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Ms. Kathleen A. Theoharides
Secretary of Energy and Environmental Affairs
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100 Cambridge St, Suite 900
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RE: Interim Clean Energy and Climate Plan for 2030

The Northeast Clean Heat and Power Initiative (NECHPI), along with 2G Energy, AB Energy USA, the Combined Heat and Power Alliance, Dalkia Aegis EDF Group, Energy Spectrum, and Tecogen, respectfully submits the following comments in response to the Interim Clean Energy and Climate Plan for 2030 (2030 CECP). These comments address the proposed phase-out of incentives for fossil-fuel heating systems between 2022 and 2024, and the benefits of Combined Heat and Power (CHP) systems even as the electric grid decarbonizes. We urge the Executive Office of Energy and Environmental Affairs to revisit its proposal to end incentives for CHP, and continue rewarding high efficiency, environmentally superior CHP systems.

CHP systems participating in Mass Save and the Alternative Portfolio Standard programs provide a suite of benefits to ratepayers that will still be realized up to, and potentially beyond 2050. They reduce the emission of CO₂ and other criteria pollutants, as well as providing on-site electric and thermal resiliency. We suggest as one resource examining the benefits that are quantified for CHP projects that have received the Mass Save incentive, and urge that the Executive Office of Energy and Environmental Affairs utilize program information on CO₂ reductions from CHP in their decision of whether to continue incentivizing projects. Another, albeit anecdotal, data resource are the several US EPA CHP Award winning projects based in Massachusetts that have self-certified significant CO₂ reductions as well as dozens of Massachusetts businesses that have made public statements on the CO₂ reductions from their CHP investments.

CHP provides a significant CO₂ savings relative to current Massachusetts grid emissions. The NE-ISO Load-Weighted Marginal Unit (LMU) marginal emission rate for 2018 was 745 lbs. CO₂/kWh, and the eGRID Non-Baseload emissions rate for the NE ISO, which is used to calculate CO₂ savings from Mass Save projects, is 931 lbs. CO₂/kWh. According to a 2019 study by ICF, *As the Grid Gets Greener, Combined Heat and Power Still Has a Role to Play*, CHP emissions are estimated at 652 lbs. CO₂/kWh when accounting for offset boiler emissions. Using either 745 lbs. CO₂/kWh or 931 lbs. CO₂/kWh, CHP provides a significant CO₂ savings, and will

until marginal grid emissions are drastically reduced.

This savings relative to marginal grid emissions, combined with CHP's high capacity factor, leads to significant CO₂ savings, even compared to the same MW of installed wind and solar. According to a study by Entropy Research, LLC. 10MW of CHP with an 85% capacity factor can provide 33,533 tons of CO₂ savings compared to eGRID non-baseload emissions on an annual basis. For comparison, the same study found that 10MW of solar with an average capacity factor of 26.1% saved 17,159 tons of CO₂ annually, and 10MW of wind with an average capacity factor of 37.4% saved 24,501 tons of CO₂ annually. CHP can provide nearly double the carbon savings of solar and a 50% increase in savings compared to wind, for the same number of MW installed.

CHP systems also provide savings in the wholesale energy and capacity markets, and by decreasing energy imported from outside Massachusetts, keeping dollars in the state economy. CHP systems can reduce transmission and distribution costs, both for reduced capital expenditure in congested areas and in reduced O&M costs, benefiting ratepayers and increasing grid reliability. Investing in CHP also provides direct and secondary economic benefits to the state economy through industry design and construction jobs, as well as service jobs. We suggest that the FULL picture of the benefits of CHP, vis-à-vis all other clean heating and cooling technologies, ought to recognize these important ratepayer and societal benefits

CHP uniquely provides a suite of benefits to ratepayers that include the following:

- Reduction in criteria pollutants,
- Reduction in CO₂ (greenhouse gas) emissions,
- Power and Thermal Energy **resiliency** for appropriately designed CHP systems,
- Economic multiplier benefits (importing less energy) keeping dollars in MA economy,
- Local job creation, direct industry jobs, service jobs,
- Critical infrastructure support including health-care, hospitals, research, pharmaceuticals, key supply chain products and services,
- Energy and capacity savings,
- Reduction in utility transmission and distribution (T&D) capital costs benefiting ratepayers,
- Reduction in utility T&D operating and maintenance costs benefiting ratepayers, and
- Reduction in local T&D congestion, enhancing the network reliability.



Sincerely yours,

John Moynihan

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Chair, NECHPI Board of Director

Co-signed:
2G Energy
AB Energy USA
Combined Heat and Power Alliance
Dalkia Aegis, EDF Group
Energy Spectrum
Tecogen