April 24, 2024

The Honorable Dominick J. Ruggerio
President of the Senate
Rhode Island Senate
Providence, RI 02903

The Honorable Ryan W. Pearson
Majority Leader
Rhode Island Senate
Providence, RI 02903

The Honorable Jessica de la Cruz
Minority Leader
Rhode Island Senate
Providence, RI 02903

Re: The Rhode Island Clean Heat Standard Act – Stakeholder Comments

Dear President Ruggerio, Majority Leader Pearson, Minority Leader de la Cruz, and members of the Rhode Island Senate:

The Northeast Chapter of the Combined Heat and Power Alliance (the "Northeast Chapter") welcomes this opportunity to provide comments regarding the Rhode Island Clean Heat Standard ("CHS") proposed language as set forth in the Rhode Island Clean Heat Standard Act (RI H7782/S2848). The Northeast Chapter is the successor organization to the Northeast Clean Heat and Power Initiative.

The Northeast Chapter is a group of manufacturers, system developers, engineers, and end- user representatives with the common goal of reducing energy costs and carbon emissions using the highly efficient and reliable technology of combined heat and power ("CHP"). Certain of its members are located in Rhode Island and/or develop and operate projects therein. The Northeast Chapter strongly believes that CHP must play a crucial role in reducing marginal grid emissions in the near-term while assisting Rhode Island's efforts for a fully decarbonized grid. The United States Department of Energy shares this sentiment, having stated that "[i]ndustrial CHP can provide significant greenhouse gas emissions reductions in the near- to mid-term as marginal grid emissions continue to be based on a mix of fossil fuels."[1] Ignoring CHP at this critical moment is fundamentally inconsistent with the express goals of Rhode Island's Clean Heat Standard Act.

In furtherance of such goals, we are pleased to submit the following comments emphasizing the need to include CHP technologies in Rhode Island's comprehensive decarbonization strategy, specifically regarding the CHS.

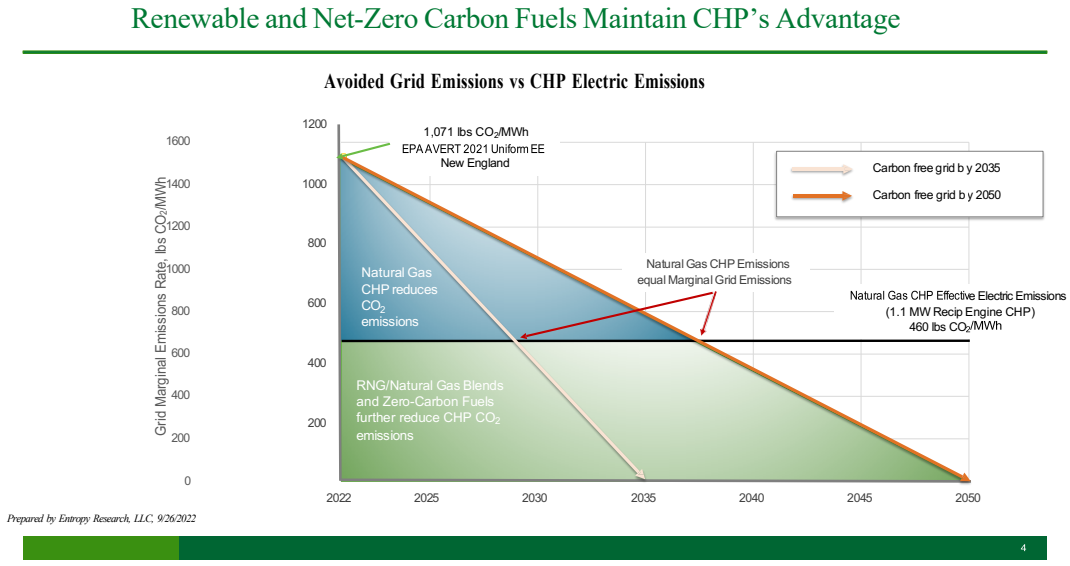
1. The Northeast Chapter strongly encourages Rhode Island to adopt a standard that is: (i) based on overall greenhouse gas reductions; (ii) expressed in relation to such reductions; and (iii) technologically agnostic regarding the method of achieving such reductions.

[1] US Department of Energy, Industrial Decarbonization Roadmap, Sep. 2022 at 14, https://www.energy.gov/sites/default/files/2022-09/Industrial%20Decarbonization%20Roadmap.pdf

The expressed purpose of the Rhode Island Clean Heat Standard Act is "to reduce greenhouse gas emissions attributable to the Rhode Island thermal sector."[2] The Northeast Chapter shares the desire to reduce such pollution, which is why CHP must be included in the CHS. This is a crucial time for Rhode Island, as it has recently experienced a rise in greenhouse gas emissions between 52% and 72% from its power plants.[3] The exclusion of more efficient "fossil fuel use, or the use of renewable natural gas or hydrogen"[4] as a requirement to receive credits ignores CHP, which currently results in lower greenhouse gas emissions than the electrical grid in Rhode Island.[5]

Accordingly, the CHS must adopt a technologically agnostic approach that prioritizes actual greenhouse gas reductions over select technologies that are not currently delivering similar reductions. Such an approach will result in lower carbon emissions now, while supporting the transition to full electrification. Additionally, this technologically agnostic approach will ensure that Rhode Island remains at the cutting edge of innovation throughout the duration of the energy transition by not foreclosing the possibility that other technologies may reduce emissions further than is currently contemplated. Finally, a technologically agnostic approach will provide Rhode Island's citizens with a level of consumer choice that is likely to incentivize them to shift away from current fossil fuel sources in a timelier manner.

One of CHP's greatest strengths is that it is not a "technology lock in," but rather operates as a fuel-flexible system capable of using both low-carbon and zero-carbon fuels.[6] As such, it can both serve as a transitional technology, bridging the gap as Rhode Island moves to electrification, and fill the gaps by addressing difficult to decarbonize sectors. CHP is an established, high-efficiency technology reducing marginal grid emissions today by displacing dirtier grid resource carbon emissions, as demonstrated in Figure 1:



[2] RI H7782/S2848 §23-23.8.2(1)
[3] *See* Rob Smith, *R.I. Sees Rise in Greenhouse Gas Emissions from Power Plants*, ecoRI News, March 4, 2024, https://ecori.org/r-i-sees-rise-in-greenhouse-gas-emissions-from-power-plants/
[4] RI H7782/S2848 §23-23.8.3(2)
[5] 2022 and 2023 Annual Power Plant Emissions, EPA's Clean Air Markets Division, Data Current as of February 5, 2024, https://www.epa.gov/power-sector/latest-emission-comparisons-pollution-controls#Annual
[6] Today's existing and newly installed CHP systems can use a substantial blend of clean hydrogen – ranging from 20-100%, according to equipment manufacturers. CHP Alliance. "Clean Hydrogen and CHP: A Roadmap for Industrial and Commercial Decarbonization." March 2022. https://chpalliance.org/wp-content/uploads/2019/08/CHP-Hydrogen-Roadmap-2.pdf

Figure 1: The reduction in difficult to ameliorate marginal grid emissions can be affected via combined heat and power technology.

Furthermore, Figure 1 illustrates that as zero carbon fuels become available for use in CHP systems, they can maintain carbon advantage over the grid for a considerable period into the future. If, as some studies have suggested, net-zero carbon fuels are in limited supply and/or expensive, using these relatively scarce and costly fuels in high efficiency CHP systems will ensure they are used in the most highly productive manner.

The Carbon Leadership Forum has noted that, "[b]ecause emissions are cumulative and because we have a limited amount of time to reduce them, carbon reductions now have more value than carbon reductions in the future. The next couple of decades are critical."[7] CHP is the precise type of technology that results in less carbon produced *now*. Accordingly, Rhode Island must adopt a technologically agnostic approach considering the critical nature of this moment in time. The consequences of ignoring, in the near to medium term, better performing technologies, such as CHP, could significantly increase transition costs while increasing CO2 emissions outcomes. This is fundamentally inconsistent with the express environmental and affordability goals of the Rhode Island Clean Heat Standard Act.

2. The Northeast Chapter urges that Rhode Island include CHP as part of its commitment to equity in its push to decarbonize and electrify the grid.

As expressly stated in the Rhode Island Clean Heat Standard Act, "the Clean Heat Standard shall be designed and implemented to enhance social equity by minimizing adverse impacts to low-income and moderate-income customer and those households with the highest energy burdens."[8] CHP can provide crucial assistance in the equity space. CHP is presently being used to control costs and provide reliability within existing public housing infrastructure and healthcare facilities in Rhode Island and New England. The Northeast Chapter is committed to environmental justice and applauds Rhode Island's commitment to such equity concerns. A proven driver of environmental equity, such as CHP, must be considered as part of Rhode Island's CHS. Ignoring CHP would be a disservice to certain of Rhode Island's most vulnerable communities.

3. The CHS should provide full credit for renewable natural gas ("RNG"), biofuels, and hydrogen, in construction of a Clean Heat Standard.

The Northeast Chapter strongly believes that all clean energy sources, including RNG, biofuels, and hydrogen should be eligible for credits within a proposed CHS. Excluding other clean fuels discourages their use, impedes investment in and stifles development of clean energy resource options, narrowing the set of alternatives at this critical moment for the environment. Necessary electrical infrastructure improvements are required to enable the clean energy objectives of Rhode Island reliably and safely. As those improvements are likely to take significant time to implement, decarbonized RNG and biofuels provide a viable solution while Rhode Island constructs the infrastructure necessary to meet its climate goals. Disincentivizing the use of these energy sources during the energy transition puts Rhode Island at risk of failing to meet its climate goals.

[7] Larry Strain. The Time Value of Carbon, Carbon Leadership Forum, University of Washington, May 10, 2017. https://carbonleadershipforum.org/download/35419/?tmstv=1696538222

[8] RI H7782/S2848 §23-23.8.2(2)

Hydrogen must be given full credit within the development of a Clean Heat Standard. The United States Department of Energy believes that the use of "renewable and synthetic fuels, and clean sources of energy as the prime movers for CHP systems can avoid the use of fossil fuels, which will support the integration of CHP into a fully decarbonized energy economy."[9] Accordingly, RNG, biofuels, and hydrogen must be given full credit under the CHS.

Several states including California, Oregon, Washington, Vermont, Colorado allow for utilization of alternative fuels in their transportation sector Low Carbon Fuels Standard or CHS. Rhode Island ought to look to the lessons of experiences of Colorado's investor-owned gas utilities in meeting that state's Clean Heat Standard. According to a recent article in S&P Global, gas utilities Atmos and Black Hills are relying heavily on energy efficiency and renewable natural gas (later, in 2030, hydrogen) to meet the CHS mandates and stay under the cost cap:

> In assessing different clean heat portfolios, the companies {Atmos, Black Hills} ran into a dilemma similar to the one their larger peer, Xcel Energy Inc., encountered when it filed the state's first clean heat plan in August 2023. Achieving the full 22% reduction by 2030 would require far outspending the cost cap imposed on clean heat plans by legislators, or 2.5% of annual retail sales.[10]

We urge that all viable options for meeting our shared concerns be kept on the table. Pre-selecting a subset of technologies and systems, while ruling out other alternative technologies and fuels as eligible measures in the CHS, is not in line with a goal of maximizing emissions reductions and ensuring affordability for customers.

Conclusion

Rhode Island's proposed CHS is not in alignment with its stated mission "to reduce greenhouse gas emissions,"[11] In order to remain truly committed to this mission, all credits given to energy sources and technologies should be linked to the life cycle reduction in greenhouse gas emissions that these solutions provide. Accordingly, the CHS must be technology agnostic, and provide full credits to a broader spectrum of energy sources, such as combined heat and power technology, and low carbon/zero carbon fuels such as hydrogen and RNG, provided that they deliver greenhouse reductions relative to fossil fuels.

Respectfully,

The Northeast Chapter of the Combined Heat and Power Alliance

[9] US Department of Energy, *Industrial Decarbonization Roadmap*, Sep. 2022 at 14, https://www.energy.gov/sites/default/files/2022-09/Industrial%20Decarbonization%20Roadmap.pdf.
[10] Tom DiChristopher, Atmos, Black Hills Rely on Energy Efficiency, RNG in Colo. Clean Heat Plans, January 17, 2024. https://www.spglobal.com/marketintelligence/en/news-insights/latest-news-headlines/atmos-black-hills-rely-on-energy-efficiency-rng-in-colo-clean-heat-plans-80068913
[11] RI H7782/S2848 §23-23.8.2(1)