



March 21, 2024

House Environment and Natural Resources Committee
Rhode Island State House
82 Smith Street
Providence, RI 02903

Acadia Center Testimony in Support of House Bill 7617, the Building Decarbonization Act of 2024

Chairperson Bennett and Members of the House Environment and Natural Resources Committee,

Acadia Center appreciates the opportunity to provide testimony in support of House Bill 7617, the Building Decarbonization Act of 2024, our organization's top priority this legislative session. 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. This starts with meaningful investments in energy efficiency and continues with the electrification of our heating and other appliances.

The Building Decarbonization Act of 2024 is a measured approach to tackling carbon emissions in both existing and new buildings. Over a dozen local as well as national organizations have signed on in support of the act, and include not only climate organizations, but also organizations focused on workforce development, local economic development, and social and economic justice.

Benchmarking Tackles Energy Waste and Reduces Energy Costs

First, the bill proposes benchmarking for large existing buildings, requiring the tracking and reporting of energy usage in large public buildings and then private buildings in two phases. Benchmarking is a no-brainer for tackling energy waste and combatting rising energy costs, and is a widespread best practice of governments, institutions, and private companies who manage properties. Equipped with a better understanding of their utility bills and energy consumption, building owners can then leverage data to make cost-effective investments that will save them money and reduce their energy usage and thus emissions. Following three years of collecting baseline data, the bill proposes that the Office of Energy Resources (OER) create a building performance standard to guide these large building owners through setting long-term energy reduction and emissions targets. A building performance standard is critical to charting a path to achieving building emission reductions aligned with Rhode Island's net zero goal.

Benchmarking targets the largest buildings to gain the greatest impact when it comes to potential for energy and emissions reductions. In the first year, reporting requirements will apply only to public buildings larger than 25,000 square feet. In the second year, private buildings larger than 50,000 square feet will be required to report, and in the third year, that will expand to private buildings larger than 25,000 square feet. What kinds of buildings are about this size? The Rhode Island DMV headquarters has nearly 70,000 square feet of space spread across three floors – it would report in year 1. URI's ice arena and RIC's Donovan Dining Center are both around 60,000 square feet and would also report in year 1. A private building that is just over 50,000 square feet is the Arcade in Providence, so that would report in year 2. On the smaller side, the Dean Hotel in Providence occupies a roughly 25,000-square-foot space across its guest rooms and commercial spaces, so it would report in Year 3.

I have a deep familiarity with building benchmarking and the use of Energy Star Portfolio Manager due to my previous roles at the City of Providence. Over the past decade, an Energy Manager has tracked the city's utility bills, matching meters to usage, identifying opportunities for behavior change and fast ROIs on energy efficiency investments, and saving the city tens of millions of dollars. During my most recent tenure at the Department of Sustainability, we provided technical assistance for large building owners in Providence to do the same through the voluntary energy challenge program, RePowerPVD. Large building owners set up their utility accounts in Energy Star Portfolio Manager, established a baseline of energy usage, and then reported annually to the city through the Portfolio Manager platform. Our team prepared to expand capacity for additional technical assistance in preparation for the adoption of the city's mandatory building energy reporting ordinance, which passed last year. Providence's ordinance goes slightly farther to apply to all private buildings larger than 50,000 square feet in the first year and buildings larger than 20,000 square feet in the second year. Providence's ongoing implementation of the law will serve as an ideal example for OER.

All-Electric New Construction Cost Effective with Lifetime Operational Savings

Second, the bill proposes tiers of all-electric new construction, from electric-ready requirements to requirements for public buildings and the local approval of all-electric requirements, to ultimately requiring that all new construction statewide be all-electric, with some exceptions for commercial and industrial uses. 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.

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 and that, for newly constructed homes, heat pumps are the most cost-effective option as compared to all fossil fuels.² Heat pumps outsold gas furnaces nationally beginning in 2022.³ 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 allows for even more savings. These communities depend largely on fuel oil and other delivered fuel for

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 Billimoria, Sherri, et al. "The Economics of Electrifying Buildings." Rocky Mountain Institute (RMI), 2018. <https://rmi.org/insight/the-economics-of-electrifying-buildings/>. Accessed 12 March 2024.

³ 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.

heating and have the most to gain in lifetime operational energy savings and costs. A study from the National 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.⁴

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 almost certain 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 critical provisions for the assessment of the impact of all-electric provisions on housing and electricity affordability. While studies in the Northeast, and specifically Massachusetts and Rhode Island, are unanimous in the cost effectiveness of all-electric construction, we must be vigilant to any unique local impacts to affordable housing development and energy cost burden for low- and moderate- income households. In collaboration with the national think tank Win Climate, we are currently commissioning a study on the cost of all-electric new construction specific to Rhode Island, for both single-family and multi-family residential construction. 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 Building Decarbonization Act is an essential first step to transitioning our buildings away from fossil fuels in order to meet our state's climate mandates. We cannot allow new buildings to lock in fossil fuel systems for decades to come. And by tracking energy usage and building performance, large public and private building owners can lower energy costs and chart a path toward investing in energy efficiency and electrification. Both policy approaches offer significant opportunities for reducing energy costs, in addition to reducing emissions, for building owners and users.

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

Sincerely,

Emily Koo
Senior Policy Advocate and Rhode Island Program Director
ekoo@acadiacenter.org
401.276.0600 ext.402

⁴ 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.