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### **Comments of the Center for Sustainable Energy® Addressing the Efficiency Maine Trust's Draft Staff Report on Beneficial Electrification**

Dear Ms. Cushman,

The Center for Sustainable Energy® (CSE; [www.energycenter.org](http://www.energycenter.org)) appreciates the opportunity to offer comments on the Draft Staff Report on Beneficial Electrification (the Draft Report) issued by the Efficiency Maine Trust (the Trust). CSE applauds the Trust for developing this Draft Report and is excited to see the Report findings disseminated to the Legislature and other stakeholder across the State.

CSE is a 24-year-old national nonprofit dedicated to decarbonizing transportation and the built environment. We provide program administration, technical assistance and policy advisement to a diverse set of stakeholders across the energy and transportation industry. As a nonprofit administrator and advisor, CSE serves as a trusted and objective resource helping government agencies implement successful technology programs that use public and ratepayer funds in the best interest of consumers, ratepayers, and the general public.

CSE provides the following comments based on our experience administering statewide electric vehicle (EV) and EV charging infrastructure programs in California, Oregon, New York, Connecticut and Massachusetts, as well as supporting energy efficiency initiatives across various jurisdictions within California. CSE offers the following specific recommendations:

1. Encourage the Legislature to Establish a Sustainable Revenue Stream for Incentive Programs;
2. Expand Funding for EV Charging Infrastructure;
3. Consider Developing a Block Grant Style Program for Deploying EV Charging Infrastructure;
4. Include Panel Upgrades and Fuel Substitution Measures in Financial Incentives;
5. Align Price Signals with GHG Reduction Goals;
6. Consider Demand Flexibility within Codes and Standards;
7. Include Workforce Training to Support Load Flexibility and Integrated Control; and
8. Promote Efforts to Integrate DERs into Transportation Electrification Strategies.

These recommendations are discussed in greater detail below.

## 1. Encourage the Legislature to Establish a Sustainable Revenue Stream for Incentive Programs

CSE supports the Trust's assertion in Section 5.1.4 of the Draft Report that funding incentive programs is critical to widespread electrification. To this end, CSE recommends that the Trust include a recommendation in the Final Report that encourages the Legislature to establish a dedicated, stable, and sustainable revenue stream for incentive programs, including rebates for both EVs and EV infrastructure. In surveys conducted by CSE pursuant to California's Clean Vehicle Rebate Program (CVRP), approximately 90% of CVRP recipients cite the rebate as being moderately to extremely important, and over 40% of rebate recipients cite the vehicle rebate as being essential to their EV purchase.<sup>1</sup> These numbers are even higher in other states. In New York and Connecticut, rebate importance was ranked at 94% and 96%, respectively, and rebate essentiality was ranked at 53% and 63%, respectively.<sup>2</sup> CSE's experience with CVRP also indicates that funding disruptions result in incentive waitlists and reduce overall program efficacy.<sup>3</sup> Potential funding sources for the Trust to consider include future revenues through the Regional Greenhouse Gas Inventory (RGGI) or the Transportation Climate Initiative (TCI), or system benefit charges as used by utilities in New York<sup>4</sup> and New Jersey.<sup>5</sup> Finally, CSE recommends the Trust mention and discuss potential funding for EV charging infrastructure that may be made available through a settlement agreement between Central Maine Power (CMP) and the Conservation Law Foundation (CLF). This settlement is expected to result in a commitment of \$15 million for EV infrastructure, distributed through two distinct funds.<sup>6</sup> CSE encourages the Trust to consider how this funding could supplement existing vehicle electrification measures.

## 2. Expand Funding for EV Charging Infrastructure

CSE strongly supports the assertions in Section 5.2.4 of the Draft Report regarding the importance of widespread, publicly accessible EV charging infrastructure. A robust charger network will provide reliable charging for EV owners and will increase consumer confidence for potential EV buyers. CSE supports Maine's prior funding commitments to EV infrastructure, including the \$3.15 million commitment from the Volkswagen Settlement. However, additional funding will be necessary to ensure that Maine has sufficient EV infrastructure to support the growth in the EV market. While it is unclear exactly how many EV chargers will be needed in Maine in the coming years, CSE has used the Alternative Fuels Data Center's Electric Vehicle Infrastructure Projection Tool (EVI-Pro) to conduct EV infrastructure assessments in California. CSE encourages the Trust include a specific recommendation in the Final Report that highlights the need for EV infrastructure assessments and urges the Legislature to expand funding for EV infrastructure incentives (potentially through the revenue streams cited above).

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<sup>1</sup> California Clean Vehicle Rebate Project, EV Consumer Survey Dashboard. <https://cleanvehiclerebate.org/eng/survey-dashboard/ev>

<sup>2</sup> Williams, B., Electric Vehicle Rebates: Lesson Learning.

[https://energycenter.org/sites/default/files/docs/nav/resources/2019-02-08\\_CSE\\_CT\\_EV\\_Roadmap\\_handout\\_v2.pdf](https://energycenter.org/sites/default/files/docs/nav/resources/2019-02-08_CSE_CT_EV_Roadmap_handout_v2.pdf)

<sup>3</sup> California Clean Vehicle Rebate Project, Summary of CVRP Rebate Eligibility and Funding Availability Over Time. [https://cleanvehiclerebate.org/sites/default/files/attachments/CVRP\\_Disruptions\\_Fact\\_Sheet.pdf](https://cleanvehiclerebate.org/sites/default/files/attachments/CVRP_Disruptions_Fact_Sheet.pdf)

<sup>4</sup> The New York State Energy Research and Development Authority (NYSERDA), System Benefits Charge. <https://www.nyserd.org/Researchers-and-Policymakers/System-Benefits-Charge>

<sup>5</sup> New Jersey's Clean Energy Program, Societal Benefits Charge (SBC). <https://www.njcleanenergy.com/societal-benefits-charge>

<sup>6</sup> Conservation Law Foundation (CLF), CLF and Partners Reach Agreement with Central Maine Power. <https://www.clf.org/newsroom/clf-and-partners-reach-agreement-with-central-maine-power/>

### 3. Consider Developing a Block Grant Style Program for Deploying EV Charging Infrastructure

In addition to expanding funding for EV charging infrastructure, CSE recommends that the Trust consider disbursing EV infrastructure funding through a single, statewide block grant program. This type of program can ensure that grant funding is awarded with geographic and socio-demographic considerations unique to each region of the state, including remote rural communities. As an example, CSE encourages the Trust to consider the California Electric Vehicle Infrastructure Project (CALeVIP), which is implemented by CSE on behalf of the California Energy Commission. CALeVIP funds up to 80 percent of the cost of EV charging infrastructure, with private developers or site hosts responsible for paying the remaining 20 percent. This block grant program for EV infrastructure has issued or approved nearly \$40 million in incentive funding in under two years.<sup>7</sup> One key element of this program's success has been CSE's incentive processing platform, which incorporates multiple functionalities into a single tool, including the ability to support incentives for multiple charging applications, offer various incentive payment structures, and ensure that EV chargers are placed in priority regions (using the assessment methodologies described above). CSE encourages the Trust to consider recommending a similar block grant style program for EV infrastructure in Maine. This type of program would ensure the streamlined deployment of EV infrastructure, enable co-funding arrangements with local partners, and simplify the application process for all program participants.

### 4. Include Panel Upgrades and Fuel Substitution Measures in Financial Incentives

The Trust accurately identifies upfront costs as a barrier to electrification measures and includes financial incentives as a solution in Section 5.1.2 of the Draft Report. CSE recommends the Trust allow for some level of funding from its incentive offerings for heat pumps, heat pump water heaters, and EVs to be used towards infrastructure upgrades, such as service panel upgrades, which may otherwise create barriers to the adoption of new technologies – particularly in low-income homes. In addition, CSE supports allowing energy efficiency programs to leverage conservation funds for fuel-switching incentives, following the examples from recent regulatory changes in Massachusetts and California, which opened significant funding opportunities for electrification measures.<sup>8</sup> Lastly, CSE reiterates our recommendation to allow electrification incentive programs to be stacked with existing incentives for efficient equipment to maximize the impact of each program.<sup>9</sup> While layering of programs should not be necessary for participating in beneficial electrification programs, such an approach will provide opportunities for projects to achieve additional energy and carbon reduction benefits.

### 5. Align Price Signals with GHG Reduction Goals

CSE agrees with the Trust's recommendation to consider rate mechanisms that set price signals to incentivize or disincentivize certain behaviors. Supportive rate design can both help ensure that electrification strategies do not create additional burdens on customers and the grid as well as maximize the benefits of such strategies by aligning rates with grid needs and greenhouse gas (GHG) reduction goals. When considering new rate structure design, Maine should not only "better align prices with costs of producing and delivering electricity,"<sup>10</sup> but also

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<sup>7</sup> The California Electric Vehicle Infrastructure Project (CALeVIP), Available Funding.

<https://calevip.org/available-funding>

<sup>8</sup> Draft Report, page 30.

<sup>9</sup> Center for Sustainable Energy Comments in Response to Efficiency Maine Trust's Request for Information (RFI) on Beneficial Electrification Study, September 18, 2019, page 2.

[https://www.energymaine.com/docs/CSE-Comments\\_Maine-Beneficial-Electrification-Study\\_Final.pdf](https://www.energymaine.com/docs/CSE-Comments_Maine-Beneficial-Electrification-Study_Final.pdf)

<sup>10</sup> Draft Report, page 23.

align prices with the carbon intensity of the grid based on the availability of variable carbon-free resources. For example, the California Public Utilities Commission's (CPUC) direction to investor-owned utilities (IOUs) on how to implement residential rate design structure stated that GHG costs should be reflected in residential customer's electricity rates.<sup>11</sup> In addition to rate structures, Maine should consider additional opportunities to encourage load shifting through price signals, such as demand response programs. For example, a 2019 report developed for the CPUC includes proposals for demand response models focused on aligning load with zero-marginal cost renewable generation, which is consistent with the state's emphasis on decarbonizing the grid.<sup>12</sup> As Maine further electrifies its transportation fleet and building end uses, such price signals will help ensure behaviors such as EV charging utilize clean generation sources based on differences in time, season, and geography.

## 6. Consider Demand Flexibility within Codes and Standards

CSE recommends Maine leverage its building codes and appliance standards to further ensure greater load flexibility as beneficial electrification drives up demand. While the Draft Report acknowledges mandatory energy codes and standards as a mechanism for accelerating the market transformation of electrification technologies, including EV charging infrastructure and appliance standards that could compel adoption of heat pump water heaters,<sup>13</sup> codes and standards also present an opportunity to compel demand flexibility. For example, California's Building Energy Efficiency Standards require demand responsive controls in certain buildings and end uses,<sup>14</sup> and Maine can consider additional technologies and end uses that would support beneficial electrification strategies. Similarly, in 2018 the California state legislature passed Senate Bill 49, which directs the California Energy Commission to adopt standards for appliances to facilitate the deployment of flexible demand technologies.<sup>15</sup> Moreover, CSE recommends Maine support the continued development and advancement of standardized communications protocols that are user-friendly and designed with integration in mind to further enable decarbonization strategies through demand-side management.

## 7. Include Workforce Training to Support Load Flexibility and Integrated Controls

CSE strongly supports the Trust's emphasis on promoting load flexibility and controls as a solution to beneficial electrification barriers as outlined in Section 5.1.1 of the Draft Report. However, effective implementation of the proposed solutions will require a trained and skilled workforce. As systems are increasingly integrated, it will no longer be sufficient to consider each system on its own; rather, this will require the engagement of multiple trades in the building and energy industries. As such, CSE recommends explicitly citing the need for increased workforce training on load management concepts, controls integration, and the interaction of building systems, which will be essential to the effective installation and use of flexible technologies and controls.

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<sup>11</sup> California Public Utilities Commission, Decision on Residential Rate Reform for Pacific Gas and Electric Company, Southern California Edison Company, and San Diego Gas & Electric Company and Transition to Time-of-Use Rates, July 3, 2015, page 329.

<http://docs.cpuc.ca.gov/PublishedDocs/Published/G000/M153/K110/153110321.PDF>

<sup>12</sup> California Public Utilities Commission, Final Report of the California Public Utilities Commission's Working Group on Load Shift, January 31, 2019.

[https://gridworks.org/wp-content/uploads/2019/02/LoadShiftWorkingGroup\\_report.pdf](https://gridworks.org/wp-content/uploads/2019/02/LoadShiftWorkingGroup_report.pdf)

<sup>13</sup> Draft Report, pages 26-27.

<sup>14</sup> California Energy Commission, 2019 Building Energy Efficiency Standards, pages 126-127. Available at

<https://ww2.energy.ca.gov/2018publications/CEC-400-2018-020/CEC-400-2018-020-CMF.pdf>

<sup>15</sup> California Senate Bill 49 (Stats. 2019, ch. 697). Available at

[https://leginfo.ca.gov/faces/billTextClient.xhtml?bill\\_id=20190200SB49](https://leginfo.ca.gov/faces/billTextClient.xhtml?bill_id=20190200SB49)

## 8. Promote Efforts to integrate DERs into Transportation Electrification Strategies

CSE recommends that any forthcoming beneficial electrification programs or pilots seek to integrate distributed energy resources (DERs) with vehicle electrification strategies. This will ensure that beneficial electrification efforts are streamlined and complementary, and can lay the foundation for future initiatives that address multiple sectors. For example, CSE encourages the Trust to support EV charging during periods when there is a high proliferation of renewables on the grid. As mentioned above, the Trust's Draft Report could include a recommendation for utilities to consider price signals that promote this behavior. CSE also recommends that the Trust identify opportunities to promote vehicle-grid integration (VGI) and quantify the benefits of VGI, including ancillary services such as voltage regulation. These types of holistic design principles will ensure that beneficial electrification programs are implemented in an integrated, efficient, and equitable manner.

### Conclusion

CSE appreciates the opportunity to provide comments on the Efficiency Maine Trust's Draft Staff Report on Beneficial Electrification. CSE commends the Trust for continuing to identify and overcome barriers to beneficial electrification in Maine, and encourages the Trust and the Legislature to implement pilot projects to incorporate these solutions. CSE looks forward to continuing to work with the Trust to transform Maine's building and transportation sectors.

Sincerely,



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