



Triennial Plan VI

Fiscal Years 2026-2028

Issued June 5, 2024

Draft Overview for Public Comment

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Background

Function of the Triennial Plan

- Provides integrated planning, program design and implementation strategies for all energy efficiency, alternative energy, and conservation programs administered by EMT.
- Authorizes and governs implementation of EMT programs.
- For programs that will be implemented pursuant to sections 10110 [Electric Conservation Fund] and 10111 [Natural Gas Conservation Fund], the Plan
 - identifies maximum achievable cost-effective (“MACE”) energy efficiency savings;
 - identifies programs to achieve these savings;
 - describes the costs and benefits of such programs; and
 - provides the basis and support for the costs and benefits.

35-A MRS Sec. 10104(4)

The Triennial Plan Process

- Research & External Inputs
 - Research past program performance, forecasts of future opportunities
 - Consider feedback from stakeholders, including supply chain, consumers, advocates, policymakers
- Consultation
 - Board
 - Entities and agencies involved in delivering energy efficiency
- Offer to brief and take input from the Legislature's Energy, Utilities and Technology Committee (EUT)
- Adoption by 2/3 vote of EMT Board
- Review and approval by the Maine Public Utilities Commission (PUC) in an adjudicatory process, open to the public
- Annual Updates
 - Significant changes and updates to the Plan during the three-year period must be approved by the Board and reported to the PUC.
 - Certain changes, especially impacting Electric Fund and Natural Gas Fund collections, also must be approved by PUC.

Board and Stakeholder Engagement

- **Request for Information**

- September-December 2023
- Comments Received posted <https://www.energymaine.com/triennial-plan-vi/>

- **Individual Stakeholder Meetings**

- Electric utilities
- Natural Gas utilities
- Governor's Energy Office
- Governor's Office of Policy Innovation and the Future
- MaineHousing
- Working Groups of the Maine Climate Council
- Trade allies (RRVs, QPs)
- Low Income Advisory Group
- Arrearage Management Stakeholders Group
- Electric Ratepayer Advisory Council
- Transportation Advisory Group

- **Public Informational Workshops**

- 8/23/2023 Board Meeting: Legal Framework and Process Overview
- 10/25/2023 Board Meeting: Methodology of Identifying Cost-Effective Opportunities
- 11/15/2023 Board Meeting: Update on Beneficial Electrification Rulemaking, Update on Natural Gas Programs
- 12/20/2023 Board Meeting: Update on Input for the Beneficial Electrification Plan, EV Charging in Triennial Plan VI

Board and Stakeholder Engagement

- **Public Informational Workshops (continued)**

- 1/24/2024 Board Meeting: Update on Beneficial Electrification Plan, Financing Initiatives
- 2/28/2024 Board Meeting: Interim Beneficial Electrification Plan, Federal IRA Rebate Strategic Plan, Contractor Support and Engagement
- 3/15/2024 Special Workshop: Income-Eligible Initiatives and Equity
- 3/27/2024 Innovation Advisory Group Meeting: Innovation Program
- 3/27/2024 Board Meeting: RGGI Funding Priorities, Heating System Measures Beyond Air-to-Air Heat Pumps
- 4/12/2024 Special Workshop: Beneficial Electrification Plan for Triennial Plan VI
- 4/24/2024 Board Meeting: Beneficial Electrification Plan Stakeholder Meeting – Update, Heating System Measures Beyond Air-to-Air Heat Pumps – Further Discussion
- 5/10/2024 Special Workshop: Evaluation, Measurement, and Verification
- 5/22/2024 Board Meeting: Avoided Costs and Non-Energy Benefits, Residential Baseline Study
- 5/31/2024 Special Workshop: Demand Management Program
- 6/26/2024 Board Meeting: Electric Vehicle Studies, Triennial Plan VI budgets
- 7/24/2024 Board Meeting: Stakeholder Comments and Staff Responses

Introductory Sections (1-3)

Triennial Plan Document: Introductory Sections

1. Efficiency Maine Trust

- Introduces EMT's mission statement, governance structure, and staffing

2. Regulatory Framework

- Describes elements of the Efficiency Maine Trust Act (Maine statute), including EMT's statutory purpose, authorization of program funds, long-term targets, principles of administration, and statutory directives

3. The Triennial Plan

- Describes the Plan's purposes and requirements, process and timeline, program implementation priorities, and some recent results

2. Regulatory Framework: Revenue Streams

Utility Funds

- Payments made by electric and natural gas utilities to the Trust
- Collected from ratepayers
- Set at level needed to capture MACE opportunity
- Policy change – electric MACE includes certain fuel switching measures*

Regional Greenhouse Gas Initiative (RGGI)

- Payments received from the sale of “carbon allowances” at quarterly auctions
- Used for programs that reduce electricity consumption or GHG emissions

Grants and Settlements

- Federal grants (e.g., Inflation Reduction Act, Bipartisan Infrastructure Law funds), New England Clean Energy Connect (NECEC) Settlement, etc.

Forward Capacity Market (FCM)

- Revenues from bidding the Trust’s electricity resources (e.g., capacity) into the markets of the Independent System Operator for New England (ISO-NE)

Renewables Policies

- Payments from the Maine PUC for the alternative compliance payments for Thermal REC portfolio requirements

* See 2023 [Beneficial Electrification Policy Act](#) (summarized on next slide)

2. Regulatory Framework: Beneficial Electrification Policy Act

- Establishes a definition of “beneficial electrification” – switching end-uses and processes from fossil fuel to electric, where the switch reduces emissions and benefits ratepayers
- Requires the calculation of electric MACE to include all beneficial electrification measures that are cost-effective *and* that reliably reduce electricity rates over the life of the measure
 - Updates the cost-benefit screening for beneficial electrification measures funded through electric procurement to consider savings from avoided fuels
 - Requires the funding of the Trust’s budgets for delivering these savings through the electric utility procurement
- Directs EMT to develop a beneficial electrification plan, to be incorporated into its triennial plan
 - See Appendix H: *Beneficial Electrification Plan* for detail

35-A MRS Sec. 10102(3-A), Sec. 10110(2)(A) and (4-A)(D)

2. Regulatory Framework: Specific Goals and Targets for the Triennial Plan

1. Reduce **energy costs**
2. Reduce **greenhouse gas emissions**
 - consistent with the reduction requirements in state statute and the climate action plan adopted by the Maine Climate Council
3. Create stable private sector **jobs**
4. Support **weatherization** of 35,000 homes and businesses from 2020-2029,
 - Including at least 10,000 in low-income households through the combined efforts of the Trust and the Maine State Housing Authority
5. **Electricity**
 - Achieve the “maximum achievable cost-effective” (MACE) savings of electricity
 - Achieve MACE **peak-load** demand reductions
6. **Natural gas** – Achieve MACE savings of natural gas
7. High-efficiency **heat pump systems** – by 2030, support installation of at least 115,000 homes wholly heated by heat pumps and another 130,000 homes partially heated by heat pumps
8. **Electric vehicles** – Promote the purchase of at least 220,000 EVs registered in Maine by 2030

3. Triennial Plan: Program Implementation Priorities

- Lowering costs through acquiring efficiency and other resources
- Transforming the market
- Reducing the environmental impacts of energy
- Maintaining fairness and promoting equity
- Leveraging the private sector

4. Identifying Cost-Effective Opportunity

4. Identifying Cost-Effective Opportunity

- Statute requires triennial plan to identify the “maximum achievable cost-effective”(“MACE”) energy efficiency opportunity for **electricity** and **natural gas** savings
- Plan describes components of cost-effectiveness analysis, including:
 - How EMT estimates **benefits** and **costs** based on difference between two scenarios:
 - *Baseline Scenario* – what would have happened if not for the program, and
 - *Efficient Scenario* – where incremental energy resources are saved/delivered due to an intervention
 - High-level overview of considerations and assumptions
 - How to calculate benefits and costs
 - How to monetize benefits and costs
- Associated Appendix = Appendix E: Avoided Costs

4. Cost Effectiveness Calculation Formulas

- **Primary Benefit Cost Test**

- $BCR = \frac{NPV(Lifetime\ Benefits)}{NPV(Lifetime\ Costs)}$ A benefit-to-cost ratio (BCR) ≥ 1 = cost-effective

- **Program Administrator Cost Test**

- $PACT = \frac{NPV(Lifetime\ Benefits)}{NPV(Lifetime\ Program\ Administrator\ Costs)}$

- NPV = Net Present Value – calculation of today’s value of future costs and benefits taking the time value of money into account using a discount rate. A dollar tomorrow is worth less than a dollar today.

4. Cost Effectiveness Calculation Building Blocks (1)

- **Benefits:** Avoided Energy Supply Costs (AESC) due to reduced energy and peak demand usage, water savings, and reduced operations and maintenance costs
 - Per the Beneficial Electrification Policy Act: For beneficial electrification measures, all net energy costs, including savings from avoided fuels
- **Costs:** participant costs, incentives, increased operations and maintenance, AESC costs due to increased energy and peak demand usage, and program delivery expenses
- Cost-effectiveness screening is assessed at **gross** savings
- Cost-effectiveness screening is assessed at the **measure level**, rather than at the program level
 - *For Income-Eligible Initiatives only:* screening is assessed at the *project level* (a project is defined as a bundle of related measures installed concurrently)

4. Cost Effectiveness Calculation Building Blocks (2)

- The **discount rate** is set at current yield of 10-year U.S. Treasury securities, plus 200 basis points, adjusted for inflation (per Ch. 3 and Ch. 4 of Trust rules)
- **Free-ridership rates** are set at the levels found in a program's most recent evaluation
 - Default rate of 25% is applied for measures that are unevaluated and have no comparable evaluated measures
- **Operations and Maintenance (O&M)** costs and benefits are included in screening of measures when quantifiable and material

4. Beneficial Electrification Measures Included in MACE

- Beneficial electrification measures are included in determinations of electric MACE only if those measures:
 1. Are cost-effective (per the Trust's primary benefit cost test) AND
 2. Reliably reduce electricity rates over the life of the measures
- To assess reliable reduction in rates, Chapter 3 of EMT rules requires comparison of NPV of costs and revenues collected through transmission and distribution (T&D) rates attributable to the measure, including:
 - Changes in utility revenue from incremental electricity sales
 - Changes in utility cost from the marginal impact on T&D costs
 - Costs of the financial incentive and cost of EMT to administer the incentive program

4. Identification of MACE and Procurement Cap

- Statute requires triennial plan to identify the “maximum achievable cost-effective”(“MACE”) energy efficiency opportunity for **electricity** savings
- Statute also places a cap on the total amount of electric procurement:
 - “the commission may not require the inclusion in rates under this subsection of a total amount that exceeds **4%** of total retail electricity and transmission and distribution sales in the State as determined by the commission.”
- Each year the Commission determines the cap amount based on historic total sales of electricity
- In this overview, EMT has identified a MACE budget that may exceed the cap in FY2026 and likely exceeds the cap in FY2027 and FY2028. EMT will work with stakeholders and the Board to develop strategies to address this funding gap. Options could include:
 - Securing new offsetting funds: For example, there are two federal grant applications pending that, if successful, would offset sufficient procurement funds in the first year of the plan to reduce the procurement needs below the cap in FY 2027 and potentially FY 2028
 - Work with policymakers to revisit the level of the cap
 - Scale back incentives and/or program activity

5. Major Programs

5.1 Commercial and Industrial Custom Program

Incentivizes tailored energy efficiency, beneficial electrification, distributed generation, and demand management projects that require unique, site-specific engineering analyses

Measures Considered

- Broad array of potential projects and participation from customers of varying sizes
- Competitive incentives for distributed generation, energy efficiency, beneficial electrification, and demand management projects (e.g., steam turbines, heat recovery, refrigeration upgrades, process steam reduction, and controls)

Incentives and Financial Considerations

- *Minimum project savings* – ensure project savings exceed investment costs
- *Simple payback* – ensure program incentive is instrumental in moving project forward (avoid free riders)
- *Ceiling on cost of first-year energy savings* – seek maximum dollar-per-unit of savings (avoid overpayment)
- *Customer contribution* – require significant customer contribution to project cost
- *Maximum incentive size* – apply annual incentive caps (promote distribution across multiple participants)

5.1 Commercial and Industrial Custom Program

Opportunity Analysis and Findings

- Opportunity Analysis based on Triennial Plan V activity and performance
- Findings
 - Observed considerable uptick in electrical efficiency projects from large customers who take service at the transmission and sub-transmission (T&ST) level
 - EMT must allocate and use alternative sources of funding (e.g., RGGI) for T&ST customer projects since those customers do not contribute to, and are therefore ineligible for, Electric Efficiency Procurement funding
 - Federal funding opportunity targeting manufacturers drove renewed interest from the sector
 - Saw uptick in interest from universities and colleges looking to meet aggressive GHG reduction targets
 - Observed slowing program interest from cannabis cultivation facilities
 - Distributed generation opportunities at forest products industry facilities will be lower than previous triennial plans
 - The budget estimate for custom natural gas is a maximum per year and will likely be highly variable. EMT will work with the natural gas utilities to structure the collection of these budgets to avoid over collection

5.1 Commercial and Industrial Custom Program

Marketing

- Individualized, customer-focused outreach strategy (contact with leadership and facility/energy managers)
- Outreach to major vendors, contractors, and architectural and engineering firms to help identify projects

QA/QC

- Independent verification of energy saving calculations in project proposals
- Upon completion of each project, program staff conduct site visit to verify installation details
- Savings estimates (and incentives) are adjusted for “as-built” conditions (overruns covered by customer)

Approach to Market Barriers

- Design incentive structure to overcome barriers associated with large upfront costs and longer payback periods
- Require significant customer investment
- Review project proposals on rolling basis to ensure that project investments can sync with customers’ internal budgeting processes
- Provide several levels of technical support (e.g., free scoping audits, incentives for technical assistance) to overcome barriers associated with lack of in-house expertise

5.1 Commercial and Industrial Custom Program

Draft Budget

	Electric	NG	RGGI	FCM	Settlement	Federal/Other
FY 2026	\$2,698,000	\$214,000	\$4,179,000	\$0	\$0	\$0
FY 2027	\$2,698,000	\$214,000	\$4,179,000	\$0	\$0	\$0
FY 2028	\$2,698,000	\$214,000	\$4,179,000	\$0	\$0	\$0
Total	\$8,094,000	\$642,000	\$12,537,000	\$0	\$0	\$0

5.2 Commercial and Industrial Prescriptive Initiatives

Suite of broad, market-based initiatives and targeted initiatives that focus on specific sectors, hard-to-reach markets, or certain technologies.

Measures Considered

- Energy-saving measures that are widely available, have predictable operating characteristics, and broad application across the C&I sector, including:
 - HVAC systems (including heat pump technology)
 - Heat pump water heaters
 - Weatherization
 - Lighting
 - Sector-specific solutions (e.g., compressed air systems, refrigeration)

Incentives and Financial Considerations

- Incentive amounts vary depending on project/decision type, enhanced incentives for certain targeted initiatives, sectors or customer types
- Financing options available (see Section 7 - Efficiency Maine Green Bank)

5.2 Commercial and Industrial Prescriptive Initiatives

Opportunity Analysis and Findings

- Opportunity Analysis draws upon a review of past program history and six separate analyses:
 - Appendix H: *Beneficial Electrification Plan*
 - Appendix J: *Heat Pump Analysis and Considerations*
 - Appendix K: *Comprehensive Literature Review*
 - Appendix M: *Natural Gas Programs*
 - Appendix N: *Heat Pump Water Heater Analysis and Considerations*
 - Appendix P: *Commercial and Industrial Lighting Opportunity*
- Findings
 - Rooftop unit heat pumps and whole-building/zone heat pumps screen as eligible beneficial electrification measures fundable with Electric Efficiency Procurement (MACE); commercial variable refrigerant flow (VRF) systems currently do *not* screen as beneficial electrification measures and will continue to require alternative funding (measure is cost-effective but does not reliably reduce rates)
 - Newly cost-effective measures include water cooler timers, and advanced rooftop unit (RTU) controllers,
 - Due to severely diminished opportunity, natural gas incentives remain suspended
 - Modest inefficient lighting opportunity remains (accounting for discontinuation of general service lamps with LED baseline) and will likely require enhanced incentives through targeted initiatives focused on specific sectors and hard-to-reach markets

5.2 Commercial and Industrial Prescriptive Initiatives

Marketing

- Support installers (i.e., Qualified Partner network) to help them to identify and motivate customers
- Conduct marketing direct to potential customers
- Targeted initiatives may employ sector- or customer-specific marketing campaigns
- Offer virtual consultations for businesses looking to get started on a project

QA/QC

- Screen incentive applications for completeness
- Conduct technical review of applications over a certain dollar threshold before granting pre-approval; after completion, larger projects are reviewed again before issuing incentive payment
- Conduct on-site inspection of 10% of all projects

Addressing Marketing Barriers

- Pay incentives to customer or contractor
- Outreach and support to contractors providing services
- Targeted initiatives may provide higher incentives and/or direct installation and technical assistance

5.2 Commercial and Industrial Prescriptive Initiatives

Draft Budget

	Electric	NG	RGGI	FCM	Settlement	Federal/Other
FY 2026	\$16,126,000	\$0	\$3,675,000	\$0	\$633,000	\$11,428,000
FY 2027	\$17,512,000	\$0	\$3,563,000	\$0	\$633,000	\$11,449,000
FY 2028	\$19,227,000	\$0	\$3,415,000	\$0	\$633,000	\$5,582,000
Total	\$52,865,000	\$0	\$10,653,000	\$0	\$1,900,000	\$28,458,000

5.3 Retail and Distributor Initiatives

Incentives for efficient products acquired through retailers and/or distributors (supply houses where contractors and larger customers purchase plumbing, heating, refrigeration, and electrical supplies).

Measures Considered

- Measures sold in volumes large enough that distributors and retailers will stock them
- Achieve predictable savings when installed
- New construction, replace-on-burnout or emergency replacement measures, as well as early retirement of inefficient measures, including appliances, heat pump water heaters, and pumps

Incentives and Financial Considerations

- Incentives delivered as instant discounts or mail-in rebates
- Discount efficient equipment by amount required to motivate the sale (shrink or eliminate incremental price difference between conventional and high-efficiency models, and sometimes make the efficient model less expensive than the inefficient one)
- EMT may incentivize distributors to collect and report data as that burden shifts from contractors to distributors in this program model; may also provide distributors payments to offset administrative and marketing costs to encourage sales

5.3 Retail and Distributor Initiatives

Opportunity Analysis and Findings

- Opportunity analysis for Triennial Plan VI was based on:
 - Review of Triennial Plan V program performance
 - Appendix H: *Beneficial Electrification Plan*
 - Appendix I: *Residential Baseline*
 - Appendix K: *Comprehensive Literature Review*
 - Appendix N: *Heat Pump Water Heater Analysis and Considerations*
- Findings:
 - Measures offered during Triennial Plan V remain cost-effective: heat pump water heaters, clothes washers, electronically commutated motor (ECM) circulator pumps
 - Trust staff will continue to review measure costs and inclusion of measures during the Triennial Plan period
 - 14% of customers receiving rebates for heat pump water heaters through this program qualify as low income

5.3 Retail and Distributor Initiatives

Marketing

- Focus on replace-on-burnout or emergency replacement purchases
- For replace-on-burnout sales, leverage online search ads, target in-store/distributor messaging, and plumber and homeowner benefits
- For early retirement, use non-store channels and emphasize expiration date of promotions to motivate action
- Conduct distributor outreach and training

QA/QC

- Review instant discounts and rebate claims to ensure that the products and participants are eligible
- Monitor product pricing and program participation to assess appropriate discount amounts

Approach to Market Barriers

- First costs – reduce the cost of the high-efficiency option to make it cost competitive with the conventional option
- Awareness – market to decision maker at the decision point (online, in-store, postal mailing to home, etc.)

5.3 Retail and Distributor Initiatives

Draft Budget

	Electric	NG	RGGI	FCM	Settlement	Federal/Other
FY 2026	\$16,787,000	\$0	\$0	\$0	\$0	\$0
FY 2027	\$18,003,000	\$0	\$0	\$0	\$0	\$0
FY 2028	\$19,219,000	\$0	\$0	\$0	\$0	\$0
Total	\$54,009,000	\$0	\$0	\$0	\$0	\$0

5.4 Home Energy Savings Program

Market-based program that operates through network of independent trade allies to reach residential customers in single-family homes, duplexes, and condominiums.

Measures Considered

- *Building Envelope Improvements* –
 - insulating and air sealing of thermal envelope
 - energy assessments to verify improvement in thermal envelope
- *Heating Systems* –
 - Systems capable of heating the entire home with air-source heat pumps, geothermal systems, and biomass boilers and furnaces
 - Controls that can balance multiple heating systems

Incentives and Financial Considerations

- Rebates to defray cost of efficiency projects and equipment
- Financing options available (see Section 7 - Efficiency Maine Green Bank)

5.4 Home Energy Savings Program

Opportunity Analysis and Findings

- Opportunity analysis for Triennial Plan VI was based on:
 - Review of Triennial Plan V program performance
 - Appendix H: *Beneficial Electrification Plan*
 - Appendix I: *Residential Baseline*
 - Appendix J: *Heat Pump Analysis and Considerations*
 - Appendix K: *Comprehensive Literature Review*
 - Appendix J: *Heat Pump Water Heater Analysis and Considerations*
- **Findings**
 - Triennial Plan V weatherization program design sets the pace to meet Maine Climate Council (MCC) goals; proposed Triennial Plan VI budget will maintain the pace needed to meet MCC goals (~2,220 homes/year).
 - Weatherization in natural gas-heated homes screens cost-effective (using updated avoided costs), so will be eligible.
 - Consistent with Triennial Plan V changes, program will remain limited to heat pump systems serving a whole home; supplemental heat pumps will not be eligible for rebates through this program. Multi-zone heat pumps will not be eligible for rebates, even if part of a whole-home solution.
 - Heat pumps installed to cover a whole house meet the criteria of a "beneficial electrification" measure so are fundable with Electric Efficiency Procurement (MACE)
 - Pellet boiler/furnace measure in homes does not screen cost-effective, and frustrates near-term goals for "gross" carbon reductions. Staff recommends discontinuing the measure, concentrating available RGGI funds on weatherization. (Biomass measures in non-residential buildings will remain eligible through other programs.)

5.4 Home Energy Savings Program

Marketing

- Digital marketing (web ads, social media, search engine optimization)
- Print ads and materials
- Event-based outreach
- Brochures in property tax bill mailings
- Residential Registered Vendor (RRV) network support

QA/QC

- Vendor code of conduct
- Vendor requirements (licensing, training, insurance)
- Project inspections (in-home and virtual)
- Rebate claim forms

Approach to Market Barriers

- Lack of familiarity with technologies – educational print and web materials
- Lack of upfront capital – rebates and loans to overcome the initial cost barrier and allow customers to spread out the cost of energy improvements
- No contractor relationship – RRV vendor locator tool and code of conduct
- Split incentive in rental situations – outreach to landlords of single-family homes and duplexes

5.4 Home Energy Savings Program

Draft Budget

	Electric	NG	RGGI	FCM	Settlement	Federal/Other
FY 2026	\$15,080,000	\$600,000	\$7,086,000	\$4,005,000	\$0	\$0
FY 2027	\$19,870,000	\$600,000	\$7,086,000	\$3,861,000	\$0	\$0
FY 2028	\$25,645,000	\$600,000	\$7,086,000	\$3,765,000	\$0	\$0
Total	\$60,595,000	\$1,800,000	\$21,258,000	\$11,631,000	\$0	\$0

5.5 Income-Eligible Home Programs

- Portfolio of residential programs that reach low- and moderate-income (LMI) customers through market-based programs, targeted initiatives, and direct-mail campaigns
- Formerly “Low-Income Initiatives” in TPV – renamed to encompass broader range of income brackets
- See Appendix F: *Summary of Initiatives Serving Low-Income Customers* for a synopsis of all EMT’s initiatives serving low-income customers (beyond this specific program)

Measures Considered

- Building envelope improvements
- Whole-home heat pumps
- Supplemental heat pumps
- Heat pump water heaters
- DIY (Do It Yourself) kits with low-flow faucet aerators and low-flow showerheads with thermostatic valves

Incentives and Financial Considerations

- Enhanced rebates to defray cost of efficiency projects and equipment (leverage private investment)
- Targeted initiatives (focused on specific measures, home types, geographic areas, etc.) that use enhanced incentives and/or facilitate contractor support
- Direct mail campaigns promoting incentives for qualifying households
- Financing options available (see Section 7 - Efficiency Maine Green Bank)

5.5 Income-Eligible Home Programs

Opportunity Analysis and Findings

- Opportunity analysis for Triennial Plan VI was based on:
 - Review of Triennial Plan V program performance
 - Appendix H: *Beneficial Electrification Plan*
 - Appendix I: *Residential Baseline*
 - Appendix J: *Heat Pump Analysis and Considerations*
 - Appendix K: *Comprehensive Literature Review*
 - Appendix J: *Heat Pump Water Heater Analysis and Considerations*
- Findings
 - Several measures offered during Triennial Plan V continue to be cost-effective; but incentives for LED lamps are no longer necessary, given that incandescent bulbs are prohibited by federal law
 - Heat pumps installed to cover a whole house meet the criteria of a "beneficial electrification" measure so are fundable with Electric Efficiency Procurement (MACE)
 - Heat pumps remain a good fit for market-based program delivery – achieves wide reach, leverages network of contractors marketing to the residential sector
 - Discontinue targeted initiative for heat pump water heaters (covered 100% of equipment and installation costs, facilitated contractor support).
 - DIY energy-saving bundles deliver modest energy savings, have universal applicability, and low costs (price point and delivery), but market may now be saturated
 - With new avoided costs (AESC 2024), natural gas weatherization screens as cost-effective and will be offered anew. After multiple years of serving this sub-sector, the remaining opportunity in single-family homes is found to be extremely limited.
 - Advance the statutory weatherization goal by maintaining current program design and budgets to average 1,100 homes per year through 2030

5.5 Income-Eligible Home Programs

Marketing

- Direct mail and outreach through partner organizations (DHHS, MaineHousing, Community Action Agencies, etc.)
- Share collateral materials with community organizations
- Contractor-initiated customer acquisition
- Targeted social media and web advertising
- Statewide marketing of other EMT programs

QA/QC

- 15-25% of all direct-install and market-based projects

- Vendor requirements (RRV list, licensing, training, insurance)

Approach to Market Barriers

- Employing a variety of channels helps overcome obstacles to low- and moderate-income program participation
- Market-based initiatives – provide enhanced incentives to lower initial costs, and financing
- Targeted initiatives – focus on specific measures, home types, geographic areas, etc., providing enhanced incentives and/or facilitating contractor support

5.5 Income-Eligible Home Programs

Draft Budget

	Electric	NG	RGGI	FCM	Settlement	Federal/Other
FY 2026	\$35,750,000	\$250,000	\$9,060,000	\$828,000	\$1,267,000	\$4,229,000
FY 2027	\$44,867,000	\$250,000	\$9,171,000	\$828,000	\$1,267,000	\$4,689,000
FY 2028	\$56,390,000	\$250,000	\$9,320,000	\$828,000	\$1,267,000	\$5,298,000
Total	\$137,007,000	\$750,000	\$27,551,000	\$2,484,000	\$3,800,000	\$14,216,000

5.6. Electric Vehicle (EV) Initiatives: Public Charging

Program to facilitate and accelerate Maine's transition to a low-carbon transportation system by expanding availability of public EV charging infrastructure.

Measures Considered

- DC fast chargers (guided by Maine DOT's Plan for Electric Vehicle Infrastructure Deployment [PEVID])
- Level 2 chargers (including those located at multifamily buildings, disadvantaged communities, municipal buildings, large workplaces, and rural service centers)

(Note: Managed charging is discussed in Section 5.7 - Demand Management Program; At-home chargers are discussed in 5.6 - EV Initiatives: Vehicles)

Incentives and Financial Considerations

- Grants to cover portion of the costs of installing fast-charging and community-charging infrastructure
 - Primarily funded by federal Bipartisan Infrastructure Law grants, administered through EMT
- Demand charges and other costs associated with hosting can be a barrier for some charging hosts. EMT grants may, in some cases, cover a portion of demand charges for the initial years of operation

5.6. Electric Vehicle Initiatives: Vehicles

Program to facilitate and accelerate Maine's transition to a low-carbon transportation system by supporting adoption of electric vehicles.

Measures Considered

- Light duty vehicles
 - Battery electric vehicles (EVs) and Plug-in hybrid EVs
 - Attention to promising niche uses of EVs, including fleets
- Medium & heavy-duty (MHD) EVs
- At-home charging bundled with a new vehicle purchase

Incentives and Financial Considerations

- Instant rebates and mail-in rebates for qualifying EVs
- Enhanced rebates for income-eligible Mainers
- Promotional rebates for targeted customer segments such as local and tribal governments, small businesses, etc.

5.6 Electric Vehicle Initiatives

Opportunity Analysis and Findings

- Opportunity analysis for Triennial Plan VI was based on:

- Public Charging:

- Appendix L-1: *Electric Vehicle and Public Electric Vehicle Charging, Analysis and Considerations*
- Appendix L-2: *Maine Plan for EV Infrastructure Deployment (PEVID)*

Vehicles:

- Appendix H: *Beneficial Electrification Plan*
- Appendix L-3: *Light-Duty Electric Vehicle Market Study*

- Findings:

- Public Charging: Appendix L-2 (PEVID) details the statewide plan for building out a public charging network; Appendix L-1 details other charging investment priorities. Overall, opportunity will be driven by available funding
- Vehicles:
 - Generally, market transformation to EVs will be accelerated and made more equitable with assistance from programs to overcome barriers of higher upfront cost and lack of information/familiarity with EVs and EV charging.
 - Light-duty EVs may become ineligible for funding through "beneficial electrification" MACE if the peak demand impacts from charging increase. The *Light-Duty Electric Vehicle Market Study (L-3)* will provide this estimate (*expected June 2024*). However, eligibility for MACE funding could be restored by requiring participation in managed Level 2 home charging to mitigate these peak demand impacts.
 - Appendix L-3 will estimate future adoption of light-duty EVs in Maine, quantity of EVs rebated at different rebate amounts, and provide details on the future of EV incremental cost (*findings TBD - expected June 2024*)

5.6 Electric Vehicle Initiatives: Marketing and Awareness

Marketing Activities Include:

- Build general awareness about EVs and EV chargers through advertising, educational videos, and events
- Develop and disseminate “how-to” guides and other public information campaigns to overcome misinformation and address frequently asked questions about electric vehicles and charging
- Continue to develop and maintain informational materials and resources on website
- **Public Charging:**
 - Leverage earned media through events around ribbon cuttings, community events, etc.
 - Provide education about the locations and operation of the public charger network through the website, public service announcements, and events
 - Collaborate with state and local government agencies on public engagement activities
 - Facilitate public outreach around annual updates to PEVID and federal funding plans
- **Vehicles:**
 - Visit dealerships to provide EV brochures and collateral materials, refresh program offerings, build relationships with dealership staff, and gather feedback
 - Distribute newsletter to participating EV dealers
 - Host and participate in EV workshops, conferences, and ride-and-drive events

5.6 Electric Vehicle Initiatives: QA/QC and Market Barriers

QA/QC

- **Public Charging:** Employ QA criteria in solicitations, including minimum uptime requirements where appropriate, data reporting, file and site reviews
- **Vehicles:** Employ list of qualified products, review each rebate application, dealer training and check-ins, customer surveys

Addressing Market Barriers

- Instant discounts applied at point of sale
- Tiered incentives based on income; enhanced incentives for lower income brackets
- Promotional efforts to demonstrate priority applications for EVs
- Education of car sales staff
- Addressing concerns about charging availability and range anxiety with network development and public information
- Continue to grow charger network by providing information and incentives to address potential host site questions and concerns

5.6 Electric Vehicle Initiatives Budgets

Draft Budget

	Electric	NG	RGGI	FCM	Settlement	Federal/Other
FY 2026	TBD	\$0	\$0	\$0	\$0	TBD
FY 2027	TBD	\$0	\$0	\$0	\$0	TBD
FY 2028	TBD	\$0	\$0	\$0	\$0	TBD
Total	TBD	\$0	\$0	\$0	\$0	TBD

5.7 Demand Management Program

Deploys measures and strategies that mitigate the impacts of peak demand and balance the increased penetration of intermittent renewables on the grid.

- ***Demand Response Initiative:*** participants are compensated for reducing electricity use when called upon to do so (typically during periods of peak demand that drive system costs)
- ***Distributed Energy Resource (DER) Initiative:*** aimed at implementing passive and active load-shifting strategies across fleets of devices. These devices and deployment strategies are programmable and/or networked, allowing them to operate in response to internal or remote dispatch signals. The initiative incentivizes participants to shift their load during periods of peak demand, reducing overall system costs to all ratepayers

Measures Considered

- Demand Response
- DERs (managed EV charging, home smart chargers, small residential/commercial batteries, large commercial batteries)

Incentives and Financial Considerations

- ***Demand Response Initiative:*** participants are compensated based on evaluated, curtailed, demand (kW) during grid peak
- ***DER Initiative:*** participants may receive upfront rebate on equipment and/or be compensated for verified operation/performance; EMT will also explore location-based bonuses

5.7 Demand Management Program

Opportunity Analysis and Findings

- Opportunity Analysis based on:
 - Past program performance, calibrated with growth trajectories for similar programs in the Northeast
 - Appendix O: *Demand Management Program Analysis and Considerations*
 - Appendix L-3: *Light-Duty Electric Vehicle Market Study*
- Findings:
 - All measures offered in TPV remain cost-effective in TPVI (exact activity level to be calibrated based on analysis listed above)
 - EMT can expand the DER Initiative by offering different pathways for participation. EMT will continue to offer the option to original equipment manufacturers (OEMs) to either enroll in and use EMT's DERMS platform, or to use their own platform and report the results to EMT seasonally
 - Cost-effective opportunity exists to expand current program for small batteries (limited to existing equipment) to “lost opportunity” situations where customers are looking to install whole-home reliability solutions. Enhanced load-shifting incentives will help encourage customers to invest in battery system over fossil-fuel generators
 - EMT can expand market penetration of managed EV charging by offering incentives on smart chargers at the time of EV purchase

5.7 Demand Management Program

Marketing

- *Demand Response Initiative*: Curtailment Service Providers (CSPs) will manage all elements of customer relationships, including acquisition
- *DER Initiative*: work with vendors, equipment suppliers, and installers on promotion, equipping these entities with collateral necessary to inform potential customers of incentive opportunities. Leverage existing EMT programs (e.g., EV rebate program), its webpage, and online advertising strategies.
- Empower and incentivize aggregators and Third-Party Owners (TPOs) to manage all elements of customer enrollment, management, and device performance

QA/QC

- *Demand Response Initiative*: incentive based on verified performance (using utility data)
- *DER Initiative*: all measures will require network functionality; annual evaluation will determine performance-based incentives

Approach to Market Barriers

- *Demand Response Initiative*: program provides participants financial benefit and technical expertise
- *DER Initiative*: reduces upfront cost of equipment and installation; reflects more accurate value of off-peak usage for some customers who otherwise pay flat rate for electricity

5.7 Demand Management Program

Draft Budget

	Electric	NG	RGGI	FCM	Settlement	Federal/Other
FY 2026	\$5,150,000	\$0	\$0	\$0	\$0	\$0
FY 2027	\$9,624,000	\$0	\$0	\$0	\$0	\$0
FY 2028	\$15,087,000	\$0	\$0	\$0	\$0	\$0
Total	\$29,861,000	\$0	\$0	\$0	\$0	\$0

6. Other Initiatives

6. Other Initiatives

EMT oversees several miscellaneous initiatives, some of which leverage or supplement EMT's existing programs, and others that stand on their own with unique characteristics.

- **Non-Wires Alternatives (NWAs)** – EMT will continue to collaborate closely with the Office of the Public Advocate and the Non-Wires Alternative Coordinator (NWAC) to analyze the potential for cost-effective NWA resources, such as energy efficiency, distributed generation, load management, or energy storage, located on the customer's side of the meter (also called "behind the meter" or BTM). The Legislature amended the law to expand the review of the NWAC to projects that include only substations. EMT anticipates that this will increase the possibility of NWA projects in the TPVI period.
- **Thermal Energy Investment Program** – EMT provides incentives to businesses, municipalities, educational institutions, and non-profit entities in the State for the installation of new thermal energy-derived projects (i.e., projects that produce thermal renewable energy credits [TREC], such as boilers using wood or biofuels derived from wood).
- **School Decarbonization Program** – EMT facilitates PreK-12 schools' efforts to decarbonize their operations, including by providing technical and financial support for professional services (engineering, legal, PPAs, etc.) and cost-effective energy measures.
- **Home Energy Score** – A bill passed in 2023 requires EMT to establish a home energy scoring system for residential buildings. Through a competitive bidding process, the Trust selected a Home Energy Score Partner to provide scores for Maine as the Trust's recommended provider. This designee will be linked from the Efficiency Maine Trust website for homeowners, real estate professionals, and others interested in home energy scores. This designee will also act as the official database for scores.

7. Efficiency Maine Green Bank

7. Efficiency Maine Green Bank (EMGB)

Beginning in FY2025, **EMGB's capitalization will double** with the influx of federal capital from the U.S. EPA's Greenhouse Gas Reduction Fund.

- **EMGB will continue to offer the following finance initiatives:**
 - *Home Energy Loans* – provides loans for homeowners for energy upgrades to their homes
 - *Small Business Energy Loans* – provides loans for energy upgrades installed in small businesses
 - *Commercial Property Assessed Clean Energy (C-PACE)* – facilitates an arrangement that enables a commercial property owner to place a special assessment on their property to finance energy upgrades
 - *Municipal Lease* – pairs municipalities and PreK-13 schools with local lenders to finance energy upgrades through a tax-exempt lease purchase (instead of incurring debt)
 - *Financing for Heat Pumps in Manufactured Homes* – provides targeted offering for manufactured homes involving modest monthly payments toward the purchase and installation of whole-home heat pump systems
 - *Targeted Initiative for Congregate Living Facilities* – provides grants and loans for energy audits and building electrification (pending federal award, expected launch FY25)

7. Efficiency Maine Green Bank (EMGB)

- **EMGB will grow its existing finance initiatives to drive uptake by:**
 - substantially increasing marketing and outreach to customers and trade allies
 - rolling out a streamlined participation process involving a new online lending platform with instant decisioning capabilities
 - adjusting current finance initiative terms (e.g., increasing borrowing amounts, adjusting interest rates, accommodating tax credits, and other incentives)
- **Other EMGB expansions during Triennial Plan VI may include:**
 - extending eligibility for commercial loans beyond current offerings for small businesses
 - offering bridge loans for new construction projects in larger, commercial buildings
 - extending financing opportunities to projects beyond EMT-incentivized projects (e.g., Solar PV)
 - leveraging additional third-party capital (e.g., portfolio purchases, credit enhancements, loan loss reserves)

7. Efficiency Maine Green Bank (EMGB)

Draft Forecast of Loan Demand, Inclusive of Administrative Costs*

	American Recovery and Reinvestment Act (ARRA)	IRA Greenhouse Gas Reduction Fund (GGRF)*	Energy Efficiency Revolving Loan Fund	Small Business Loan Fund
FY 2026	\$4,900,000	\$2,200,000	\$790,000	\$700,000
FY 2027	\$2,400,000	\$2,200,000	\$12,000	\$170,000
FY 2028	\$2,400,000	\$2,200,000	\$12,000	\$170,000
Total	\$9,700,000	\$6,600,000	\$814,000	\$1,040,000

*Figures do not include mobilization of private capital.

8. Strategic Initiatives

8.1 Evaluation, Measurement, and Verification

- Includes systematic data collection and analysis activities regarding EMT programs
- Produce key data to inform short- and long-term program planning and delivery decisions, and to meet reporting requirements
- Allocate **2.5%** of program budgets from electric procurement and other funding sources as appropriate (same as Triennial Plan V)
- Types of activities:
 - Technical Reference Manuals
 - Tracking and reporting database that documents the Trust's energy savings (effRT 2.0)
 - Independent third-Party evaluations
 - Research and Analysis
 - Forward Capacity Market compliance certification
 - Data reporting to stakeholders, Legislature and executive branch, PUC, municipalities, and NGOs
 - Quality assurance, quality control, and process improvement across programs
 - Utility data and modern analytics

8.2 Innovation

Background

- Support pilot projects that demonstrate new types of energy efficiency, demand management, beneficial electrification, or alternative energy measures, or new strategies for promoting such measures
- Target measures with significant potential to be cost-effective and to provide energy savings or greenhouse gas savings, but not well understood or established in marketplace
- Use smaller pilot projects to generate findings about cost effectiveness and market demand before making larger investments on incentives and program delivery

Budget and Implementation

- Allocate **1%** of program budgets from electric procurement and other funding sources as appropriate
- Conduct in-house research and issue one or more competitive solicitations annually to target specific opportunities for demonstrating new program measures or designs

8.2 Innovation

Triennial Plan VI Project Priorities

- Pilot the next generation of Demand Management measures
 - managing costs and grid reliability
 - integrate higher penetrations of renewable energy
 - reducing curtailment of renewable energy
- Pilot near-commercial technologies that show substantial energy-saving opportunities for the State.
 - Load shaping strategies that can incorporate energy market participation leveraging locational value
 - Devices that can participate in transactive energy marketplaces
 - Hydronic heat pump solutions with and without thermal storage
- Pilot connecting more customers with real-time energy markets in Maine.
- Pilot measures identified as key areas of interest in the state's beneficial electrification work but not yet ready for program implementation
 - See Appendix H: *Beneficial Electrification Plan* and Appendix K: *Comprehensive Literature Review*
 - Measures close to cost-effective or those without enough data for reliable TRM entries

8.3 Public Information and Outreach

- Increase consumer awareness of cost-effective energy-efficient options
- Assist market transformation and further influence the behavior of Maine consumers
- Provide general information about the benefits of energy efficiency and distributed renewable or alternative energy
- Provide tools and resources to support decision-making related to energy conservation, including best practices, usage tips, calculators, purchasing guides, and vendor locators
- Support training and workforce development efforts

8.3 Outreach Activities

Reach people wherever they get their information, where the efforts are most measurable, and in the most geographically targeted manner.

- Website
- Print advertising
- Google ads (search and display)
- Radio
- Direct mail campaigns
- Earned media
- Rebate check stuffers
- Email campaigns
- Educational outreach
- Tax mailers and utility bill inserts
- Videos – YouTube, Vimeo
- Cross-promotion during inspections
- Support for and outreach to retailers and distributors
- Business consultations and direct outreach
- Vendor support (newsletters, collateral, pro calls)
- Social media (Facebook, LinkedIn, Twitter) posts and ads
- Trade association outreach
- Non-profit outreach
- Events (trade/home shows/community)

9. Organizational Initiatives and Collaborations

9. Organizational Initiatives and Collaborations (1)

- **Legislature** – Engage at public hearings and work sessions of the Maine Legislature
- **Maine Public Utilities Commission** – Remain active in proceedings that have a direct or indirect impact on EMT programs
- **Governor’s Energy Office and Governor’s Office of Policy Innovation and the Future** – Collaborate to provide data and activity reports to DOE, Maine’s federal delegation, ISO New England, non-profit, and academic initiatives. Confer on legislation pending at the Legislature and certain PUC dockets. Collaborate on a variety of issues and initiatives, including use of existing and future federal funds, activities related to the Maine Climate Council and Maine’s Plan for EV Infrastructure Deployment
- **MaineHousing** – Coordinate activities, particularly on delivering heat pumps and weatherization to benefit low-income Mainers
- **Department of Environmental Protection** – Coordinate where environmental objectives overlap (e.g., RGGI Inc. participation, oil tank issues, Maine Climate Council Industrial Innovation Task Force)
- **Maine Department of Transportation** – Assist with planning and delivery of state’s EV initiatives

9. Organizational Initiatives and Collaborations (2)

- **Office of the Public Advocate** – Collaborate on Arrearage Management Program and NWA assessment process
- **Maine Climate Council** – Serve as ex-officio member of Council and co-chair of Buildings, Infrastructure, and Housing Working Group; serve on Energy Working Group and Transportation Working Group; promote Climate Action Plan strategies through EMT programs (including beneficial electrification, weatherization, EVs, and Industrial Task Force)
- **Electric Ratepayer Advisory Council** – Serve as ex-officio member, assisting council in evaluating measures to make electricity more affordable in Maine
- **Equity** – Continue to prioritize enhancing fairness and promoting equity in EMT programs, with a particular focus on LMI customers, small businesses, and geographic distribution. Adhere to statutory budget allocation requirements associated with ratepayer funds, and Justice40 requirements associated with federal funds
- **Workforce Development** – Support targeted training and other means of promoting quality assurance, provide scholarships, support GEO's Maine Clean Energy Partnerships initiative
- **Codes and Standards** – Serve as ex-officio member of the Maine Uniform Building and Energy Code Technical Board, support workshops and trainings as appropriate

Appendices

Appendix A: Budget and Performance Metrics

- Appendix A identifies the “maximum achievable cost-effective”(“MACE”) energy efficiency opportunity for **electricity** savings
- Appendix A provides an estimate of 4% procurement cap (described on slide 20) for FY2026 and FY2027
 - At this time, EMT does not have sufficient information on retail electricity sales to estimate the cap for FY2028
- Appendix A identifies a MACE budget that may exceed the cap in FY2026 and likely exceeds the cap in FY2027 and FY2028. EMT will work with stakeholders and the Board to develop strategies to address this funding gap. Options could include:
 - Securing new offsetting funds: For example, there are two federal grant applications pending that, if successful, would offset sufficient procurement funds in the first year of the plan to reduce the procurement needs below the cap in FY 2027 and potentially FY 2028 as well
 - Work with policymakers to revisit the level of the cap
 - Scale back incentives and/or program activity

Appendix A: Budget and Performance Metrics (FY2026)

Program	Electric	NG	RGGI	FCM	Settlement	Federal/Other
C&I Custom Program	\$2,698,000	\$213,760	\$4,178,889	\$-	\$-	\$-
C&I Prescriptive Initiatives	\$16,126,461	\$-	\$3,674,524	\$-	\$633,333	\$11,428,331
Retail and Distributor Initiatives	\$16,787,200	\$-	\$-	\$-	\$-	\$-
Income Eligible Home Programs	\$35,750,049	\$250,000	\$9,060,276	\$828,000	\$1,266,667	\$4,228,998
Home Energy Savings Program	\$15,080,464	\$600,000	\$7,086,312	\$4,004,536	\$-	\$-
Electric Vehicle Initiatives	TBD	TBD	TBD	TBD	TBD	TBD
Demand Management Program	\$5,150,060	\$-	\$-	\$-	\$-	\$-
Innovation	\$915,922	\$10,638	\$240,000	\$48,325	\$-	\$-
Public Information	\$457,961	\$5,319	\$120,000	\$-	\$-	\$-
Administration	\$5,800,000	\$74,463	\$800,000	\$-	\$100,000	\$233,740
EM&V	\$2,289,806	\$26,594	\$600,000	\$120,813	\$-	\$222,650
Inter-Agency Transfer	\$915,922	\$10,638	\$240,000	\$48,325	\$-	\$-
Total	\$101,971,846	\$1,191,411	\$26,000,000	\$5,050,000	\$2,000,000	\$16,113,719
Estimated Electric Procurement Cap	\$102,800,000					

Appendix A: Budget and Performance Metrics (FY2027)

Program	Electric	NG	RGGI	FCM	Settlement	Federal/Other
C&I Custom Program	\$2,698,000	\$213,760	\$4,178,889	\$-	\$-	\$-
C&I Prescriptive Initiatives	\$17,512,027	\$-	\$3,563,412	\$-	\$633,333	\$11,448,598
Retail and Distributor Initiatives	\$18,003,200	\$-	\$-	\$-	\$-	\$-
Income Eligible Home Programs	\$44,867,049	\$250,000	\$9,171,387	\$828,000	\$1,266,667	\$4,689,085
Home Energy Savings Program	\$19,870,255	\$600,000	\$7,086,312	\$3,860,995	\$-	\$-
Electric Vehicle Initiatives	TBD	TBD	TBD	TBD	TBD	TBD
Demand Management Program	\$9,623,601	\$-	\$-	\$-	\$-	\$-
Innovation	\$1,125,741	\$10,638	\$240,000	\$46,890	\$-	\$-
Public Information	\$562,871	\$5,319	\$120,000	\$-	\$-	\$-
Administration	\$6,400,000	\$74,463	\$800,000	\$-	\$100,000	\$248,820
EM&V	\$2,814,353	\$26,594	\$600,000	\$117,225	\$-	\$222,650
Inter-Agency Transfer	\$1,125,741	\$10,638	\$240,000	\$46,890	\$-	\$-
Total	\$124,602,837	\$1,191,411	\$26,000,000	\$4,900,000	\$2,000,000	\$16,609,153
Estimated Electric Procurement Cap	\$78,400,000					

Appendix A: Budget and Performance Metrics (FY2028)

Program	Electric	NG	RGGI	FCM	Settlement	Federal/Other
C&I Custom Program	\$2,698,000	\$213,760	\$4,178,889	\$-	\$-	\$-
C&I Prescriptive Initiatives	\$19,226,955	\$-	\$3,415,264	\$-	\$633,333	\$5,581,559
Retail and Distributor Initiatives	\$19,219,200	\$-	\$-	\$-	\$-	\$-
Income Eligible Home Programs	\$56,390,049	\$250,000	\$9,319,535	\$828,000	\$1,266,667	\$5,297,867
Home Energy Savings Program	\$25,644,699	\$600,000	\$7,086,312	\$3,765,301	\$-	\$-
Electric Vehicle Initiatives	TBD	TBD	TBD	TBD	TBD	TBD
Demand Management Program	\$15,087,337	\$-	\$-	\$-	\$-	\$-
Innovation	\$1,382,662	\$10,638	\$240,000	\$45,933	\$-	\$-
Public Information	\$691,331	\$5,319	\$120,000	\$-	\$-	\$-
Administration	\$7,000,000	\$74,463	\$800,000	\$-	\$100,000	\$267,670
EM&V	\$3,456,656	\$26,594	\$600,000	\$114,833	\$-	\$222,650
Inter-Agency Transfer	\$1,382,662	\$10,638	\$240,000	\$45,933	\$-	\$-
Total	\$152,179,552	\$1,191,411	\$26,000,000	\$4,800,000	\$2,000,000	\$11,369,746
Estimated Electric Procurement Cap	TBD*					

*dependent on electric rates during CY2025

Appendix B: Triennial Plan VI Measure Details

- B-1 Measure Screening

- Measure life and adjustment factors
- Energy, Demand, and Water Impacts
- Benefits and Costs
- Benefit-cost-ratio

$$BCR = \sum_{\text{measure life}} \frac{PV(\text{Energy\&Demand Benefits} + \text{Water Benefits} + \text{O\&M Benefits})}{PV(\text{Fuel Costs} + \text{Measure Cost} + \text{O\&M Costs})}$$

- B-2 Program Roll-up

- Budget projections for each program
- Built up from measure/end use program activity
- Allocated to funding sources
- Rolled up by program and funding source

Appendix C: Regional Greenhouse Gas Initiative (RGGI) Revenue Forecast

Staff recommends following the conservative revenue forecast as presented to the Board at its March 27, 2024, Meeting:

- The annual forecast will take an average of the last 8 quarters excluding any revenue from credit associated with the Cost Containment Reserve (CCR)
- As of June 2024, the estimate would be \$26 million a year. EMT will use this number for planning purposes for each year of Triennial Plan VI
- EMT proposes allocating all RGGI revenues received in excess of the forecast to offset the electric procurement in the following fiscal year
- For example, if there is a release of CCR allowances in year one of TPVI, the revenue associated with those allowances will be allocated to offsetting the electric procurement in year two of TPVI
- In each of its annual updates, EMT will update the forecast for the remaining years based on updated auction results

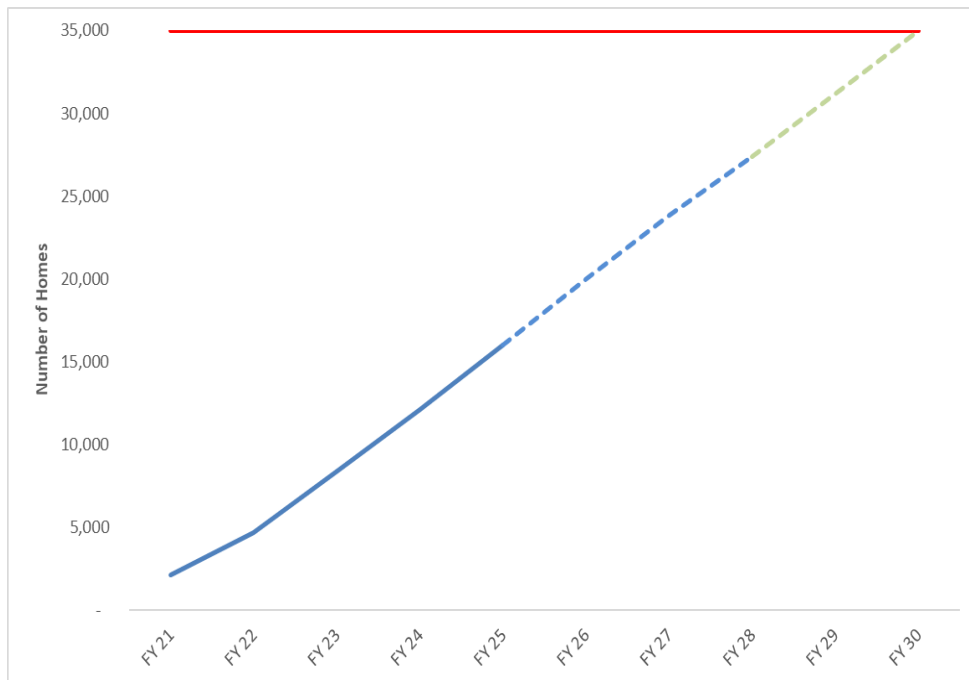
Appendix D: Long-Term Target Results

Maine statute provides that an objective of the Triennial Plan is to design, coordinate, and integrate programs that advance the following long-term goals:

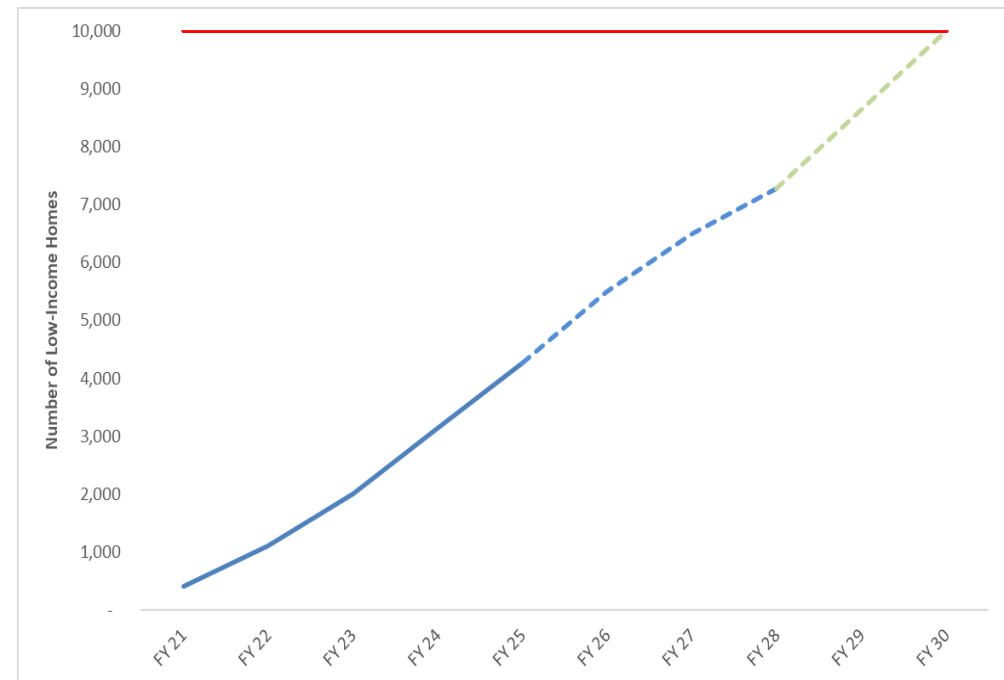
1. Reducing energy costs, including residential heating costs
2. For the period beginning January 1, 2020, and ending January 1, 2030, weatherizing 35,000 homes and businesses, with at least 10,000 of such weatherization projects completed in low-income households through the combined efforts of the Trust and the Maine State Housing Authority
3. Reducing peak-load demand for electricity by the maximum achievable cost-effective amount
4. Achieving the maximum achievable cost-effective electricity and natural gas program savings
5. Creating stable private sector jobs providing alternative energy and energy efficiency products and services in the State
6. Contributing to the effort to reduce GHG emissions by the amounts consistent with the State's GHG reduction requirements, and in a manner consistent with the State's climate action plan
7. Promoting the purchase of high-efficiency heat pump systems to achieve by 2030 the goal of at least 115,000 households in the State wholly heated by heat pumps and an additional 130,000 households in the State partially heated by heat pumps
8. Promoting the purchase of battery electric vehicles and plug-in hybrid vehicles to achieve by 2030 the goal of at least 220,000 such vehicles registered in the State

Appendix D: Long-Term Target Results

Progress to Goal: Total Number of Homes Weatherized: 35,000

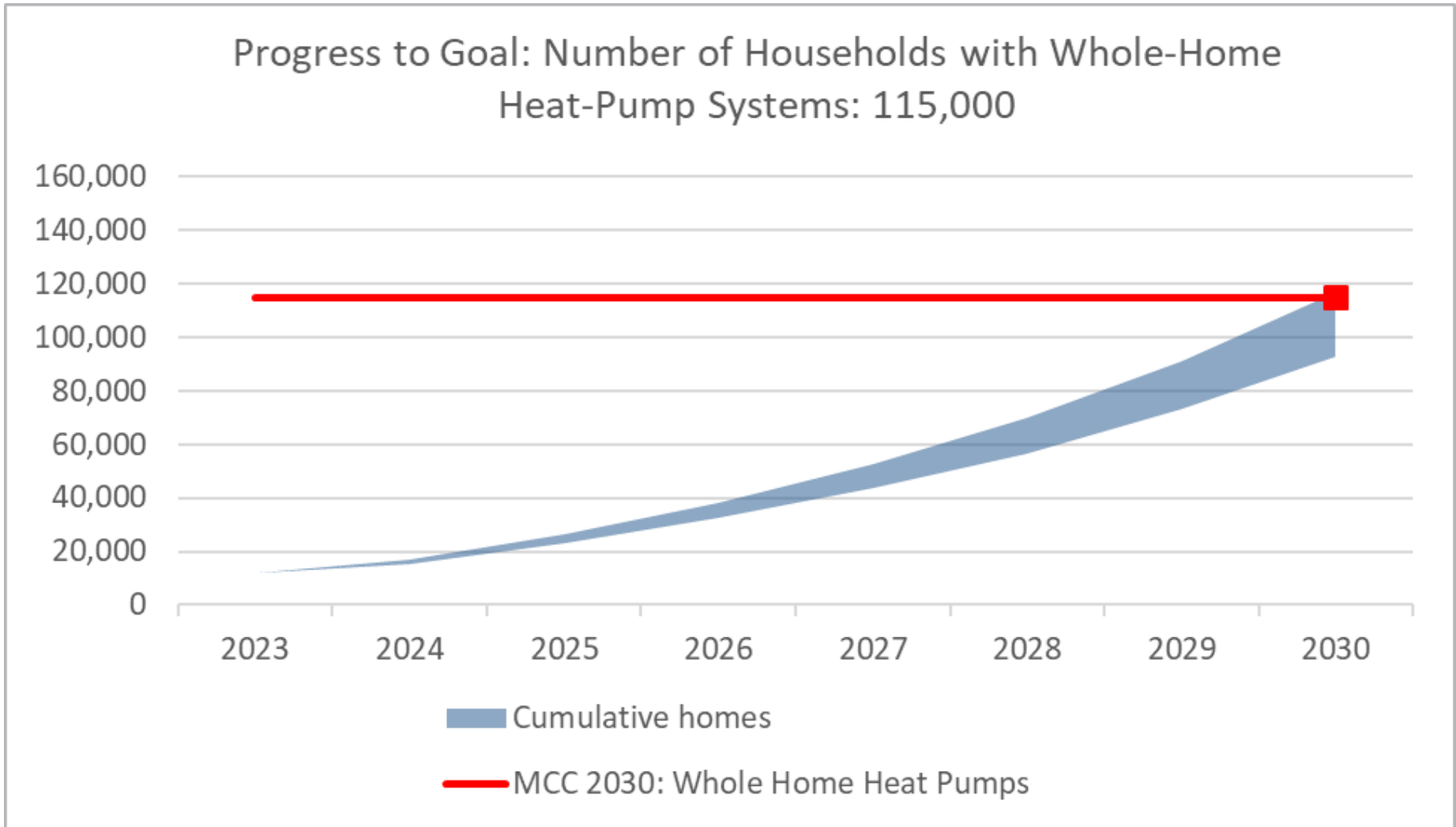


Progress to Goal: Total Number of Low-Income Homes Weatherized: 10,000

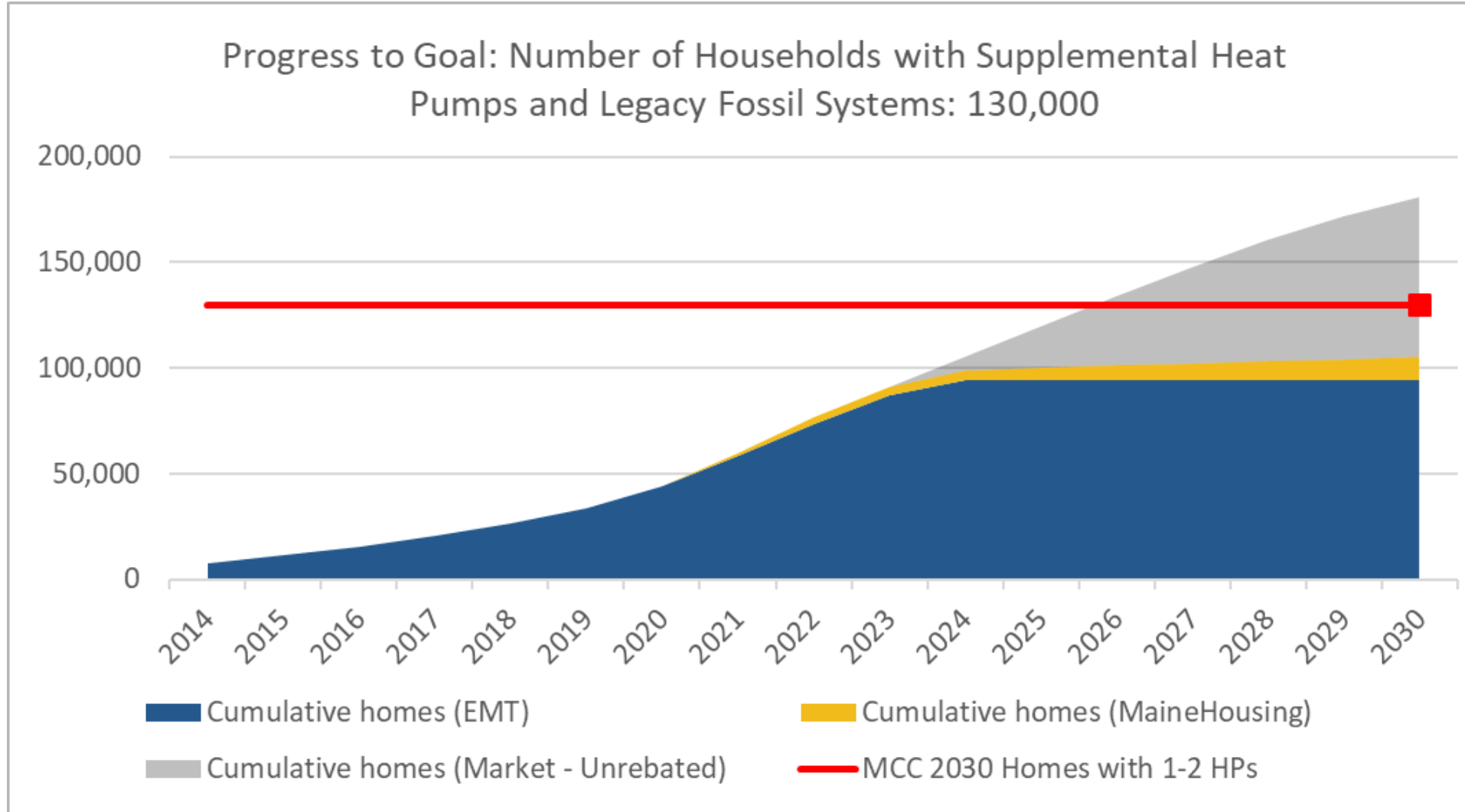


Note: Graphs reflect homes weatherized through both EMT and MaineHousing programs.

Appendix D: Long-Term Target Results



Appendix D: Long-Term Target Results



Appendix E: Avoided Costs

- The Trust will use the Avoided Energy Supply Costs in New England 2024 conducted by Synapse Energy Economics to quantify the financial values of energy savings consistent with *Title 35A §10110 4-A (B)*

The trust shall use... values for each element of avoided energy cost from a regional avoided energy supply cost study as long as the analysis has been developed through a transparent process, with input from state agencies, public advocates, utilities or energy efficiency administrators from at least 3 other states in New England and the analysis has been published not more than 24 months prior to the trust's filing of the plan

- To determine the values of energy efficiency and other demand-side measures, avoided costs are calculated and provided for each New England state in a hypothetical future in which the New England program administrators do not install any new demand-side measures in 2024 or later years. The 2024 AESC offers program administrators options through six different counterfactuals. The EMT staff recommends using counterfactual #1 where a future in which program administrators install no new energy efficiency, building electrification, or active demand management (demand response and energy storage) resources in 2024 or later years. This will allow the Trust to quantify the margin value of each of those measures.
 - For more information on the AESC 2024 please visit: <https://www.synapse-energy.com/aesc-2024-materials>
- At the May 2024 Board meeting, the Staff recommended and the Board approved using the social cost of carbon at a 2% discount rate

Appendix F. Summary of Initiatives Serving Low-Income Customers

Appendix provides a synopsis of the various channels through which EMT serves low-income customers and the budgets associated with each.

1. **Income-Eligible Home Programs**

- EMT's primary program targeting upgrades in low-income homes (primarily single-family)

2. **C&I Prescriptive Initiatives**

- Includes initiatives specifically targeting multifamily buildings housing low-income renters/residents (primary focus of federal Inflation Reduction Act Home Energy Rebate programs)

3. **EV Initiatives**

- Provides enhanced rebates for low-income customers

4. **Retail and Distributor Initiatives**

- EMT study showed that ~14% of participants are low-income customers

5. **Efficiency Maine Green Bank**

- Provides targeted financing support for low-income customers
- New federal Greenhouse Gas Reduction Fund (GGRF) capital sets specific investment requirements for low-income and disadvantaged communities

Appendix F. Summary of Cross-Program Low-Income Initiatives

Program/Initiative	FY 2026	FY 2027	FY 2028	Total
Income-Eligible Home Programs	\$24,161,000	\$28,149,000	\$33,529,000	\$85,839,000
C&I Prescriptive Initiatives	\$9,605,000	\$9,621,000	\$3,749,000	\$22,975,000
EV Initiatives	TBD	TBD	TBD	TBD
Retail and Distributor Initiatives	\$2,042,880	\$2,213,120	\$2,383,360	\$6,639,000
Efficiency Maine Green Bank*	\$7,700,000	\$7,700,000	\$7,700,000	\$23,100,000

*Expected value of financing in low-income and/or disadvantaged communities (LIDACs)

Appendix G: Statutory Budget Allocation Requirements

- **Electric Efficiency and Conservation Fund** (electric ratepayer funds)
 - Target at least 10% of funds or \$2.6 million, whichever is greater, to **low-income residential customers** [35-A MRS §10110(2)(B)]
 - Target at least 10% of funds or \$2.6 million, whichever is greater, to **small business customers** [35-A MRS §10110(2)(B)]
- **Natural Gas Conservation Fund** (natural gas ratepayer funds)
 - Apportion funds such that a "reasonable percentage" of the available funds is directed to programs for **low-income residential consumers** and **small business consumers**, as defined by EMT [35-A MRS §10111(1)(B)]
 - Chapter 4 of EMT's rules dictate that the determination of what is a "reasonable percentage" must take into consideration each customer group's share of gas load and the cost-effective opportunity available.

Appendix G: Statutory Budget Allocation Requirements

Electric Efficiency and Conservation Fund – Low-Income Sector

- Includes the portion of the **Income-Eligible Initiatives** electric procurement budget specifically allocated to low-income households
 - Includes whole-home heat pumps, heat pump water heaters, DIY kits
- Trust attributes a portion of program spending in **Distributor and Retail Initiatives** to this target
 - A 2020 survey found that ~**14%** of the heat pump water heaters sold through these programs are installed in low-income homes
- May include portion of **Electric Vehicle Initiatives** budget specifically allocated to vehicle rebates for low-income customers

Program	FY 2026	FY 2027	FY 2028	Total
Income-Eligible Home Programs	\$12,700,000	\$16,117,000	\$20,740,000	\$49,557,000
Portion of Retail and Distributor Initiatives	\$2,043,000	\$2,213,000	\$2,383,000	\$6,639,000
Portion of Electric Vehicle Initiatives	TBD	TBD	TBD	TBD
Total	\$14,743,000	\$18,330,000	\$23,123,000	\$56,196,000
10% Target	\$9,159,000	\$11,257,000	\$13,827,000	\$34,243,000

Appendix G: Statutory Budget Allocation Requirements

Electric Efficiency and Conservation Fund – Small Business Sector

- Spending in C&I Prescriptive (CIP) Initiatives
 - Includes **100%** of funds targeted through **Small Business Initiative**
 - Applies portion of funding for **standard energy efficiency CIP Initiatives** – **22%** (based on 2021 survey)
 - Includes **100%** of funding for single- and multi-zone heat pumps
- Includes portion of **Retail and Distributor Initiatives** funding - **2.9%** (based on 2024 survey)
- Includes **Demand Management Program** budget for all small commercial batteries
- May include portion of **Electric Vehicle Initiatives** budget specifically allocated to vehicle rebates for commercial customers

Program	FY 2026	FY 2027	FY 2028	Total
Portion of CIPI Other	\$10,538,000	\$12,053,000	\$13,891,000	\$36,482,000
Portion of Retail and Distributor Initiatives	\$487,000	\$522,000	\$557,000	\$1,566,000
Portion of Demand Management Program	\$5,000	\$8,000	\$11,000	\$24,000
Portion of Electric Vehicle Initiatives	TBD	TBD	TBD	TBD
Total	\$11,030,000	\$12,583,000	\$14,459,000	\$38,072,000
10%	\$9,159,000	\$11,257,000	\$13,827,000	\$34,243,000

Appendix H: Beneficial Electrification Plan – Overview

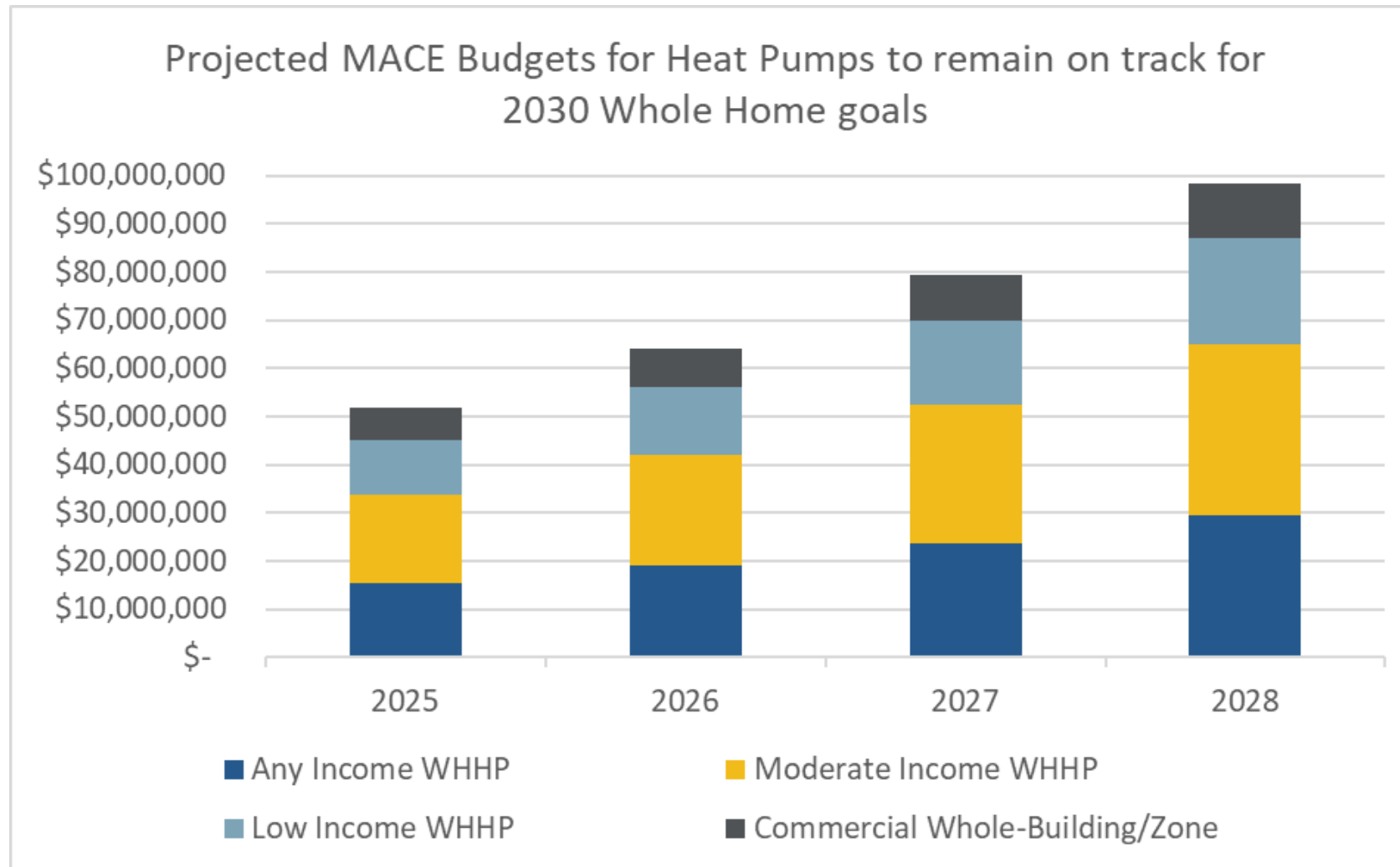
- The Beneficial Electrification Policy Act (2023) directs EMT to develop a plan for promoting beneficial electrification as part of the triennial plan
- Determinations of MACE opportunity include beneficial electrification measures that are cost-effective and that reliably reduce electricity rates over the life of the measure
 - Measures included in this appendix reflect the findings of the reliable reduction in rates analysis conducted in the preparation of EMT's approved Interim Beneficial Electrification Plan for FY 2025. EMT is in the process of conducting an updated analysis for the Triennial Plan VI beneficial electrification plan with results available in July 2024
- Planned investments accelerate Maine's progress toward Maine Climate Action Plan goals for the deployment of whole-home heat pumps and electric vehicles (EVs) (codified in EMT statute at 35-A MRSA Sec. 10104)
- EMT will seek to offset electric procurement to fund MACE budgets with other sources of funding

Appendix H: MACE Electrification Budgets for Heat Pumps

Measure	Estimated project count			Estimated electric budgets		
	FY2026	FY2027	FY2028	FY2026	FY2027	FY2028
Whole-home Heat Pump (Any-income)	4,500	5,625	7,000	\$19,085,000	\$23,731,250	\$29,410,000
Whole-home Heat Pump (Moderate-income)	3,800	4,750	5,900	\$23,050,000	\$28,750,000	\$35,650,000
Whole-home Heat Pump (Low-income)	1,700	2,125	2,700	\$13,918,000	\$17,335,000	\$21,958,000
C&I Prescriptive Beneficial Electrification Measures*	N/A	N/A	N/A	\$7,959,360	\$9,551,232	\$11,461,478

**Does not include Variable Refrigerant Flow (does not reliably reduce rates) or Packaged Terminal Heat Pump (categorized as energy efficiency) measures.*

Appendix H: Electric Procurement Budgets for Whole-Home and Whole-Building Heat Pumps (Preliminary)



Appendix H: Considerations Informing Budgets for EVs

- Federal grants pending
- Ongoing study focused on EV incentives that would prioritize market uplift (see Appendix L-3: *Light-Duty Electric Vehicle Market Study*)
- Incentive amounts recently doubled (1/1/2024)
- EV adoption in a state of transition, coming off an inventory-constrained market

Appendix I: Residential Baseline Study

- Conducted by NMR Group, Report due summer 2024
- Objectives
 - Assess the existing condition of Maine’s residential housing stock
 - Identify opportunity for energy saving

Key Tasks	Manufactured Homes	Single-Family Homes	Multifamily Buildings	Sample Target	Sample Achieved
RECS* Data Analysis	X	X	X	N/A	N/A
Mobile Web Survey	X	X	X	500	480 w/photos 691 total
Virtual Audits	X	X	X	41	42
Energy Modeling	X			5 prototypes	5
End Use Disaggregation	X	X	X	Up to 500**	TBD
Landlord Interviews			X	10	10
Literature Review			X	N/A	N/A

88 *Residential Energy Consumption Survey <https://www.eia.gov/consumption/residential/>

** Dependent on the availability of utility data

Appendix J: Heat Pump Analysis and Considerations

- The goal of this testimony is for the Trust to provide a details on its analysis and consideration for heat pump technology as it cuts across a number of the Trust's programs
- The testimony will describe how the Trust defines a heat pump and or heat pump system especially as it pertains to meeting climate council goals
- The testimony will explain the considerations that went into the Trust shift in program design around heat pumps in the Triennial Plan V period from supplemental heat pumps to whole-building/zone heat pump systems
- The testimony will describe why it has stopped rebating residential multi-zone systems.
- The testimony will explain some of the salient points learned from its most recent evaluation of residential and C&I heat pumps
- The testimony will walk through the savings calculations and methodologies included in its peer-reviewed heat pump model
- The testimony will conclude with a walk through of the TRM, the sources of each of the assumptions, and how it is applied to our cost effectiveness calculation

Appendix K: Comprehensive Literature Review

- Commissioned study, undertaken by Cadmus, to identify new measures that might be included during the Triennial Plan VI period
- Study reviewed other efficiency programs, industry-wide Technical Reference Manuals, and recent energy efficiency literature to identify measures that might be included in the measure portfolio, with a particular eye to measures that might be cost-effective through beneficial electrification
- Cadmus and staff reviewed 50 measures and identified 12 for in-depth review including cost-effectiveness and applicability in Maine
- Some new measures resulting from the study will be included in TPVI period, including water cooler timers, drain water heat recovery, and advanced RTU controllers
- Staff will continue to closely monitor heat pump clothes dryers because they were close to cost-effective (will be included if retail costs come down)
- Some measures identified, including electric lawn equipment, will not be immediately included because of a lack of data on hours of use, but may be candidates for further study and/or metering

Appendix L: Electric Vehicle and Public Electric Vehicle Charging, Analysis and Considerations

- **Public Charging Appendix describes:**
 - Maine DOT's Plan -- *Maine's Plan for EV Infrastructure Deployment (PEVID)* -- which guides EMT's investment of federal funds to build out the statewide public EV charging network
 - Other charging investment areas not covered by the current PEVID plan, informed by the Maine Clean Transportation Road Map and the 2024 update to the State's climate action plan
- **Vehicles:**
 - Includes *Light-Duty Electric Vehicle Market Study*, prepared by Dunsky (to be concluded early July 2024)
 - Study will forecast EV adoption trends for the purposes of determining MACE using a bottom-up approach -- regression against other jurisdictions using variables including climate, demographics, commuting, availability of public charging, and more
 - Desired outcomes:
 - Estimate impact of program activity on market lift
 - Estimate future adoption of light-duty electric vehicles in Maine
 - Estimate quantity of vehicles rebated at different rebate amounts
 - Gather information on the future of electric vehicle supply and incremental cost

Appendix M: Natural Gas Programs

EMT suspended its natural gas programs during the Triennial Plan V period due to a lack of cost-effective opportunity. In Triennial Plan VI, EMT finds there is renewed opportunity and proposes to fund incentives for residential weatherization and for C&I Custom Program projects using natural gas efficiency procurement.

- Screening conducted using the updated social cost of carbon (SCC) at a 2% discount rate from the 2024 AESC Report indicates that weatherization of natural gas-heated homes is, generally, cost-effective
 - Due to the lower average heat load of single-family homes for Low- and Moderate-Income households, weatherization is only marginally cost-effective in natural gas-heated homes
 - Also, after multiple years of serving this sub-sector, the remaining opportunity in single family homes is found to be extremely limited
 - Where there are cost-effective opportunities, EMT is to direct "a reasonable percentage" of natural gas efficiency procurement to programs for low-income residential consumers
- EMT seeks to work with the natural gas utilities to explore updated approaches to funding cost-effective C&I Custom Program projects (e.g., via project-based assessment)

Appendix N: Heat Pump Water Heater Analysis and Considerations

- Estimated quantity of heat pump water heater installations achievable during TPVI period:
 - 14,000 annually
 - Based on recent program activity
- Cost-effectiveness of measure assumes blend of baselines -- emergency replacements of failed systems, purchases for new homes, pre-emptive replacement of operational water heaters
- Energy and fuel savings calculated on a blended fuel mix based on a 2020 survey of water heater purchases
- Measure cost reflects a blend of the different costs of decision types (19% retrofit projects and 81% new construction/replace-on-burnout)
- Heat pump water heaters will be incentivized primarily through the Distributor and Retail Initiatives program
 - Program focuses on having stock on hand and rebates or instant discounts at time of purchase to make costs comparable to less-efficient options
 - Water heaters with tanks larger than 80 gallons intended for commercial applications will be incentivized through the C&I prescriptive program

Appendix O: Demand Management Program Analysis and Considerations

The Demand Management Program Analysis and Considerations Appendix will:

- Show how EMT will create multiple channels for individuals, aggregators, and third-party owners to participate in our programs through the TP VI period
- Describe dispatch and curtailment methods used across all device types
- Discuss the benefit created during RNS peaks and how that is not captured in the benefit cost test
- Explain the benefit cost calculation
- The appendix will go into detail on the new offerings for Triennial Plan VI

Appendix P: Commercial and Industrial Lighting Opportunity, Background & Findings

- A Non-Residential Baseline Lighting Study was conducted in 2018 to inform Triennial Plan IV
- In 2021, the study authors reviewed program activity that occurred between 2018 and 2021 to access remaining opportunity for Triennial Plan V
- The Trust compared the forecast from the 2021 study to actual program activity in 2023
- In aggregate, the study forecast accurately predicted FY2023 program activity

FY2023 Forecast versus Actual Performance	FY 2023 electric savings (kWh)		
	Forecast	Actual	% of Forecast
CIPI non-Small Business Targeted	12,304,663	16,081,824	131%
Small Business Targeted	5,942,407	2,299,415	39%
CIPI+SBI	18,247,070	18,381,239	101%
Distributor Lighting (C&I portion)	5,033,741	4,200,415	83%
Total C&I Prescriptive Initiatives	23,280,811	22,581,654	97%

Appendix P: Commercial and Industrial Lighting, Budgeting

- 60,000,000 kWh/y of opportunity remains at the beginning of FY 2026
- Average incentive at the end of FY 2025 is \$0.39/kWh/y
- 20% of remaining opportunity is captured each year
- Incentives increase by 20% on average each year

Incentive Budget (\$M)			Total Budget with Program Delivery (\$M)		
FY2026	FY2027	FY2028	FY2026	FY2027	FY2028
\$5.68	\$5.45	\$5.23	\$6.68	\$6.41	\$6.16

Glossary

Glossary

Arrearage: Unpaid debt or overdue payments.

Avoided Energy Supply Costs: Costs that would have been incurred had a utility and/or energy supplier otherwise been required to supply the power that was avoided through the installation of an energy efficiency or distributed generation project. The avoided costs include the wholesale cost of energy and capacity, the costs of complying with renewable energy and climate policies, plus the marginal costs of adding future T&D (but not the retail cost of T&D).

Benefit-to-Cost Ratio (BCR): The ratio of the net present value of the quantifiable financial benefits to the costs of an efficiency measure. The benefits and costs included in the calculation are dependent on the test used. See glossary entries of Primary Benefit-Cost Test and Program Administrator Cost Test.

Community Action Agencies: Non-profit private and public organizations established under the U.S. Economic Opportunity Act of 1964 to reduce poverty. CAAs deliver emergency services, education, training, housing, weatherization services, and more.

Free Rider: A program participant who, as determined through surveys and market analysis, would have installed equivalent efficiency measures independent of the Trust's program or its incentives.

Maximum Achievable Cost-Effective (MACE): An energy efficiency industry term that refers to the full universe of potential cost-effective energy efficiency projects that could realistically be installed given technical and economic constraints and assumed adoption rates based on offered incentives.

Qualified Partner: A term used to describe the network of contractors and vendors working with Efficiency Maine's Commercial & Industrial Prescriptive Initiatives.

Residential Registered Vendor (RRV): A term used to describe the network of contractors and vendors working with Efficiency Maine's residential programs.