council as requested. This process will minimize administrative costs by providing a single point of contact to minimize multiple communications, will cause each request to be accompanied by supporting information, thus requiring that the requester clearly articulate the purpose and consider alternative pathways, and will ensure that each request is reviewed for value, usefulness, and cost prudency.

This process will apply to all Council data requests, regardless of estimated response time. This process does not apply to the day-to-day work of the EEAC Consultant Team and the PAs through Management Committees and other standing meetings.

5.6 Budget Spending

Data Management Costs, Separate from Evaluation Costs

Many years ago, the PAs worked with a third-party evaluation vendor to create a customer profile study. A result of that effort is the statewide customer profile dashboard. Currently the PAs are tracking all of the data support that the third-party evaluator gives the PAs within the evaluation budget category. Much of the work

[136] The process outlined does not apply to addressing clarifications, corrections or data quality issues identified as part of the Council's review of monthly data dashboards, quarterly reports and KPIs, annual reports, or term reports.

the vendor performs is supporting the PAs' data efforts outside of the profile studies completed as part of the evaluation framework.

For the 2025-2027 term, the PAs would like to track those expenses separately. Approximately 25 percent of the vendor's data management contract is explicitly related to evaluation such as supporting other evaluation vendors with their data requests and publishing a residential and commercial customer profile study each year. The remaining three-quarters of their work consists of providing municipalities with data and supporting other PA-driven requests such as lists of customers likely using delivered fuels for heating which are not related to evaluation. Therefore, to more accurately reflect this transition, the PAs have assigned 75 percent of the data management costs related to these activities within the "Statewide Database" row of each PA's budget in the PP&A budget category, rather than in the "Statewide Evaluation" row. Given the intended improvements to Mass Save Data to modernize technology and improve the user experience, the PAs anticipate increasing spending on this dashboard as well. In addition, the PAs plan to increase their spending to provide timelier responses for ad hoc data requests.

5.7 Data Aggregation Standards

As noted above, in order to protect customer privacy, and pursuant to standards articulated by the Department in D.P.U. 14-141, data has been aggregated according to the following guidelines. C&I data is displayed only when there is a minimum of 15 customers, with no single customer accounting for more than 15 percent of electric or natural gas usage. Residential and Income Eligible data is displayed only when there is a minimum of 100 customers.

5.7.1 Data Aggregation Standards: Proposed Changes

Following the PAs' experience applying the data aggregation standards, the PAs propose some refinements to the standards for the next Plan cycle to increase transparency in the Residential and Low-Income sector, particularly at the community level, while remaining protective of customer privacy.

Because it enables varied and detailed analyses, granular data is the most useful to interested stakeholders, researchers, and the public. However, a primary concern with making granular data available publicly is privacy concerns from re-identification, or the discovery of an individual's personal information from a dataset that has been de-identified. Even after a dataset has been aggregated and the personally identifiable information has been removed, there may still be the possibility of inadvertently disclosing personal information about customers represented in the dataset. For more detailed information and guidance on how to weigh the risks

and benefits of publishing government data as open data, see Harvard University's 2017 report, "Open Data Privacy: A risk-benefit, process oriented approach to sharing and protecting municipal data".

To develop recommendations for changes to the existing data privacy standards, the PAs researched data aggregation standards used in other jurisdictions including California, New York, and Connecticut as well as by the US Census Bureau in the American Community Survey data.

California

In 2014, the California Public Utilities Commission issued a "Final Decision adopting Privacy Rules directed at accessing Energy Usage and Usage-Related Data While Protecting Customer Privacy (D.14-05-016)".[137] The goal of the rules was both to protect customer privacy, but also enable customers to access usage data and share that data with authorized third parties to promote future conservation and grid management activities.

For posting data publicly, the CPUC established the following rules which were adopted by the Department in D.P.U. 14-141.

- **For residential customers**, the ZIP code must have 100 or more residential customers. For ZIP codes that lack 100 residential customers, the utility is directed to aggregate the data with a bordering ZIP code until the aggregation includes at least 100 residential customers.
- **For commercial, industrial, or agricultural customers**, the ZIP code must have 15 or more commercial or agricultural customers, with no single account constituting more than 15 percent of the total consumption in any month. For ZIP codes that do not meet this standard, the utility is directed to aggregate the consumption with a bordering ZIP code until the area contains at least 15 commercial or agricultural customers, with no single account constituting more than 15 percent of the total consumption in any month for the combined ZIP codes.

For local government access, the following rules apply:

- **For residential, commercial, or agricultural customers**, the request must have 15 or more customers, with no single account accounting for more than 20 percent of the total consumption in any interval requested and the data must not contain personal identifying information

[137] See California Public Utilities Commission, "Final Decision adopting Privacy Rules directed at Accessing Energy Usage and Usage-Related Data While Protecting Customer Privacy (D.14-05-016)".

pertaining to any account. For requests that do not meet this standard, the utility is directed to work with the requestor to include additional customers until the requirement is met.

- **For industrial customers**, the request must have five or more industrial customers, with no single account accounting for more than 25 percent of the total consumption in any interval requested equal to or greater than a month and the requested data must not contain identifying information pertaining to any account. For requests that do not meet this standard, the utility is directed to work with the requestor to include additional customers until the requirement is met.

New York

New York developed aggregation standards similar to California except that they adopted the C&I standard for all customer sectors.[138] The 15/15 standard provides that an aggregated data set may be shared only if it contains at least 15 customers, with no single customer representing more than 15 percent of the total load for the group. Under the 15/15 standard, aggregated customer usage data is considered sufficiently anonymous to share publicly if (1) the aggregated group contains at least 15 individual accounts, and (2) no one account represents more than 15 percent of the total load. In general, a privacy standard for aggregated energy data establishes the minimum configuration and characteristics of energy accounts that, when aggregated over a geographic area or building, are expected to provide a reasonable expectation of customer privacy by not revealing or permitting determination of individual customer-specific energy use.

Connecticut

The Connecticut State Data Plan[139] (Principle 12, p. 8) provides the following guidance on aggregating and publishing open data:

- Provide open data at the finest level of geographic and demographic granularity possible, with consideration of client/consumer data confidentiality, privacy, and deductive disclosure.
- Aggregate private and sensitive data in consistent, meaningful and respectful ways, to enable policy makers to make better decisions, but protect the rights and dignity of persons for whom these data may be collected.

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[138] See State of New York Public Service Commission, Order Adopting Whole Building Energy Data Aggregation Standard, issued and effective Apr. 20, 2018, available at: https://documents.dps.ny.gov/public/Common/ViewDoc.aspx?DocRefId=%7B4C4CE28E-54CC-4514-967D-B513678E3F37%7D.

[139] See Connecticut State Department of Education Data Suppression Guidelines.

Connecticut does not have specific criteria that the PAs are aware of related to utility data. However, the Connecticut state guidance refers to a helpful document outlining the Connecticut State Department of Education ("CSDE") data suppression guidelines available on its website. This document discusses when to suppress data in aggregated datasets and may be a helpful starting place for agencies looking to publish private and sensitive data as open data. The document provides the following suppression rules:

Suppression of Cell Counts

- If any cell is ≤ 5 the value is suppressed (this includes a total).
- If cell is ≤ 5 and only one value is suppressed in a row or column, the next highest value in that row or column is also suppressed. If there are multiple occurrences of this value, randomly suppress one occurrence. This is referred to as complementary suppression.
- Totals are retained whenever possible.
- Fields with a value of 0 are not suppressed.
- All categories by which data are parsed (e.g., race, EL) are presented in report tables even if there are no data for categories.

Suppression of Computed Statistics

When cell counts are small, suppression of statistics (e.g., average, percent of total) protects confidentiality and ensures that statistics based on a small sample size are not interpreted as equally representative as those based on a sufficiently larger sample size. Suppress a statistic if any one of the following conditions is true:

- The count associated with the statistic has been previously suppressed.
- The numerator is ≤ 5.
- Denominator is < 20.

More detail about the CSDE's suppression guidelines is available in their "Data Suppression Guidelines." The Connecticut standards also refer to this Harvard study "Open Data Privacy" which focuses on cities collecting and storing a wide range of data that may contain sensitive information about residents. As cities embrace open data initiatives, more of this information is released to the public. While opening data has many important benefits, sharing data comes with inherent risks to individual privacy: released data can reveal information about individuals that would otherwise not be public knowledge.

U.S. Census Bureau - American Community Survey

The American Community Survey ("ACS") is an annual demographics survey program conducted by the US Census Bureau.[140] Every year, the US Census Bureau contacts over 3.5 million households across the country to participate in the survey. The ACS covers a broad range of topics about social, economic, demographic, and housing characteristics of the U.S. population and small population subgroups. In order to protect customer privacy, the US Census Bureau suppresses data if it does not meet the following criteria:

- Fifty or more cases in the geographic area.
- Three or more cases are required to publish a cell in a table.
- Complementary suppression is required to prevent users from calculating suppressed data.

5.7.2 Proposed Data Aggregation Standards

The recommended approach is to leverage the standards developed by the Connecticut Department of Education. The PAs propose using those standards as they are both simple to understand and apply (i.e., do not require usage calculations) while also being comprehensive in their applicability. The PAs propose that in order to protect residential (including income eligible), commercial, and industrial customer privacy, an aggregated set of data may be shared only if:

- The population size represents at least 20 individual customer accounts.
- Five or more cases are represented in the data cell.
- Complementary suppression[141] is applied to prevent users from calculating suppressed data.
- If the aggregation thresholds are not met, then that particular data point will be suppressed. This same standard would apply to the most granular level of data shown, including any geographic view of data (i.e., town, ZIP Code, Census Block Group) or if filters are applied to the data (i.e., by PA, Building Type, etc.). Data shared at a geographic level would be no more granular than the Census Block Group level for residential customers and no more granular than municipality level for C&I customers with the exception of Boston where ZIP code level data is reported due to the size of the city and unique characteristics of each neighborhood.

[140] See American Community Survey Office Data Suppression (census.gov).

[141] If cell is ≤ 5 and only one value is suppressed in a row or column, the next highest value in that row or column is also suppressed. If there are multiple occurrences of this value, randomly suppress one occurrence. This is referred to as complementary suppression. Depending on dashboard capabilities, this may be handled by rounding up by the suppression threshold (i.e., 20).

- Data request examples are shown below to show how this aggregation standard would be applied to usage data such as consumption and participation data such as incentives.

Data Suppression Examples

If showing residential electric *usage data*, such as consumption by census block group or filtered by a demographic characteristic such as home type, there would need to be at least 20 residential (including income eligible) electric customer accounts in that group in order to show the aggregated usage data. If a particular group had fewer than 20 residential electric customer accounts, that data would be suppressed for that geographic or other defined group with the same feature.

Following the same example, if showing *participation data*, such as incentives or savings, there would need to be at least 20 residential electric customer accounts in that census block group and at least 5 residential electric participants in that census group to show aggregated participation data. If neither of those thresholds are met, no participation data can be shown at that granularity. The figure below showcases a variety of data use cases to further illustrate how the data suppression standards apply in practice.

Figure 41: Illustrative Example of Proposed Data Privacy Standards

Use Case	Customer Type	# of Cases	Applicability of Data Suppression
Usage by Census Block Group by Sector and Fuel	Residential Electric	50 Residential Electric Customer Accounts in Census Block Group	SHOWN population size represents at least 20 customer accounts
Savings and incentives by Census Block Group, Sector, and Fuel	Residential Electric	50 Residential Electric Customer Accounts in Census Block Group and 7 Residential Electric participants in Census Block Group	SHOWN cell data represents at least 5 participants and population size represents at least 20 customer accounts
Usage by Census Block Group by Sector and Fuel	Residential Electric	15 Residential Electric Customer Accounts in Census Block Group	SUPPRESSED population size represents less than 20 customer accounts
Savings and incentives by Census Block Group, Sector, and Fuel	Residential Electric	15 Residential Electric Customer Accounts in Census Block Group and 7 Residential Electric participants in Census Block Group	SUPPRESSED fewer than 20 Residential Electric accounts in Census Block Group
Savings and incentives by Census Block Group, Sector, and Fuel	Residential Electric	25 Residential Electric Customer Accounts in Census Block Group and 3 Residential Electric participants in Census Block Group	SUPPRESSED cell data represents less than 5 participants

Usage for C&I Industry Segment (i.e., Construction) in a PA Territory	C&I Electric	30 C&I Electric Customer Accounts in the Industry Segment in a PA Territory	SHOWN population size represents at least 20 customer accounts
Savings for C&I Industry Segment (i.e., Construction) in a PA Territory	C&I Electric	30 C&I Electric Customer Accounts in the Industry Segment in a PA Territory and 2 C&I Electric Participants in the Industry Segment	SUPPRESSED cell data represents less than 5 participants
EES Contributions by Income Eligible Customers in a ZIP Code	Residential Electric (including income eligible)	75 Residential Electric Customer Accounts in the ZIP Code and 3 of which were on a discount rate	SUPPRESSED cell data represents less than 5 customers on the discount rate
EES Contributions by Income Eligible Customers in a ZIP Code	Residential Electric (including income eligible)	75 Residential Electric Customer Accounts in the ZIP Code and 12 of which were on a discount rate	SHOWN cell data represents at least 5 customers on the discount rate and population size represents at least 20 customer accounts

5.7.3 Key Differences from Current State to Proposed Data Aggregation Standards

Here are the notable changes to existing standards:

- **Setting data privacy standards at the Census Block Group and no more granular for geographic data.** The current standards only specifically mention ZIP codes and PAs are often hearing from stakeholders that access to more granular geographic data would be helpful to deliver the programs more effectively. For context, there are approximately 5,000 census block groups in MA with an average of 655 people in a census block group vs. approximately 500 ZIP codes in MA with an average of 5,215 people in a ZIP code. Given that the average Census Block Group includes 655 people, the PAs feel it is appropriate to share data to this level but do not think it appropriate to show anything more granular.
- **Setting same data privacy standards for Residential and C&I customer data types.** In the current guidelines, the standards differ depending on if the data is Residential or C&I. The proposed standard sets one set of rules for data privacy, regardless of customer type.
- **Changing threshold from 100 to 20 customer accounts for residential customer data and from 15 to 20 for C&I customer data.** Currently, Residential and Low-Income data is displayed only when there is a minimum of 100 Residential customer accounts and C&I data when there is a minimum

of 15 C&I customer accounts. The PAs propose setting the threshold to 20 customer accounts for Residential and Commercial.

- **Add in additional suppression for any participation data so no singular data point represents fewer than 5 participants.** This will be a new suppression rule that will help to ensure that participation data is properly protected but less restrictive than protection of usage data (billing accounts vs. participation accounts) and will allow us to increase transparency by lowering the overall customer account threshold while still helping guard customer privacy.
- **For C&I, remove requirement where no single customer accounts for more than 15 percent of usage.** By raising the threshold from 15 C&I customer accounts to 20 C&I customer accounts and adding in the additional participation threshold such that no one participation data point represents fewer than 5 C&I participants, the approach maintains customer privacy while being much simpler to operationalize in practice compared to applying the suppression criteria of any 1 customer accounting for more than 15 percent of usage.
- **Suppressing data that does not meet aggregation standards rather than aggregating with neighboring ZIP codes.** The PAs suggest removing the requirement to aggregate ZIP Code data that does not meet the aggregation standards with neighboring ZIP codes and instead suppress data that does not meet privacy thresholds. Other well-known and respected data sources such as the US Census apply privacy standards by suppressing data that does not meet standards and then shows data at a more aggregated level if privacy thresholds are met and the PAs would propose to do the same. For example, if US Census block group data is being shown and there are not at least 20 customer accounts but there are at the town level then the data would be shown at the town level instead and would only be shown at Census block group level of those block groups with at least 20 customer accounts.

SECTION SIX: MARKETING

6.1 Overview

In 2010, the PAs joined together to promote energy efficiency programs to the Commonwealth through a statewide PA brand—Mass Save. The PAs' intent was to drive broader and deeper customer engagement through consistent program/incentive offerings and a singular voice that complements the PAs' brands to achieve broader reach, awareness, and engagement with energy efficiency programs. As "Sponsors" of the Mass Save word service mark, the PAs' communications are intended to complement the Sponsors' individual brand efforts when communicating with residential and business customers about energy efficiency programs and to help drive additional impact.

A trademark or service mark identifies goods and services as originating from a single source. Trademarks, in effect, represent the goodwill that a business has built up through its history of offering quality goods and services. A word mark is the most common form of trademark and simply consists of a word or group of words. The PAs have rights to the word mark Mass Save, having obtained federal registration on August 29, 2006. Under trademark law, the PAs monitor and control the use of their marks to maintain their integrity and to prevent inferior energy efficiency services from diminishing them. Throughout the past four three-year plan periods, the PAs have overseen significant monitoring efforts with respect to the Mass Save mark to identify unauthorized uses of the service mark. Legal measures have been successful in stopping such unauthorized uses and thus the integrity of the mark has been protected. Throughout the 2025-2027 term, the PAs' marketing efforts will continue under the Mass Save brand as will the work to maintain the equity of the brand.

The Mass Save marketing campaigns and efforts are central to the 2025-2027 Plan and are helping transform markets to equitably deliver energy savings and reduce GHG emissions. The ultimate goal of the 2025-2027 marketing strategy is to build a culture of energy efficiency and decarbonization in the Commonwealth with a strong emphasis on supporting all customers' participation in Mass Save programs. The PAs will continue to utilize a multi-channel approach to effectively communicate with Massachusetts residents and businesses throughout the term. A multi-channel marketing approach is crucial as it recognizes the diverse preferences of customers, allowing the PAs to engage with audiences across various platforms and channels and meet them where they are in their understanding of and engagement with energy efficiency and electrification. By taking a customer-centric approach to communications, the PAs can enhance the reach and

relevance of the communication, foster stronger connections and increase the likelihood of successful communications and ultimately program participation.

In addition to launching campaigns and culturally relevant outreach, the PAs will receive real-time and timely status updates on campaign successes and results, allowing them to benchmark and evaluate the effectiveness of their messaging and media placements and optimize the marketing strategies to further drive program participation. Rigorous reporting, tracking, and measurement of campaigns are essential components of the marketing efforts, ensuring appropriate and efficient allocation of resources.

For the 2025-2027 term, the core objectives of the PAs' education, awareness, and promotion campaigns will include 11 key objectives:

1. Increase consumer awareness of and participation in the Mass Save energy efficiency, electrification, and demand response programs to reduce energy use and GHG emissions.
2. Encourage and facilitate equitable participation in the programs.
3. Drive reduction of GHG emissions via electrification and weatherization.
4. Diversify and strengthen the workforce through strategic marketing support, including marketing outreach and resources, tools and opportunities for trade partners, with an additional focus on MWBEs.
5. Drive program participation in LOTE (Languages Other Than English) customers.
6. Foster behavioral changes that lead to energy savings, the reduction of GHG emissions, and monetary savings.
7. Build awareness of Mass Save as a trusted statewide resource for all things involving energy efficiency and decarbonization needs.
8. Educate customers about compelling and easy to understand program benefits to drive participation among all customer segments, including the residential, low-income, commercial, industrial, and municipal customer sectors as well as trade/industry professionals.
9. Ensure adequate and effective reach to all customers, including customers within Environmental Justice Communities and those who have not yet participated in Mass Save programs, through diverse, strategically selected, media channels (digital, radio, public transit, social media, etc.).

10. Encourage positive experiences and satisfaction among customers to naturally lead to the organic spread of positive word-of-mouth referrals within the community, and to foster connections and trust among neighbors.
11. Achieve broader and more profound energy savings through coordination of various strategies to educate customers about the opportunities to save energy and reduce GHG emissions.

The measures, programs, and initiatives to be supported include the following.

6.2 Sectors

Residential

- Heating and cooling (Retail).
- Products (lawn equipment and appliances).
- Weatherization (Residential Turnkey Services).
- Home Energy Assessments (Residential Turnkey Services).
- Renovations and new construction.
- Financing (HEAT Loan).
- ConnectedSolutions / demand response.
- Income eligible and moderate income.
- Online Marketplace.
- Multifamily.

Low-Income

- Income eligible and moderate income.
- Multifamily.

Commercial & Industrial

- Building insulation and weatherization.
- Heating and cooling.
- Lighting and controls.

- Building and HVAC controls.
- Specialty equipment (foodservice, lawn equipment, lab equipment, laundry, etc.).
- Water heating and pipe insulation.
- New construction.
- Small business.
- Online Marketplace.
- Demand response.

Community Outreach

- Community First Partnership.

Workforce Development

- Contractor management and training.
- Supplier diversity.
- Clean Energy Pathways.

6.3 Marketing Campaigns

The PAs' campaigns will:

- Use messaging that clearly describes the benefits and importance of energy efficiency and reducing GHG emissions.
- Reach the maximum number of target consumers possible.
- Market to differentiated consumer types and communities throughout the state including communities where English is not the primary language with a specific focus on Spanish, Portuguese, Mandarin, Cantonese, and Haitian Creole.
- Utilize a variety of digital, social, and traditional media that may or may not include digital display advertising, website content, social media, television, radio, billboards, public transit, trade, business, print, newspaper, search engine optimization ("SEO"), Google and professional associations, as appropriate in reaching the targeted audiences.

- Leverage statewide and program marketing strategies together to achieve deeper and broader savings.

The PAs recently overhauled their long-standing approach to marketing. An RFP was executed, and all statewide marketing and program marketing were combined under one new strategy and an integrated team of qualified agencies, specialized by core discipline instead of by program. The agencies have been hired to focus on:

- Marketing strategy.
- Website.
- Media advertising.
- Creative development.
- Direct outreach.
- Public relations.
- Event coordination.
- Social media content and management.
- Social media listening and response.

This new approach aims to reach customers via a more holistic, comprehensive approach. This restructuring also afforded the opportunity to curate a marketing team of multiple agencies highly specialized in their area of discipline, thus garnering more robust skillsets, best practices, and an enhanced caliber of work.

This new centralized model will serve as the optimal infrastructure for supporting the goals of the 2025-2027 plan. Rather than targeting customers with program-specific messages, the PAs will more easily deploy customer-centric campaigns to drive greater program participation and deeper savings while providing a better customer experience. The PAs will market to customers by audience type: residential customers including homeowners, renters, and income-qualifying customers; commercial and industrial customers, including organizations of all sizes; municipal customers, and community partners. The campaigns will focus on overcoming obstacles preventing adoption and finding proactive opportunities to market relevant content and offerings that best guide the customer along their energy efficiency journey as well as provide for more comprehensive energy savings.

This significant shift in strategy will provide customers with a greater understanding of all available solutions and the benefits of taking action, while delivering significant cost-efficiencies to the PAs, who are the stewards of the Mass Save funds. Furthermore, there will be greater synergies as well as more centralized reporting, allowing for greater applied learnings across campaigns.

6.4 Data-Driven Research

Data-driven marketing will be cornerstone to the 2025-2027 marketing strategy. This includes market research to inform marketing tactics, media strategies and messaging. In Q1 2024, the PAs are continuing their longitudinal research studies to update baseline metrics on customer familiarity, understanding, favorability, and propensity to engage with Mass Save programs and services, as well as likelihood to act and utilize them among residential and commercial audiences. The results of this survey will inform marketing, messaging and metrics, and help improve the effectiveness of the campaign. Research will be supplemented by research from the EPA's ENERGY STAR program that provides additional insight into the messages likely to drive consumers and businesses to energy efficiency and electrification action and the terms that resonate and do not resonate.

In Q4 2024, the PAs and the supporting agencies will conduct additional, multilingual research to better understand barriers to action, the impact of rebates and other financial incentives to act, identify new trusted messengers, and refine marketing campaign concepts and creative. The research will also provide the most up-to-date data insight into the customer journey and where in the process of program participation that customers fall off, so these issues can be addressed directly in the 2025-2027 term.

Hard-to-Reach Customers

- LOTE (Languages Other Than English) customers.
- Renters.
- Small business owners.
- Income eligible.

During the 2022-2024 term, the PAs executed specific educational outreach to reach targeted audiences including Spanish and Portuguese speakers, renters, income-eligible customers, and small business owners, and will continue to target these audiences in the 2025-2027 term.

6.5 MassSave.com

The PAs maintain a joint statewide website, MassSave.com, which is designed to educate customers and provide access to energy efficiency program information and participation. MassSave.com provides the PAs an opportunity to offer streamlined information, including the online home energy assessment, online rebate processing, access to an online retail marketplace, and online HVAC facilitation tools, which offer substantial customer experience benefits. The centrality of MassSave.com to the PAs' marketing efforts demonstrates the commitment of the PAs to working together for the benefit of customers throughout the state and will continue to be a core element of the 2025-2027 marketing strategy.

The PAs' focus on total customer experience recognizes the entry of the customer through MassSave.com as a critical component of that experience. MassSave.com is continually being updated and enhanced. As a result of extensive usability testing, a major overhaul of MassSave.com's global navigation was conducted in 2023 to optimize the user experience and drive greater program participation. Nearly every section of MassSave.com has gone through web template updates, re-writes, journey mapping, new page creations, and more to make the website even more robust and easy to use.

Several new sections have been created to ensure all programs offered to customers are clearly messaged with strong calls to action. This includes website enhancements for the trade partners section of MassSave.com. This area of MassSave.com further connects contractors and other critical business partners with the training, resources, and information they need to excel in implementing energy efficiency programs. It also serves to connect with new trade partners to further expand and diversify the workforce. Many of the new pages created and content that was updated involved the expansion of messaging and branding strategies into the broader context of energy and environment, supporting the Commonwealth's expanded policy objectives around electrification, renewable energy, and clean energy strategies. In part, a series of new electrification focused webpages were developed to educate customers and increase the adoption of non-fossil fuel technologies.

As part of the 2025-2027 Plan, these webpages will serve as a platform for an expansion of electrification-related content and information. Furthermore, there will be greater MassSave.com enhancements to foster an optimal user experience. This will include personalization enhancements to nurture residential and business customers along their energy efficiency journey by providing the most relevant and helpful content and information. MassSave.com is currently accessible in English, Spanish and Portuguese, the most common languages spoken across the state, and may include other language tools in the future to ensure accessibility for diverse linguistic populations.

SECTION SEVEN: RESEARCH, DEVELOPMENT, AND DEMONSTRATION

In their continued efforts to explore new technologies, measures, and solutions available for customers, the PAs set forth this budget to pursue research and development for new technologies, measures, and solutions that may lead to customer savings. This allows the PAs to be proactive and leaders in innovation and constantly add to the portfolio of offerings for customers. Costs associated with research and development into areas of interest are charged to this category.

The PAs constantly perform research and development work identifying new technologies, measures, and solutions for customers. Examples of new portfolio additions developed during the 2022-2024 term include prescriptive C&I weatherization, expanding Qualified Product List categories to include more electrification opportunities for customers of all sectors, small equipment electrification for all sectors, C&I building controls offerings, and C&I and Low-Income Deep Energy Retrofit offerings. These new offerings have been developed and are now offered to customers as full programmatic opportunities.

Additionally, the PAs have conducted the necessary research and development to make multiple proposals for portfolio expansion within the 2025-2027 Plan. This includes non-energy related GHG reduction space, embodied carbon in the new construction space, and two PAs' proposals of incentivizing solar photovoltaic for customers to support controlling building electrification operating costs (see Appendix K, sections K.6 (Compact) and K.7 (National Grid). Through the first two years of the 2025-2027 term, the PAs have continued their research and development efforts in building electrification and decarbonization, building improvements, and traditional energy efficiency and demand reductions to expand existing offerings to better suit customer needs.

Demonstration projects, meeting the definition and intent of recent updates to the DPU's Energy Efficiency Guidelines, may be considered, where applicable. Proposed demonstration projects must meet the following criteria:

- Reasonableness of the size, scope, and scale of the proposed project in relation to the likely benefits to be achieved.
- Adequacy of the Evaluation Plan.
- The extent to which there is appropriate coordination among the PAs.
- Utility bill impacts to customers.

The PAs will seek to identify demonstration project candidates during a three-year plan development or propose them within a three-year plan term through a mid-term modification.

SECTION EIGHT: EFFORTS TO REDUCE ADMINISTRATIVE COSTS

8.1 Minimizing Administrative Costs

In accordance with the GCA, the PAs seek to minimize administrative costs to the fullest extent practicable. Administrative costs, also commonly referred to as PP&A (program, planning, and administrative) costs, are associated with:

- Day-to-day program administration, including labor, benefits, expenses, materials, supplies, and overhead costs.
- Any regulatory costs associated with energy efficiency activities.
- Costs for development of program plans, including market transformation plans and RD&D activities (excluding RD&D assigned to Evaluation and Market Research).
- Costs for energy efficiency services contracted to non-affiliated companies such as outside consultants used to prepare plans, screen programs, improve databases, and perform legal services.
- Internal salaries for administrative employees/tasks, including program managers that do not have direct sales and technical assistance contact with customers.

For the 2025-2027 term, 4.8 percent of the statewide electric and natural gas PAs' costs are assigned to PP&A. These percentages are in line with the budget allocations approved by the Department historically, demonstrating that the PAs have been able to provide direct benefits to customers and contractors and expand the energy efficiency portfolios while minimizing costs. Most importantly, the majority of energy efficiency budgets are returned to customers in the form of incentives that are intended to overcome the financial barrier to investment in energy saving and carbon reducing practices and equipment.

The most significant factor in the PAs' approach to minimizing administrative costs is the statewide collaborative process. This process is used by the PAs to coordinate planning, the adoption of consistent programs and processes, program design, EM&V studies, statewide marketing, regulatory proceedings, joint procurements, the use of common vendors for certain services, and the development and sharing of all best practices. Sharing of these costs, which would otherwise be borne by each PA individually, results in economies of scale that reduce the cost for each PA. For example, joint releases of RFPs and use of common vendors lead to minimization of administrative costs (e.g., cost for preparation and release of the RFP are

shared by the PAs). The PAs also minimize administrative costs by coordinating energy efficiency program delivery, where appropriate, with other customer service activities such as customer acquisition, key account management, and trade ally relationships.

The PAs also seek to minimize administrative costs in reporting by collaborating on reporting templates and through the utilization of KPIs, which are reported on a quarterly basis and made available on the Council's website. As noted in section 5: Statewide Data and Data Availability, the PAs also make performance and other program data available on Mass Save Data (https://www.masssavedata.com/public/home), the PAs' energy efficiency database. Similarly, the PAs have developed the Customer Profile Dashboard (https://www.masssavedata.com/Public/CustomerProfileDashboard), which provides public access to a wide array of aggregated customer usage and program participation data in a transparent and easy-to-use web-based format. These tools allow the PAs to provide significant amounts of data to stakeholders and the public, thereby avoiding individual data requests.

The PAs have also worked closely with DOER to address requests from interested parties for program-related information in an efficient manner. The PAs appreciate DOER's collaboration in focusing these requests on the information that is most relevant and in referring parties to readily available public information as applicable. For the Plan, the PAs and the Council Consultants have updated the key performance indicators to provide useful, regular reporting designed to reduce ad hoc public and Council data requests and minimize administrative costs.

Notwithstanding coordination with other customer service departments, it is necessary and appropriate for all PAs to maintain a skilled and dedicated administrative staff to ensure successful delivery of programs, compliance with the GCA, timely responses to the requests of the EEAC, Department, and DOER, documentation and achievement of savings, as well as to respond to the unique needs of their territories. The PAs seek to balance the need to minimize administrative costs to the extent prudent with the need to maximize program adoption, quality, and oversight in their service territories. Councilors have emphasized the need to devote sufficient administrative resources to successfully implement the aggressive programs called for in the three-year plans.

While the economies of scale and other steps taken to minimize costs are effective, and administrative costs incurred by the PAs are transparent, exact quantification of the minimization of administrative costs is not possible in a meaningful way. This is because the continuous scaling up and evolution of the plans make it impractical to establish an accurate baseline of administrative costs that allows for a meaningful comparison. Because the variables are constantly (and necessarily) shifting from term to term and within a term, there is no

opportunity to make a meaningful quantitative comparison regarding how costs have been reduced. Further, a direct quantitative comparison term over term or year over year would only provide a comparison of two points in time.

The mandate of the GCA is to seek administrative efficiencies, which is a continuous process that evolves along with energy efficiency planning and implementation. Program needs and opportunities for administrative efficiency are always changing, and the PAs seek to minimize costs at every available opportunity, and not just from one point in time to another. By collaborating, creating consistent programming, optimizing staffing, and providing beneficial reporting, the PAs can minimize administrative costs to the extent practicable while providing quality energy efficiency services for customers.

The PAs have continued to apply lessons from an administrative cost study conducted in advance of the 2019-2021 term. This study, *The Best Practices for Minimizing Program Planning and Administrative Costs for the Massachusetts Utilities and Energy Efficiency Services Providers*, was finalized on October 25, 2018 ("PP&A Report") and was filed with the 2019-2021 Plan. The PP&A Report:

- Identified best practices, both in Massachusetts and nationwide, for tracking and assessing administrative costs.
- Identified potential benchmarks, metrics, and/or indicators for measuring administrative costs.
- Provided specific recommendations, as appropriate, for reducing administrative costs.

In addition to the efforts noted above, and consistent with the PP&A Report, the PAs continue to seek to minimize administrative costs using the following overall recommendations:

- **Continue to focus on ways to improve consistency in accounting practices.** The Program Administrators have reviewed accounting practices and have determined that they are consistent among the PAs. The PAs allocate costs based on budgets, assigning the same percentage of an allocated cost to a program as the percentage of the sector or portfolio budget (as appropriate) planned for that program. The manner of allocation is the same among the PAs, even though the actual percentages necessarily differ based on the spending needs for each program in each service area.
- **Follow cost accounting best practices in allocation, tracking, and control.** The PAs regularly communicate to ensure that costs are allocated in accordance with a common methodology and maintain spreadsheets documenting cost allocation decisions. Each PA has specific employees dedicated to reviewing costs. The PAs have not sought to establish targets for cost reduction, as

spending is related to program implementation, but continue to review costs to reduce them where possible and ensure that they support a direct energy efficiency benefit.

- **Implement an annual process to stress test status quo processes and spending.** The PAs review spending at the time of the Term Report and Plan-Year Report. The PAs have performed a detailed review of costs in connection with the preparation of each annual report since the issuance of the study referenced above. Additionally, PAs continuously work on reviewing processes and spending through management committees and working groups.

The Massachusetts PAs will continue to use these recommendations during the 2025-2027 term to assist in efforts to continuously minimize administrative costs to the greatest extent practicable without negatively affecting program delivery.

8.2 Competitive Procurement

The PAs use competitive procurement processes to engage and retain contractors and vendors to perform activities including, but not limited to assessment delivery, quality control, rebate processing, monitoring and evaluation, potential studies, and marketing. The PAs are committed to continuing to utilize competitive procurement practices to the fullest extent practicable throughout the implementation of the 2025-2027 Plan. Therefore, consistent with past practice, the PAs anticipate that they will continue to issue RFPs to engage appropriate third-party vendors to provide energy efficiency services and work collaboratively to ensure that energy efficiency services have been procured in a manner that minimizes costs to customers, while maximizing the associated benefits of those investments. Through the PAs' supplier diversity and competitive procurement efforts, the Program Administrators will continue to expand the pool of qualified program vendors, promote the entry of new market actors into contractor and subcontractor roles, encourage diversity and inclusion through procurement, and ensure the transparency of the contractor bidding process and selection criteria used to evaluate proposals.

SECTION NINE: OVERSIGHT SUPPORT

9.1 DOER Assessment

The DOER Assessment represents an annual budget for DOER to help coordinate customer-funded programs for energy efficiency, energy conservation, and demand reduction programs. DOER assesses the annual budget pursuant to G.L. c. 25A, § 11H, which requires that the allocation of costs to the Program Administrators not exceed the 3.75 percent cap set forth in the statute. For Electric Program Administrators, DOER interprets the cap to be the customer costs authorized under G.L. c. 25, §19, including the system benefit charge and the energy efficiency surcharge, as further defined in D.P.U. 22-150-A and the Energy Efficiency Guidelines at §3.2.1 and §2(12). For Gas Program Administrators, DOER interprets that cap to be the annual budget.

9.2 Council Consultants

The Council consultant budget is managed by DOER and used to support the retention of expert consultants by the Council and reasonable administrative costs, in accordance with G.L. c. 25, § 22(c). The Council must annually submit to the Department a proposed budget for the "retention of expert consultants and reasonable administrative costs." G.L. c. 25, § 22(c).

APPENDICES

Appendix A: Glossary

See https://richmaypc478.sharefile.com/public/share/web-s82633d3537d840aa85662b2cba601786

Appendix B: Maps of Service Areas

See https://richmaypc478.sharefile.com/public/share/web-s52d12e6da5554c689e37cea3c1d20429

Appendix C: Statewide Energy Efficiency Data Tables

See https://richmaypc478.sharefile.com/public/share/web-sae495b095c13438d965c8e55298438cb

Appendix D: Council's Resolution of December 20, 2023

See https://richmaypc478.sharefile.com/public/share/web-sad9135bea7e44be8aa34d9507410c2bf

Appendix E: Council's Resolution of July, 2024

To be included with the final 2025-2027 Plan.

Appendix F: Agreement of XXX, 2024 on Certain Terms between Attorney General, DOER, and Program Administrators

To be included with the final 2025-2027 Plan.

Appendix G: Reserved

Appendix H: Avoided Energy Supply Components in New England: 2024 Report

See https://richmaypc478.sharefile.com/public/share/web-sf22054d45d4c4104b8dd0cc47d5a00e2

Appendix I: Description of Measures

To be included with the final 2025-2027 Plan.

Appendix J: Sponsorships & Subscriptions Policy

See https://richmaypc478.sharefile.com/public/share/web-s24743a7adffe45fe9d5a053d4b03a614

Appendix K: PA-Specific Programming

K.1 Residential and School Education (Eversource)

In addition to the statewide education plan, Eversource provides a robust menu of educational offerings through its Residential and School Education program. Eversource recognizes the need to educate future energy consumers to embrace positive energy behaviors and encourage careers in energy efficiency and decarbonization. As such, Eversource strives to provide educators with the tools necessary to teach students positive energy behaviors, provide energy efficiency and decarbonization education, and bring awareness to green career opportunities.

Eversource offers student and educator programming for Grades K-12. Grades K-8 can take advantage of in-class programming and Grades 6-12 can participate in career development workshops. K-12 students can enter the Eversource Challenge and K-12 educators can attend professional development workshops. These educational and entertaining offers teach students to be more aware of their energy habits and to develop positive energy usage habits to conserve and use natural resources wisely. Many of these programs have won national and regional awards for their creativeness and effectiveness. All these programs are science-based learning and align with the Massachusetts Curriculum Frameworks.

All K-12 education offerings in the Eversource Residential and School Education program are required to introduce the topic of energy efficiency and green careers. Eversource believes informing young students at an

early age will reveal opportunities for them to enter energy efficiency or green career pathways. In addition, a career exploration workshop is offered to middle and high school students to introduce them to green jobs, as well as inform students regarding the path and credentials needed.

All Eversource education offers are inclusive to accommodate all students, educators, and school districts to meet the individual, distinct needs of each student. Some programs offered by Eversource to K-12 students include:

- **K-12 student contest.** The Eversource Challenge is a prompt-based student contest for K-12 students to highlight their knowledge on saving energy, energy-efficient technologies, decarbonization, and sustainability. The contest includes challenges ranging from poster making for first graders to developing an energy efficiency plan for high school students. First, second, and third place prizes are awarded for each grade level.
- **In-class and virtual programming.** Both in-class and virtual programming are offered to students in Grades K-8. Wattsville™ is offered to Grades K-2 students to teach them about energy efficiency and the importance of saving energy. The National Theatre for Children offers Grades 3-5 skits featuring a variety of characters and scenes to introduce students to different topics about saving energy and new energy-efficient technologies, and for Grades 6-8 students, Eversource offers EnergyQuest™, an interactive environment experience which gives students the opportunity to become energy investigators to learn more about energy usage and new technologies.
- **Educator workshops are offered statewide with other Program Administrators.** Eversource goes beyond the statewide program and offers additional workshops for educators in the Eversource electric and gas service territories. These workshops offer curriculum and resources to educators so they can in turn teach the lessons to their students. In conjunction with these educator workshops, many schools throughout the Eversource territory have participated in the NEED (National Energy Education Development) project's Youth Awards program and several national and regional winners from Massachusetts have been recognized.
- **At-home family lessons and activities.** During the pandemic, Eversource introduced at-home family lessons and activities for students. Eversource has continued to offer these lessons several times a year so families can work together to save energy and build positive energy behaviors. Examples of family activities include experiments on the benefits of insulation, a vampire load scavenger hunt, comparing various types of lighting, and building solar cookers. Students are

encouraged to share photos on social media of their families completing the activities. Eversource intends to continue these family lessons for the 2025-2027 term.

- **In-school events.** Eversource works with schools and organizations on a case-by-case basis assisting with energy fairs, STEM (Science, Technology, Engineering, and Math) events, career days, and science days when approached.
- **Activity workbooks and supplies for school or community events.** Eversource also offers grade-level activity workbooks (available in English and Spanish) and energy efficiency activities (including a bike that shows how much more energy is needed to produce the light of an incandescent than a LED) are available upon request to any school or community event.

Eversource's educational offerings also extend to the local community. To educate residential customers, Eversource has supplied local libraries with Kill a Watt meter kits for patrons to check out. These kits allow customers to explore three types of electric use: plug, lighting, and mechanical. The kits measure and record the amount of electricity consumed by a small appliance. A booklet that gives tips on reducing energy consumption and costs is provided with the meter kits.

Eversource is committed to collaborating with Massachusetts communities and schools on different ways to enhance education and customer awareness of energy savings opportunities, tips, and new energy-efficient technologies. Eversource encourages students and its customers to take action to ensure they are responsible energy consumers and to ensure that the next generation can make informed energy decisions.

K.2 Residential Behavioral Energy Efficiency (National Grid and Unitil electric)

Unitil and National Grid's Residential Behavioral Energy Efficiency program ("Behavior program") is a customer engagement solution that brings behavioral science into the utility customer experience. The program enables customers to get a better understanding of how their household uses energy and how they can make reductions through behavioral changes. This program also aims to educate customers and engage them on next steps toward deeper energy savings through participation in other programs such as the Residential Turnkey Services and Residential Rebates programs.

The program uses customer data to create individualized Home Energy Reports to put customers' energy usage in context, comparing their usage to that of similar households. For participating National Grid customers, reports are supplemented by educational videos that are individualized with data from the customer's home and by general heat pump educational videos to encourage customers to electrify.

Customers of both Program Administrators also benefit from high usage alerts to encourage them to curb their energy usage through behavioral changes.

Program Design

National Grid and Unitil residential customers receive monthly Home Energy Reports showing their energy usage and putting it into context, comparing them to similar sized households. The program encourages customers to take small, behavioral actions (including specific recommendations included in each Home Energy Report) that can lead to meaningful reductions in energy consumption. The program also encourages customers to find out more about Mass Save offerings, serving as educational outreach. For National Grid customers, Home Energy Reports are sent out via email along with customers' monthly bills, which encourages higher opening rates. These reports are delivered alongside customer electric and gas bills so customers are viewing them while they are thinking about their energy usage already and may feel more motivated to click through to learn more about ways they can save energy and decarbonize. Unitil's customers receive monthly Home Energy Reports by email each month, as well as a mailed printed report every quarter. These reports are a timely resource for customers to reference alongside their electric bill, effectively increasing engagement and awareness of their energy usage patterns.

Educational videos on Home Energy Reports further engage National Grid customers with information about their energy usage, displaying their data reports in a visually engaging way. These videos are given to customers at the end of the year to summarize not only how much they used and how it compared to similar households, but also how and when they used energy. The individual data is provided only to the customer through an automated process so that no private data is shared with third parties.

Customers of both Program Administrators receive high usage alerts via email when their energy usage has spiked over a one-month period. These alerts help customers to better understand their energy usage and be deliberate about how they use their HVAC system, appliances, and electronics and whether they should make behavioral changes. These reports also alert them to when their utility bills may be higher, so that they can make adjustments and / or include in their budget planning.

Program Barriers

The program encourages customers to take action to better manage their energy consumption even without making investments in new equipment in their homes, while educating them on further steps they could take toward efficiency and decarbonization by participating in Mass Save programs. Given the potentially short-term nature of any behavioral changes, these initiatives have a limited measure life of just one year. This

limits the cost effectiveness of these programs as currently modeled, and also means that savings realized through these programs do not contribute to achievement of the PAs' 2030 GHG reduction goals.

How the Program Impacts Plan Priorities

The Behavior program helps drive customers to other Mass Save programs such as Residential Turnkey Services (see section 3.1.2), Residential Rebates (see section 3.1.3), and Low Income (see section 3.2). Approximately 30 percent of the customers participating in the offering are low and moderate income, though the PAs do not qualify participants on the basis of income. The reports are supplemented for National Grid customers by heat pump educational videos to help them understand how they can save energy and to encourage them to decarbonize.

K.3 Residential Behavioral Energy Efficiency (Eversource)

Since 2021, Eversource has been sending Delivered Energy Insights to customers in Massachusetts and New Hampshire. Delivered Energy Insights are designed to encourage recipients to be more energy efficient by sending digital letters via email with personalized energy usage information and energy-saving tips. As such, the program is intended to achieve direct savings through behavioral change. The program has been evaluated for savings each year since its inception. Although the studies have yet to show statistically significant savings, the savings estimates have increased year over year in Massachusetts. Additionally, the program achieved statistically significant savings in New Hampshire for the program year 2022. Given the trend of increasing savings estimates and savings achieved in other states, Eversource will continue to offer Delivered Energy Insights to customers in Massachusetts. Eversource will also continue to study the offering; should the studies fail to demonstrate statistically significant savings in 2024 or beyond, Eversource will cease offering the program in Massachusetts.

Program Design

Delivered Energy Insights are designed to provide customers with insights into their usage and how that usage changes over time. The insights are sent to customers monthly and contain usage information for the latest billing period compared to the previous year's billing period in an animated graph, usage information for the next billing period of the previous year, and seasonally relevant tips or program offerings with a call-to-action link. Seasonal summaries are sent out at the end of the heating season for gas customers, and the cooling season for electric customers, which contain comparisons for the entire season, combined with seasonal factors that might affect usage. The program is currently constructed as a randomized control trial looking to measure potential savings. Currently there are two waves: (1) the first wave launched in 2021, and

(2) the second wave launched in the second half of 2023. Each wave has a 50/50 split between a treatment group who receives both Delivered Energy Insights and seasonal summaries and a control group who does not receive any Delivered Energy Insights-related communication.

Program Barriers

Delivered Energy Insights are sent as a digital only communication, and customer reach is limited by email availability, email quality, and access to historical usage information.

How the Program Impacts Plan Priorities

Delivered Energy Insights helps drive customers to other Mass Save programs such as Residential Turnkey Services (see section 3.1.2), Residential Rebates (see section 3.1.3), and Low-Income (see section 3.2). The program design is flexible, and messaging can be changed as needed throughout the term to support Plan priorities.

K.4 Steam Electrification (Eversource)

Eversource will support the electrification of customers currently taking service from district steam loops in Boston. Historically, the PAs have not supported energy efficiency measures related to steam loops because the 'upstream' accounts for the gas used to create the steam are special contracts that do not pay into the energy efficiency fund. However, the 'downstream' customers using the steam do pay into the electric fund via their individual electric accounts, and therefore Eversource will support decarbonization efforts at these customers sites, including but not limited to the implementation of heat pump technology.

K.5 Localized Decarbonization Approaches (Eversource)

Eversource will dedicate up to $70 million of funding to support enhanced delivery of decarbonization measures among two target populations. The first target is specific geographic areas that are impacted by electric or gas infrastructure upgrades, including projects covered under the Integrated Planning Approach described in Eversource's Electric Sector Modernization Plan. The second potential target population is low and moderate-Income customers for whom the operating costs of electric technology may be a barrier to adoption. This funding may include additional incentives for adoption of electrification technology or barrier remediation, new incentives for adoption of solar and/or storage, and support for provision of "turnkey" delivery of these measures, among other things. Eversource is continuing to examine the needs of the impacted communities and will work with community stakeholders to design and refine the best fit approach.

K.6 Cape and Vineyard Electrification Offering (Cape Light Compact)

The Cape and Vineyard Electrification Offering ("CVEO") is the Compact's comprehensive strategic electrification and energy optimization offering that combines home weatherization from the Compact's historically successful energy efficiency programs with the following technologies: (1) cold climate air source heat pump (heat pump), (2) battery storage, and (3) solar photovoltaics ("PV"). The offering was approved by the Department in Cape Light Compact JPE, D.P.U. 22-137 on January 11, 2023, with a supplemental budget stamp approval from the D.P.U. on April 6, 2023. The Department approved the CVEO as a demonstration offering pursuant to Section 87A of An Act Driving Clean Energy and Offshore Wind, St. 2022, c. 179.

Through CVEO, the Compact proposed to serve 100 low- and moderate-income customers with a budget of approximately $6.1 million for implementation during the 2023-2024 Plan years. Since the Department's approval, the Compact has diligently pursued implementation of CVEO. The Compact has enrolled 79 participants in the offering for an initial CVEO site assessment. The Compact expects that 55 enrolled participants will complete installation of their respective CVEO technologies by the end of 2024. However, not all enrolled participants in CVEO will have completed their installations by the end of 2024.

The Compact is proposing to complete the CVEO demonstration offering during the 2025-2027 term within the budget approved by the Department in D.P.U. 22-137. Additional details on the Compact's proposal for CVEO during the 2025-2027 term may be found in the Compact's supporting testimony.

K.7 Photovoltaic Rebate for Electrifying Customers in Equity Communities (National Grid)

One barrier to participation in the PAs' electrification offers that particularly impacts low- and moderate-income households is the prospect of near-term operating cost increases when converting from gas heat to a heat pump. This is especially true for those customers whose energy costs are already a disproportionate share of their household's income. To avoid increasing energy burdens for these customers, National Grid is developing a per-kW PV rebate offer for eligible customers who heat with gas and install PV alongside a heat pump, in order to help minimize the operating costs of that heat pump. By doing so, National Grid will mitigate the negative bill impacts that might otherwise occur for these customers in the near term, while striving toward the state's equity and electrification goals.

Geographic eligibility for this offer will be limited to specific communities that meet the following criteria:

- Communities that are home to gas-heating customers within National Grid's electric service territory.

- Communities drawn from the statewide population of environmental justice community geographies.
- Communities where behind-the-meter residential and C&I PV installations are not likely to result in distribution grid upgrade costs.

Please note that these communities may be different than the designated equity communities identified in section 3.1.2: Residential Turnkey Services. Should the offer move forward, National Grid would anticipate selecting the specific communities before the final Plan is filed in October, and anticipates the total budget impact across the term, including both residential and C&I installations, to fall between $35 million and $45 million.

Residential Offer

Customers within these communities will be screened for eligibility through the Home Energy Assessment process, and the relevant Implementation Lead Vendor or Home Performance Contractor will ensure that the customer has access to resources to evaluate heat pump options, including offering turnkey options as those become available to eligible customers, as well as a rebate for the PV. Should the customer choose to lease the rooftop PV or enter into a power purchase agreement ("PPA") with a third-party provider, the rebate would be assignable to a lease or PPA provider. The rebate will be capped at 10 kW (alternating current = AC).

The rebate will not be a low-income offer, designed to cover the full cost of the PV installation. The rebate will cover a portion of installed solar cost and is specifically intended to improve long-term heat pump operating costs for customers who are most sensitive to those costs and will be limited to customers with household incomes between 61 and 150 percent of area median income.

Commercial Offer

Within the same communities, National Grid will offer a PV rebate to C&I customers which fully electrify existing gas heating. Eligible C&I customers will be limited to the following segments, initially:

- Schools and other public buildings.
- Nonprofits.
- Master-metered managed housing.

These customer segments are particularly sensitive to increased operating costs, and face barriers to participation in electrification offers. As the offer scales throughout the 2025-2027 term, National Grid may

target other segments within environmental justice communities. Should the customer choose to lease the rooftop PV, the rebate can instead be assigned to the lease provider. The rebate will be capped at 150 kW (AC) to align with the anticipated annual electric consumption of the participating facility following the installation of the heat pump.

Cost-Efficient Electrification

National Grid is structuring its PV rebate to meaningfully improve access to electrification incentives, while avoiding redundancy with other efforts. For example, the Cape and Vineyard Electrification Offering (CVEO), see section K.6 above, is exploring delivery of low- and moderate-income, no-cost electrification with PV, heat pumps, battery storage, and induction stoves. Additionally, DOER has applied for funding for low-income, multifamily, solar loan, and community solar incentives through its Solar For All application. This PV equipment rebate will avoid overlap with those existing funding sources and offerings, while still focusing funding for the programmatic offering for customers with barriers to electrification and program participation. However, external non-customer funding through Solar For All could be used to expand program terms to additional customer segments, should DOER seek to utilize the mature Mass Save implementation channels and vendors to deploy that funding.

Importantly, National Grid has structured its offer in acknowledgement of the Department's Order in D.P.U. 22-137, which directed that "Any future proposal under Section 24 [of the 2022 Clean Energy Act] must be based on an analysis and lessons learned from the demonstration offerings developed under Section 87A. Accordingly, the Program Administrators shall review the Compact's evaluation of the CVEO and the Department's Section 87A report to the Legislature prior to the development of any future Section 24 offerings."[142] Section 24 of the 2022 Clean Energy Act added to the section of the GCA which governs what programs may be included in a three-year plan (new clause underlined), "programs that result in customers switching to renewable energy sources or other clean energy technologies including, but not limited to, programs that combine efficiency and electrification with renewable generation and storage."[143]

While National Grid's PV rebate offer will be submitted with the 2025-2027 Plan before the Compact's full evaluation of the CVEO and the Department's Section 87A report to the Legislature is issued, it is being offered as a separate and distinct offering from the CVEO that integrates early feedback from the Compact about the challenges of managing the CVEO offer and recruiting customers. National Grid's PV rebate targets the

142 See Cape Light Compact, JPE D.P.U. 22-137, at 33.

143 See G.L. c. 25, § 21(b)(2)(iv)(J).

segment of customers who are not affluent early adopters and need these incentives to decarbonize their homes and businesses without incurring increased near-term heating costs, in furtherance of Massachusetts' climate goals. This offering is designed to remove specific barriers to electrification for this large customer segment, prior to 2028, leading to early, sustained GHG emissions reductions well before 2030.

National Grid's PV rebate will allow vulnerable customers who currently heat with gas to electrify while limiting heating bill cost increases, an outcome that cannot be achieved through upfront heat pump incentives alone.

Appendix L: Technical Reference Manual

To be included with the final 2025-2027 Plan.

Appendix M: MassCEC Equity Workforce Funding Levels (FY25-FY27)

See https://richmaypc478.sharefile.com/public/share/web-sf94392309dba492290c7260b3ae6c647

Appendix N: Potential Study

See https://richmaypc478.sharefile.com/public/share/web-safd8aff0d4af4fb89a3233c382301457

Appendix O: Reserved

Appendix P: Reserved

Appendix Q: Reserved

Appendix R: Performance Incentive Model

To be included with the final 2025-2027 Plan.

Appendix S: Strategic Evaluation Plan

To be included with the final 2025-2027 Plan.

Appendix T: Evaluation Study Summaries

To be included with the final 2025-2027 Plan.

Appendix U: Evaluation Studies

To be included with the final 2025-2027 Plan.

Appendix V: EEA Secretary's Greenhouse Gas Goal Letter, March 1, 2024

See https://richmaypc478.sharefile.com/public/share/web-s162403f8fa0f4e309e9e0fa961ecbb11

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