

January 17, 2020

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**RE: Efficiency Maine Trust, Request for Comment on Beneficial Electrification Study  
Comments of Industrial Energy Consumer Group**

Dear Emily:

In response to Efficiency Maine Trust's Request for Comment on Beneficial Electrification, the Industrial Energy Consumer Group (IECG) submits the following comments.

As the representative of Maine's largest energy consumers, IECG applauds the Trust for its consideration of beneficial electrification of transportation and heating, in the context of Maine's efforts to reduce the state's overall greenhouse gas emissions. The most recent report by the Maine Department of Environmental Protection – its Eighth Biennial Report on Progress Toward Greenhouse Gas Reduction Goals, released on January 13, 2020 – shows that Maine's electric sector has largely been decarbonized, while transportation and heating remain laggards that Maine must address if we are to meet the state's greenhouse gas reduction requirements under 38 M.R.S. § 576-A and other state programs.

Transportation dominates Maine's greenhouse gas emissions as it has for decades, contributing 54% of the state's total in 2017, because nearly all vehicles burn gasoline or diesel. Homes are the second-largest emitters, contributing 19% of the total, mostly by burning oil for heating. Commercial businesses (11%) and industrial businesses (9%) contribute relatively smaller shares.

Meanwhile electric power generation contributed just 7% of Maine's CO<sub>2</sub> emissions in 2017 (down from 9% in 2015). As Figure 7 from the Department's report shows -- reproduced below -- no sector has cut its carbon emissions by a greater percentage than the electricity sector, while transportation stands out for its dominant and growing share of emissions. As New England electric grid operator ISO-NE recently noted in its 2019 Regional Energy Outlook, "carbon emissions from the grid have fallen by roughly a third... the region is on its way from having an electric grid dominated by fossil-fuel and nuclear generation to one that includes large amounts of wind and hydro generation and hundreds of thousands of small solar and storage systems spanning the six states. The states' next step in their decarbonization journey is to transition the emissions-heavy heating and transportation sectors to low-carbon electricity."

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Beneficial electrification represents an opportunity to take that step. As IECG has consistently urged, if Maine wants to reduce our state's carbon emissions, we need to address our transportation and heating sectors. We need to focus efforts and expenses on where our investment will make the biggest difference for the lowest cost. And thanks to the billions Maine has invested in decarbonizing our electric sector over the past decades, our best targets for further progress are transportation and heating. Transportation alone is responsible for most of Maine's greenhouse gas emissions, with residential and commercial heating the next biggest contributors.

Reducing transportation-related emissions by just 20% would reduce Maine's total greenhouse gas emissions more than if we totally removed carbon emissions associated with the electric sector, representing a more efficient use of our effort and dollars. Home heating similarly represents another large clump of low hanging fruit. Focusing there can provide meaningful reductions in the cost of heating and transportation for families and small businesses quickly and efficiently.

Moreover, as IECG has urged, we need to do this without imposing new costs on electric ratepayers, and this can be done through beneficial electrification. As the Trust's draft report finds, increasing electricity costs will only increase barriers to beneficial electrification:

Indeed, the price of electricity relative to fossil fuels is critical to the prospects for beneficial electrification; to the extent electricity prices increase, this will tend to reduce or possibly even eliminate the lifetime cost savings that high-efficiency electrification options have over fossil-fired alternatives. Rising electricity prices would constitute a barrier to beneficial electrification because where operating costs of electric measures exceed those of fossil-fuel burning alternatives, customers will be less inclined to choose the electric options.<sup>1</sup>

As the draft report notes, electricity does not compete on a level playing field against fossil fuels in various ways, including charges on electricity sold in Maine that are not universally applied to all fossil fuels.

IECG also echoes the observation in the draft report that certain categories of customer groups in Maine face particular challenges investing in efficient, clean technology, including low-income households, small businesses, and large, publicly traded industrial customers.<sup>2</sup> However, IECG notes that the discussions of barriers and solutions for these groups does not specifically address industrial issues. IECG recommends that industrial customer issues be addressed in more detail in the final report.

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<sup>1</sup> Draft Report, Section 5.1.3, at page 28.

<sup>2</sup> Draft Report, Section 5.1.5, at page 31.

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Finally, IECG notes that the draft report includes descriptions of potential electrification technologies, with semi-technical explanations. IECG comments that the potential of these technologies to reduce carbon emissions will only increase, as the system electricity mix continues its decarbonization. For example, according to Acadia Center, heat pumps currently significantly reduce emissions, even with the current electric fuel mix.

Further decarbonization of the electricity supply will only enhance the ability of beneficial electrification to reduce Maine's carbon emissions – but as noted above, this can only work as long as the electricity is affordable. As the draft report notes:

It is important to note that much of the literature points to the need for this electrification to be “beneficial” or “strategic,” taking care to balance other societal objectives that factor into decision-making. For example, the Regulatory Assistance Project (RAP) asserts that for electrification to be considered beneficial, or in the public interest, it must meet one or more of the following conditions, without adversely affecting the other two: saves consumers money over the long run; enables better grid management; and reduces negative environmental impacts.<sup>3</sup>

IECG appreciates the Trust's efforts in preparing this draft report, as well as Maine's efforts to address greenhouse gas emissions associated with the state's transportation and heating sectors. The conclusions and recommendations adopted by the Trust should ensure that electricity can be the solution to Maine's thorniest transportation and heating problems, without making electric ratepayers the financiers of that solution.

Sincerely,

/Todd J. Griset/

Todd J. Griset  
R. Benjamin Borowski  
Counsel to Industrial Energy Consumer  
Group

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<sup>3</sup> Draft Report, Section 2, at page 7.