



Natural Resources Council of Maine

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Subject: Efficiency Maine Trust Triennial Plan VI—Comments on Draft Overview

On June 5, 2024, the Efficiency Maine Trust (EMT or “the Trust”) issued a Draft Overview for public comment of its three-year strategic plan (Triennial Plan VI) for the period spanning fiscal years 2026, 2027, and 2028, and requested written comments by a deadline of July 5, 2024.

The Natural Resources Council of Maine (NRCM) is Maine’s leading environmental advocacy organization with more than 30,000 members and supporters and 65 years of history working to protect, restore, and conserve Maine’s environment. Successfully achieving Maine’s statutory greenhouse gas reduction requirements and the strategies prescribed by the state’s Climate Action Plan, pursuant to Title 38 sections 576-A and 577, will rely in no small part on the vital work of the Trust. NRCM is actively engaged in the state’s climate and clean energy programs, including those aimed at electrifying the transportation and building sectors and creating the grid flexibility needed to integrate new electric load affordably and reliably—areas increasingly central to the work of the Trust.

NRCM submitted written comments in response to the Trust’s request for information for the Triennial Plan VI (TPVI) in December 2023 and we are grateful for this additional opportunity to provide comments on the draft plan. Thank you for your consideration of these comments and please feel free to contact us if you have any questions.

Respectfully submitted,

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Protecting the Nature of Maine

Our comments below are organized in response to the sections of the draft overview as enumerated in the Table of Contents on page 2.¹

Section 3. Program Implementation Priorities

While these five priorities are fine ones, and well suited to this phase of the work of the Trust, they should be accompanied by an explanation of their purpose. Specifically, we encourage the Trust to consider including a description of how these priorities are intended to guide the work of the Trust both in principle and in practice, the ways the Trust intends to achieve these priorities, how success be determined, according to what information and data success will be evaluated, and when and where progress relative to these implementation priorities will be reported.

Section 4. Identifying Cost-Effective Opportunities, including Beneficial Electrification Measures included in MACE, Procurement Cap

We support the Trust's work in implementing the Beneficial Electrification Policy Act of 2023 (PL 2023 ch 328, LD 1724²), including the chapter 3 rulemaking finalized earlier this year. It is critical that the Trust's authorizing statute be updated to reflect the important role the agency has to play in facilitating consumer adoption of clean, efficient end-use technologies, like electric vehicles and heat pumps, to shift Maine homes and businesses away from dirty and expensive fossil fuels in the buildings and transportation sectors.

Expanding the Trust's cost-effectiveness test to account for net cost savings between fuel types is a practical and important modification of the Trust's current practice that rightly reflects real cost savings felt by consumers who make these energy efficient investments.

These shifts in energy consumption will also result in steady and durable growth in load and volumetric sales for transmission & distribution (T&D) utilities. This, on the one hand, reinforces utility interests, while, on the other hand, reduces volumetric rates for Maine ratepayers. Likewise, the Commission's annual determination of electric procurement funding levels is set relative to historic total sales of electricity, which, by taking increased load into account, will push upward against the statutory cap.

Therefore, raising the statutory cap on electric procurement to enhance EMT programing in this area is a necessary and reasonable extension of the incremental authorities granted by the Beneficial Electricity Policy Act, consistent with the interests of utilities and ratepayers alike.

We strongly encourage the Trust to work with policymakers to raise the cap on electric procurement levels in the next legislative session. The influx of federal money should not be used to substitute this

¹ https://www.energymaine.com/docs/TPVI_Draft_Overview_for_Public_Comment.pdf.

² <https://www.mainelegislature.org/legis/bills/getPDF.asp?paper=SP0688&item=3&snum=131>

important adjustment necessary to empower and evolve Maine state programs to achieve economy-wide energy efficiency and emission reductions gains through beneficial electrification (BE).

In Appendix C, page 73 of the Draft Overview, the Trust proposes: “allocating all RGGI revenues received in excess of the forecast to offset the electric procurement in the following fiscal year.” Again, in Appendix H, on page 84, the Beneficial Electrification Plan Overview notes that “EMT will seek to offset electric procurement to fund MACE budgets with other sources of funding.”

We appreciate the Trust’s effort to diligently seek alternative funding sources to avoid increasing costs to Maine ratepayers and we recognize the importance of funding flexibility in annual rate proceedings at the Public Utilities Commission to reduce impacts to ratepayer. Yet we urge the Trust not to use federal funding or funding from other sources in excess of what has been planned to backfill MACE in lieu of seeking an increase to the statutory cap. We think it is vital to the long-term financial and programmatic strength of the Trust that the procurement cap be increased to meet the needs of the agency as required by the Beneficial Electrification Policy Act, among its other duties and functions.

We encourage the Trust to provide greater detail on the benefits of EMT’s expanded programing through electric procurement funds in the Demand Management Program.

Appendix O on Demand Management Program analysis and considerations, page 94, mentions that the plan content here will explain the benefit cost calculation and “discuss the benefit created during RNS peaks and how that is not captured in the benefit cost test.” NRCM welcomes a detailed discussion under those points, including the mechanics of RNS fee settlement. We also encourage the Trust to provide information about additional benefits that may be outside the benefit cost calculation, for instance other potential avoided T&D costs, whether or not those benefits are readily quantifiable or monetizable at present.

The potential is enormous for demand-side solutions to reduce system costs and keep rates more affordable for Maine homes and businesses over the course of the clean energy transition. Preliminary findings from the Brattle’s forthcoming Pathways to 2040 study on behalf of Maine’ Governor’s Energy Office (GEO) suggest that load flexibility can reduce growth of peak demand on Maine’s T&D systems by roughly half, with enormous implications for costs savings to Maine ratepayers over the next twenty-five years.³

At a regional level there are additional benefits to be gained. ISO New England 2050 Transmission Study, released February 12, 2024, found that regional transmission costs will get significantly more expensive as peak load grows over the next twenty-five years, and that reducing peak will significantly reduce transmission costs for the region.⁴ Aggressive demand response and peak shaving programs, combined

³ https://www.maine.gov/future/sites/maine.gov.future/files/2024-02/2024.01.19_MCC%20Demand%20Management%20Workshop_Murphy%20Slides_Pathway%20to%202040.pdf

⁴ https://www.iso-ne.com/static-assets/documents/100008/2024_02_14_pac_2050_transmission_study_final.pdf

with deep energy efficiency investments, will position us to save us \$9 billion in regional transmission costs.

Nationally, Brattle has estimated that load flexibility (using behind-the-meter batteries, EVs, water heaters, smart thermostats, appliances—all technologies that are already cost-competitive and in use in homes and businesses across the state and the country) could provide 20% of system peak by 2030, with benefits amounting to \$15 billion per year from avoided investments in new generation, storage, and transmission & distribution capacity.⁵

With the Trust’s well-researched proposal to expand its demand management offerings in TPVI, Maine will set the stage for building the markets and partnerships that it will need to realize these potential savings for Maine ratepayers. To do so, though, will also require concerted attention and support from utilities, regulators, policy makers, business innovators, and other implementing agencies, to remove barriers, monetize value on the local distribution system, and integrate bundling of flexible load into utility operations, planning, and investment. By providing a robust discussion of benefits that are stake for Maine in TPVI, the Trust can help build support and public understanding of the short and long-term value of EMT creating robust programs in this area.

Section 5 Major Programs

Home Energy Savings Program (HESP): With respect to the HESP, we support the planned transition to heat pumps designed to meet the heating needs of the entire home. Maine’s Climate Action Plan requires by 2030 that we have 130,000 homes partially heated by heat pumps and 115,000 homes heated entirely by heat pumps, and while, thanks to the success of the HESP program, we are well on track for meeting the target for partial heating, it is now time to shift the emphasis to whole home heat pumps.

Income Eligible Home Programs: With respect to Income Eligible Home Programs, the Draft Overview states on page 39 that the Trust will “Advance the statutory weatherization goal by maintaining current program design and budgets to average 1,100 homes per year through 2030.” While this may put the state on track to meet our 2030 climate goal of weatherizing 10,000 low-income homes, the historic annual numbers are below the required pace, at 939 low-income homes weatherized in FY2023.⁶ We urge the Trust to consider being more ambitious by putting greater emphasis on reaching low-income households to relieve energy burdens and focus efforts on those who need it most.

Electric Vehicles (EV) Initiatives: With respect to EV Initiatives, the Trust’s planning efforts should align closely with the ongoing work at the Maine Climate Council.

⁵ https://www.brattle.com/wp-content/uploads/2021/05/16639_national_potential_for_load_flexibility_-_final.pdf

⁶ https://www.maine.gov/future/sites/maine.gov.future/files/2024-03/Efficiency%20Maine%20HP_Wx%20Initiatives%203.20.24.pdf

The Transportation Working Group (TWG) and Energy Working Group (EWG) of the Maine Climate Council both gave serious consideration to managed EV charging. NRCM was represented on both of these working groups. A Demand Management intersectional group was convened to bring members of the TWG and EWG together to discuss how managed EV charging might be addressed in the Maine Climate Action Plan update coming out in December 2024.

Draft recommendations to the Maine Climate Council include “facilitate customer participation in demand management programs through the adoption of supportive policies, programs, markets, and regulatory mechanisms.” The draft recommendations further encourage Efficiency Maine to track and annually report the results of demand management programs, particularly pertaining to low-and-moderate income participation in those programs. Demand management has been identified as a critical climate strategy and an important element of integrated grid planning.

As such, we think it is very important that light-duty EVs remain eligible for beneficial electrification MACE funding by requiring participation in managed level-2 home charging. We strongly support the Trust’s finding to this effect (page 44) and urge the Trust to plan for this evolution in its program design and implementation at the outset of TPVI.

The Climate Action Plan draft recommendations further encourage education and communication around the benefits and opportunities of demand management to consumers, policymakers, and regulators.

The Transportation Working Group also identified dealer education and engagement as a primary strategy to promote EV adoption. We believe this to be a critical factor in the EV transition, and the Trust has the tools and ability to provide the resources necessary to equip dealers with the information they need to effectively sell EVs. New brochures, trainings, and surveys to collect feedback from dealers about their experience selling EVs will move the needle on EV adoption. We applaud the Trust’s focus on dealer engagement in TPVI.

Maine’s Plan for Electric Vehicle Infrastructure Deployment is impressive and has placed Maine at the forefront of EV charging implementation nationally. With over \$40 million mobilized to support the expansion of Maine’s EV charging network over the past few years, Maine is well on the way to supporting an electrified transportation future. Efforts paralleling charger implementation now should focus on increasing public charger visibility, educating drivers on charging best practices, and prioritizing Level 2 charging implementation at workplaces and in low- and moderate-income communities.

Promotional rebates for targeted customer segments should include Maine gasoline superusers, drivers who have the most to gain from transitioning to an electric vehicle.⁷ This recommendation is also included in the TWG draft recommendations.

⁷ <https://coltura.org/wp-content/uploads/2024/02/Maine-Gasoline-Superusers-Mini-Report.pdf>

The medium- and heavy-duty electric vehicle (MHDEV) rebate pilot program established through LD 122 in the 131st legislature (PL 2024 ch 535) will provide needed evidence of MHDEV efficacy for commercial applications in Maine.⁸ This pilot program is highlighted in the TWG draft recommendations and will supplement findings from the Medium- and Heavy-Duty Clean Transportation Roadmap coming out in December of 2024. This pilot program will facilitate some of the first commercial applications of MHDEVs in Maine and as such will be determinative in the near-term success of MHDEV adoption in Maine.

Regarding the Electric Vehicles Initiative Budget, we note that the stated goal of 220,000 light-duty EVs purchased in Maine by 2030 will require a heavy lift, and continued funding to incentivize EV adoption will be needed for the foreseeable future. This includes ensuring that EVs are still eligible for beneficial electrification MACE, as mentioned above, even if it entails required participation in managed charging.

The Trust rightly identifies that demand charges and other costs associated with hosting public charging infrastructure poses a significant barrier for some charging hosts (page 42). We support the Trust's suggestion to use grants to cover a portion of demand charges for the initial years of operation. Temporary relief from demand charges until the utilization of charging infrastructure increases to a point that is economically viable for the host is a well-documented policy approach to support initial infrastructure deployment. In addition to the possibility of offering grants to some charging hosts, we encourage the Trust to consider advocating at the Public Utilities Commission for temporary exemption within rate design discussions.

Generally, for EVs, heat pumps, and other measures, we commend the Trust's move to incorporate instant discounts and rebates at time of purchase, a powerful way to address market barriers and reduce the administrative burdens on consumers and retail and distributors alike.

NRCM appreciates the rigor with which the Trust's work is held to account by its cost effectiveness test. In the case of light-duty EVs, the MACE analysis (page 44) presents a prime example of why the Trust's expanded responsibilities in beneficial electrification, as codified by Title 35-A chapter 38, are inherently related to the issue of integrating new load at minimal impact to the T&D system. Yet load flexibility is notably missing from the beneficial electrification plan, pursuant to section 3803 subsection 2, and other provisions of Chapter 38.

We encourage the Trust to consider whether Chapter 38 should be amended to explicitly include the advancement of load flexibility to minimize impacts of BE, to strengthen and clarify the Trust's authorities beyond a focus on energy end-use, to include for instance customer-sited solar and storage, as well as distribution system solutions for flexible integration of buildings and other DERs. We are wary of narrow jurisdictional interpretations that could potentially, if unintentionally, limit the strategies that EMT pursues.

⁸ <https://www.mainelegislature.org/legis/bills/getPDF.asp?paper=SP0061&item=3&snum=131>

Demand Management Program: With respect to the Trust’s Demand Management Program, we strongly support the overall program design as proposed at the May 31, 2024, workshop. (Comments below respond to slides entitled “Efficiency Maine Demand Management Program: Triennial Plan Six Working Group,” as presented at the May 31, 2024, workshop, but apparently not available online. Reference to this document is abbreviated here in line as “TPVI DMP.”)

We encourage the Trust to focus from the outset not just on peak shaving, but on load shifting and shaping as well. The Trust’s programs, i.e., the platforms, prices, and contracts with both customers and service providers, among other features, should be structured to enable peak respond to changing grid conditions and values. The deployment of EVs, managed charging, solar, storage, combined solar-storage, time-of-use rate options, among other interventions and regulatory reforms, are poised to change load curves both within the local distribution system and on the regional grid. These changes will likely come in ways that were not entirely anticipated. As EMT’s proposal states, “The marketplace is constantly evolving” (page 7, TPVI DMP).

Given the high degree of uncertainty, we need nimble programs that can readily accommodate changes in load profiles and monetize value where it manifests, while externalizing the incremental costs of program modification to the private sector service providers. The Trust should amend the objectives of its Demand Management Program (page 4, TPVI DMP) to specify a focus not just on peak demand reduction, but also on load shifting and shaping.

With respect to the open access program for existing small batteries, we are encouraged by the Trust’s initial implementation over the summer season 2024, and we highlight here a few lessons thus far which will have implications for TPVI programs. We would encourage the Trust not to be limited by the targets that it sets for itself and permit rolling enrollment through the summer curtailment season. Rolling enrollment would help improve program effectiveness by growing participation in a given season but would also ensure that the Trust is capitalizing on the narrow recruitment window that exists at the time of battery installation, when customer attention is heightened and installer/vender engagement with customers is greatest. We also encourage the Trust to consider ways to track the opportunity that exist in deployed small batteries, whether through a voluntary reporting program with top installers/vendors in Maine or through another approach, to keep tabs on the scale of the opportunity that evades participation in EMT’s programs.

With respect to the new home battery storage program proposal for TPVI, we applaud the Trust’s rigorous research and analysis of the industry landscape to arrive at its preferred capacity agreements model (pages 12, 15, TPVI DMP). We support EMT’s adoption of this model, with EMT playing a clear market catalyst role with minimized administrative, transaction, and management costs to itself.

However, we emphasize the importance of strong consumer protections and oversight by the Trust of outreach and communications to consumers. While we want to externalize risk to the aggregators, “whereby vendors are vying for customers”, we also need to assure a high quality of consumer

communications. The loss of customer trust in this new frontier of behind-the-meter load aggregation could have a negative legacy effect for enrollment and grid-edge market development, with significant implications for Maine’s clean energy transition – and that risk will be Maine’s to bear. Therefore, we strongly encourage the Trust to retain some means of direct oversight and quality control of outreach strategies, content, and customer communication.

We also encourage the Trust to define from the outset the reporting requirements from service providers that will be needed by EMT and the public to evaluate and monitor program performance, including the effectiveness of the new marketplace that the Trust seek to spawn. Like with all markets, rules will need to be adjusted over time to ensure the desired purposes are in fact being achieved. For instance, the value to Maine’s local distribution system may not be achieved through RNS price signals alone, but instead may require the addition of a clear directive from market administrators at the Trust or alternatively pay-for-performance based on a range of program objectives, like locational or load shaping attributes for example. Likewise, we will want to evaluate rebate levels relative to participation rates and performance/value outcomes over time. The Trust should incorporate evaluation and monitoring specifications from the outset and commit to regular transparent reporting of that data.

Section 8: Strategic Initiatives

We applaud the Trust’s innovation in strategic initiatives generally and specifically with regard to hydronic heat pumps. Hydronic heat pumps represent an area of key importance for home heating electrification due to the potential for one-to-one replacements in Maine’s existing housing stock, especially those without ducting.

We do encourage further consideration of electric lawn equipment, as mentioned on page 90 of the Draft Overview. A June 2024 survey by American Council for an Energy-Efficient Economy suggests that electric lawn equipment may be a gateway to home electrification.⁹ “[Survey] participants who have electric lawn equipment were 84% more likely to want to electrify their cooking, 33% more likely to want to electrify their home heating, and 32% more likely to want to electrify their water heating than someone without electric outdoor power tools.”¹⁰

We also urge the Trust to consider making deeper investments in e-bike rebates. E-bikes have significant potential to replace car trips and decarbonize Maine’s transportation sector. They are far less expensive to own and operate than vehicles and contribute one percent of the emissions of a combustion engine

⁹⁹ <https://www.aceee.org/press-release/2024/06/survey-environment-and-health-top-consumer-reasons-transition-homes-fossil>

¹⁰ <https://www.canarymedia.com/articles/electrification/electric-lawn-equipment-solar-could-be-home-electrification-gateways>

vehicle per person mile. E-bike rebates in Portland, South Portland, and places outside Maine including Colorado,¹¹ Massachusetts, and Vermont have been effective.

Maine DOT is conducting a program to provide e-bikes as commuting tools for Mainers recovering from addiction and the program has been highly successful in its early stages. Maine's current e-bike rebate program will provide needed data to reinforce the efficacy of e-bikes and should be expanded to provide more Mainers access to a proven climate technology.

¹¹ https://5891093.fs1.hubspotusercontent-na1.net/hubfs/5891093/Denvers%202022%20Ebike%20Incentive%20Program%20Results%20and%20Recommendations.pdf?_hstc=137334191.547db567c53613a99538d119c1db43e3.1677773589748.1677773589748.1677773589748.1&_hssc=137334191.1.1677773589748&_hsfp=3780959174&hsCtaTracking=f6c129d8-5739-4033-ae8d-38d8a4d7d52b%7C4d3304a1-3f00-438b-b2bd-bd69b50cfdb9