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December 4, 2023

VIA ELECTRONIC MAIL AND HAND DELIVERY

Luly E. Massaro, Clerk
Rhode Island Public Utilities Commission
89 Jefferson Boulevard
Warwick, RI 02888

Re: Docket No. 23-35-EE – 2024-2026 Three Year Energy Efficiency Plan and 2024 Annual Energy Efficiency Plan
Responses to PUC Data Requests – Set 4 (Full Set)

Dear Ms. Massaro:

On behalf of The Narragansett Electric Company d/b/a Rhode Island Energy ("Rhode Island Energy" or the "Company"), I have enclosed the Company's responses to the Fourth Set of Data Requests issued by the Public Utilities Commission in the above-referenced docket. Please note the Company is correcting its response to data request PUC 4-2 originally filed on November 27, 2023.

Please contact me if you have any questions. Thank you for your attention to this matter.

Very truly yours,

Leticia Pimentel

Leticia C. Pimentel

cc: Docket 23-35-EE Service List

Certificate of Service

I hereby certify that a copy of the cover letter and any materials accompanying this certificate were electronically transmitted to the individuals listed below.

The paper copies of this filing are being hand delivered to the Rhode Island Public Utilities Commission and to the Rhode Island Division of Public Utilities and Carriers.

Leticia Pimentel

Leticia Pimentel

December 4, 2023
Date

Docket No. 23-35-EE – Rhode Island Energy's EE Plan 2024-2026 Three-Year Plan and 2024 Annual EEP
Service list updated 10/4/2023

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PUC 4-1

Request:

On Bates page 78, the Company explains that it "looked at the measure-level to analyze which gas efficiency measures were not cost-effective. These gas efficiency measures, primarily in the residential sector, were reduced or removed entirely from the Plan where prudent. The funds from these gas efficiency measures were shifted to more cost-effective gas measures within the residential sector or to the C&I sector." In response to Division 1-3 parts c and d, the Company indicated that between the 2023 and 2024 Gas Efficiency Plans, it shifted $135,150 away from certain non-cost-effective gas measures, $97,689 of which was shifted towards more cost-effective gas measures. Please confirm that when the Company references its efforts to "right-size" gas efficiency incentives in the 2024 Gas Efficiency Plan, it is only referring to the budget adjustments described in response to Division 1-3. If there are additional adjustments that the Company made as part of its effort to right-size" gas efficiency incentives, please describe.

Response:

Yes, the Company is only referring to the budget adjustments described in response to Division 1-3 and not to any other additional adjustments.

PUC 4-2 (Correction)

Request:

In response to PUC 1-17, the Company indicated that the "LED - Interior SI" measure proposed to be offered through the 2024 Small Business Direct Install (electric) program has a benefit-cost ratio of 0.89. The proposed incentive budget associated with that measure is $2,387,189, which appears to be 34% of the total Rebates and Customer Incentives budget for the 2024 Small Business Direct Install (electric) program. Please recalculate the benefit cost ratio of the 2024 Small Business Direct Install program (electric) if the "LED - Interior SI" measure is removed from the program. In your response, present the interstate and intrastate benefit cost ratios, consistent with the sensitivity analysis performed in Tables E-5 Primary and E-5A.

Original Response:

Please see the table below for recalculated benefit cost ratios of the 2024 Small Business Direct Install program (electric) if the "LED - Interior SI" measure is removed, consistent with the sensitivity analysis performed in Tables E-5 Primary and E-5A.

Program	RI Test Benefit / Cost	Intrastate RI Test Benefit / Cost
Small Business Direct Install (w/o "LED - Interior SI" measure)	1.17	0.92

Note: Benefit-cost ratios presented does not include qualitative factors or value associated with economic development.

As discussed in the Company's response to PUC 3-8, lighting measures such as LED fixtures - whether screw-in (SI) or hardwired (HW) - and lamps, help the Company gain access to customers' businesses/facilities ("get a foot in the door") to promote more cost-effective energy efficiency measures. The Company and its implementation vendors have found that energy-efficient lighting resonates with customers, and provides an important analogy for customers to understand energy savings from more technically complex measures. This specific measure – LED-Interior SI – has been found to be a strong hook to encourage customers to progress through the Small Business Direct Install program. Once in the door, energy auditors will recommend the most cost-effective measures that best meet lighting needs.

To date, the Small Business Direct Install program has installed approximately 13,500 LEDs, approximately 90% of which are LED fixtures with a benefit-cost ratio greater than 1. This conversion rate suggests the benefit-cost ratio that includes the planned level of the LED-Interior SI measure may be considered a lower-bound of program performance. Please see the table below for recalculated benefit cost ratios of the 2024 Small Business Direct Install program

PUC 4-2, Page 2 (Correction)

(electric) if the "LED - Interior SI" measure is removed, consistent with the sensitivity analysis performed in Tables E-5 Primary and E-5A.

Corrected Response:

Program	RI Test Benefit / Cost	Intrastate RI Test Benefit / Cost
Small Business Direct Install (w/o "LED - Interior SI" measure)	1.11	0.86

Note: Benefit-cost ratios presented does not include qualitative factors or value associated with economic development.

As discussed in the Company's response to PUC 3-8, lighting measures such as LED fixtures - whether screw-in (SI) or hardwired (HW) - and lamps, help the Company gain access to customers' businesses/facilities ("get a foot in the door") to promote more cost-effective energy efficiency measures. The Company and its implementation vendors have found that energy-efficient lighting resonates with customers, and provides an important analogy for customers to understand energy savings from more technically complex measures. This specific measure – LED-Interior SI – has been found to be a strong hook to encourage customers to progress through the Small Business Direct Install program. Once in the door, energy auditors will recommend the most cost-effective measures that best meet lighting needs.

To date, the Small Business Direct Install program has installed approximately 13,500 LEDs, 92% of which are LED fixtures with a benefit-cost ratio greater than 1. This conversion rate suggests the benefit-cost ratio that includes the planned level of the LED-Interior SI measure may be considered a lower-bound of program performance. Upon further consideration, the Company plans to re-allocate the incentive dollars for the LED SI and HW measures to reflect the actual installations in 2023 to date.

This revision will not affect the total budget of the 2024 Small Business Direct Install (electric) program. It reduces the LED - Interior SI" measure proposed incentive budget from $2,387,189 to $329,253. The LED – Interior HW" measure proposed incentive budget increases from $1,731,426 to $3,789,362, representing 92% of the total proposed incentive budget for these LED measures. The benefit-cost ratios above reflect this adjustment. The Company will provide updated tables for program years 2024 through 2026 prior to the hearing reflecting this re-allocation between the two interior LED measures.

PUC 4-3

Request:

In response to Division 3-11, the Company describes the limitations it faces in tracking the cost of remediating pre-weatherization barriers in the Income Eligible programs. The Company writes "these costs typically show up as 'General Labor' or 'General Repair' in our records, because the Company's data systems are set up to track traditional energy efficiency measures that have direct energy benefits, as opposed to pre-weatherization barriers." Are the Company's data systems incapable of tracking pre-weatherization expenses or simply not configured to do so. Please fully describe your answer.

Response:

The Company's data systems are not configured to do so. The Company is working towards implementing better tracking of pre-weatherization expenses as part of its new data management system. This process involves making modifications to other systems, such as Hancock, which the CAP Agencies and DHS use as their primary data management system.

PUC 4-4

Request:

Consider the following hypothetical: Company forecasts indicate that it will need to serve 100 kWh of annual electric demand. The Company develops an electric energy efficiency portfolio to annually serve all 100 kWh of electric demand with energy efficiency. All measures in the portfolio have a single-year measure life. Explain the following:

a. Using the Company's proposed carbon accounting methodology, show the value of avoided carbon emissions associated with the 100 kWh of electric energy savings that the Company will use in its benefit cost analysis, for the following years: 2027, 2030, and 2034. Provide all underlying calculations and assumptions.

b. Using the Company's proposed carbon accounting methodology, show the value of avoided carbon emissions associated with the 100 kWh of electric energy savings that the Company will use in its cost of supply analysis, for the following years: 2027, 2030, and 2034. Provide all underlying calculations and assumptions.

c. If the answers to parts a and b are the same, explain why the Company believes it appropriate to utilize the same methodology to calculate the value of avoided carbon emissions from electric energy savings for both the benefit cost analysis and the cost of supply analysis. In your response, clarify what assumptions the Company is making about what value of carbon is embedded in the electric market before 2033 vs. after 2033.

Response:

a. Any measure currently in the electric portfolio for 2024 could deliver 100 kWh of electric savings for one year. To answer this question, the Company selected the Large Commercial C&I measure "Process, Cool Pump" from the 2024 Plan.[1] The Company's benefit-cost model was used to produce the value of non-embedded and embedded avoided carbon emissions associated with 100 kWh of electric energy savings for single-year life measures installed in 2027, 2030, and 2034. Please see the tables below for the value of non-embedded and embedded avoided carbon emissions using the above methodology. Please note, the 2034 carbon value is $0 because of the

[1] This measure was selected from among several C&I measures (which are planned using kWh units) that do not have any associated fuel savings. The quantities for the measure were modified to equal 100 kWh of gross annual savings and the measure life was changed to 1 year. Since performance characteristics vary among measures, the quantitative results presented below will differ depending on the selected measure. Since the hypothetical focuses on the comparison between parts a and b, specifying the performance characteristics is not critical.

incorporation of the Renewable Portfolio Standard assumption that all electric energy comes from renewable sources starting in 2033. The 2027 and 2030 carbon monetization factors used are single-year avoided costs sourced from the 2021 AESC User Interface and inflated to 2024 dollars.

Measure Year	Non-Embedded Carbon Value
2027	$3.78
2030	$3.07
2034	$0.00

Measure Year	Embedded Carbon Value
2027	$0.26
2030	$0.26
2034	$0.00

b. The value of avoided carbon emissions associated with the 100 kWh of electric energy savings that the Company would use in its cost of supply analysis for a single-year measure life installation in 2027, 2030, and 2027 is the same as the value of avoided carbon emissions associated with the 100 kWh of electric energy savings that the Company would use in its benefit-cost analysis. The value of avoided carbon emissions included cost of supply analysis directly references the value of avoided carbon emissions calculated in the benefit-cost analysis.

c. The answers to parts a and b are the same. The Company utilized the same methodology to calculate the value of avoided carbon emissions from electric energy savings for both the benefit cost analysis and the cost of supply analysis because it was consistent with how the calculation was conducted in prior years, and consistent with the definition of "Cost of Supply" in the Least Cost Procurement Standards: "The cost of electric or natural gas energy supply that includes all rows in the Rhode Island Benefit Cost Framework that are costs caused by or associated with the procurement of energy supply, whether internal or external to the market cost of energy."

PUC 4-4, Page 3

The declining values for avoided carbon from AESC2021 reflect that RGGI and other state policies such as the Renewable Energy Standard will play an increasing role in embedding the value of avoided carbon in energy costs into the future. In 2033, the assumption is that all avoided carbon value for the state will be fully internalized in the electric market. This was not reflected in AESC2021; the Company made manual adjustments to the values from AESC2021 Appendix B to reflect this as noted above.

PUC 4-5

Request:

Consider the following hypothetical: Company forecasts indicate that it will need to serve 100 MMBtu of annual gas demand. The Company develops a gas energy efficiency portfolio to annually serve all 100 MMBtu of gas demand with energy efficiency. All measures in the portfolio have a single-year measure life. Explain the following:

a. Using the Company's proposed carbon accounting methodology, show the value of avoided carbon emissions associated with the 100 MMBtu of gas energy savings that the Company will use in its benefit cost analysis, for the following years: 2025, 2035, and 2040. Provide all underlying calculations and assumptions.

b. Using the Company's proposed carbon accounting methodology, show the value of avoided carbon emissions associated with the 100 MMBtu of gas energy savings that the Company will use in its cost of supply analysis, for the following years: 2025, 2035, and 2040. Provide all underlying calculations and assumptions.

c. If the answers to parts a and b are the same, explain why the Company believes it appropriate to utilize the same methodology to calculate the value of avoided carbon emissions from gas energy savings for both the benefit cost analysis and the cost of supply analysis. In your response, clarify what assumptions the Company is making about what value of carbon is embedded in the gas market.

Response:

a. Any measure currently in the electric portfolio for 2024 could deliver 100 MMBtu of gas savings for one year. To answer this question, the Company selected the Large Commercial C&I measure "BOILER RESET 1 STAGE" from the 2024 Plan.[1] The Company's benefit-cost model was used to produce the value of non-embedded avoided carbon emissions[2] associated with 100 MMBtu of gas energy savings for single-year life measures installed in 2025, 2035, and 2040. Please see the table below for the value of non-embedded avoided carbon emissions using the above

[1] This measure was selected from among several C&I measures (which are planned using MMBtu units). The quantities for the measure were modified to equal 100 MMBtu of gross annual savings and the measure life was changed to 1 year. Since performance characteristics vary among measures, the quantitative results presented below will differ depending on the selected measure. Since the hypothetical focuses on the comparison between parts a and b, specifying the performance characteristics is not critical.
[2] The response focuses on non-embedded avoided emissions. There are no embedded avoided emissions for gas in AESC2021.

methodology. The 2025, 2035, and 2040 non-embedded carbon monetization factors used are single-year avoided costs sourced from Appendix G of the 2021 AESC and inflated to 2024 dollars.

Measure Year	**Carbon Value**
2025	$452.54
2035	$267.41
2040	$172.95

b. The value of non-embedded avoided carbon emissions associated with the 100 MMBtu of gas energy savings that the Company would use in its cost of supply analysis for a single-year life measure installation in 2025, 2035, and 2040 is the same as the value of avoided carbon emissions associated with the 100 MMBtu of gas energy savings that the Company would use in its benefit-cost analysis. The value of non-embedded avoided carbon emissions included cost of supply analysis directly references the value of non-embedded avoided carbon emissions calculated in the benefit-cost analysis.

c. The answers to parts a and b are the same. The Company utilized the same methodology to calculate the value of non-embedded avoided carbon emissions from electric energy savings for both the benefit cost analysis and the cost of supply analysis because it was consistent with how the calculation was conducted in prior years, consistent with the definition of "Cost of Supply" in the Least Cost Procurement Standards: "The cost of electric or natural gas energy supply that includes all rows in the Rhode Island Benefit Cost Framework that are costs caused by or associated with the procurement of energy supply, whether internal or external to the market cost of energy."

The declining values for avoided carbon from AESC2021 reflect that state policies will play an increasing role in embedding the value of avoided carbon in energy costs into the future. Avoided carbon value does not go to zero for gas in 2033, as it does for electricity, because there is currently no analogous state policy for gas as the Renewable Energy Standard mandate of 100% by 2033.