



April 9, 2021

Michelle Turner, Administrative Secretary
Efficiency Maine Trust
168 Capitol Street, Suite 1
Augusta, ME 04330-6856

Ms. Turner,

Attached please find responses to the Efficiency Maine Trust's Request for Information on its Triennial Plan V.

VEIC is a non-profit organization that delivers energy solutions for energy efficiency, building decarbonization, transportation electrification, and a clean and flexible grid. VEIC is unique because it contains two semi-distinct but complementary divisions. First, we serve as the energy efficiency utility in several jurisdictions (including Vermont in this region), administering ratepayer-funded programs in a similar manner to the Trust. We also operate a consulting division that provides analysis, design, and implementation services to clients that include state, local and federal agencies; utilities and other program administrators; consumer advocates; and a variety of clean energy businesses and organizations from Maine to Hawaii. Our consulting division currently has long-term contracts supporting third-party energy efficiency program administrators in Wisconsin and Hawaii, and we frequently find opportunities to bring direct implementation experience—especially in the areas of innovation—into our consulting practice.

We hope the Trust finds these responses useful. If you have questions, please do not hesitate to contact either of us.

Dylan Voorhees
Senior Consultant
dvoorhees@veic.org

Emily Levin
Principal Consultant &
Energy Programs Lead

elevin@veic.org

VEIC Responses to RFI Questions

VEIC is pleased to provide responses on the following questions; we do not have specific responses to questions 3, 4, or 11.

1. We are currently planning to organize our programs into the following categories: Commercial and Industrial (C&I) Custom; C&I Prescriptive; Small Business Initiative; Distributor Initiatives; Retail Initiatives; Grid Support and Load Management; Home Energy Savings Program; Low Income Initiatives; Electric Vehicle Initiatives; Renewable Resource Fund (Demonstration Program); and Innovation Program. What discrete initiatives might we be missing? What alternative approaches to organizing these programs should we consider? What are the most important program aspects that the Plan should maintain and what are Program elements we should consider changing?

Five areas of energy efficiency programing we recommend Trust consider adding are **behavioral, new construction, Strategic Energy Management (SEM), codes and standards** and **refrigeration / refrigerant management**. The first three are found in most efficiency portfolios across leading states. They can yield important savings on the extreme ends of the measure life spectrum, from large immediate savings to very long-lasting savings. Refrigeration / refrigerant management is more cutting-edge and reflects a growing focus for energy efficiency programs on achieving climate goals alongside energy savings. Each of these approaches require moving beyond the traditional efficiency approach of providing a discrete incentive for installation of a discrete physical measure and integrating supply chain and contractor training alongside customer/employee engagement activities.

We recommend the Trust consider partnering with distribution utilities to offer a behavioral program for residential customers. Behavior-based programs use tested customer communications and behavioral prompts and messaging to induce a variety of responses that reduce energy usage. These programs have advanced significantly in the last five years and are now routinely designed with test and control groups in order to reliably demonstrate savings impact. Several jurisdictions address the question of persistence of savings, which plagued early behavioral strategies, by simply counting first-year savings and evaluating for cost-effectiveness based on those savings. Note that "behavior" can include many different actions, such as equipment purchases or operational changes. This range is a feature, not a bug, of behavior programs because it encompasses the total outcome (energy usage) rather than incentives for individual measures. Behavior-based programs harness the power of many individual actions and behaviors—some of which are difficult or impossible to achieve in a measure-based approach—to capture additional savings at scale.

We recommend that the Trust consider a new, multilayered approach to new construction. For residential buildings, this approach should take advantage of the ENERGY STAR Homes program. All the other New England states use a program oriented around these standards from

the U.S. Department of Energy. These programs target intervention at the building design phase through incentives to design and build beyond code. The latest tiers of ENERGY STAR Homes certification include all-electric and PV- and EV-ready homes, which would be highly consistent with Maine's new climate policy framework and the Trust's vision for beneficial electrification. We also recommend a commercial new construction program with similar features. We recognize that the Trust has implemented new construction programs in the past, especially for commercial buildings, with varying success. The march of technology now allows new buildings to be electrified, decarbonized, net zero, grid-connected resources, making this a good time for the Trust to re-enter this sector more aggressively.

In addition to incentives for construction beyond code, we recommend the Trust consider a formal building code and appliance standards initiative designed to support the adoption of codes and standards and increase compliance beyond a baseline. California pioneered this strategy as a part of energy efficiency program portfolios years ago, and in recent years the approach has expanded to the Northeast. Rhode Island and Massachusetts include building code compliance in energy efficiency portfolios and, in 2020, New Hampshire program administrators proposed a similar program as part of their new three-year plan. Although varied, these programs go beyond the Trust's current activities in a few ways. First, specific energy savings are attributed to these efforts, putting them alongside other ratepayer-funded programs that are based on a cost-effectiveness test. Second, they target synergies between incentive programs and sustained education of design and construction professionals, using "carrots" to improve building practices to and beyond code, which allows the bar (the "stick" of code requirements) to be more easily raised over time. By mobilizing its expertise, relationships and program budgets, the Trust could play a more central role at the fulcrum of this ratchet effect.

We also recommend the Trust consider further whether it could play a greater role in supporting the construction of new affordable housing that is highly energy-efficient. As the beneficiary of state or federally supported financing, affordable housing development can be subject to higher efficiency standards. We appreciate that the Maine State Housing Authority intends to adopt the 2021 IECC for new construction. While a major step forward, this code will soon be the standard for all new construction in many states. The Housing Authority, with the Trust's support, could set its sights higher. Several states and the federal government are also working with the private sector and community development organizations to facilitate the construction of zero-energy modular homes (including as an affordable and resilient replacement to mobile homes) and we encourage the Trust to consider this opportunity as well. The federal government is increasingly supporting research and funding for offsite construction and manufactured solutions for both new construction and major rehabilitation.¹ The Trust may be interested to learn more about

¹ For example, see <https://advancedbuildingconstruction.org/> and <https://www.energy.gov/eere/buildings/abc-initiative-strategy>

[KBS Builders](#), in Oxford County, which is expanding its capacity to produce zero energy manufactured housing.

SEM is a critical tool for helping large energy users (commercial, industrial and institutional) reduce energy consumption and waste. While SEM may still identify the need for efficient energy upgrades like equipment replacement or retrofits, the framework places greater emphasis on how energy is used in the processes that comprise today's businesses and organizations, who uses it, why they need to reduce consumption, and what tools are available to help them along the way. By systematically identifying and bridging technical and organizational barriers to expedite the implementation of efficiency opportunities, SEM addresses organizational readiness and improvement through direct participant engagement in a peer-cohort group learning environment. Well-designed SEM programs deliver energy and cost savings over the long-term, improve financial resiliency, capital allocation and planning, and help participants affect institution-wide culture change to reduce energy waste. SEM has also been linked to recruitment and productivity, talent retention and enhanced brand perception.

In practice, SEM is a data-driven institution-wide learning experience that is reinforced by a behavioral science curriculum and robust advanced savings analysis (M&V). It supports a systematic approach to procuring energy savings across an institution – one with standard operating and maintenance (O&M) procedures, continual monitoring of energy use; and processes to identify, evaluate and approve energy efficiency measures and progress.

SEM programs are typically delivered over a 12-18-month period and require a more intensive and formal customer support relationship than the Trust has used in the past. SEM is especially valuable for institutional (hospitals, colleges, and universities, correctional facilities, WRRF) or industrial customers with more complex energy usage patterns and internal equipment and processes, multiple facilities, and/or long-term planning needs. SEM has also been leveraged successfully to support and align with other organizational environmental commitment and goals including certifications and designating leadership in ISO 50001, STARS etc. VEIC has been designing and implementing SEM programs since 2014 and would be happy to provide additional information if appropriate. If the Trust considers adopting an SEM program or pilot, we recommend that the Trust consider SEM + Decarbonization, which would broaden the scope of possible activities and improvements to greenhouse gas reductions that lie beyond the current C&I portfolio but relate to energy use. This could include refrigerant management, transportation electrification, or distributed energy resources for load management. This approach would be consistent with SEM's more holistic approach as well as state policy objectives.

As the Trust knows, most refrigerants are greenhouse gases, and reducing their use and leakage is especially pressing given the significant increases anticipated through greater use of heat pumps. Like other energy efficiency administrators, the Trust can address this inherent challenge that beneficial electrification creates with broader decarbonization goals by establishing a well-designed refrigerant management program strategy that targets investments in leak prevention,

detection, and monitoring tools, in tandem with contractor education and training. VEIC has created for Efficiency Vermont an approach to refrigerant management that includes (1) refrigerant leak detection and repair, (2) charge reduction, and (3) promotion of natural refrigerants. This program resulted in the first U.S. incentivized leak repair program, and aggressive financial support and technical assistance for natural refrigerant systems. Further, as a result of VEIC's technical proficiency in quantifying refrigerant (HFC) emissions and electrical savings impacts, we have been successful in procuring regulatory acceptance of this approach in the Efficiency Vermont 2021-2023 Demand Resources Plan (the parallel to the Trust's Triennial Plan), with Vermont regulators creating a new GHG performance metric and allocating funding specifically to refrigerant management initiatives.

As outlined under the Efficiency Vermont program, refrigerant management encompasses leak management strategies for C&I customers as well as the promotion and use of low global warming potential (GWP) natural refrigerants in refrigeration and HVAC equipment. And, the effective scaling and market adoption of these strategies requires strong collaboration, support and education of heating, cooling and refrigeration (HVAC/R) equipment suppliers, installers and technicians as well. Relatedly, the Trust should examine opportunities to educate and train heat pump installers (both commercial and residential) on refrigerant leak issues and practices as another means to help transform Maine's homes, buildings, and communities into efficient, low-carbon places to work and live. The Trust should also consider a turn-key program for grocery stores specifically that helps them tackle the full range of store-wide opportunities that can help them save money and realize the carbon-cutting potential in their refrigeration equipment and systems directly.

2. (A) The Innovation Program is designed to analyze and demonstrate cost-effectiveness of emerging measures that have reached (or are about to reach) commercialization, and to gain a better understanding of what strategies should be employed to promote a measure if it were to be added to the list of eligible measures through the Trust's regularly offered programs. What emerging technologies, operational or behavioral conservation measures, or grid support/load management strategies should we consider for future Innovation Program pilot projects? (B) Historically, the Trust has set the budget for the Innovation Program at either 0.5% or 1% of program budgets. Please comment on the appropriate budget level for the Innovation Program and, where possible, share examples of budget levels used for equivalent initiatives in other jurisdictions to support your recommendation.

In addition to the areas described above, two innovation measures and strategies the Trust may want to consider in its next plan include:

- **Emerging heat pump technologies** – The Trust is widely recognized for its leadership and success with heat pumps, both air-source heat pumps (ASHP) and heat pump water heaters (HPWH). Two potential areas to build on this experience and position Maine for the next generation are supporting the development of emerging heat pump technologies that rely on low-GWP refrigerants and emerging HPWHs that are able to

take service at 120 volts. Both technologies are rapidly emerging as key parts of decarbonization strategies. Stand-alone low-GWP HPWH have not quite reached commercial availability (central water heating units have limited availability) but they may during the next plan period. Lower voltage HPWH, which could meet an important need in older homes with limited electrical service, are just reaching commercial markets. Both technologies would be appropriate for inclusion in the Innovation Program in the next plan period and should be delivered alongside contractor training focused on leak-tight installation and repair best practices.

- **Tariffed on-bill financing** – The Trust may want to revisit the idea of partnering with the distribution utilities to offer on-bill financing. Below the Trust asks an important question about the necessary funds to achieve Maine’s decarbonization goals. Although financing alone will not meet that need, it could play a greater role. In particular, we would draw the Trust’s attention to the specific instrument of tariffed on bill (TOB) “financing”.² Unlike some forms of on-bill financing, which are functionally like lending, TOB is not a loan, but a way for utilities to make investments whose costs are recovered more akin to other utility investments. (Utilities do not need to own equipment behind the meter, however.) These tariff rates can be assigned to the meter, rather than to a person. For this reason, TOB has been very successful in many jurisdictions in helping rental populations benefit from energy efficiency improvements. Given the Trust and the state’s focus on equity in the energy transition, this may have appeal. The Trust could play a key facilitation or administrative role. In Hawaii, a state financing agency plays this role for utility TOB.
- **Virtual Treasure Hunts** - Industrial buildings contain troves of energy savings potential that can be inexpensively tapped, with little disruption to operations. Yet outside of traditional stock assessments and potential studies, there has been no comprehensive statewide analysis of the impact low and no-cost opportunities can contribute to energy saving, carbon reduction, and efficiency goals. The Trust may want to consider addressing this by quantifying the energy, demand, and carbon savings identified through Energy Treasure Hunts. Through VEIC’s experience engaging customers with this underutilized approach, we have aggregated large volumes of data from across New England, and the Mid Atlantic. These results have confirmed the beneficial potential of operational and behavioral changes of up to 15% savings across a facility’s energy use, with corresponding decreases in demand and GHG emissions. By assessing a statewide roll out of this approach, the Trust could also help identify and target those industries, and facilities that based upon their full energy and emissions reduction potential could

² Pay as You Save (PAYS) is a common TOB approach used in many jurisdictions. This registered trademark version of TOB has no cost but comes with certain quality assurance and consumer protection standards.

best support state-wide demand reduction, grid resiliency, electrification and / or decarbonization (GHG reduction) goals.

VEIC has no specific response on the innovation budget, except to note that the next few years will be a very dynamic period for innovation in energy efficiency and clean energy. Setting the Innovation Program budget at the higher level would enable Maine to better leverage these emerging trends and opportunities.

See attached: Building Electrification Technology Roadmap from NBI, TOB Policy Roadmap for CA from Decarbonization Coalition

5. To prepare the Plan, the Trust will analyze the economic benefits and costs of electric (and natural gas) efficiency and conservation measures in order to determine the maximum amount of cost-effective savings potential that could be promoted through the Trust's programs. As prescribed in Chapter 3 and Chapter 4 of the Trust's rules, and further memorialized in the Trust's Technical Reference Manuals (TRMs) and past Triennial Plan filings at the Maine Public Utilities Commission (PUC), the Trust sums the avoided energy costs, marginal avoided transmission and distribution costs, and reduced water/sewer costs to determine the economic benefits of a measure. Please comment on any changes the Trust should make in how it accounts for benefits and costs in its analysis of cost-effectiveness.

Perhaps the most important change to the cost-effectiveness test would be to bring it in alignment with the state's greenhouse gas reduction laws and targets by including an appropriate value for avoided emissions. The Trust is helping deliver very substantial infrastructure investments using public resources. Failure to align those investments with state policy risks suboptimal outcomes and the equivalent of "stranded costs".

Maine's new climate law is one of the strongest in the nation, with a mandatory requirement that the state take action to meet emission reduction targets. According to the State's Climate Action Plan, energy efficiency, along with the decarbonization of the transportation sector, are key strategies to achieve those reductions. This provides a strong impetus to update the Trust's goals and systems to measure costs and benefits.

Maine is not alone in confronting this challenge and identifying ways to ensure its energy efficiency programs are aligned with new policy and technology landscapes. ACEEE has documented a trend in updates to energy efficiency resource standards that reflect this paradigm shift. Regulators and energy efficiency administrators are updating and diversifying program goals, and then aligning cost-effectiveness tests and program strategies to reflect those objectives. For example, Rhode Island used the National Standards Practice Manual

(NSPM) to update its cost-effectiveness test. The "[Rhode Island Test](#)" includes a higher value for avoided carbon.³

We encourage the Trust to revisit and consider making use of the National Standards Practice Manual as well for issues related to cost-effectiveness testing⁴. The NSPM provides an objective framework for considering costs and benefits, including in relationship to state policy or regulatory objectives. One category of non-energy benefits (NEBs) that could be further considered under that framework are health benefits. The quantification of health benefits from energy efficiency has improved significantly, providing enough confidence for several jurisdictions to include them in cost-effectiveness evaluations, including New Hampshire. Like some other jurisdictions, NH puts greatest emphasis on NEBs for low-income programs. This aligns with the objective in NH, as in Maine, to identify and achieve benefits for low-income and other vulnerable populations in an equitable way. The Trust may want to consider developing a NEB adder that could be applied to low-income programs as something of a test case.

The Trust should also re-examine its practices for applying cost-effectiveness screening at the measure, program and portfolio level. Although it can depend somewhat on whether a state measures savings primarily at the gross or net level, it is not common among leading efficiency states to require every measure in a program to screen as cost-effective individually.

Finally, the Trust should consider leveraging upfront portfolio energy modeling analysis to support the more robust and accurate analysis of how various building and electrification measures may interact across populations of buildings or market sectors. This type of meta-analysis is readily supported by open sourced energy modeling using Energy Plus, and can provide insights on energy savings, the timing of savings and support the future development of grid-interactive efficient building, communities and grid decarbonization and resiliency strategies.

See attached: Next Generation Energy Efficiency Resource Standards from ACEEE; National Standards Practice Manual for Distributed Energy Resources

6. In order to support the increased demand for heat pumps and to promote quality installations, Efficiency Maine developed a training module on "heat pump basics" that is required for all heat pump installers working with Efficiency Maine's residential programs. Efficiency Maine provides other trainings and workshops to contractors working in its commercial programs and is planning to provide building code training to contractors. Please comment on Efficiency Maine's efforts to support workforce development in energy efficiency, and include suggestions for additional areas we should consider addressing. What observations can you offer about the capacity or needs of Maine's trade professionals (e.g., electricians, plumbers, weatherization installers, heat pump

³ New Hampshire updated its test in the last few years, resulting in a new "Granite State Test". Therefore, Maine should consider upgrading to a "Pine Tree Test".

⁴ Note that in 2020 the NSPM for Energy Efficiency was replaced with the broader "NSPM for Distributed Energy Resources"

installers, heating technicians, distributors, retailers, architects and engineers) to accommodate growing demand from Maine customers for heat pumps, weatherization, high-efficiency heating systems, and other conservation measures offered through the Trust's programs? Please also share any recommendations about the approach the Trust's Plan should take to support workforce training.

We recommend that the Trust establish specific benchmarks or metrics for workforce development outcomes, in order to target its activities and track progress over time. This is not as easy or cut and dry as establishing goals for MWh, MW or GHG savings. Nonetheless, even imperfect metrics can give more definition to what may otherwise be an amorphous area of activity for the Trust. New Hampshire program administrators plan to hire a single entity to conduct a comprehensive assessment of efficiency-related workforce development needs and gaps in the state, and then use this information to better meet those needs and better align with other organizations that support workforce development. The Trust may want to consider engaging with the NH utilities to understand those plans or identify synergies for Maine.

The Trust has made good progress in partnering with trade organizations that provide training and support. In addition to leveraging those organizations resources and relationships, these partnerships help the Trust keep a finger on the pulse of evolving needs in the trades. We encourage the Trust to broaden its partnerships with a wider range of training and trade organizations, with an emphasis on as much geographic equity as possible.

The recommendation above to implement a codes and standards initiative has significant overlap with workforce development. By leveraging the code as a standard—and one that will evolve regularly through code update cycles—the Trust can help design, construction and installation contractors develop critical energy efficiency skills and experience. Although building codes generally only apply to new construction and major renovations, many construction and installation contractors complete retrofit work as well, and mastering code compliance (or beyond code practices, if incentivized) can produce broad benefits.

7. The Trust places a priority on advancing equity in delivery of its programs. For example, recent results of the Trust's programs promoting LED lights, heat pumps, and heat pump water heaters have shown strong distribution among low-income communities and in rural communities. Also, the Trust's programs have met the statutory requirements setting minimum budgets to benefit low-income Mainers. For some low-income initiatives, the Trust requires no financial contribution from the customer; for other low-income initiatives the Trust offers "enhanced rebates" for eligible customers while requiring some customers to have some "skin in the game." Please comment on how the Trust can improve on its goal of equitably delivering benefits to low-income communities while also advancing goals of maximizing energy savings, carbon reductions, and market transformation.

To follow a theme in these comments, we recommend the Trust establish several equity related benchmarks that complement the minimum spending requirements in Maine law. As described in the attached paper, VEIC has found three key elements to enhancing equity:

- 1) Defining target populations (e.g. low-income, low & moderate income, rural or economically depressed regions, disadvantaged racial groups, housing type, elderly populations, etc.);
- 2) Measuring disparate outcomes for these groups and designing strategies to reduce them over time; and
- 3) Inclusion of representative voices from equity-populations in design and implementation decision-making.

We also encourage the Trust to consider research on energy burden as a complement to traditional, and somewhat simpler definitions of low-income households. Energy burden measures the cost of energy relative to income and is potentially a more valuable metric for targeting limited resources.

Possible metrics include:

- Total number of LI households/units served
- Portion of total eligible ratepayers served by programs over time
- Average energy savings per LI household/unit
- New program outreach/partnerships that bring in qualified participants
- Number of single-family and multifamily units served compared to the estimated number of eligible households living in them
- Proportion of savings and spending for residential customers in relation to residential proportion of load (and Trust funds)
- Proportion of savings achieved for low income customers in relation to total residential savings (this would complement the Trust's low-income spending metric)
- Participation levels by county
- Energy burden by community or energy burden for participating LI customers (consider tracking average change in energy burden after households participate in a program).

We also encourage the Trust to continue to add community partnerships, both to help engage key populations but also to help advise and inform Trust decisions. We understand that the Trust may have established a low income or equity advisory board in the past. The new plan period would be a good opportunity to formalize such an advisory group and define its roles (preferably in broad terms, which may narrow over time as needs are refined.) This would complement the Maine Climate Council's emphasis on equity voices it is planning.

Finally, note that tariffed on-fill financing could be a useful tool to enhance equity, by leveraging new sources of capital to supplement Trust incentives.

See attached: Program Design with Equity at the Forefront from VEIC/ACEEE

8. The Trust has spent the last two years testing various load management strategies through its Innovation Program and intends to offer a new program to deploy demand response, load shifting, and load management in the next plan. Examples of these pilot projects include load shifting in commercial freezers using phase-change material; a residential "Bring-Your-Own-Device" pilot; and incentives for off-peak EV charging. Please share examples of successful load management initiatives from other jurisdictions that the Plan could draw from, as well as any reports, studies or evaluations that would aid the Trust in designing or prioritizing these strategies.

It appears the Trust has taken several constructive steps toward developing load management experience and data and we agree with its plan to offer a full program in this area. The Trust can indeed take advantage of program designs and strategies from other jurisdictions.

In several other jurisdictions, those design choices stem from a clear, quantifiable goal for demand reduction and we encourage the Trust to develop and propose such a goal. We are aware of Maine's general statutory goals for peak demand reduction and the historic difficulty in choosing MW goals that are neither too low nor too high. In addition to requiring different strategies, "active" demand management have different achievable quantities, structure and costs from "passive" demand reductions (i.e. through installation of energy efficient measures) and may be considered somewhat separately.

In the Northeast, utility regulators in Vermont, New Hampshire, Massachusetts and New York, have established active demand reduction or load flexibility goals for energy efficiency administrators. New Hampshire and Massachusetts are now setting active demand reduction targets for utility program administrators. Efficiency Vermont was recently assigned a goal for KW of flexible or controllable load, in addition to summer and winter peak demand reduction targets (e.g. from passive measures.) This analogy may be especially relevant to the Trust because it focuses on the measures installed (and available) behind the meter as much as their dispatch.

In addition to BYOD programs for demand response, many energy efficiency program administrators offer downstream incentives on smart thermostats and/or include them in direct install programs. In Maryland, for example, one of the EmPOWER program administrators with a similar number of customers to Maine (Pepco) provided incentives for roughly 1,200 residential smart thermostats last year, through downstream rebates, home retrofit/direct install, and the new construction program. Across the state these devices are available for demand management enrollments, but they also have deemed savings (in this case through the Mid-Atlantic TRM.) Many of those households also participate in "thermostat optimization" programs that periodically adjust setpoints for additional savings. As Maine increases the use of high-efficiency electric heating, this measure may be increasingly important.

See attached: NHSaves 2021-2023 Plan

9. Please comment on ways that the Trust's electric vehicle (EV) initiatives could be improved in the next Triennial Plan and any suggestions about how the Plan should address funding of these

initiatives. The Trust currently invests limited, one-time funding (e.g., from the Volkswagen Settlement) in EV initiatives, including developing EV travel corridors with fast and Level-2 chargers; supporting EV charging infrastructure development across the state; providing incentives for electric vehicle purchases; and developing and distributing educational materials about EVs and EV charging. Additional funding for these initiatives will be available over the next three years from the settlement of the New England Clean Energy Connect (NECEC) project proposal. Please comment on what priorities or strategies the Trust should put in the Plan for (A) expanding EV charging infrastructure and (B) transforming the market for EVs? Please also comment on whether and how the Plan should propose to fund incremental electric vehicle initiatives beyond the funding available from the VW and NECEC settlement funds.

The Trust has made excellent progress over the last 1-2 years in ramping up its transportation electrification program capacity, with significant opportunities ahead. The State Climate Action Plan included ambitious but achievable goals and we are aware that the state intends to complete an EV Roadmap which should provide significant direction to some of these questions. The Trust is well-aware of the potential for the Transportation Climate Initiative to provide funds for electrification and clean transportation. The Vermont legislature recently authorized a modest portion of the ratepayer energy efficiency charge to be used for greenhouse gas reductions specifically including clean/electric transportation.

10. The state of Maine recently released Maine Won't Wait: A Four-Year Plan for Climate Action, which outlines the state's data-driven outcomes to achieve targeted emissions reductions. The plan sets ambitious goals for beneficial electrification and points to the Trust as a key implementer of beneficial electrification through investment in electric vehicles, heat pumps, heat pump water heaters and other technologies. The Trust anticipates there will be a significant funding gap between the funds the Trust is authorized to seek and the funds required to meet the Climate Action Plan's goals. Should the Triennial Plan outline how the Trust would work to meet these goals, pending funding? How might the Trust fund the adoption of these technologies to contribute to Maine's beneficial electrification goals?

It seems clear that Maine will depend heavily on the Trust to lay out specific strategies, programs and other activities to meet the relevant goals in the Climate Action Plan. Ideally funding solutions are crafted to fulfil specific strategies and implement programs (not the other way around), and the Trust's Triennial Plan is an opportunity to put those forward. Waiting for resources to materialize may leave the state flat-footed. The federal government has already authorized very large amounts of recovery stimulus and may authorize a large infrastructure bill, both of which might provide resources for the state's clean energy and climate objectives. The Transportation Climate Initiative also looms as a possible source of funds for transportation.

The Trust may also consider that beneficial electrification may be partially or wholly part of "maximum achievable cost-effective" energy efficiency. As stated above, many states are updating traditional energy efficiency resource paradigms to address climate policy, electrification technology, and more inclusive frameworks for distributed energy resources.