

Cost-Effectiveness Report:

Rhode Island Energy's 2025 Energy Efficiency Plan

An Assessment and Report by



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Consultant Team Working on Behalf of the



Submitted to the Rhode Island Public Utilities Commission

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Summary of Consultant Team Findings

The Energy Efficiency and Resource Management Council (the “Energy Efficiency Council (EEC)” or the “Council”) Consultant Team (C-Team) finds that the *Annual Energy Efficiency Plan for 2025* (the “2025 EE Plan” or the “Plan”), reviewed and endorsed by the Council on September 26, 2024, and filed October 1, 2024 by Rhode Island Energy (“the Company”), is cost-effective according to both the “Rhode Island Test” (RI Test) and the intrastate version of the RI Test.

The Council submits these findings in compliance with the Least Cost Procurement (LCP) Standards adopted on July 27, 2023 by the Rhode Island Public Utilities Commission (PUC):

“The Council shall prepare memos on its assessment of the cost effectiveness of the EE Plans, pursuant to R.I. Gen. Laws §39-1-27.7(c)(5), and submit them to the PUC no later than three weeks following the filing of the respective EE Plans with the PUC, or in accordance with the procedural schedule set in the applicable docket.”

These findings and the remainder of this report were distributed to the Council on October 10, 2024 and presented to the Council by its C-Team at its October 17, 2024 meeting, where they were approved and adopted in a vote of the Council.

I. Introduction

This report was prepared by the Council’s C-Team to help fulfill the requirements of R.I.G.L. § 39-1-27.7(c)(5) related to the PUC’s approval of the Company’s three-year procurement plan and related annual energy efficiency plans. Since 2010, the Council has directed the C-Team to prepare this report for all three-year and annual plans filed with the PUC. This version addresses the Company’s proposed *Annual Energy Efficiency Plan for 2025* (the “2025 EE Plan” or the “Plan”), reviewed and endorsed by the Council on September 26, 2024. This report submits our finding that the 2025 EE Plan is cost-effective as evidence to the PUC. It also describes the nature and process of the review.

In order to assess the cost-effectiveness of the 2025 EE Plan, the Council’s C-Team reviewed the details of the Company’s Benefit-Cost Models (“BC Models”) for each draft of the Plan to ensure that they accurately reflect the proposed program designs described in the Plans’ narratives, recent evaluation results, and relevant Technical Reference Manual (TRM) inputs. For the 2025 EE Plan, the C-Team reviewed and provided detailed comments to the Company on the first draft narrative on June 28th and provided technical comments on the first draft BC Models on July 22nd. The C-Team also engaged in a detailed review of the second draft of the EE Plan narrative and BC Models and provided further comments to the Company on August 23rd. Following the Company’s distribution of the final draft of the Plan on September 6th, the C-Team conducted its final review and provided content on its findings to help inform the Council ahead of its

September 26th vote to endorse the 2025 EE Plan. Finally, the C-Team conducted a final review of the BC Models associated with the filed version of the Plan which was submitted to the PUC on October 1st.

II. Cost-Effectiveness Review

Throughout the 2025 EE Plan development process, the C-Team reviewed several iterations of the Plan to assess whether the cost-effectiveness analyses reflect recent evaluation results and relevant TRM inputs and are otherwise accurate.

As a result of these activities, the C-Team communicated with analysts and sector managers from the Company to address issues and questions related to program design and cost effectiveness. Our key findings are that:

- The modeling and cost-effectiveness assumptions reviewed were sufficiently supported for the portfolio proposed by the Company, either in their original form or after iterating based on review provided during this process. Any issues identified in the BC Models or in the EE Plan related to cost-effectiveness analysis were addressed at the portfolio and program level by the Company’s analyst team.
- The Company appropriately used new results from both Rhode Island and other relevant evaluations that were recently completed to update multiple measure baselines, net-to-gross ratios, measure lives, and other measure assumptions.

The filed EE Plan present the cost-effectiveness of the proposed programs using the RI Test. Table 1, below, summarizes the results in terms of benefit-cost ratio. Note that for the Plan, the Company is reporting the RI Test without economic benefits included. This is a result of deliberations that occurred during the hearings on the 2022 EE Plan in Docket 5189. The Company is also reporting the same RI Test noted above, but with benefits excluded for those that are not solely allocated to the Company. This is included to be responsive to the updated LCP Standards that were approved by the PUC on July 27th, 2023. Even when considering the RI Test without the economic benefits and benefits that are allocated to other jurisdictions, both the electric and gas portfolios are robustly cost-effective. For the 2025 Plan as proposed, electric portfolio benefits are approximately 196% of total costs of the investments, while gas portfolio benefits are 182% of costs.

Table 1. RI Test and RI Test (Intrastate) BCR Values

Portfolio	RI Test	RI Test (Intrastate)
Electric	1.96	1.70
Gas	1.82	1.64

The RI Test seeks to include a more complete set of benefits that better reflects state policy compared to the intrastate version of the RI Test. Importantly, the benefits associated with efficiency programs, including reductions in greenhouse gas (GHG) emissions, have been included by relying on the 2024¹ version of the *Avoided Energy Supply Costs in New England* report (AESC). Specifically, the EE Plan proposes to utilize the New England Marginal Abatement Cost (MAC) of \$172.47 per short ton, levelized over a 15-year period (in 2024 dollars) to monetize the non-embedded value of greenhouse gas emissions reductions generated by the Plan's activity. This accounts for the value of near-term carbon reduction that are likely to occur given current and likely future carbon regulation.

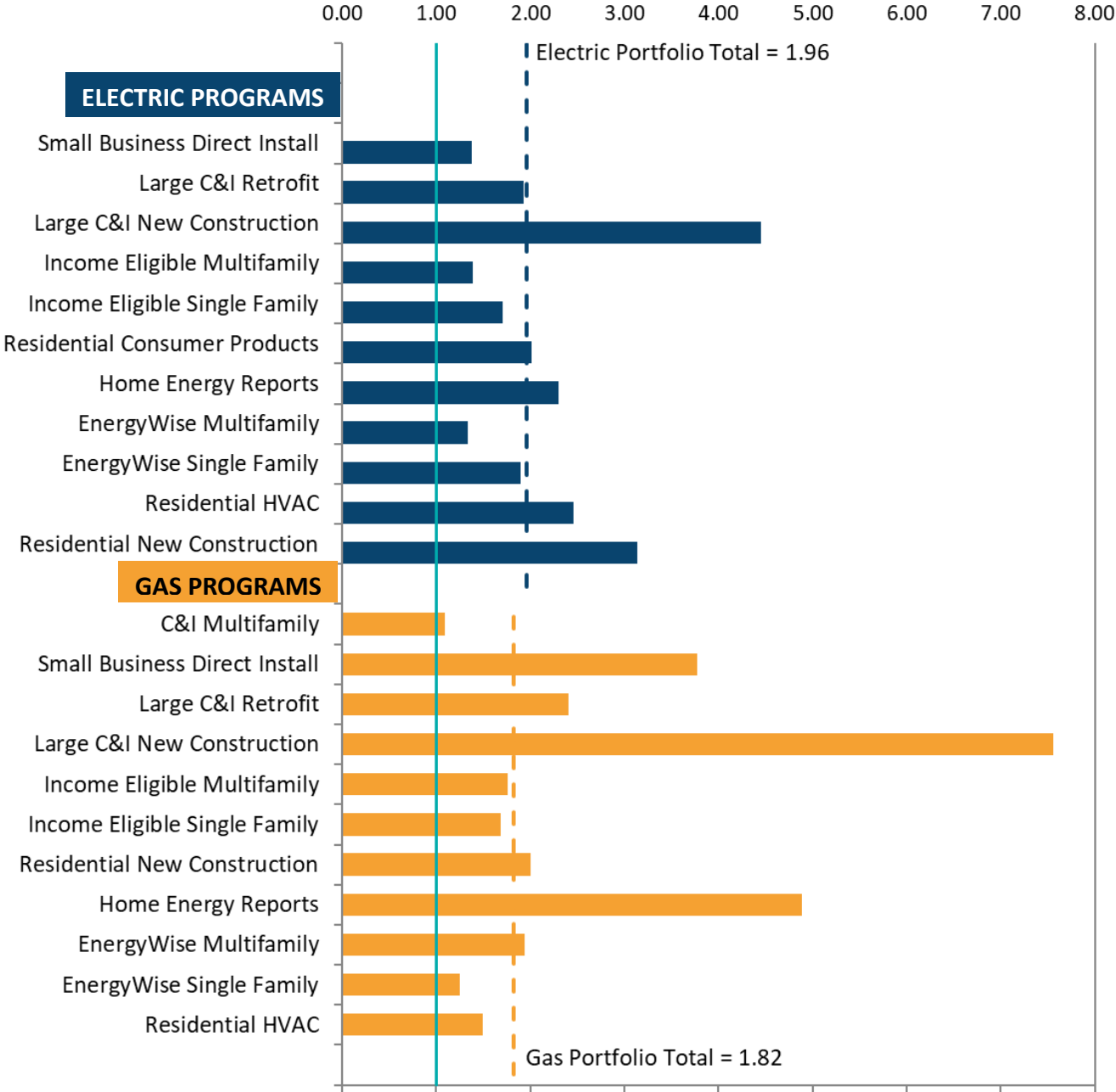
Increased spending from installing energy efficiency measures creates jobs in the local economy. Participant and program spending on efficiency often has positive benefits to the local economy as a greater portion of total efficiency costs are spent locally than is the case for the costs of additional supply. Calculation of these benefits typically requires a regional economic model. Such a model was executed for the Company in 2014, and updated in 2019, the results of which form the basis for the economic benefits historically included in the RI Test.² During review of the economic development benefits in the 2022 EE Plan in Docket 5189, concerns were raised regarding whether the economic development benefits are capturing some of the benefits reflected in other RI Test categories. As a result, it was determined that economic development benefits should be reported separately from, rather than added together with, the other RI Test benefit and cost categories, to avoid any potential double counting. Consequently, economic development benefits are not part of the calculation of RI Test BCRs in this report.

The C-Team has reviewed the quantification of the GHG reduction benefits calculated for the EE Plan. Figure 1 presents the results of the RI Test for the 2025 EE Plan in graphical form, and again demonstrates that both the electric and natural gas efficiency programs have a BCR greater than or equal to 1.0, as required by the PUC-approved LCP Standards and R.I.G.L. § 39-1-27.7 (c)(5).

¹ The AESC 2024 Study can be found at: <https://www.synapse-energy.com/sites/default/files/inline-images/AESC%202024%20May%202024.pdf>

² Macroeconomic Impacts of Rhode Island Energy Efficiency Investments: REMI Analysis of National Grid's *Energy Efficiency Programs*, National Grid Customer Department, November, 2014.

Figure 1. RI Test Benefit Cost Ratios by Program (2025)



Figures 2 and 3, below, show the major components of both the costs and benefits of the portfolios for the 2025 EE Plan, reflecting the version of the RI Test that excludes economic development benefits. As noted in the table above, the electric and gas portfolios are both cost-effective using this version of the RI Test. On the cost side, note that the BCR calculation includes an allowance for the Company's shareholder incentive at the nominal or "target" value.

Figure 2. 2025 Planned Electric Costs and Benefits

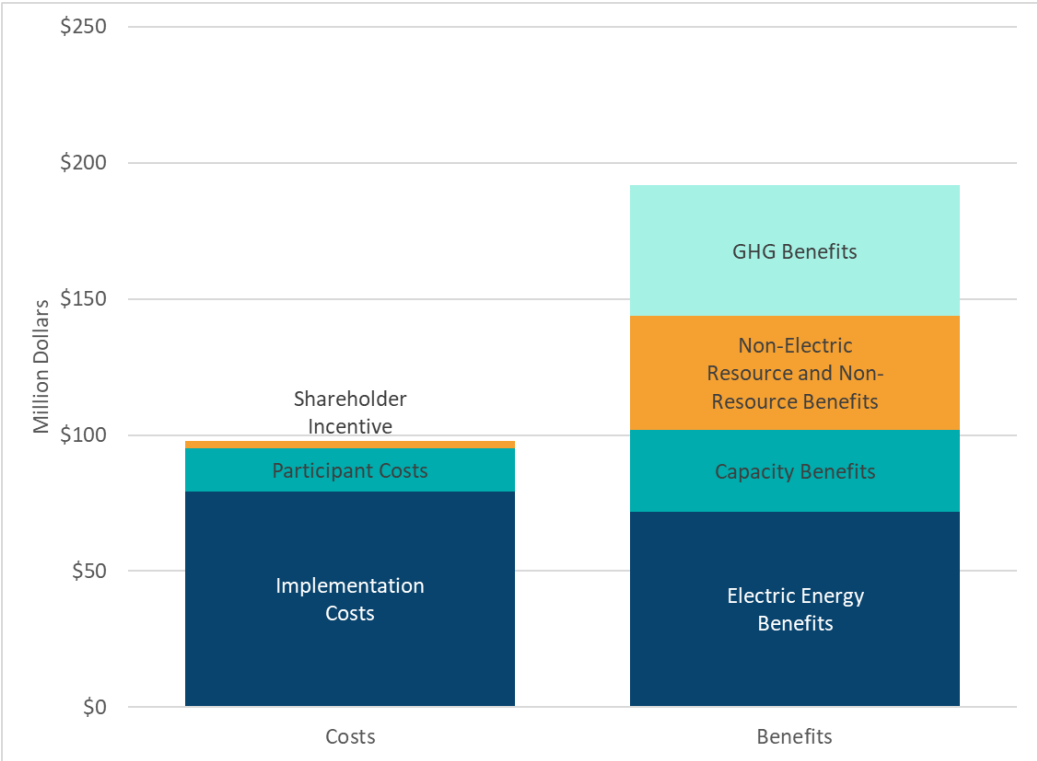


Figure 3. 2025 Planned Gas Costs and Benefits



The C-Team also reviewed the Company's assessment of the cost of efficiency as compared to alternatives; the LCP standards require that efficiency be lower cost than acquisition of additional supply. The Plan uses the RI Test as an appropriate starting point to determine which costs to include in this assessment. This test captures the aspects of the Docket 4600A Framework that pertain to energy efficiency programs. The source for many of these values is the aforementioned 2024 AESC Study. The benefits in the RI Test are associated with the cost savings to Rhode Island from investing in energy efficiency instead of investing in additional energy supply. For the purpose of the RI Test, these values are described as a benefit of energy efficiency in the form of avoided costs. It is reasonable to assume that these avoided cost values can also be applied as the costs of procuring additional energy supply for the purpose of this assessment. The RI Test also details what is considered a cost of energy efficiency. These are costs incurred by the utility to implement the Plan.

The Plan enumerates all of the cost and benefit categories included in the RI Test and indicates which are included as a cost of efficiency, which are included as a cost of supply, and which are excluded from this comparison. The major categories that are excluded are economic development benefits, non-energy resource impacts such as water and sewer cost reductions, and other non-energy impact benefits other than those associated with income eligible rate discounts and reductions in arrearages.

For the 2025 Plan, the Company conducted four scenarios for this analysis and presented Scenario D as the primary lens for assessing the cost of efficiency as compared to the cost of supply. Notably, all scenarios yield the same result, where the electric and gas portfolios are less than the cost of supply. Tables 2 and 3 reflect this finding, which builds on the discussion in Section 6.6.2 of the Plan.

- A. Total – Aligns with historical practice of including all categories for the cost of supply and cost of energy efficiency
- B. Intrastate with Delivered Fuels and Participant Costs
- C. Intrastate without Delivered Fuels and with Participant Costs
- D. Intrastate without Delivered Fuels and without Participant Costs

Based on our participation in the discussions regarding this comparison and our review of the Plan, we believe that the Company has appropriately assessed the cost of efficiency and the cost of supply and determined that the former is less than the latter.

Consistent with the Commission's Order on the 2024 Plan, the Company also assessed the cost of individual programs compared to the cost of supply in the intrastate calculation which excludes delivered fuels (Scenario D as noted above) and provided justification for why program that did not meet this standard should be approved nonetheless. The Council and the C-Team

collaborated with the Company on the development of a “justification framework”, which is detailed in Section 6.6.3 of the Plan. The Council is supportive of the Company’s approach for justifying the approval of individual programs which have costs that are greater than the cost of supply when excluding delivered fuels and out of state benefits.

In summary, the Council’s C-Team concludes that the 2025 EE Plan meets the cost-effectiveness requirements of R.I.G.L. § 39-1-27.7(c)(5), of the LCP Standards, and of guidance provided by the Commission in Docket 23-35-EE.

Table 2. Comparison of Cost of Energy Efficiency and Cost of Supply – Electric Portfolio

Portfolio	Total	Intrastate w/ Delivered Fuels and w/ Participant Costs	Intrastate w/o Delivered Fuels and w/ Participant Costs	Intrastate w/o Delivered Fuels and w/o Participant Costs
Cost of Supply (\$M)	\$168.5	\$143.3	\$118.4	\$118.4
Cost of EE Programs (\$M)	\$98.1	\$98.1	\$98.1	\$81.9
Difference (\$M)	\$70.4	\$45.2	\$20.3	\$36.4

Table 3. Comparison of Cost of Energy Efficiency and Cost of Supply – Gas Portfolio

Portfolio	Total	Intrastate w/ Delivered Fuels and w/ Participant Costs	Intrastate w/o Delivered Fuels and w/ Participant Costs	Intrastate w/o Delivered Fuels and w/o Participant Costs
Cost of Supply (\$M)	\$61.9	\$54.5	\$54.5	\$54.5
Cost of EE Programs (\$M)	\$42.2	\$42.2	\$42.2	\$35.0
Difference (\$M)	\$19.6	\$12.3	\$12.3	\$19.5

III. Conclusion

For the reasons stated herein, the Council and the Council’s C-Team find that Rhode Island Energy’s *Annual Energy Efficiency Plan for 2025* is cost-effective and lower cost than the acquisition of additional supply pursuant to R.I.G.L. § 39-1-27.7 (c)(5).