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December 1, 2022

**VIA HAND DELIVERY & ELECTRONIC MAIL**

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

**RE: Docket No. 22-33-EE - 2023 Annual Energy Efficiency Plan  
Responses to PUC Data Requests – Set 5**

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 Public Utilities Commission’s Fifth Set of Data Requests in the above-referenced docket.

Thank you for your attention to this matter. If you have any questions, please contact me at (401) 709-3359.

Very truly yours,



Steven J. Boyajian

Enclosure

cc: Docket 22-33-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.



Heidi J. Seddon

December 1, 2022

Date

**Docket No. 22-33-EE – Rhode Island Energy’s Energy Efficiency Plan 2023 Service list updated 10/24/22**

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PUC 5-1

Request:

On page 10 of its Reply Testimony, the Company clarified that the change it is proposing for the cost of supply calculation is the inclusion of five new non-energy impacts categories (Safety Related Emergency, Notices, Customer Calls and Collections, Terminations and Reconnections, and Bad Debt Write-offs), not arrearages and income-eligible rate discounts. Regarding these new non-energy impact categories, please explain the following:

- a. Are there other non-energy impacts that the Company is proposing adding to the cost of supply calculation, or just these five? If there are others, please list them.
- b. Table 16 on Bates page 89 of the Plan appears to include 3 non-energy impacts: Income eligible Rate Discount, Arrearages, and Utility. Are the new non-energy impact categories being proposed for inclusion in the cost of supply calculation embedded in the utility line item? If not, where do they appear in Table 16?
- c. For each of the new non-energy impacts the Company is proposing to add to the cost of supply calculation, please explain when the Company last assessed the value through its EM&V process (i.e. how old the value estimate is).

Response:

- a. The five non-energy impacts (NEIs) listed in the question are the only proposed NEI additions to the cost of supply calculation.
- b. The five non-energy impacts (NEIs) being proposed for inclusion in the cost of supply calculation are embedded in the Utility line item.
- c. For the five NEI categories, all values were sourced from the 2011 *Massachusetts Special and Cross Sector Studies Area, Residential and Low-Income Non-Energy Impacts (NEI) Evaluation* by the NMR Group. The Company notes that these NEIs and the associated values were included in benefit-cost analyses in years prior to the 2023 Plan. However, 2023 is the first year for which these values are included in the cost of supply calculation.

The Company's reliance on Massachusetts NEI research from 2011 is driven by the costs of doing such research. Additionally, until 2022, the Company was affiliated with National Grid, which was involved with the research in Massachusetts. Massachusetts is regarded as having one of the most well developed and advanced energy efficiency EM&V frameworks in the country, and (particularly in esoteric research areas such as

PUC 5-1, Page 2

NEIs) it is generally to Rhode Island's advantage to follow Massachusetts' lead where the results are applicable to Rhode Island. Massachusetts performed the comprehensive NEI research study in 2011 which quantified non-energy impacts (NEIs) for the low-income program. Subsequently, Massachusetts' research efforts related to low-income NEIs have been to supplement areas not covered by the 2011 study. Massachusetts has not performed further low-income NEI research to update the 2011 values and continues to rely on the study in its planning and reporting.

PUC 5-2

Request:

In response to PUC 1-28, the Company explained that it “increased the EnergyWise electric incentive budget by \$307,944.49 and the EnergyWise gas incentive budget by \$272,462.13 to provide funding for the 100% incentives which includes the moderate income weatherization incentives as well as the renter/landlord weatherization incentives in the 2023 budget.” Then, in response to PUC 3-26, the Company confirmed that the costs of the 100% moderate income weatherization offerings in 2023 will be funded with RGGI proceeds. Why did the Company increase the EnergyWise budgets for the 100% moderate income weatherization offerings if such offerings are not funded by ratepayers? In your response, please explain how RGGI funding for the 100% moderate income offerings has been incorporated into the final budgets.

Response:

In PUC 3-26 the Company responded, “the Company believes there is enough RGGI funding available to support the customer copay portion of moderate income weatherization during 2023.” When the Company began planning the 2023 EE plan, the RGGI funding for moderate income weatherization was scheduled to be available through 2022. Even at the time of drafting this response, the Memorandum of Understanding for RGGI funding for moderate income weatherization has not been drafted for 2023. The EE plan was budgeted to allow for moderate income weatherization using program budgets since there is still no certainty that the RGGI funds will be extended. If the RGGI funds are available, they will be applied to moderate income customer copays until the RGGI funds are no longer available. For the 2023 planning, the RGGI funding was not incorporated into the final budget.

PUC 5-3

Request:

In response to PUC 3-8, the Company explained that it “has impressed upon these [EMV] partners that measures should be taken to avoid delays in the future. Chief among process improvements that have been discussed is...” Has the Company actually implemented any process improvements to avoid future EMV delays, or have they only been discussed? If any have been implemented, please describe them.

Response:

Yes, the Company has begun implementing process improvements as opportunities to do so present themselves. More specifically, Rhode Island Energy is initially focusing on providing quicker responses and feedback to contractors. The Company received interim research findings from the Residential New Construction Baseline and Code Compliance Study and reviewed and provided feedback within three days. Rhode Island Energy has also talked with its Large C&I evaluation vendor to understand where bottlenecks exist and determine what can be done to remove them going forward. The Company expects to see the impacts of these improvements through the end of 2022 and into the first quarter of 2023.



PUC 5-4

Request:

In response to PUC 3-13, the Company explained that no enhanced incentives needed to be clawed back from customers whose systems failed inspection because the inspection happened before enhanced incentives were paid out. Please explain the following:

- a. Have there been occasions on which the Company has had to claw back a portion or all of an incentive from a participant after the incorrect incentive was paid out to them? If yes, please describe. If no, please explain the process controls employed by the Company to prevent such occurrence.
- b. How can a customer verify that the incentive level they are quoted by their EE contractor/provider is accurate and compliant with program rules? How can a customer confirm that their contractor was qualified to offer the enhanced incentive?

Response:

- a. Rhode Island Energy is not aware of a situation in which an incentive amount needed to be clawed back because an incorrect incentive amount was paid. The Company performs spot checks through a quality control process to prevent and detect such overpayments.
- b. Customers can verify incentive levels and program rules on Rhode Island Energy's website and/or the rebate forms. The program rules and guidelines are documented within the rebate forms, which the customer is required to sign acknowledging they have read and understand the terms and conditions. Qualifying contractors are listed on the Company's website at <https://www.rienergy.com/media/ri-energy/pdfs/energy-efficiency/rhode-island-electric-contractors.pdf>.

PUC 5-5

Request:

Referencing the Company's response to PUC 3-16 regarding wifi thermostat offerings across programs, please explain the following:

- a. Is the thermostat equipment offered through the "wifi Tstat-cool and heat oil/propane" offering in the 2023 EnergyStar HVAC program the same equipment offered through the "wifi thermostat, oil" offering in the 2023 EnergyWise program? In your response, explain whether the savings differ between offerings, and if so, what drives those differences.
- b. If the answer to part a is that the equipment is the same, what is the value of offering the same wifi thermostat in two programs at different incentive levels?

Response:

- a. Yes, the two models of Wi-Fi thermostats offered through the EnergyWise program would both be available to customers to purchase and apply for a rebate through the ENERGY STAR HVAC program if they are qualified for participation.
- b. The programs are designed to simplify customer participation and meet the customer where they are on their energy efficiency journey. Some customers are comfortable with purchasing a Wi-Fi thermostat through the HVAC program and either installing the device or hiring a contractor to complete the installation for them. Other customers may prefer having the Wi-Fi thermostat installed through the EnergyWise program where the purchase and installation are bundled. The two options allow for the customer to participate in a method that makes the most sense for them. The customer copay within EnergyWise is higher to account for installation. The incentive is also higher to cover a portion of installation.

PUC 5-6

Request:

In response to PUC 3-19, the Company explained its rationale for separating broader measure categories into constituent parts for the 2023 program year. The Company wrote that “translating actual savings into benefits has implications for the PIM, and benefits calculations associated with the database do not consider eligible and scaling nuances. A direct translation of savings from database query output into the BCR model benefits calculations enables an accurate calculation of PIM-eligible net benefits used in determining the performance incentive payout.” Given that the proposed separation of broader measures into constituent parts is new for 2023, does this mean that the calculation of PIM-eligible net benefits used in determining the performance incentive payout was inaccurate in prior years?

Response:

The separation of broader measure categories into constituent parts does not mean that the calculation of PIM-eligible net benefits used in 2021 in determining the performance incentive payout was inaccurate. (Prior to 2021, the performance incentive calculation was not based on a calculation of PIM-eligible net benefits.) The new system simply provides greater precision in reporting benefits, as well as helping to streamline the translation of measure-level savings into PIM-eligible benefits.

The Narragansett Electric Company  
d/b/a Rhode Island Energy  
RIPUC Docket No. 22-33-EE  
In Re: 2023 Annual Energy Efficiency Plan  
Responses to the Commission's Fifth Set of Data Requests  
Issued on November 21, 2022

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PUC 5-7

Request:

In its 2023 electric PIM calculations, please confirm that the Company appropriately reduced the net eligible benefits for the proposed fuel switching program to reflect the increased cost associated with serving the new electric load.

Response:

Within the PIM calculations, the Company has appropriately reflected the effects of the proposed fuel switching program to reflect the increased cost associated with serving the new electric load.

Specifically, the positive benefits associated with reduced oil consumption from the fuel switching program are discounted by 50% because they are resource benefits, and total +\$572K. The negative benefits associated with increased electricity consumption from the fuel switching program, are counted at 100% because they are electric utility system negative benefits, and total -\$191K. The sum of these benefits from the fuel switching program therefore accurately decreases the PIM-eligible net benefits and rolls into total Low Income Retrofit sector benefits.

PUC 5-8

Request:

In response to PUC 3-1, the Company explained its generation position that “a customer who receives federal EE funding should also be able to receive incentives through Rhode Island Energy’s customer-funded energy efficiency programs, when appropriate.” Does the Company believe it is appropriate for a participant to receive ratepayer-funded EE incentives for a given measure(s) in addition to other EE funding if the total incentive funding received by the participant exceeds 100% of the total resource cost of the measure(s)?

Response:

No, generally the Company does not believe it is appropriate for a participant to receive both ratepayer-funded incentives and other funding if the total incentive received by the participant exceeds 100% of the total resource cost of the measure(s).

PUC 5-9

Request:

Consider a hypothetical scenario in which the Company offers a certain measure X through the EE program. The total resource cost for measure X is \$1,000. The Company offers an incentive of \$500 and expects the participant to contribute the other \$500. Then, additional incentive funding for measure X becomes available outside of the EE program. Through this outside funding, participants are eligible for an additional \$1,000 incentive. Please explain the following:

- a. Would the Company undertake any efforts to verify whether the participant is receiving the additional \$1,000 incentive on top of the \$500 program incentive, before paying out the \$500 program incentive?
- b. If the Company was able to verify which participants received the outside \$1,000 incentive in addition to the \$500 program incentive, would the Company still claim 100% of the savings from the installed measures or some portion less than 100%? If the later, please explain how the Company would determine how many savings to claim.
- c. If the Company was unable to verify which participants received the outside \$1,000 incentive in addition to the \$500 program incentive, would the Company still claim 100% of the savings from the installed measures or some portion less than 100%? If the later, please explain how the Company would determine how many savings to claim.
- d. How would the Company adjust its free ridership and net-to-gross savings assumptions for measure X to capture the influence of the outside \$1,000 incentive funding? What information would the Company need to have in order to make these adjustments?

Response:

Responding to this hypothetical requires the consideration of numerous variables that can be reasonably anticipated, but particular circumstances could present additional unknown variables that prevent a definitive response from being formulated. These variables include accounting for the difference between tax-based incentives/credits and cash incentives. The timing of the additional funding is important to consider, as who is administering other available funds.

The Company realizes that the federal Inflation Reduction Act could present these types of potential scenarios. These issues will need to be dealt with in every state, and different jurisdictions will handle them differently based on the regulatory and programmatic situation. For Rhode Island, the Company will work closely with the OER, which will be administering some of the IRA funds, the EERMC, which provides program oversight and evaluation input,

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and other stakeholders to determine the best parameters for Rhode Island customers and stakeholders.

Furthermore, based on indications from the US Department of Energy the cash incentives from the IRA are not expected to be available until late 2023 at the earliest, and likely not until 2024. It is, therefore, expected that there will be little if any impact on the Company's 2023 EE programs, so a fuller analysis of these issues should be considered for the 2024 Plan and the 2024-2026 Three-Year Plan, development of which will occur throughout 2023. These plans will also be filed with the Commission for review.

Subject to these caveats and expected regulatory oversight, the Company anticipates that it would attempt to deal with this hypothetical scenario as described below.

- a. Yes, the Company would undertake reasonable efforts to verify whether the participant is receiving the additional \$1,000 incentive on top of the \$500 program incentive, before paying out the \$500 program incentive, subject to the practicalities described below. If OER or its agent is administering the additional funding, the Company would coordinate with OER to the extent possible to mitigate the risk of a single participant receiving more than 100% of the cost of the measure. Examples of risk mitigation strategies include OER and / or Company verification of which participants are receiving which funding, participant self-certification of incentive payments received, designing incentive levels such that combining incentives does not exceed 100% of the cost of the measure, and designing programs such that the incentives are braided together through a single incentive application.

Whether the Company could undertake any efforts to verify whether the participant is receiving an additional incentive depends, at minimum, on practical logistics and on the type of external incentive. For example, if the external incentive is in the form of a tax credit, then the participant would not be able to apply or receive that tax credit ostensibly until the following program year (e.g., a January 2023 measure installation may come with a tax credit in April 2024). The Company does not think it is practical to stage incentive payment for participants across program years (another consideration is whether delaying incentive payout might actually result in lower participation). In this same hypothetical example, the Company does not think it is appropriate for it to solicit and collect tax information from participants.

The Company reiterates its answer to PUC 5-8 that generally it is not "appropriate for a participant to receive both ratepayer-funding and other funding if the total incentive received by the participant exceeds 100% of the total resource cost of the measure(s)". In

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this given hypothetical scenario, the Company would have to balance several variables that are discussed above. These variables include the total incentive relative to the total cost, the practical logistics of verification, and the appropriateness of the Company collecting potentially sensitive information from participants.

- b. Claimable savings are determined by rigorous evaluation, measurement, and verification studies overseen by the EERMC and regulators. Process evaluations or free-ridership and spillover studies are conducted to measure attribution of project completion to program participation and are designed to assess the influence of timing and magnitude of program interventions on customer decision making. The Company would defer to such studies and oversight to determine claimable savings. The Company would work with its evaluation vendors to properly scope studies to account for such impacts. The Company notes that such studies to assess the influence of supplemental sources of funding are best conducted retrospectively to ascertain the influences on actual customer behavior; therefore, if supplemental funding is introduced in 2023, relevant studies would not be conducted until 2024 at the earliest.
- c. See response to (b). If the Company somehow were unable to verify which participants received the outside \$1,000 incentive in addition to the \$500 program incentive or conduct an evaluation study to ascertain program influence, the Company would conduct secondary evaluation studies and research (to the extent possible) and also discuss with the EERMC consultants, to determine if there are applicable estimates from other jurisdictions facing similar circumstances that could be applied. This secondary research may inform a decision to use prior estimates of free ridership (i.e., claim 100% of the planned net savings from the installed measures in the phrasing of the question) or make adjustments to it (i.e., claim some portion less than 100% of planned net savings in the phrasing of the question).
- d. See response to (b). The question presupposes that an adjustment to pre-existing levels of free ridership would be needed. While this is possible, it is not certain. For example, it is possible that customers would not be able to install the measure without the Company's \$500 incentive, since it is granted first in the hypothetical and could potentially have made customers receptive to secondary incentive offers. For this reason, the Company would need to undertake a process evaluation or a free ridership study to assess what adjustments, if any, were needed to pre-existing values of free ridership and would not change its prior estimates of free ridership until subsequent research is completed. Typically, these studies are conducted with participants in the Company's programs. To the extent possible, in the design of the study, it would be helpful to obtain information from the administrator of the supplemental funding initiative. Useful information would



PUC 5-9, Page 4

include participant identification, amount of supplemental funding received, date of supplemental funding, and whatever records are available about Measure X and its installation. All this information could be used for cross checking data records as well as developing questions in the study survey to ascertain the timing and relative influence of the sources of funding on the participant's decision making.

PUC 5-10

Request:

In response to PUC 3-12, the Company noted that it has identified 3,132 market rate residential customers and 967 income eligible residential customers with electric resistance heating. In response to PUC 1-30, the Company indicated that it has installed 1,375 heat pump replacements for residential electric resistance heating customers (market rate plus income eligible) since 2019. Then, in response to PUC 1-31, the Company explained that it plans on installing 355 heat pump replacements for market rate residential electric resistance heating customers and 20 heat pump replacements for income eligible residential electric resistance heating customers in 2023. Regarding these heat pump replacements, please explain the following:

- a. Please provide the BCR for the 355 market rate heat pump replacements for electric resistance heat planned for 2023 and a breakdown of the associated planned benefits consistent with Table E-6.
- b. Please provide the BCR for the 20 income eligible heat pump replacements for electric resistance heat planned for 2023 and a breakdown of the associated planned benefits consistent with Table E-6.
- c. Please provide the BCR for the 12 income eligible heat pump replacements of delivered fuel systems planned for 2023 and a breakdown of the associated planned benefits consistent with Table E-6.
- d. Please provide the BCR for the single \$900,000 Jamestown Housing Authority heat pump replacement project planned for 2023 and a breakdown of the associated planned benefits consistent with Table E-6.

Response:

Responses to requests a. through d. are presented in Attachment PUC 5-10 and are consistent with the updated Table E-6 filed on November 29, 2022. It's important to note that the BCR of each measure is calculated by dividing the measure-level benefits by the measure-level total resource cost (TRC). This TRC does not necessarily capture costs planned at the program level, such as program administration or marketing.

Regarding the BCR for the Jamestown Housing Authority project in part d., the analysis is based on preliminary cost information for this illustrative project; actual cost information will depend on the final configuration of the project. The electric Income Eligible Multifamily program which contains this measure is cost-effective as planned with a BCR of 1.19.

Measure	RI Test BCR	Quantity	TRC (000's)	Benefits (000's)																	
				Total Benefits (000's)	Capacity					Energy				Non Electric				Societal			
					Summer Generation	Capacity DRIPE	Trans	Dist	Reliability	Winter		Summer		Electric Energy DRIPE	Natural Gas and DRIPE	Oil and DRIPE	Other Resource	Non Resource	Carbon	NOx	
										Peak	Off Peak	Peak	Off Peak								
Elec Res to MSHP	2.54	337	\$2,028	\$5,147	\$0	\$0	\$0	\$0	\$0	\$0	\$1,265	\$1,667	\$0	\$0	\$850	\$0	\$0	\$0	\$23	\$1,322	\$19
Minisplit Heat Pumps - Electric Resistance	2.41	18	\$119	\$287	\$0	\$0	\$0	\$0	\$0	\$0	\$71	\$93	\$0	\$0	\$47	\$0	\$0	\$0	\$2	\$74	\$1
Minisplit Heat Pumps - Electric Resistance	1.45	20	\$320	\$464	\$0	\$0	\$0	\$0	\$0	\$0	\$83	\$109	\$0	\$0	\$56	\$0	\$0	\$0	\$128	\$87	\$1
Minisplit Heat Pumps Oil Fuel Switching	2.69	12	\$192	\$517	\$0	\$0	\$0	\$0	\$0	\$0	-\$57	-\$74	-\$10	-\$9	-\$42	\$0	\$571	\$0	\$0	\$109	\$27
Heat Pumps - Oil	0.89	1	\$900	\$803	-\$1	-\$1	-\$1	-\$2	\$0	\$0	-\$27	-\$35	-\$5	-\$4	-\$21	\$0	\$671	\$0	\$12	\$183	\$33

ted by dividing the measure-level benefits by the measure-level technical resource cost (TRC). This TRC does not necessarily capture costs planned at the program level.

PUC 5-11

Request:

If the budget were unlimited, how many replacements of income eligible electric resistance systems with heat pumps could the Company technically complete in 2023 and what would be the associated budget?

Response:

Even if there is an unlimited budget, the income eligible program would still need to “compete” for HVAC resources in terms of both workforce and equipment. Neighboring states and the new OER ASHP program will be using the same resources and there will likely be shortages in workforce and equipment.

A realistic estimate on how many projects could be completed would be a 20% increase over the estimated 2022 quantity of year end electric resistance to heat pump upgrades. This results in an estimate of 32 systems to be replaced. The associated incentive budget for the replacements is estimated to be \$512,000.

PUC 5-12

Request:

In response to PUC 3-4, the Company wrote “The Company has been informed that the [Jamestown Housing Authority] housing authority needs to arrange all necessary funding before the project can be completed. In addition to the heating system replacement, the housing authority also is looking to other funding sources for a necessary electrical upgrade because energy efficiency funds could not be applied on the electrical upgrade.” What is the status of the Housing Authority’s efforts to pursue alternative funding sources (i.e. non-ratepayer) for the heat pump project?

Response:

The Company is not aware of the status of the Housing Authority’s efforts to pursue alternative funding.

PUC 5-13

Request:

In response to PUC 1-29, the Company explained that it applied the “current commercial Last Resort Service rate of 18.279 cents/kWh” in its heat pump cost analysis. Please clarify the following questions regarding your electric rate assumptions:

- a. For the purposes of its analysis, did the Company assume the total cost of electricity to be 18.279 cents/kWh or did the Company develop a retail rate proxy that assumed a Last Resort Service supply rate of 18.279 cents/kWh, in addition to the other delivery rates/charges that comprise the retail rate? If the former is true, please explain why the Company ignored non-supply rates in its analysis. If the later is true, please provide the retail rate proxy used and show the underlying calculations to support that proxy.
- b. When the Company says that it applied the current commercial Last Resort Service rate in its analysis, did the Company adjust for seasonal rate changes? The current commercial LRS rate of 18.279 cents/kWh is a winter LRS rate. As the Company knows, winter LRS rates are typically higher than summer LRS rates. Please address how the Company's analysis captured this fluctuation.
- c. Why did the Company use the commercial Last Resort Service rate in its analysis, as opposed to the residential Last Resort Service rate?

Response:

The cost analysis provided in response PUC 1-29 is meant to serve as an order-of-magnitude estimate comparing the cost of oil heat to the cost of electric heat pump heat for income eligible multifamily customers. It is not intended to provide specific investment-grade advice for the representative example project, or any other project. The Company generally does not provide customers with project specific bill impact heating costs analysis. The Company is focused on benefit cost analysis based on energy use.

- a. The analysis only accounted for the 18.279 cents/kWh generation rate and did not include non-supply rates. This rate was used as an easily referenced value for this order-of-magnitude estimate. The Company acknowledges that the exclusion of non-supply rates does not provide a comprehensive picture of total bill impacts.
- b. The Company's analysis did not incorporate seasonal fluctuations in rates. The analysis concerns heating costs, and so the current winter LRS rate should provide a reasonable order-of-magnitude estimate of heating costs that may be experienced in these situations.

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- c. The housing authority used as a representative example is on a commercial rate, and so using the commercial rate should provide a reasonable order-of-magnitude estimate for similar customers.

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PUC 5-14

Request:

For the 12 delivered fuel heating systems the Company is proposing to replace with heat pumps through the proposed fuel switching program, has the Company analyzed the impact of the incremental electric heating load on the cost of the electric system (including infrastructure upgrade costs) and electric rates? If yes, please provide the results of such analysis.

Response:

The Company has not included any potential costs associated with the cost of electric system and electric rates specifically in the analysis of the delivered fuel heating systems to heat pump upgrades.



PUC 5-15

Request:

For the income eligible delivered fuel heating systems the Company is proposing to replace with heat pumps through the proposed fuel switching program (including the residents of the Jamestown Housing Authority), has the Company performed the necessary bill impact analyses to commit that participants' actual heating expenses will not increase as a result of the replacement of their delivered fuel systems with heat pumps? If yes, please provide the results of such analysis.

Response:

The Company has not run an end use heating cost analysis (project specific bill impact analysis) for the proposed projects noted in the data request above. Currently, the energy efficiency programs perform a bill impact analysis at the portfolio level by customer class.

In general, heat pumps would cost less to operate than a deliverable fuel combustion heating system based on the efficiency of the two heating systems. The Company concentrates its analysis on energy savings as defined in the benefit cost model. There are many resources available to customers for comparing heating costs by fuel types. Here is a straightforward resource, <https://www.energymaine.com/at-home/heating-cost-comparison/>. This comparison tool provides a quick snapshot of differing heating costs by heating fuel and type of heating system.

PUC 5-16

Request:

Referring to Bates page 120 of the Company's 2023 plan, and the paragraph entitled "Income Eligible Heating system replacements," has the Company developed any criteria for determining eligibility of multi-family units managed by housing authorities and any criteria for determining how much in incentives should be provided to each eligible housing authority under the Company's proposed multi-family program in the referenced paragraph for converting oil/propane systems to high efficiency heat pumps? If so, please describe.

Response:

If more than 50% of the accounts in the building are on a low income rate, then the building is considered Income Eligible. Customers that qualify for the income eligible designation receive a 100% incentive on energy efficient upgrades. Through this proposed new measure, the Company is requesting that heating systems converting to high efficiency heat pumps also receive the same incentives. The program serves customers based upon a first come, first served basis until funding is fully subscribed.

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PUC 5-17

Request:

Referring to the response to PUC 3-4, please provide a description of the referenced housing authority building(s) to which the project relates, the number of residential units in the building(s), and the building address(es).

Response:

The address is 57 Pemberton Avenue, Jamestown, Rhode Island. The site is called Pemberton Apartments, and it contains 35 apartments. The Company referred to this project as an example where funding was not readily apparent in the income eligible multifamily area. The Company is not specifically requesting funding for this project.

PUC 5-18

Request:

Referring to the response to PUC 3-4, please provide a narrative explanation of all the events and pertinent facts leading up to the decision made by the Company to request electric ratepayer funds to pay for the housing authority's heating system project in the 2023 plan.

Response:

To clarify its response to PUC 3-4, the Company proposed income eligible multifamily funding for deliverable fuel to heat pump energy efficiency upgrades based on a gap that was evidenced by the project referred to in the response to PUC 3-4. The request for funding is not specifically for this project but to fill what appears to be a gap for this type of customer.

Company representatives attended a meeting with representatives for the Jamestown Housing Authority ("JHA") on August 9, 2022. Also at that meeting were representatives of the Rhode Island Infrastructure Bank, the Rhode Island Office of Energy Resources ("OER"), the JHA's project team, and a state senator. JHA assembled the meeting to explore whether there were any opportunities for incentives for a needed heating system replacement. Each party responded that incentives were not available for this project for different reasons. The type of housing authority did not qualify for one incentive, RGGI air source heat pump ("ASHP") funding administered by OER did not cover multifamily projects, and energy efficiency funds are not available for ASHP fuel switching. JHA representatives described the needs of the seniors living at the property, and there was apparent concern and frustration on the part of JHA administrators who have reached out to a multitude of resources and have not found any assistance.

After the meeting, the Company had an internal call to discuss the meeting. One idea that came out of the discussion was to propose funding through energy efficiency to support the income eligible sector with upgrades to ASHPs, particularly when there are no other funding sources available.

PUC 5-19

Request:

Referring to the response to PUC 3-4, were any representations ever been made by the Company or any of the Company's contractors to the housing authority (i) indicating that the Company would pay for any portion of the cost of the heating system and/or (ii) indicating that the Company would request energy efficiency funding approval from the Commission to pay for any portion of the cost of the housing authority's heating system? If so, please describe the communication(s) and the date(s) the communication(s) took place.

Response:

It is the Company's understanding that the Electro-Mechanical Services Director at the Lead Vendor had erroneously indicated in email to the Jamestown Housing Authority ("JHA") that energy efficiency incentives were available for this project. The Company does not have the specific email but understands that the communication was sent around March or April of 2022. When this was brought to the Rhode Island Energy's attention around June 2022, there was clarification that incentives for fuel switching are not available.

Through internal communications, it was determined that a request for funding this project would necessitate a standalone regulatory filing to attempt to meet JHA's desired timeframe. The Company ultimately did not pursue a separate filing because it would not have produced a timely enough response for the heating season.

Rhode Island Energy's multifamily program manager is no longer employed by the Company. Furthermore, the Electro-Mechanical Services Director at the Lead Vendor, RISE Engineering, who produced the on-site screening for the heating and hot water system upgrades, is no longer employed by the Lead Vendor. Therefore, it is difficult for the Company to offer a more detailed response.

PUC 5-20

Request:

Referring to Table 2 on Bates page 144 of the energy efficiency plan (i.e., the row in column 2 labeled “Heat Pumps – Oil”), please provide a breakdown of how the Company determined and calculated the amount of \$900,000.

Response:

The representative Jamestown Housing Authority project costs were estimated based on four types of upgrades. The estimate totaled \$918,530. The Company rounded down to \$900,000 in the 2023 planning because the project was only an estimate of the potential of other projects. The estimated costs are shown below:

**Air source heat pumps**

Building	\$/Unit	# units	Total
A	\$20,000	4	\$80,000
B	\$20,000	4	\$80,000
C	\$20,000	8	\$160,000
D	\$20,000	4	\$80,000
E	\$20,000	4	\$80,000
F	\$20,000	4	\$80,000
G	\$20,000	7	\$140,000
Office	\$25,000	1	\$25,000
<b>Total</b>			<b>\$ 725,000</b>

**Domestic hot water**

Building	\$/Unit	# units	Total
A	\$8,000	1	\$8,000
B	\$8,000	1	\$8,000
C	\$19,000	1	\$19,000
D	\$11,000	1	\$11,000
E	\$11,000	1	\$11,000
F	\$5,500	1	\$5,500

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G	\$18,000	1	\$18,000
Shed	\$20,000	1	\$20,000
Total			\$ 100,500

**Attic hatch insulation/sealing**

Building	\$/Unit	# units	Total
A	\$1,500	2	\$3,000
B	\$1,500	2	\$3,000
C	\$1,500	4	\$6,000
D	\$1,500	2	\$3,000
E	\$1,500	2	\$3,000
F	\$1,500	2	\$3,000
G	\$1,500	4	\$6,000
Total			\$ 27,000

**Attic Insulation**

Building	\$/sqft	sqft	Total
A	\$ 6	1,199	\$7,194
B	\$ 6	1,199	\$7,194
C	\$ 6	1,599	\$9,594
D	\$ 6	1,199	\$7,194
E	\$ 6	1,199	\$7,194
F	\$ 6	1,199	\$7,194
G	\$ 6	3,411	\$20,466
Total			\$ 66,030

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PUC 5-21

Request:

Referring to the response to PUC 3-4, please describe the source of federal funds or any other source of funding that is being sought for the referenced project.

Response:

The Company's understanding is that the Housing Authority was seeking emergency funding from the U.S. Department of Housing and Urban Development.



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PUC 5-22

Request:

Referring to the response to PUC 3-4, please provide the Company's understanding of what is being estimated for the cost of the entire heating system project for the housing authority, with and without the cost of the "necessary electrical upgrade."

Response:

The Company's understanding is that the estimated cost for the heating and water heating upgrades is \$918,530. Electrical upgrades are estimated to cost approximately \$540,000.

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PUC 5-23

Request:

Referring to the response to PUC 3-4, please describe the Company's understanding of the current condition and status of the heating system of the housing authority which would be replaced.

Response:

The Company's understanding of the housing authority heating system is that it only works on backup mode.

PUC 5-24

Request:

Referring to the response to PUC 3-4, please provide a description and cost itemization of the referenced "necessary electrical upgrade." Please distinguish in the answer the extent to which the upgrade pertains to the Company's system or internal building upgrades.

Response:

As part of the Jamestown Housing Authority ("JHA") oil to heat pump conversion, the existing electrical infrastructure needs to be upgraded. A new 800-amp service needs to be brought to a pad mounted transformer at the site. A new main distribution panel, underground conduits and cables to the buildings, and distribution panels boards in each building must be installed.

In addition to the service and distribution panel upgrades, JHA has emergent electrical issues associated with their existing service components (i.e. Federal Pacific panels). The FPE Stab-Lok Breakers installed within the units include hazards such as the failure to "trip" in an overcurrent situation and thus, need to be replaced as part of the oil to heat pump conversion.

The total cost for the electric upgrades for the housing authority is currently estimated at around \$540,000 (~\$90k of which is for sub-panels in the dwelling units).

The work described above pertains to the housing authority.

The Company has not received a work request from the customer for a service upgrade.

PUC 5-25

Request:

Please refer to the press release at the following link. <http://cicilline.house.gov/press-release/15m-federal-grant-to-help-jamestown-housing-authority-with-urgent-heating-upgrades-at-pemberton-apartments#:~:text=JAMESTOWN%2C%20RI%20%E2%80%93%20Today%2C%20U.S.,of%20Pemberton%20Apartments%20in%20Jamestown> Does the heating system upgrade project referenced in this article relate to the same housing authority buildings project identified in PUC 3-4? If yes, please explain the extent to which the grant described in the press release affects the Company's proposal for an incentive to be paid to the Jamestown Housing Authority.

Response:

Yes, the heating system upgrade project referenced in the article cited above in the data request relates to the same housing authority buildings project identified in the Company's response to PUC 3-4.

The Company believes that a gap may still exist in this area for customers looking to overcome replacement costs, particularly if political support is not available, or elected officials are not able to secure continuing federal funding for similar projects. Additionally, the cited article does not indicate whether the replacement is for efficient electric heating or if it will provide another oil heating system. In reference to Jamestown Housing Authority ("JHA"), there were communications indicating that HUD generally would not pay for an upgrade to air source heat pumps but instead focuses on replacing like-to-like systems. The Company also is not aware of other resources in the state that will support income eligible multifamily projects. For all of these reasons, the Company's proposal for an income eligible multifamily offering remains relevant and worthwhile. As described in the Company's response to PUC 5-17, JHA was a proxy to help guide what expected costs and savings would result from this measure.

PUC 5-26

Request:

On page 6 of its Reply testimony, the Company states that it “is evaluating its spending forecast for 2023 in light of actual spending in 2022 to determine whether any adjustments to the 2023 Plan budget are warranted.” Please provide the results of that evaluation.

Response:

The Company’s spending forecast for 2023 resulted in a \$2.4 million reduction in its spending forecast for the C&I Electric sector, including \$1.8 million from incentives and \$0.6 million from other expenses. It should be noted that this response pertains to energy efficiency (“EE”) spending only; spending for the Connected Solutions Program has been excluded.

In developing this revised 2023 spending forecast, the Company undertook a detailed analysis of its 2022 spending forecast, then adjusted the forecast to account for planned activities and factors expected to impact 2023 spending relative to 2022. The Company then used the results of this analysis in developing an updated budget proposal (i.e., the Company’s updated 2023 Plan budget closely reflects the new spending forecast).

**Participant Incentives:** The Company forecasts that energy efficiency (“EE”) incentive spend will increase by \$7.5 million in 2023, based on the following factors:

<b>Factor</b>	<b>Impact (\$ million)</b>
Project pipeline relative to prior year at this time	\$5.7
Additional sales staff focused on customers 1-2M kWh	\$1.0
Other changes (new program offerings, higher energy prices, less severe supply chain delays, increased marketing)	\$0.8
<b>Total increase</b>	<b>\$7.5</b>

*Please see PUC 5-28 for more details about the project pipeline.*

**Non-Incentive Spending:** The Company forecasts that non-incentive spending will increase by \$2.9 million in 2023 based on the following factors:

<b>Factor</b>	<b>Impact (\$ million)</b>
Evaluation, Measurement, and Verification	\$0.8
Direct charges (implementation and technical assistance vendors)	\$0.6
Building Analytics Program customer set-up incentives	\$0.4
Marketing	\$0.3

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Pilot, Demonstrations, and Assessments	-\$0.1
Other allocations and labor	\$0.9
<b>Total increase</b>	<b>\$2.9</b>

**Combined Impacts:** Overall, the Company forecasts a \$10.4 million increase in C&I Electric EE spending compared to 2022. Although this is a significant increase relative to the current-year forecast, the Company believes it is valuable to consider two additional points of comparison. The updated 2023 forecast and associated budget proposal:

1. Represent a \$4.6 million (10.1%) reduction from the C&I Electric EE budget approved for the 2022 Plan.
2. Are close to actual spending levels in 2021 (\$1.1 million higher).

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PUC 5-27

Request:

If the Company is recommending any adjustments to the 2023 Plan budget, please provide a detailed description of the Company's recommended budget adjustments and provide updated schedules incorporating the recommended budget adjustments.

Response:

Please refer to the updated schedules in the Corrections and Updated Budget Proposal that the Company filed on November 29, 2022, which provide details of the Company's recommended budget adjustments. Please also refer to the Company's responses to PUC 5-26 and 5-28 for explanations and quantifications of the factors underlying the proposed budget adjustments.

PUC 5-28

Request:

On page 7 of its Reply testimony, the Company also states that it is “undertaking an analysis of factors that have come to light since the filing of the 2023 EE Plan that might impact the Company’s spending forecast.” Please identify the factors and provide the results of the Company’s analysis of those factors.

Response:

The main factors that have come to light since the filing of the 2023 Plan are:

- **2022 Spending Forecast:** The Company’s Electric spending forecast for the Commercial and Industrial (“C&I”) sector in the 2022 EE Plan year decreased by \$5.1 million. This reflects a combination of reductions in:
  - Incentive costs per net lifetime MWh of savings;
  - Project volume; and
  - Non-incentive costs for internal labor, vendor-driven initiatives, demonstration projects, workforce development, and evaluation.
- **2023 Project Pipeline:** The Company has a large pipeline of projects anticipated to be completed in 2023. The following table shows the incentive budget for projects anticipated to be completed in the following plan year as of early November 2020, 2021, and 2022. The incentive figures are the sum of all projects with signed letters from customers committing to complete these projects (i.e., projects likely to be completed).

Plan Year	Report Date	Incentive \$
2023	Nov 2022	\$9,395,854
2022	Nov 2021	\$3,704,653
2021	Nov 2020	\$3,484,289