



Advancing the Clean Energy Future

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House Municipal Government and Housing Committee
Rhode Island State House
82 Smith Street
Providence, RI 02903

Acadia Center Testimony in Support of House Bill 5450, All-Electric Building Act

Chairperson Casey, Vice Chairpersons Fogarty and Speakman, and Members of the Committee,

Acadia Center appreciates the opportunity to provide testimony in support of House Bill 5450, the All-Electric Building Act. Acadia Center is a non-profit research and advocacy organization committed to advancing the clean energy future. Acadia Center's work is characterized by reliable information, comprehensive advocacy, and collaborative, innovative problem-solving.

The Act on Climate requires statewide emissions reductions of 45% below 1990 levels by 2030, 80% by 2040, and net-zero emissions by 2050. Buildings in Rhode Island, solely accounting for residential and commercial heating, are responsible for nearly 30% of our state's greenhouse gas emissions. Currently, the state is not on track to meet the mandated targets in the Act on Climate, and lacks a plan to reduce emissions from buildings. To meet these mandates, we must tackle the transition of our building sector away from fossil fuels. While a small proportion of Rhode Island's building stock is new construction, it is critical that this new generation of buildings take advantage of the most energy efficient technologies and lead the way for a fossil fuel free future. The All-Electric Building Act ensures that our new buildings do not lock in fossil fuel systems for decades to come.

While the upfront and operational costs of gas to all-electric retrofits (of existing buildings) presents some barriers, studies show that all-electric new construction has reached cost parity with fossil fuel infrastructure.¹ Heat pumps outsold gas furnaces nationally beginning in 2022.² For customers who are not already attached to the gas system, which includes much of western Rhode Island, as well as towns like Jamestown and Little Compton, all-electric construction becomes even more cost-effective. These communities depend largely on fuel oil and other delivered fuel for heating and have the most to gain in lifetime operational energy savings and costs. A study from the National

¹ Walsh, Michael. Groundwork Data. "New Construction and the Future of Gas in Massachusetts". 2024.
<https://static1.squarespace.com/static/62e94d16a77e1e191eafe4ae/t/65c509b847ec46459341d78d/1707411896890/New+Construction+and+the+Future+of+Gas+in+MA+-+2.7.24.pdf>. Accessed 12 March 2024.

² Takemura, Alison F. "Heat pumps outsold gas furnaces again last year — and the gap is growing". 13 February 2024. Canary Media.
<https://www.canarymedia.com/articles/heat-pumps/heat-pumps-outsold-gas-furnaces-again-last-year-and-the-gap-is-growing>. Accessed 20 March 2024.

Renewable Energy Lab shows that, even for existing homes, between 72% and 85% of fuel oil and propane-fueled homes would see a positive cash flow by switching to heat pumps.³

Despite our current reality of the higher cost of electricity to gas, heat pumps are far more efficient than gas furnaces. A gas furnace has to *generate* heat, losing some percentage of usable heat for an efficiency below 100%. In contrast, air source heat pumps are *moving* heat, often for an efficiency of 260% or more (on an annual basis). The efficiency of air source heat pumps has and will continue to get even better over the coming years. For institutional and public building owners, as well as longtime tenants and homeowners, this lifetime operational efficiency is likely to result in and accumulate reduced operational expenses. All-electric buildings offer the added benefits of highly efficient cooling, improved indoor air quality, and significantly reduced emissions. Further, as the electric grid gets greener each year, all electric buildings also get greener.

Due to the fluctuating variables of gas and electric prices and construction costs, the bill includes an assessment of the impact of all-electric provisions on housing and electricity affordability. While studies in the Northeast point to the cost effectiveness of all-electric new construction, we must be vigilant to any unique local impacts to affordable housing development and energy cost burden for low- and moderate- income households. We see a close collaboration with the housing and energy justice communities as critical to Rhode Island's shift to an all-electric future. The All-Electric Building Act is an essential step to ensuring that our new buildings lead the way to an affordable fossil-free future.

Thank you again for your consideration of this important bill to tackle emissions in the building sector.

Sincerely,

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³ Eric J.H. Wilson, Prateek Munankarmi, Brennan D. Less, Janet L. Reyna, Stacey Rothgeb. "Heat pumps for all? Distributions of the costs and benefits of residential air-source heat pumps in the United States." . U.S. Department of Energy's National Renewable Energy Laboratory (NREL). Joule, 2024.