

Testimony Supporting An Act Relative to the Clean Heat Standard (H.3694)

Joint Committee on Telecommunications, Utilities, and Energy

July 12, 2023

Dear Chair Barrett, Chair Roy, and Honorable Members of the Committee:

My name is Ben Butterworth, and I am the Director of Climate, Energy, and Equity Analysis for Acadia Center.

I am testifying in support of Bill 3694. The bill explicitly states that clean heat measures shall not include the use of hydrogen or biomethane, often referred to as “renewable natural gas” or RNG. It’s critical that a clean heat standard not incentivize the blending of either of these alternative fuels into the gas distribution system. Doing so would significantly impair the state’s ability to cost-effectively decarbonize the building sector. Economy-wide decarbonization modeling studies including the Massachusetts 2050 Decarbonization Roadmap and the Princeton Net-Zero America Project support this conclusion.

While both biofuels and green hydrogen will certainly play a role in helping the Commonwealth achieve net zero emissions, utilization of these limited and valuable alternative fuels to decarbonize the gas distributions system is misguided for a multitude of reasons.

Let’s focus on RNG. It faces several key challenges: Namely limited supply combined with escalating costs and diminishing GHG reduction benefits as RNG production scales nationally. Supply is the chief concern. Even reports from the gas industry are bearish on the potential to produce RNG at scale.

Specifically, the American Gas Association’s 2019 report titled “Renewable Sources of Natural Gas” used extremely optimistic assumptions in their “High Resource Potential” scenario to assess how much RNG could be produced on a national scale if the industry significantly scaled over the next 20 years. This scenario found that, by 2040, there would be enough “waste methane” from sources including landfills, wastewater treatment plants, food waste, and animal manure to produce an amount of RNG equivalent to about 5% of current U.S. natural gas demand – just 5%.

Increasing RNG production beyond this level would require the use of highly controversial resources including energy crops and gasification of agricultural and forest residues. These forms of RNG production that rely on the intentional production of methane simply shouldn’t be on the table for several reasons that are well documented in the scientific literature – lack of any clear GHG reduction benefit, and tradeoffs associated with land use, water use, and food production to name a few. As research by Dr. Emily Grubert highlights, when we intentionally produce methane from biomass, any methane leaks along the RNG supply chain result in a net increase in GHG emissions. And we know that the RNG supply chain is *at least* as leaky as the notoriously leaky natural gas supply chain.

When you consider the overarching goal of economy-wide decarbonization, there are simply much higher value uses of limited biomass resources than RNG production. For example, these same biomass resources can be used to

produce liquid fuels to decarbonize hard-to-electrify sectors like aviation and shipping or can be used to produce firm electricity to complement renewable generation. Hydrogen faces many of the same challenges as RNG as a decarbonization solution for the gas distribution system, but also brings with it issues related to pipeline and end use equipment compatibility that further compromise its potential.

The opportunity cost and stranded asset risk associated with incentivizing hydrogen and RNG as a gas system decarbonization solution via policies like a Clean Heat Standard is simply too high for the Commonwealth to bear.

Thank you for this opportunity to share Acadia Center's views on the bill addressed above under consideration in today's hearing, and I am happy to answer any questions.

Sincerely,

Ben Butterworth
Director of Climate, Energy & Equity Analysis
Acadia Center
bbutterworth@acadiacenter.org
617-742-0054 x111