

MEMO

CONSULTANT TEAM

TO: Energy Efficiency Council
FROM: EEC Consultant Team
CC: Office of Energy Resources
DATE: July 17, 2025
RE: C-Team Comments on Rhode Island Energy Old Mill Lane Compliance Filing



INTRODUCTION

On August 22, 2024, the Energy Facility Siting Board (EFSB) approved a five-year license for a liquefied natural gas (LNG) vaporization facility in Portsmouth, Rhode Island (the “Old Mill Lane LNG Facility”), to address natural gas supply constraints on Aquidneck Island¹. The facility is intended to serve as a backup during periods of high demand or pipeline disruptions, helping to prevent service interruptions during extreme cold. While the EFSB recognized that a robust demand response and energy efficiency program might reduce or eliminate the need for the facility, it found the current evidence insufficient to support that conclusion. As a result, the EFSB directed Rhode Island Energy (the “Company”) to develop and submit a targeted plan exploring such alternatives, leaving it to the Public Utilities Commission (PUC) to determine whether such a program should be implemented and funded through gas distribution rates.

In complying with the EFSB’s Order, the Company filed its analysis and report, performed by Energy + Environmental Economics (E3) on June 1, 2025². The analysis examines the feasibility of using non-pipes alternatives (NPAs) to address the projected gas capacity shortfall on Aquidneck Island. The report concluded that, while it is technically feasible to use NPAs to address the shortfall, it would require levels of heat pump adoption not yet seen in the United States, and would not pass either societal cost test (SCT) or utility cost test (UCT). The Consultant Team (C-Team) reviewed the study’s data sources, methodology, and assumptions and presents our comments in this memo.

SUMMARY OF E3 STUDY

The study looks at three different scenarios for a potential NPA:

- A **Lower Cost Scenario** that significantly relies on efficient gas boilers, furnaces, and envelope improvements
- A **No New Fossil Fuel Equipment Scenario** that relies almost entirely on heating electrification (There is still gas equipment being purchased on the island, but this equipment is not being incentivized through the NPA)

¹ The EFSB’s Order related to this matter is available online at:

<https://ripuc.ri.gov/sites/g/files/xkgbur841/files/2025-05/SB-2021-04%20-%20Decision%20and%20Order%20-%205-12-25.pdf>

² Available online at: <https://ripuc.ri.gov/sites/g/files/xkgbur841/files/2025-06/25-16->

[NG%20Old%20Mill%20Lane%20-%20Pre-filed%20Direct%20Testimonies%20of%20Aas%20and%20Gresham%20-%2006-02-2025.pdf](https://ripuc.ri.gov/sites/g/files/xkgbur841/files/2025-06/25-16-NG%20Old%20Mill%20Lane%20-%20Pre-filed%20Direct%20Testimonies%20of%20Aas%20and%20Gresham%20-%2006-02-2025.pdf)

- An **Expanded Electrification Scenario** that is about halfway in-between the other two scenarios

In addition, given significant uncertainties in likely adoption rates under different incentive amounts, each scenario looks at a low customer uptake case and a high customer uptake case. The No New Fossil Fuel Equipment Scenario, for example, assumes that 30% of annual new heating equipment sales are whole building heat pumps in the low customer uptake case, and that 60% of sales are heat pumps in the high customer uptake case.

The study finds that the capacity shortfall is successfully met by 2035 in the high customer uptake case for all three scenarios but is not met in the low customer uptake case for any of the scenarios. It also finds negative net benefits for all three scenarios using both the UCT and the SCT. For example, the UCT net benefits of the high uptake case range from negative \$118 million in the Lower Cost Scenario to negative \$163 million in the No New Fossil Fuel Equipment Scenario.

CONSULTANT TEAM COMMENTS

Overall, the study is well researched and put together. The definitions of the scenarios, data sources, and methodologies are reasonable, and the specific measures analyzed make sense for an NPA program. That said, we have a few comments in regard to the cost-effectiveness methodology, cost assumptions, and overall conclusion. This section provides our comments in each of these categories.

COST EFFECTIVENESS

Our most notable concern about the study is that it does not appear to consider the cost of the alternative solution that would be needed if no NPA is done. E3 uses avoided cost values from the latest AESC study for New England. This is appropriate for general efficiency programs that aren't designed as alternatives to specific needed investments, but, for gas, largely consists of the avoided commodity costs from having to purchase less wholesale gas. On Aquidneck Island, significant expenditures in gas infrastructure would presumably be needed to ensure sufficient supply if the NPA does not move forward. These costs need to be compared to the net costs of the NPA to really decide on the cost-effectiveness of a program.

COST ASSUMPTIONS

It is not clear from the available material what components are included in the cost assumptions for electrification. For example, it is stated that the electrification projects assume some envelope improvements to reduce load. However, if a house is fully electrifying its heating system, then there are no additional reductions in gas peak load in envelope improvements, and so it does not seem that these should be funded through an NPA. In addition, it is not clear whether or to what extent E3 considered the avoided replacement costs of not having to buy a new furnace, boiler, and/or air conditioner.

ADOPTION ASSUMPTIONS

We believe that E3's conclusion that achieving the necessary reductions "would require customer adoption at unprecedented levels, far exceeding what current programs have achieved to date" has the potential of overstating the infeasibility of the achieving a 60% market share of new heat pump units.

While it is true no other large-scale program has achieved this adoption, it is also true that no other program has consistently offered incentives covering almost the whole installed cost of the system as is modeled in the E3 study. There have been some examples – particularly in New York State – of utilities offering these levels of incentives and achieving extremely high adoption rates. In addition, many states have official targets – through legislation and/or executive orders – for heat pump adoptions that implies higher market share than that envisioned in the high uptake case of the study.