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Also admitted in Massachusetts

November 25, 2024

**VIA HAND DELIVERY AND ELECTRONIC MAIL**

Stephanie De La Rosa, Commission Clerk  
Rhode Island Public Utilities Commission  
89 Jefferson Boulevard  
Warwick, RI 02888

**RE: Docket 24-39-EE – 2025 Annual Energy Efficiency Plan  
Responses to Rhode Island Public Utilities Commission’s  
First Set of Data Requests**

Dear Ms. De La Rosa:

On behalf of The Narragansett Electric Company d/b/a Rhode Island Energy (the “Company”), I have enclosed the Company’s responses to the Public Utilities Commission’s First 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.

Sincerely,



Steven J. Boyajian

Enclosure

cc: Docket 24-39-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

November 25, 2024

Date

**Docket No. 24-39-EE – Rhode Island Energy’s 2025 Energy Efficiency Plan  
Service list updated 10/21/2024**

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PUC 1-1  
**Bill Impacts**

Request:

Beginning on Bates page 77, the Zhu testimony describes four bill-impact data points:

1. the bill impact of electric program on all customers,
2. the bill impact of the electric program on electric participants,
3. the bill impact of the gas program on all customers, and
4. the bill impact of the gas program on gas participants.

Please provide a table with rows for each data above and columns for the program years 2015-2025. For years 2015-2024, please use the expected bill impact of the approved program at, or else explain what data was used (e.g., expected bill impact of the proposed program).

Response:

Please see Attachment PUC 1-1 for the table with columns for the specified data requested above and rows for the program years 2015-2025. The Company opted to transpose the rows and columns from the request because of the resulting length and dimensions of the table. Of note, each program year is broken into the granularity with which results were presented. Each program year also has a linked reference to the source of the bill impacts data. Following the convention used in recent Energy Efficiency Plan filings, in Attachment PUC 1-1 bill savings are universally presented with negative percentages, and bill increases are universally presented with positive percentages.

In the 2025 Annual Plan, the Company presented bill impacts data that is "Shared w/ all customers," which is comparable to non-participant bill impacts produced in previous years. Therefore, non-participant bill impacts for 2015-2024 have also been included on Attachment PUC 1-1.

(a) #	(b) Year	(c) Source	(d) Portfolio	(e) Sector	(f) Participant Bill Impact	(g) All Customers Bill Impact	(h) Non-Participant Bill Impact		
1	2015	<a href="#">Docket No. 4527 - Narragansett Electric Co. d/b/a National Grid - 2015 Energy Efficiency Program Plan (EPPP) for Electric &amp; Gas (filed October 31, 2014)</a>	Electric	Residential	Home Energy Reports 0.4% HVAC -6.7% EnergyWise -11.2% Residential Lighting -3.0%	-1.3%	0.6%		
2				Income Eligible	Single Family -13.1% Multifamily -2.5% Home Energy Reports 0.8% Residential Lighting -2.6%	-1.9%	0.9%		
3				Small Commercial	-35.9%	-3.4%	-2.6%		
4				Large Commercial	New Construction -3.5% Retrofit -18.1%	-1.9%	-0.4%		
5			Gas		Residential	-4.5%	-0.64%	5.4%	
6					Income Eligible	-13.4%	-0.17%	5.6%	
7					Small Commercial	-1.2%	-0.02%	4.5%	
8					Large Commercial	-2.0%	-0.30%	7.1%	
9	2016	<a href="#">Docket No. 4580 - The Narragansett Electric Co. d/b/a National Grid - 2016 Energy Efficiency Program Plan (EPPP) for Electric &amp; Gas (filed October 15, 2015)</a>	Electric	Residential	Home Energy Reports 0.87% HVAC -14.48% EnergyWise -17.24% Residential Lighting -1.50%	-2.05%	1.10%		
10				Income Eligible	Single Family -18.64% Multifamily -5.61% Home Energy Reports 0.95% Residential Lighting -1.13%	-2.63%	1.15%		
11			Gas		Small Commercial	-15.53%	-0.36%	0.63%	
12					Large Commercial	New Construction -17.91% Retrofit -4.12%	-2.38%	0.02%	
13					Residential	-4.26%	-2.92%	5.43%	
14					Income Eligible	-18.84%	-3.28%	5.43%	
15			2017	<a href="#">Docket No. 4654 - The Narragansett Electric Co. d/b/a National Grid - 2017 Energy Efficiency Program Plan (EPPP) for Electric &amp; Gas (filed October 14, 2016)</a>	Electric	Small Commercial	-2.69%	-0.02%	3.62%
16						Large Commercial	-2.24%	-0.79%	3.65%
17	Gas				Residential	-2.00%	-1.69%	1.26%	
18					Income Eligible	-3.86%	-3.16%	1.45%	
19			Small Commercial	-35.47%	-0.16%	0.41%			
20			Large Commercial	-4.63%	-3.44%	0.10%			
21	2018	<a href="#">Docket No. 4755 - The Narragansett Electric Co. D/b/a National Grid - 2018 Energy Efficiency Program (EPP) For (filed 11/1/17)</a>	Electric	Residential	-0.85%	-0.60%	6.23%		
22				Income Eligible	-8.47%	-1.49%	6.23%		
23			Gas		Small Commercial	-3.53%	-0.02%	5.19%	
24					Large Commercial	-4.38%	-0.85%	5.27%	
25	Residential	-1.56%			-1.35%	1.31%			
26	Income Eligible	-3.69%			-3.47%	1.82%			
27	2019	<a href="#">Docket No. 4888 - The Narragansett Electric Co. d/b/a National Grid - 2019 Energy Efficiency Program (EPP) For (filed 10/15/18)</a>	Electric	Small Commercial	-15.80%	-0.81%	0.54%		
28				Medium Commercial	-11.58%	-1.42%	0.30%		
29			Gas		Large Commercial	-5.35%	-2.42%	0.25%	
30					Residential	-0.93%	-0.51%	5.65%	
31	Income Eligible	-8.28%			-1.75%	5.65%			
32	Small Commercial	-3.22%			-0.01%	4.60%			
33	2020	<a href="#">Docket No. 4979 - The Narragansett Electric Co. d/b/a National Grid - 2020 Energy Efficiency Plan (filed 10/15/19)</a>	Electric	Large Commercial	-2.23%	-0.75%	4.96%		
34				Residential	-1.69%	-1.60%	0.11%		
35			Gas		Income Eligible	-3.56%	-3.28%	0.94%	
36					Small Commercial	-22.85%	-1.69%	0.21%	
37	Medium Commercial	-11.50%			-2.24%	0.40%			
38	Large Commercial	-5.41%			-3.46%	1.01%			
39	2021	<a href="#">Docket No. 5076 - The Narragansett Electric Co. d/b/a RI Energy (formerly National Grid) - 2021-2023 Energy Efficiency Program Plan (Three-Year Plan) &amp; 2021 Annual Energy Efficiency Program Plan (filed 10/15/20)</a>	Electric	Residential	-1.12%	-0.64%	4.68%		
40				Income Eligible	-23.70%	-5.14%	4.68%		
41			Gas		Small Commercial	-5.99%	-0.02%	3.18%	
42					Large Commercial	-5.49%	-0.32%	3.43%	
43	Residential	-1.00%			-0.99%	0.16%			
44	Income Eligible	-3.50%			-3.41%	1.10%			
45	2022	<a href="#">Docket No. 5189 - The Narragansett Electric d/b/a National Grid - Annual Energy Efficiency Plan for 2022 (filed 10/1/2021)</a>	Electric	Small Commercial	-21.70%	2.16%	0.24%		
46				Medium Commercial	-10.00%	-2.26%	0.43%		
47			Gas		Large Commercial	-5.35%	-3.21%	0.72%	
48					Residential	-0.81%	-0.63%	7.11%	
49	Income Eligible	-1.71%			-0.35%	7.18%			
50	Small Commercial	-0.711%			-0.004%	5.53%			
51	2023	<a href="#">Docket No. 5076 - The Narragansett Electric Co. d/b/a RI Energy (formerly National Grid) - 2021-2023 Energy Efficiency Program Plan (Three-Year Plan) &amp; 2021 Annual Energy Efficiency Program Plan (filed 10/15/20)</a>	Electric	Large Commercial	-1.019%	-0.03%	5.59%		
52				Residential	-0.42%	-0.42%	0.41%		
53			Gas		Income Eligible	-2.54%	-2.46%	1.23%	
54					Small Commercial	-8.88%	-0.81%	0.37%	
55	Medium Commercial	-9.02%			-1.66%	0.03%			
56	Large Commercial	-4.44%			-2.72%	-0.16%			
57	2024	<a href="#">Docket No. 5189 - The Narragansett Electric d/b/a National Grid - Annual Energy Efficiency Plan for 2022 (filed 10/1/2021)</a>	Electric	Residential	0.03%	0.15%	0.43%		
58				Income Eligible	-4.48%	-0.16%	0.75%		
59			Gas		Small Commercial	-7.12%	0.19%	0.25%	
60					Large Commercial	-1.16%	0.00%	0.41%	
61	Residential	-5.50%			-0.02%	0.30%			
62	Income Eligible	-6.74%			-0.97%	0.59%			
63	2025	<a href="#">Docket No. 22-33-EE - The Narragansett Electric Co. d/b/a Rhode Island Energy - 2023 Energy Efficiency Plan</a>	Electric	Small Commercial	-8.57%	-0.42%	0.41%		
64				Medium Commercial	-5.01%	-0.53%	0.28%		
65			Gas		Large Commercial	-2.57%	-1.00%	0.21%	
66					Residential	0.15%	0.25%	0.48%	
67	Income Eligible	-4.28%			-0.17%	0.77%			
68	Small Commercial	-23.55%			0.19%	0.32%			
69	2026	<a href="#">Docket No. 23-35-EE - The Narragansett Electric d/b/a Rhode Island Energy</a>	Electric	Large Commercial	-2.61%	0.02%	0.47%		
70				Residential	-4.72%	-0.30%	-0.07%		
71			Gas		Income Eligible	-6.09%	-0.81%	0.10%	
72					Small Commercial	-20.28%	-0.48%	0.10%	
73	Medium Commercial	-7.00%			-0.49%	0.01%			
74	Large Commercial	-5.16%			-0.46%	0.03%			
75	2027	<a href="#">Docket No. 23-35-EE - The Narragansett Electric d/b/a Rhode Island Energy</a>	Electric	Residential	-0.01%	0.14%	0.37%		
76				Income Eligible	-3.69%	0.11%	0.55%		
77			Gas		Small Commercial	-23.54%	0.08%	0.25%	
78					Large Commercial	-3.33%	-0.07%	0.30%	
79	Residential	-4.94%			-0.20%	0.03%			
80	Income Eligible	-6.45%			-1.30%	-0.28%			
81	2028	<a href="#">Docket No. 23-35-EE - The Narragansett Electric d/b/a Rhode Island Energy</a>	Electric	Small Commercial	-21.25%	-0.54%	-0.04%		
82				Medium Commercial	-9.31%	-0.63%	-0.13%		
83			Gas		Large Commercial	-0.51%	-1.16%	-0.33%	
84					Residential	-0.01%	0.14%	0.37%	
85	Income Eligible	-3.84%			0.11%	0.57%			
86	Small Commercial	-24.51%			0.08%	0.26%			
87	2029	<a href="#">Docket No. 24-39-EE - The Narragansett Electric d/b/a Rhode Island Energy</a>	Electric	Large Commercial	-3.01%	-0.04%	0.30%		
88				Residential	-1.12%	N/A	0.25%		
89			Gas		Income Eligible	-8.69%	N/A	-0.45%	
90					Large Commercial	-2.76%	N/A	0.24%	
91	Residential	-0.86%			N/A	0.41%			
92	Income Eligible	-3.00%			N/A	0.39%			
93				Large Commercial	-1.36%	N/A	0.21%		

Note: In the 2025 Annual Plan, the Company presented bill impacts data that is "Shared w/ all customers," which is comparable to non-participant bill impacts produced in previous years. Therefore, non-participant bill impacts for 2015-2024 have also been included.

The Narragansett Electric Company  
d/b/a Rhode Island Energy  
RIPUC Docket No. 24-39-EE  
In Re: 2025 Annual Energy Efficiency Plan  
Responses to Commission's First Set of Data Requests  
Issued November 12, 2024

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PUC 1-2  
**Cost of Supply**

Request:

Provide the cost of efficiency for all measures that appeared in any part of RIE's response to PUC 1-6.

Response:

Please see tables 1 through 5 below for the cost of energy efficiency for all 2025 planned measures that appeared in the Company's response to PUC 1-6.

*Table 1. Electric Small Business Direct Install (SBS) Measure-Level Cost of Energy Efficiency*

<b>Program</b>	<b>Measure</b>	<b>Cost of Energy Efficiency</b>
SBS	CUSTOM LIGHTING	\$618,321
SBS	Custom Motors/Drives, HVAC	\$1,437,480
SBS	Custom Motors/Drives, Non-HVAC	\$319,440
SBS	Freezer Recycling	\$12,101
SBS	Hot Water, Custom	\$383,328
SBS	HVAC, Custom	\$1,596,746
SBS	LED - Exterior HW	\$264,641
SBS	LED - Interior HW	\$3,119,078
SBS	LED - Interior SI	\$272,622
SBS	Refrigerated case LED	\$3,396
SBS	PROGRAMMABLE THERMOSTATS	\$52,240
SBS	VENDING MACHINES	\$2,012
SBS	Water Heating	\$3,217

PUC 1-2, Page 2  
**Cost of Supply**

*Table 2. Gas Residential HVAC (HVAC) Measure-Level Cost of Energy Efficiency*

<b>Program</b>	<b>Measure</b>	<b>Cost of Energy Efficiency</b>
HVAC	Forced Hot Water Boiler - >=95% AFUE	\$696,547
HVAC	Combo Condensing Boiler/Water Heater - 95% AFUE	\$3,613,438
HVAC	ENERGY STAR STORAGE WATER HEATER .64 UEF (med draw)	\$4,007
HVAC	ENERGY STAR ON DEMAND WATER HEATER 0.87 UEF	\$97,698
HVAC	Furnace w/ ECM - 97% AFUE	\$575,764
HVAC	Low Flow Showerhead	\$2,995
HVAC	Programmable Thermostat	\$23,380
HVAC	WiFi Thermostat, Gas - Heat Only	\$274,947
HVAC	WiFi Thermostat, Gas - Cooling and Heating	\$105,375

*Table 3. Gas EnergyWise Multifamily (EW MF) Measure-Level Cost of Energy Efficiency*

<b>Program</b>	<b>Measure</b>	<b>Cost of Energy Efficiency</b>
EW MF	Faucet aerator	\$223
EW MF	Air Sealing	\$110,160
EW MF	Duct Insulation, MF	\$94
EW MF	Duct Sealing	\$105
EW MF	Heating, Custom	\$120,120
EW MF	MF Shell Insulation	\$324,564
EW MF	Pipe Wrap (Water Heating)	\$558
EW MF	Low Flow Showerhead - Showerhead	\$1,860
EW MF	Programmable thermostat	\$9,752

PUC 1-2, Page 3  
**Cost of Supply**

*Table 4. Gas Income Eligible Multifamily (IE MF) Measure-Level Cost of Energy Efficiency*

<b>Program</b>	<b>Measure</b>	<b>Cost of Energy Efficiency</b>
IE MF	Faucet aerator	\$750
IE MF	Air Sealing	\$18,600
IE MF	HEATING_Custom_LI	\$2,655,000
IE MF	Insulation	\$46,080
IE MF	Pipe Wrap (Water Heating)	\$120
IE MF	Low Flow Showerhead - Showerhead	\$3,750
IE MF	Programmable thermostat	\$38,750

*Table 5. Gas C&I Multifamily (C&I MF) Measure-Level Cost of Energy Efficiency*

<b>Program</b>	<b>Measure</b>	<b>Cost of Energy Efficiency</b>
C&I MF	Heating, Custom	\$792,246
C&I MF	Faucet aerator	\$28
C&I MF	Air Sealing	\$8,296
C&I MF	MF Shell Insulation	\$44,268
C&I MF	Pipe Wrap (Water Heating)	\$335
C&I MF	Programmable thermostat	\$1,060



PUC 1-3  
**Cost of Supply**

Request:

On Bates page 10, the Feldman testimony describes “PUC hearings ... in which the Commission referred to the utility system cost of supply minus the cost of energy efficiency as an approximation of bill savings.” Please provide a specific reference to the hearing transcripts.

Response:

Please reference the pages listed below from the transcript of the Commission's December 13, 2023 (day 2) hearing in Docket No. 23-35-EE regarding the Company's 2024-2026 Energy Efficiency Three Year Plan and Annual Energy Efficiency Plan for 2024.

- Page 18, Lines 5-18
- Page 19, Lines 1-5 and 15-25
- Page 20, Lines 24-25
- Page 21, Lines 1-14
- Page 28, Lines 14-25
- Page 29, Lines 1-24
- Page 30, Lines 23-25
- Page 31, Lines 1-3

PUC 1-4  
**Cost of Supply**

Request:

On Bates page 30, the Feldman testimony states,

“The Company has provided the comparison of the cost of supply with the cost of energy efficiency at the program and portfolio level with the intrastate benefits only and without delivered fuel benefits as the primary view in Section 6.6 of the 2025 Annual Plan.

“In the alternative view, without intrastate benefits, delivered fuel benefits, or participant costs...” [emphasis added]

- a. Regarding the underlined instance of “without intrastate,” is this statement correct, or does the witness mean “without interstate?”
- b. The witness describes a “primary” comparison that excludes interstate price benefits and delivered fuels benefits. The “alternative” appears identical except that the alternative also excludes participant costs. Please confirm.
- c. If the primary comparison includes participant costs, please reconcile this with the exclusion of participant costs noted in Table 4 on Bates page 132. Please also reconcile with the costs presented in Tables 5 and 6 on Bates page 134, for which labels include “w/o Participant Costs.” Please reconcile that the numbers in Tables 5 and 6 also match the data reported in column (d) in Tables E-12 (Bates page 354) and G-12 (Bates Page 372).

Response:

- a. The statement is not correct. The witness meant “without interstate.” Please note that the Company will include this correction in a separate filing to be made ahead of the scheduled hearing in this docket.
- b. The Company confirms that the “primary” comparison described on Bates page 30 excludes interstate price benefits and delivered fuels benefits. The “primary” view also excludes participant costs. Regarding confirmation of the components of the “alternative” views, please see the Company’s response to PUC 1-10 which corrects the Pre-Filed Direct Testimony of Brett S. Feldman to include participant costs among the items excluded from the primary view.

Prepared by or under the supervision of: Brett S. Feldman (parts a. and b.) and  
Nicholas Zhu (part c.)

PUC 1-4, Page 2  
**Cost of Supply**

- c. The “primary” comparison described on Bates page 30, as corrected in the response to PUC 1-10, does not include participant costs. Therefore, it is consistent with Table 4 on Bates page 132, Tables 5 and 6 on Bates Page 134, and column (d) in Tables E-12 and G-12 on Bates pages 354 and 372 respectively, which all exclude participant costs.

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PUC 1-5  
**Cost of Supply**

Request:

On Bates page 9, the Feldman testimony describes the number of programs for which the cost of efficiency is greater than the cost of supply decreasing from 11 in the 2024 Plan to 6 in the 2025 Plan. Please confirm this statement is based on the net supply costs shown in column (d) of tables E-12 and G-12 on Bates pages 354 and 372, respectively. Please explain if column (d) is the "primary" or "alternative" view described by Feldman on Bates page 30.

Response:

The Company confirms that Mr. Feldman's statement on Bates page 9 is based on the net supply costs shown in column (d) of Tables E-12 and G-12 on Bates pages 354 and 372, respectively. Column (d) of tables E-12 and G-12 is the "primary" view described by Mr. Feldman in the correction to his testimony on Bates page 30 as stated in the Company's response to PUC 1-10 which confirms that participant costs are among the items excluded from the primary view.

PUC 1-6  
**Cost of Supply**

Request:

On Bates page 9, the Feldman testimony describes the number of programs for which the cost of efficiency is greater than the cost of supply decreasing from 11 in the 2024 Plan to 6 in the 2025 Plan. For each of the five programs that shifted from negative to positive supply cost savings, please provide:

- a. what measures, if any, were removed or added to the program from 2024 to 2025, and the total dollar impact on the budget for each;
- b. what measures, if any, had program budgets that changed more than 5% from 2024 to 2025, and the total impact on the budget for each; and
- c. what measures, if any, made up more than 10% of the total program budget in 2024, and what percentage of the 2025 program budget is allocated to the measure.

Response:

- a. No measures were added or removed from the electric Small Business Direct Install, gas Residential HVAC, gas EnergyWise Multifamily, gas Income Eligible Multifamily, or gas C&I Multifamily proposed programs between 2024 and 2025.
- b. Please see Tables 1 through 5 below for measures that had incentive budgets change more than 5% between 2024 and 2025 and their dollar impact on their respective total program incentive budget in 2025.

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**Cost of Supply**

*Table 1. Electric Small Business Direct Install Incentive Budget Changes and Dollar Impacts on Total Program Incentive Budgets in 2025.*

<b>Measure</b>	<b>% Change in Measure-Level Incentive Budget between 2024 and 2025</b>	<b>Dollar Impact on Total Program Incentive Budget</b>
CUSTOM LIGHTING	-25%	-\$174,467
Custom Motors/Drives, HVAC	70%	\$467,640
Custom Motors/Drives, Non-HVAC	70%	\$103,920
Freezer Recycling	-18%	-\$3,433
Hot Water, Custom	70%	\$124,704
HVAC, Custom	90%	\$606,240
LED - Exterior HW	-35%	-\$127,648
LED - Interior HW	-35%	-\$1,333,855
LED - Interior SI	-36%	-\$117,333
Refrigerated case LED	-19%	-\$603
PROGRAMMABLE THERMOSTATS	24%	\$7,631
VENDING MACHINES	-19%	-\$370
Water Heating	-19%	-\$578

PUC 1-6, Page 3  
**Cost of Supply**

*Table 2. Gas Residential HVAC Incentive Budget Changes and Dollar Impacts on Total Program Incentive Budgets in 2025.*

<b>Measure</b>	<b>% Change in Measure-Level Incentive Budget between 2024 and 2025</b>	<b>Dollar Impact on Total Program Incentive Budget</b>
Combo Condensing Boiler/Water Heater - 95% AFUE	97%	\$580,850
ES STORAGE WATER HEATER .64 UEF (med draw)	45%	\$670
ES ON DEMAND WATER HEATER 0.87 UEF	-42%	-\$70,243
Furnace w/ ECM - 97% AFUE	160%	\$132,225
Low Flow Showerhead	-58%	-\$1,225
Programmable Thermostat	123%	\$3,675
WiFi Thermostat, Gas - Heat Only	153%	\$48,750
WiFi Thermostat, Gas - Cooling and Heating	230%	\$21,525

*Table 3. Gas EnergyWise Multifamily Incentive Budget Changes and Dollar Impacts on Total Program Incentive Budgets in 2025.*

<b>Measure</b>	<b>% Change in Measure-Level Incentive Budget between 2024 and 2025</b>	<b>Dollar Impact on Total Program Incentive Budget</b>
Faucet aerator	-92%	-\$2,852
Air Sealing	-50%	-\$159,062
Demand Circulator	-100%	-\$1,800
Duct Insulation, MF	-60%	-\$155
Duct Sealing	-99%	-\$10,737
Heating, Custom	6%	\$5,280
MF Shell Insulation	-17%	-\$74,196
Pipe Wrap (Water Heating)	126%	\$335
Low Flow Showerhead – Showerhead	-55%	-\$2,418
Programmable thermostat	-83%	-\$47,903
Wi-Fi programmable thermostat (gas heat only)	-100%	-\$8,469
Low Flow Showerhead - w/TSV	-100%	-\$1,228

PUC 1-6, Page 4  
**Cost of Supply**

*Table 4. Gas Income Eligible Multifamily Incentive Budget Changes and Dollar Impacts on Total Program Incentive Budgets in 2025.*

<b>Measure</b>	<b>% Change in Measure-Level Incentive Budget between 2024 and 2025</b>	<b>Dollar Impact on Total Program Incentive Budget</b>
Faucet aerator	-62%	-\$1,210
Air Sealing	-52%	-\$19,865
Custom	-100%	-\$699,600
HEATING _Custom_LI	79%	\$1,170,000
Insulation	-78%	-\$160,945
Pipe Wrap (Water Heating)	-59%	-\$174
Low Flow Showerhead - Showerhead	34%	\$950
Programmable thermostat	-37%	-\$22,500

*Table 5. Gas C&I Multifamily Incentive Budget Changes and Dollar Impacts on Total Program Incentive Budgets in 2025.*

<b>Measure</b>	<b>% Change in Measure-Level Incentive Budget between 2024 and 2025</b>	<b>Dollar Impact on Total Program Incentive Budget</b>
Heating, Custom	-10%	-\$54,974
Faucet aerator	-96%	-\$793
Air Sealing	-69%	-\$26,951
Demand Circulator	-100%	-\$4,200
MF Shell Insulation	308%	\$37,005
Pipe Wrap (Water Heating)	-56%	-\$460
Programmable thermostat	-92%	-\$23,970
Wi-Fi programmable thermostat (gas heat only)	-100%	-\$1,670
Low Flow Showerhead w/ Thermostatic Valve	-100%	-\$335



PUC 1-6, Page 5  
**Cost of Supply**

- c. Please see Table 6 below for measures that made up more than 10% of their respective total program incentive budgets in 2024 and the percentage of their respective total program incentive budget they make up in 2025. Please note that all of these measures, except for the gas HVAC “Forced Hot Water Boiler - >=95% AFUE” measure, also appear in Tables 1-5 of this response.

*Table 6. Measure-Level Contributions Over 10% to Program-Level Incentive Budgets In 2024 Compared to % Contributions in 2025*

<b>Fuel</b>	<b>Program</b>	<b>Measure</b>	<b>% of 2024 Program Incentive Budget</b>	<b>% of 2025 Program Incentive Budget</b>
E	SBS	LED - Interior HW	54%	37%
G	HVAC	Forced Hot Water Boiler - >=95% AFUE	18%	11%
G	HVAC	Combo Condensing Boiler/Water Heater - 95% AFUE	55%	65%
G	HVAC	ES ON DEMAND WATER HEATER 0.87 UEF	15%	5%
G	EW MF	Air Sealing	35%	26%
G	EW MF	MF Shell Insulation	47%	57%
G	IE MF	Custom	28%	0%
G	IE MF	HEATING _Custom_LI	59%	94%
G	C&I MF	Heating, Custom	86%	75%

“E” refers to “Electric”

“G” refers to “Gas”

“SBS” refers to the Small Business Direct Install program

“HVAC” refers to the Residential HVAC program

“EW MF” refers to the EnergyWise Multifamily program

“IE MF” refers to the Income Eligible Multifamily program

“C&I MF” refers to the C&I Multifamily program

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PUC 1-7  
**Cost of Supply**

Request:

Please provide a table comparing the net supply costs of the gas and electric programs using the net supply costs in column (c) of tables E-12 and G-12 on Bates pages 354 and 372, respectively, and the analogous data for the 2024 Plan.

Response:

Please see Attachment PUC 1-7 for a table comparing the net supply costs of the gas and electric programs using the net supply costs in column (c) of tables E-12 and G-12 on Bates pages 354 and 372, respectively, and the analogous data for the 2024 Plan.

Electric Portfolio

	(a)	(b)
	<b>Intrastate w/o Delivered Fuels and w/ Participant Costs</b>	
	<b>2024</b>	<b>2025</b>
1 <b>Residential</b>		
2 Residential New Construction	-\$56.8	\$71.6
3 Residential HVAC	\$5,966.4	\$6,259.2
4 EnergyWise Single Family	-\$17,789.4	-\$10,372.3
5 EnergyWise Multifamily	-\$436.2	-\$225.7
6 Home Energy Reports	\$1,846.6	\$1,399.0
7 Residential Consumer Products	\$698.5	\$1,115.6
8 <b>Subtotal</b>	<b>-\$9,770.9</b>	<b>-\$1,752.7</b>
9 <b>Income Eligible Residential</b>		
10 Income Eligible Single Family	-\$7,078.1	-\$2,091.2
11 Income Eligible Multifamily	-\$2,051.9	-\$240.5
12 <b>Subtotal</b>	<b>-\$9,130.0</b>	<b>-\$2,331.7</b>
13 <b>Commercial &amp; Industrial</b>		
14 Large C&I New Construction	\$15,443.7	\$18,712.0
15 Large C&I Retrofit	\$8,255.3	\$5,939.5
16 Small Business Direct Install	-\$1,830.5	-\$292.3
17 <b>Subtotal</b>	<b>\$21,868.5</b>	<b>\$24,359.2</b>
18 <b>Total</b>	<b>\$2,967.6</b>	<b>\$20,274.7</b>

Gas Portfolio

		(a)	(b)
		Intrastate w/o Delivered Fuels and w/ Participant Costs	
		2024	2025
1	<b>Residential</b>		
2	Residential New Construction	\$166.6	\$258.7
3	Residential HVAC	-\$234.9	\$764.9
4	EnergyWise Single Family	-\$2,978.9	-\$2,412.4
5	EnergyWise Multifamily	-\$4.3	\$482.7
6	Home Energy Reports	\$1,055.4	\$1,071.9
7	<b>Subtotal</b>	<b>-\$1,996.1</b>	<b>\$165.8</b>
8	<b>Income Eligible Residential</b>		
9	Income Eligible Single Family	-\$2,804.7	-\$2,556.1
10	Income Eligible Multifamily	-\$582.6	\$86.6
11	<b>Subtotal</b>	<b>-\$3,387.3</b>	<b>-\$2,469.5</b>
12	<b>Commercial &amp; Industrial</b>		
13	Large C&I New Construction	\$7,292.5	\$7,795.6
14	Large C&I Retrofit	\$8,790.5	\$5,699.6
15	Small Business Direct Install	\$727.7	\$1,336.4
16	C&I Multifamily	-\$252.8	-\$217.1
17	<b>Subtotal</b>	<b>\$16,557.8</b>	<b>\$14,614.6</b>
18	<b>Total</b>	<b>\$11,174.4</b>	<b>\$12,310.8</b>

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PUC 1-8  
**Cost of Supply**

Request:

For any program with a net negative supply cost savings that was identified in response to PUC 1-7, address whether the general justification provided in Sections 6.6.3.1 through 6.6.3.3 of the Plan (Bates pages 135 to 139) also apply to these programs.

Response:

The general justification provided in Sections 6.6.3.1 through 6.6.3.3 of the Plan (Bates pages 135 to 139) also applies to those programs with a net negative supply cost savings identified in the Company's response to PUC 1-7.

PUC 1-9  
**Cost of Supply**

Request:

Please provide a program-specific justification for any program identified in response to PUC 1-7 that is not already addressed in Section 6.6.3.4 of the Plan (Bates page 140).

Response:

The Electric Portfolio Small Business Direct Install Program is a direct install program through which the Company's implementation teams perform the measure installation in customers' businesses, rather than the customer needing to arrange equipment purchases, installation and maintain quality. Direct install programs are by their nature expensive because, to encourage participation, small business customers receive their facilities' energy audits at no cost, are provided the opportunity to finance interest-free their share of the project costs, and are provided recycling services at no cost so that lamps and ballasts are disposed of in an environmentally safe manner.

The Gas Portfolio C&I Multifamily Program is delivered by the same vendor as the Residential Multifamily Programs and enables the Company to deliver more comprehensive services throughout the building and not just in the residential units.

PUC 1-10  
**Cost of Supply**

Request:

On Bates page 30, the Feldman testimony states

“In the alternative view, without intrastate benefits, delivered fuel benefits, or participant costs...” [emphasis added].

On Bates page 65, in response to the question, “The Company indicates in Table 5 of the Annual Plan that the primary view of “CoCOES” in the 2025 Annual Plan does not include participant costs. Why is that?” Newberger responds:

“The Company understood that the PUC’s focus in the guidance it provided about the calculation of the Cost of Supply is on utility system costs and utility system benefits. Removal of participant costs is consistent with that understanding.”

On Bates page 65 the Zhu testimony has an identical exchange.

- a. Please reconcile the quoted Newberger and Zhu testimony with the quoted Feldman testimony.
- b. In Docket 4486 the EERMC proposed revisions to the cost of supply test that included excluding participant costs (*see* the EERMC’s May 18, 2018, proposed revisions to the LCP Standards, Chapter 1.2.C.ii).<sup>1</sup> The PUC considered and rejected this amendment finding the change lacked symmetry (*see* sections V and VI of PUC Order 23876).<sup>2</sup> With reference to this history, to what additional guidance are Newberger and Zhu referring?

Response:

- a. Mr. Feldman’s testimony on Bates page 30 omitted the phrase “and participant costs” in the first paragraph of the response. Furthermore, the Company notes that there are three alternative views presented on Bates pages 354 and 372 which highlight varying combined treatments of interstate benefits, delivered fuels benefits, and participant costs.

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<sup>1</sup> [https://ripuc.ri.gov/eventsactions/docket/4684-EERMC-LCPStandards-RedLine\\_05\\_18\\_2018.pdf](https://ripuc.ri.gov/eventsactions/docket/4684-EERMC-LCPStandards-RedLine_05_18_2018.pdf).

<sup>2</sup> <https://ripuc.ri.gov/sites/g/files/xkgbur841/files/2024-11/4684-EERMC-Ord23876%208-11-20.pdf>.

PUC 1-10, Page 2  
**Cost of Supply**

Please see the following corrected testimony replacing lines 3-16 on Bates page 30<sup>3</sup>  
(Changes Emphasized):

“The Company has provided the comparison of the cost of supply with the cost of energy efficiency at the program and portfolio level with intrastate benefits only and without delivered fuel benefits *and participant costs* as the primary view in Section 6.6 of the 2025 Annual Plan. Other views, including with delivered fuels benefits included, are provided in Tables E-12 and G-12 in Attachments 5 and 6, for the electric and gas portfolios, respectively.

The results of the comparison show that, in the primary view, the cost of energy efficiency is less than the cost of supply at the portfolio level for both fuels. ***In the three alternative views presented in Tables E-12 and G-12, on Bates pages 354 and 372, respectively, the cost of energy efficiency is less than the cost of supply at the portfolio for both fuels. In the primary view, at the program level, the cost of four electric programs and two gas programs exceeds the cost of supply.*** Per Commission guidance, the Company has provided its reasoning as to why funding of these programs is justified. This is provided in Section 6.6.3 of the 2025 Annual Plan.”

- b. In Order No. 25092 entered in Docket 23-35-EE on July 3, 2024, the section titled “Future Filing Requirements” on page 37, the PUC introduces the cost of supply view that excludes interstate and delivered fuels benefits. Additionally, in this section, the PUC describes the necessity of justification for programs in which the cost of supply without intrastate and delivered fuels benefits is less than the cost of energy efficiency.

The Company interpreted this portion of Order No. 25092 as a shift in the PUC’s perspective regarding the “lower cost than acquisition of additional supply” provisions of the Least Cost Procurement statute, to one that focuses primarily on utility system costs and benefits. Furthermore, during Commission’s December 13, 2023 (day 2) hearing in Docket No. 23-35-EE regarding the Company’s 2024-2026 Energy Efficiency Three-Year Plan and Annual Energy Efficiency Plan for 2024, at transcript pages 18-31, the Commission discussed the importance of the cost of supply excluding interstate and delivered fuels benefits minus the cost of energy efficiency in assessing customer bill

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<sup>3</sup> Please note that the Company will include this correction in a separate filing to be made ahead of the scheduled hearing in this docket.



PUC 1-10, Page 3  
**Cost of Supply**

impacts. The cost of energy efficiency (represented by the calculated energy efficiency charges in Tables E-1 and G-1) in previous bill impact analyses excludes participant costs. Therefore, the Company believes the primary view of the cost of supply minus the cost of energy efficiency, without participant costs, is consistent with bill impacts methodology and consistent with the PUC's decision as set forth in in PUC Order No. 25092 and as discussed during the hearings in Docket 23-35-EE.

PUC 1-11  
**Cost of Supply**

Request:

The data in tables E-12 and G-12 on Bates pages 354 and 372, respectively, show the difference between the program costs of supply and efficiency for four different views. Please expand the table to include the minuend and subtrahend for each cell. If the cost of supply is identical across the four views, please print it only once.

Response:

Please see Attachment PUC 1-11 for Tables E-12 and G-12 expanded to include the minuend and subtrahend for each cell. In the Attachment, columns (a), (b), and (c) are added minuends, and columns (d) and (e) are added subtrahends. Columns (f), (g), (h), and (i) align with columns (a), (b), (c), and (d) respectively in Tables E-12 and G-12.

Electric Portfolio

	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)
	Total Cost of Supply	Intrastate w/ Delivered Fuels Cost of Supply	Intrastate w/o Delivered Fuels Cost of Supply	Cost of Energy Efficiency	Cost of Energy Efficiency w/o Participant Costs	Total (a) - (d)	Intrastate w/ Delivered Fuels and w/ Participant Costs (b) - (d)	Intrastate w/o Delivered Fuels and w/ Participant Costs (e) - (d)	Intrastate w/o Delivered Fuels and w/o Participant Costs (e) - (e)
1 <b>Residential</b>									
2 Residential New Construction	\$5,121.5	\$4,799.6	\$1,894.2	\$1,822.6	\$1,726.2	\$3,298.9	\$2,977.0	\$71.6	\$167.9
3 Residential HVAC	\$21,727.7	\$18,491.6	\$16,628.2	\$10,369.0	\$7,038.8	\$11,358.7	\$8,122.6	\$6,259.2	\$9,589.3
4 EnergyWise Single Family	\$22,609.0	\$21,904.8	\$4,401.6	\$14,774.0	\$13,207.1	\$7,835.0	\$7,130.9	-\$10,372.3	-\$8,805.4
5 EnergyWise Multifamily	\$1,087.2	\$923.5	\$890.2	\$1,115.9	\$1,052.4	-\$28.8	-\$192.4	-\$225.7	-\$162.2
6 Home Energy Reports	\$5,301.1	\$3,971.2	\$3,971.2	\$2,572.2	\$2,572.2	\$2,728.9	\$1,399.0	\$1,399.0	\$1,399.0
7 Residential Consumer Products	\$4,834.9	\$3,866.0	\$3,793.5	\$2,678.0	\$2,381.0	\$2,156.9	\$1,188.0	\$1,115.6	\$1,412.5
8 <b>Subtotal</b>	<b>\$60,681.3</b>	<b>\$53,956.7</b>	<b>\$31,578.9</b>	<b>\$33,331.6</b>	<b>\$27,977.8</b>	<b>\$27,349.7</b>	<b>\$20,625.1</b>	<b>-\$1,752.7</b>	<b>\$3,601.1</b>
9 <b>Income Eligible Residential</b>									
10 Income Eligible Single Family	\$15,604.8	\$13,842.8	\$10,982.4	\$13,073.6	\$13,073.6	\$2,531.2	\$769.2	-\$2,091.2	-\$2,091.2
11 Income Eligible Multifamily	\$2,544.7	\$2,244.4	\$2,198.2	\$2,438.7	\$2,438.7	\$106.0	-\$194.3	-\$240.5	-\$240.5
12 <b>Subtotal</b>	<b>\$18,149.5</b>	<b>\$16,087.2</b>	<b>\$13,180.6</b>	<b>\$15,512.3</b>	<b>\$15,512.3</b>	<b>\$2,637.2</b>	<b>\$574.9</b>	<b>-\$2,331.7</b>	<b>-\$2,331.7</b>
13 <b>Commercial &amp; Industrial</b>									
14 Large C&I New Construction	\$32,941.1	\$27,807.1	\$27,807.1	\$9,095.2	\$7,565.3	\$23,845.9	\$18,712.0	\$18,712.0	\$20,241.9
15 Large C&I Retrofit	\$44,751.0	\$36,017.1	\$36,032.8	\$30,093.4	\$22,480.5	\$14,657.6	\$5,923.8	\$5,939.5	\$13,552.4
16 Small Business Direct Install	\$12,003.1	\$9,439.0	\$9,766.4	\$10,058.6	\$8,409.9	\$1,944.5	-\$619.6	-\$292.3	\$1,356.5
17 <b>Subtotal</b>	<b>\$89,695.2</b>	<b>\$73,263.3</b>	<b>\$73,606.4</b>	<b>\$49,247.2</b>	<b>\$38,455.6</b>	<b>\$40,448.0</b>	<b>\$24,016.1</b>	<b>\$24,359.2</b>	<b>\$35,150.7</b>
18 <b>Total</b>	<b>\$168,526.0</b>	<b>\$143,307.2</b>	<b>\$118,365.8</b>	<b>\$98,091.1</b>	<b>\$81,945.7</b>	<b>\$70,434.9</b>	<b>\$45,216.1</b>	<b>\$20,274.7</b>	<b>\$36,420.2</b>

Gas Portfolio

	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)
	Total Cost of Supply	Intrastate w/ Delivered Fuels Cost of Supply	Intrastate w/o Delivered Fuels Cost of Supply	Cost of Energy Efficiency	Cost of Energy Efficiency w/o Participant Costs	Total (a) - (d)	Intrastate w/ Delivered Fuels and w/ Participant Costs (b) - (d)	Intrastate w/o Delivered Fuels and w/ Participant Costs (c) - (d)	Intrastate w/o Delivered Fuels and w/o Participant Costs (c) - (e)
1 <b>Residential</b>									
2 Residential New Construction	\$1,463.6	\$1,290.9	\$1,290.9	\$1,032.2	\$689.1	\$431.4	\$258.7	\$258.7	\$601.8
3 Residential HVAC	\$7,921.2	\$6,883.2	\$6,883.2	\$6,118.3	\$2,527.5	\$1,802.9	\$764.9	\$764.9	\$4,355.7
4 EnergyWise Single Family	\$14,114.0	\$12,278.1	\$12,278.1	\$14,690.5	\$13,842.2	-\$576.5	-\$2,412.4	-\$2,412.4	-\$1,564.1
5 EnergyWise Multifamily	\$1,535.1	\$1,349.2	\$1,349.2	\$866.5	\$920.0	\$668.6	\$482.7	\$482.7	\$429.2
6 Home Energy Reports	\$1,903.5	\$1,490.8	\$1,490.8	\$418.9	\$418.9	\$1,484.7	\$1,071.9	\$1,071.9	\$1,071.9
7 <b>Subtotal</b>	<b>\$26,937.4</b>	<b>\$23,292.3</b>	<b>\$23,292.3</b>	<b>\$23,126.5</b>	<b>\$18,397.8</b>	<b>\$3,811.0</b>	<b>\$165.8</b>	<b>\$165.8</b>	<b>\$4,894.5</b>
8 <b>Income Eligible Residential</b>									
9 Income Eligible Single Family	\$2,719.4	\$2,374.2	\$2,374.2	\$4,930.3	\$4,930.3	-\$2,210.9	-\$2,556.1	-\$2,556.1	-\$2,556.1
10 Income Eligible Multifamily	\$4,488.2	\$3,783.2	\$3,783.2	\$3,696.7	\$3,696.7	\$791.5	\$86.6	\$86.6	\$86.6
11 <b>Subtotal</b>	<b>\$7,207.6</b>	<b>\$6,157.5</b>	<b>\$6,157.5</b>	<b>\$8,627.0</b>	<b>\$8,627.0</b>	<b>-\$1,419.4</b>	<b>-\$2,469.5</b>	<b>-\$2,469.5</b>	<b>-\$2,469.5</b>
12 <b>Commercial &amp; Industrial</b>									
13 Large C&I New Construction	\$10,813.4	\$9,868.7	\$9,868.7	\$2,073.1	\$1,696.3	\$8,740.4	\$7,795.6	\$7,795.6	\$8,172.3
14 Large C&I Retrofit	\$13,366.6	\$11,980.2	\$11,980.2	\$6,280.6	\$4,639.1	\$7,086.0	\$5,699.6	\$5,699.6	\$7,341.1
15 Small Business Direct Install	\$2,311.7	\$2,109.2	\$2,109.2	\$772.8	\$690.7	\$1,539.0	\$1,336.4	\$1,336.4	\$1,418.5
16 C&I Multifamily	\$1,215.3	\$1,121.1	\$1,121.1	\$1,338.2	\$998.4	-\$122.9	-\$217.1	-\$217.1	\$122.7
17 <b>Subtotal</b>	<b>\$27,707.0</b>	<b>\$25,079.2</b>	<b>\$25,079.2</b>	<b>\$10,464.6</b>	<b>\$8,024.6</b>	<b>\$17,242.4</b>	<b>\$14,614.6</b>	<b>\$14,614.6</b>	<b>\$17,054.6</b>
18 <b>Total</b>	<b>\$61,852.0</b>	<b>\$54,528.9</b>	<b>\$54,528.9</b>	<b>\$42,218.1</b>	<b>\$35,049.4</b>	<b>\$19,633.9</b>	<b>\$12,310.8</b>	<b>\$12,310.8</b>	<b>\$19,479.5</b>

PUC 1-12  
**Cost of Supply**

Request:

Referencing the Newberger testimony on Bates page 66, please provide the specific projects in a proposed Infrastructure, Safety, and Reliability Plan could potentially be avoided by energy efficiency investment.

Response:

There are no specific projects in the Fiscal Year 2025 Electric Infrastructure, Safety and Reliability (ISR) Plan, filed on December 21, 2023, in Docket No. 23-48-EL, that can be potentially avoided by energy efficiency. Energy efficiency reduction are taken prior to distribution planning analysis and prior to projects inclusion in an ISR plan. Therefore, the specific projects in an ISR Plan have already taken energy efficiency into account.

The Company’s testimony can be used to determine the reasonableness of an approximate deferral benefit of energy efficiency where that deferral benefit is non-zero. In the Company’s opinion, the deferral benefit is best and most reasonably quantified by a subset of the System Capacity and Performance budget where the types of projects, not the specific projects themselves, are related to types of projects that energy efficiency could defer. It is important to distinguish that the relationship is about types of projects and not specific projects in order to arrive at a reasonable non-zero benefit. Also see the response to Division 2-34.

The following System Capacity and Performance projects are examples of the types of projects that could be used to reasonably approximate the deferral benefit of energy efficiency. As stated above, these specific projects would not be deferred by energy efficiency investments.

<b>Project Name</b>	<b>Reference Bates Pages<sup>1</sup></b>
1. Weaver Hill Road Substation	70, 72, 86, 153
2. Overloaded Transformer Replacements	70, 72, 86
3. Newport (also “Other Area Study Projects -Newport”)	85, 86, 104, 137, 153
4. South County East (also “Other Area Study Projects -SCE”)	71, 82, 86, 140, 153

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<sup>1</sup> An electronic copy of the Company’s Fiscal Year 2025 Electric ISR Plan is available at [https://ripuc.ri.gov/sites/g/files/xkgbur841/files/2024-01/2348-RIE-Book1-ElecISRPlan\\_12-21-23.pdf](https://ripuc.ri.gov/sites/g/files/xkgbur841/files/2024-01/2348-RIE-Book1-ElecISRPlan_12-21-23.pdf).

PUC 1-13  
**Cost of Supply**

Request:

On Bates page 72, the Zhu testimony describes “winter peaks by the mid-2030s.” Do these peaks affect generation, transmission, and/or distribution capacity? If so, do these peaks exceed summer peaks by the mid-2030s?

Response:

The winter peaks referenced on Bates page 72 would affect generation and PTF transmission capacity. The AESC 2024 Study User Interface for Counterfactual #3 predicts that these peaks would exceed summer peaks by 2036.

PUC 1-14  
**Program Coordination**

Request:

On Bates page 17, the Feldman testimony answer the question of how the increased availability of funding through federal and state resources was included in the proposed Plan. The witness addresses two programs, the Home Electrification and Appliance Rebates (HEAR) and Home Energy Rebates (HER) programs. Were any other sources or programs considered? If so, how?

Response:

Yes, the Company considered sources and programs in addition to HEAR and HER. A list of other programs that were considered, and additional detail on the Company's approach, can be found in Section 5.4.3 of the Main Text of the 2025 Energy Efficiency Plan, Bates page 119. When evaluating potential funding sources, the Company considers the source's eligibility criteria, application process, funding availability, funding timeline, and administrative costs associated with coordinating an outside source with the Company's existing programs.

PUC 1-15  
**Program Coordination**

Request:

Regarding the consideration of the HEAR and HER in the proposed plan discussed on Bates page 17, the witness states, "The Company assessed the potential impact of [HEAR and HER], and given their limited overlap with the current Company offerings, did not adjust the Plan budgets as they are currently adequate to cover a potential increase in program activity as a result of these programs." [emphasis added]

- a. Does the underlined instance of "they" refer to the EE program budgets or something else?
- b. Does the underlined instance of "program activity" refer to EE programs or something else?
- c. Does the underlined instance of "these programs" refer to HEAR and HER, or something else?
- d. If the response to part b is "yes," please list all EE programs for which RIE expects activity will increase (or decrease), and which external program (HEAR or HER) RIE expects will cause that increase (or decrease).

Response:

- a. Yes, the "they" refers to EE Program Budgets.
- b. Yes, the underlined instance of "program activity" refers to EE programs.
- c. Yes, the underlined instance of "these programs" refers to HEAR and HER.
- d. As both HEAR and HER are new programs, the Company does not have any expectation of an increase or decrease in program activity as a result of HEAR or HER.

For the HEAR program, there is the possibility of a decrease in program spending for knob and tube remediation. The HEAR program can offer funding for wiring upgrades, including the remediation of knob and tube, a barrier to weatherization. The Community Action Programs that OER is working with to implement the HEAR program, will be instructed by OER to utilize HEAR funds for this work ahead of utilizing efficiency program funding administered by the Company. Funding for knob and tube remediation



PUC 1-15, Page 2  
**Program Coordination**

is provided as part of the weatherization services offered in the EnergyWise Single Family and Income Eligible Single-Family Programs.

For the HER program, there is the potential for an increase in program spending on weatherization for income-eligible customers with delivered fuels. The HER program, as proposed, requires weatherization as a condition of participation. The Company has previously weatherized over one thousand units of HER eligible multifamily housing since 2015. Therefore, the Company does not expect an increase from current demand for weatherization measures for delivered fuels multifamily properties given the number of HER eligible multifamily housing units that have already been weatherized. Weatherization for income-eligible customers is funded through both the Income Eligible Single Family and Income Eligible Multifamily Programs.

PUC 1-16  
**Program Coordination**

Request:

Please provide a list of all activities that fall under the coordination that will continue in this program year between RIE and OER (Bates 17, lines 5 to 6). In additional, provide the following:

- a. Has RIE provided OER or its program managers with a list of programs and measures that can complement OER's offerings?
- b. Has RIE established a data sharing plan to identify potential and actual enrollees that might benefit from simultaneous enrollment in both OER's and RIE's programs?
- c. Will RIE target OER's enrollees with complementary program offerings? If so, how?
- d. If the testimony in lines 14 to 17 mean the witness believes that the budgets for relevant EE programs are sufficient to allow full and concurrent enrollment in the HEAR or HER programs, please provide the analysis upon which this statement is based. For example, how may HEAR and HER enrollees are expected during 2025, and how many enrollees are the relevant EE programs designed to accommodate?

Response:

The Company will continue to work with OER in 2025 to coordinate regarding its Home Energy Rebate ("HER"), Home Electrification and Appliance Rebate ("HEAR"), and Clean Heat RI ("CHRI") programs. Early in 2024 the Company and OER collaborated with Rewiring America to design a web-based incentive calculator that Rhode Island residents can use to identify state, federal, and Company incentives. Rhode Island Energy will continue to work with OER and Rewiring America in 2025 to ensure that calculator reflects the most accurate list of available incentives and rebates.

The Company is coordinating with OER to provide a list of customers using delivered fuels that have already received weatherization services and who would therefore be eligible for HER incentives.

For the HEAR program, the Company held a meeting with the lead vendor for its Income Eligible program and OER in July 2024. The purpose of the meeting was to coordinate the use of the Community Action Programs ("CAPs"), since OER signaled its intent to use the CAPs to

PUC 1-16, Page 2  
**Program Coordination**

implement the HEAR program. The outcome from that meeting was to ensure that the CAPs are aligned on their work processes and to ensure that customers will be presented with a comprehensive suite of both Company and HEAR incentives for which they might be eligible. The Company is continuing to coordinate with OER and the CAPs to develop methodology to ensure that eligible customers are utilizing both HEAR and the Company's programs.

For CHRI income-eligible participants, OER works with the participant to refer them to the appropriate CAP to begin the weatherization process. For CHRI installations that do not require weatherization, OER provides the participant with information about the Company's weatherization programs. In turn, when the Company completes a home energy assessment through the EnergyWise Single Family Program, the customer is provided with details on how to apply for CHRI funding.

- a. The Company has not provided a list of programs and measures to OER specifically to outline the ways the Company's programs can complement OER offerings. The Company and OER have had many conversations about the ways the Company's and OER's programs and measures can complement one another. For business customers, for example, the Company and OER have collaborated to facilitate Rhode Island business customers benefitting from the Company's energy efficiency programs while also participating in the CHRI program.
- b. For the HEAR program, OER and the Department of Health Services ("DHS"), the administrator of the Weatherization Assistance Program delivered by the CAPs, have a memorandum of understanding in place to facilitate data sharing for the HEAR program so customers participating in the weatherization program are also offered HEAR rebates, and vice versa.

For the HER program, OER is targeting income-eligible multifamily customers with delivered fuel heating for heat pump installations. OER will require weatherization as a condition of participating in the HER program. DHS, the CAPs, and OER can identify, through their shared data systems, the income-eligible residents of buildings with two to four units that have received weatherization services and who would thus be eligible for HER. For multifamily dwellings with five or more units, the Company is working with OER to share a list of income-eligible multifamily buildings that have received weatherization services through the Company's energy efficiency programs.

PUC 1-16, Page 3  
**Program Coordination**

With respect to CHRI, the Company and OER are currently discussing a data sharing agreement. OER and the Company have discussed including language in the CHRI terms and conditions agreement that would allow OER to share CHRI participant data with the Company. The Company would then contact CHRI participants to make sure they are aware of the Company's EnergyWise program. In addition, the Company is working with the CAPs to enroll income-eligible customers that both 1) heat with delivered fuels, and 2) received weatherization services in the CHRI program, since they are eligible for a conversion to a heat pump through CHRI if they meet those two conditions.

- c. Yes, as mentioned in the response to part b, the Company is working with OER to access the data necessary to target CHRI participants.
- d. The HEAR program has a total budget of approximately \$32 million. The maximum HEAR incentive per household is \$8,340. If each household were to receive the maximum incentive, approximately 3,800 households would participate in the HEAR program. This assumes the full \$32 million is allocated to households, which, though assumed for the sake of our analysis, will not be the case as a portion of the funding will be used for program administration. The Company budgeted for 798 income-eligible weatherization projects in 2025 (448 through the electric program, 350 through the natural gas program) which the Company believes will be adequate to meet the demand for income-eligible weatherization services. There is no evidence at this time that the HEAR program will increase demand for income eligible services or that the number of weatherizations budgeted by the Company will be inadequate to meet demand. The CAPs and the Company will continue to drive enrollment in WAP while at the same time tracking any increases in demand that result from interest in the HEAR program.

The HER program has a total budget of approximately \$32 million. The maximum HER incentive per household is \$16,000. In conversations with the Company, OER has indicated that it has a goal of reaching 1,500 multi-family units through the HER program. While the HER program requires weatherization as a condition of participation, the Company has previously weatherized over one thousand units of HER eligible multifamily housing since 2015. Therefore, the Company does not expect an increase from current demand for weatherization measures for delivered fuels multifamily properties given the number of HER eligible multifamily housing units that have already been weatherized.

PUC 1-17  
**Program Coordination**

Request:

Do the IE Single Family and Multi Family programs offer the same measures as the EW Single Family and Multi Family programs, respectively? If not, provide detail at the measure level.

Response:

In the Company's 2025 Plan, the Income Eligible Single Family (IE SF) and EnergyWise Single Family (EW SF) programs both offer the same basic measures for the following: audits, weatherization, thermostats, smart strips, and low-flow fixtures to reduce hot water heating load (e.g., faucet aerators and low-flow showerheads).

The IE SF program does offer additional measures that the EW SF program does not. These are:

- Heating System Replacements
- Window AC Replacements
- Early Retirement Clothes Washer
- Replacement Refrigerator
- Replacement Freezer
- Heat Pump Water Heaters
- Dehumidifier Rebate

There are no differences between the measure offerings in the EnergyWise Multi Family (EW MF) and Income Eligible Multi Family (IE MF) programs.

PUC 1-18  
**Program Coordination**

Request:

Regarding the C&I Multifamily program described in the testimony on Bates page 54, how (sic) please explain how this program is different from the EW MF and IE MF.

Response:

The C&I Multifamily program provides weatherization services and replacement of heating and domestic hot water heating equipment and systems for market rate properties when the building has a commercial account, oftentimes to serve a central heating and domestic hot water plant. Residential customers' units that are metered on residential rates are served through the EnergyWise multifamily (EW MF) program. If the site has a commercial account for central heating and/or hot water, but is an income eligible property, the project is put through the income eligible multifamily (IE MF) program.

PUC 1-19  
**Program Coordination**

Request:

Why are residences with two to five dwellings served through the single-family programs and not the multi-family programs?

Response:

The Company does not serve five-unit properties through single family programs. The Company serves one- to four-unit properties through the single family programs because the design, construction, and major energy using systems (e.g., HVAC, hot water) for these types of properties tend to be similar. Properties with five or more units are served through multi-family programs. These properties tend to be larger, with more variety and more complex and varied design, construction, and major energy using systems. For example, a multi-family property is more likely to have more hallways, more stairwells, shared laundry, larger foyer, common areas, a large central heating and hot water system, etc. Grouping properties into these two buckets helps improve the efficiency of implementation, program design and measure offering.

PUC 1-20  
**Program Coordination**

Request:

Regarding the 20% decrease in planned quantities of delivered fuels weatherization described in the Lawrence testimony on Bates page 45, did RIE explore or discuss offering these quantities through the gas portfolio?

Response:

No, the Company did not explore or discuss offering these quantities through the gas portfolio.

All delivered fuels customers are electric customers, but they are generally not natural gas customers. In addition, weatherization of delivered fuels customers does provide electric savings through reduced cooling electricity load.



PUC 1-21  
**Program Coordination**

Request:

Regarding the 20% decrease in planned quantities of Income Eligible Heating System Replacements for delivered fuel systems described in the Lawrence testimony on Bates page 45, did RIE explore or discuss offering these quantities through the gas portfolio?

Response:

As noted on Bates page 45 of Mr. Lawrence's testimony, the Company reduced planned quantities of Income Eligible Heating System Replacements for delivered fuel systems by 85% (i.e., 2025 Plan relative to 2023 actuals). The Company did not explore or discuss offering these quantities through the gas portfolio.

All delivered fuels customers are electric customers, but they are generally not natural gas customers.

PUC 1-22  
**Program Coordination**

Request:

With reference to the PUC 1-20 and 1-21, has RIE explored using gas portfolio budget dollars for delivered fuels customers in locations on the edges of the gas system, where system expansion might otherwise occur?

Response:

With reference to the PUC 1-20 and 1-21, Rhode Island Energy has not explored using gas portfolio budget dollars as a specific funding source for delivered fuels customers in locations on the edges of the gas system, where system expansion might otherwise occur.

PUC 1-23  
**Program Coordination**

Request:

Beginning on Bates page 51, the Siegal testimony describes two pathways to enroll in the Large C&I New Construction Program. Please provide an alternative description that makes clear what the differences are.

Response:

The two pathways are intended to support customers' ability to upgrade the baseline equipment proposed in their new buildings. Customers with the timeline to allow for full-building electric and gas building modeling can choose to utilize Pathway 1 which looks at the building's energy use intensity across all the end uses (e.g. lighting and controls, HVAC). With Pathway 1, the Company helps to fund the building modeling and technical assistance that identifies high-performance systems and equipment and the overall building energy-use intensity. For Pathway 2, the customer and the Company do not invest the time and resources into full-building modeling and instead analyze the savings potential for specific end-use equipment exceeding the current baseline codes and standards.

PUC 1-24  
**Program Coordination**

Request:

On Bates page 52, the Siegal testimony explains that the Large Commercial [and Industrial] Retrofit program “incentivizes the replacement of existing equipment and systems with high efficiency alternatives... .” On Bates page 52, the witness explains that the Large C&I program offers “incentives ... for energy efficiency [for] ...major renovation [and] planned replacement of aging equipment... .” Please explain how the programs are different, and how RIE determines in which program customers’ enrollment counts.

Response:

The Large Commercial and Industrial (“C&I”) Retrofit program as described on Bates page 52 is intended to incentivize customers to replace **existing, working equipment in their facilities** with cost-effective, higher-efficiency equipment. Absent the Company’s program, the customer would continue to utilize the working equipment in the facility until it failed (or approached end of life) and therefore would not have realized the energy and cost benefits from having installed the high efficiency equipment earlier. This program’s incentive is based on funding a portion of the project costs that include both the labor and equipment because the customer could choose to do nothing. The Large C&I New Construction Program as described on Bates page 51 is intended to incentivize customers to install cost-effective high efficiency equipment in a new building, major renovation where the existing equipment is scheduled for removal or demolition, or failed equipment. In these instances, the customer does not have existing, working equipment and the Company’s program is intended to affect the customer’s decision regarding the efficiency of the equipment being installed during this time-dependent event. Absent the Company’s program it is expected the customer would have installed new equipment meeting the current energy codes and standards. This program’s incentive is based on funding a portion of the incremental equipment cost between the higher-cost high-efficiency equipment and the lower-cost baseline equipment. It does not fund the labor cost associated with the installation of the equipment because that would have occurred regardless of which equipment was installed.

The Company enrolls customers in the program primarily based on whether the project is accelerating the replacement of existing, working equipment with high efficiency equipment (Large Commercial and Industrial Retrofit program) or is a time-dependent project where the Company’s program has resulted in equipment being installed that exceeds the required baseline efficiency for that equipment.

PUC 1-25  
**Miscellaneous Program Design**

Request:

On Bates page 40, the Lawrence testimony lists “ENERGY STAR Most Efficient windows.”

- a. Does this measure appear in row 41 in Table 34 on Bates page 203? If not, what other rows in Table 34 or any other analogous tables does the measure appear?
- b. Does the Plan accommodate 10 windows? If not, what number of windows does the Plan accommodate? How many customers does the Plan accommodate?
- c. How did RIE arrive at an allocation for 10 windows (or the number provided in response to part b)?

Response:

- a. In preparing its response to this data request the Company realized that it should not have specified the “Most Efficient” subtype of ENERGY STAR Certification. The Company does provide incentives for ENERGY STAR triple pane windows, but they are not necessarily of the “Most Efficient” designation. These measures appear as cited on row 41 in Table 34 on Bates page 203, as well as on rows 42, 43, and 44 of Table 2 (“Table 2. Planned Measures for Electric Residential Programs”) which begins on Bates page 192. Rows 42, 43 and 44 appear on Bates pages 194 and 195.
- b. The Company’s 2025 Plan accommodates 110 ENERGY STAR Triple Pane windows. The Company is unable to say how many customers the Plan accommodates as the number of windows purchased by customers will vary when utilizing this rebate.
- c. The Company’s 2025 Plan allocated incentives for 110 ENERGY STAR Triple Pane windows. The Company plans measures based on a variety of factors including historical and anticipated demand. There is historically very little uptake of windows, as they tend not to be a cost-effective investment for a homeowner to make (due to the high material cost, and high labor cost involved in removing an old window and installing a new one). However, there are situations in which customers will seek to purchase more efficient windows, and the Company offers these to be available in such a situation.

PUC 1-26  
**Miscellaneous Program Design**

Request:

With reference to the testimony in line 20 on Bates page 52, what is a national account?

Response:

A national account is typically characterized as a business customer with multiple locations in Rhode Island and throughout the country. Oftentimes, these customers have a centralized organization that includes an energy manager.

PUC 1-27  
**Miscellaneous Program Design**

Request:

With reference to the testimony in line 9 on Bates page 53, is the enrollment open to gas customers that use less than 100,000 therms per year?

Response:

Yes, enrollment in the Large Commercial Retrofit Program is open to customers that use less than 100,000 therms per year.

PUC 1-28  
**Miscellaneous Program Design**

Request:

On Bates page 120 (41/80) the Plan states “The Company adjusted the savings estimates for some measures to reflect new code baselines or to eliminate measures that are now considered to be required equipment.” Please list all savings estimates, by measure, that were adjusted in relation to the IECC.

Response:

In the 2025 Annual Plan, five electric measures were adjusted or removed due to the IECC 2024 code.

See Table 1 below for measures that were removed from the program.

*Table 1. Measures No Longer Offered per IECC 2024 Updated Requirements*

Sector	Program	Measure	Reasoning
C&I	C&I NC*	Lighting Controls - Dimming	Now required per IECC 2024
C&I	C&I NC	Lighting Controls - Sensor	Now required per IECC 2024

\* “C&I NC” refers to the Large C&I New Construction program.

See Table 2 below for measures that had savings estimates adjusted per updated IECC 2024 code baselines.

*Table 2. Measures with Adjusted Savings Estimates per IECC 2024 Updated Baselines*

Sector	Program	Measure	Previous Value per unit	Updated Value per unit	Reasoning
Res.*	RNC**	Clothes Washer	46.3 kWh	27.7 kWh	IECC ‘24 updated baseline
Res.	RNC	Refrigerators	101.4 kWh	95.7 kWh	IECC ‘24 updated baseline
Res.	RCP***	Clothes Washer Most Eff.	265.45 kWh	29.25 kWh	IECC ‘24 updated baseline

\* “Res.” refers to the Residential Sector.

\*\* “RNC” refers to the Residential New Construction program.

\*\*\* “RCP” refers to the Residential Consumer Products program.



PUC 1-29  
**Miscellaneous Program Design**

Request:

On Bates page 74 the Zhu testimony states, “Specifically for the gas multifamily program, the free ridership rate for a few measures is relatively high (equal to or greater than 33 percent) and the netted-out costs paid by free-riders drive the participant cost negative for the program. The incentive cost levels **may** indicate a desire to attract participants to this program, even at the risk of a larger percentage of free riders.” [emphasis added]

- a. What methods and data does the Company use to quantify free ridership for the gas multifamily program?
- b. Regarding the emphasized instance of “may,” does the negative participant cost indicate a desire to attract participants to this program even at the risk of a larger percentage of free riders? If so, what is the justification? If not, what is the purpose and justification?

Response:

- a. The Company uses evaluation studies to quantify free ridership for the gas multifamily program. Please see Table 1 for the planned 2025 measures, free-ridership value, and their sources. Please note for custom measures the free ridership is assumed to be zero due to the nature of custom projects.

*Table 1. Free-Ridership Values and Sources for EnergyWise Multifamily, Gas*

	(a) Program	(b) Measure	(c) Free Ridership	(d) Source
1	EnergyWise Multifamily	Air Sealing	0.33	1
2	EnergyWise Multifamily	Duct Insulation, MF	0.33	1
3	EnergyWise Multifamily	Duct Sealing	0.33	1
4	EnergyWise Multifamily	Faucet aerator	0.08	1
5	EnergyWise Multifamily	Heating, Custom	0	
6	EnergyWise Multifamily	Low Flow Showerhead - Showerhead	0.08	1
7	EnergyWise Multifamily	MF Shell Insulation	0.33	1
8	EnergyWise Multifamily	Pipe Wrap (Water Heating)	0.08	1
9	EnergyWise Multifamily	Programmable thermostat	0.48	1

PUC 1-29, Page 2  
**Miscellaneous Program Design**

Source 1: Cadeo/Illume (2020). Impact & Process Evaluation of EnergyWise Multifamily Program. Table 9.ng-ri-mf-impact-and-process-comprehensive-report\_final\_04sept2020.pdf

- b. The negative participant cost does not indicate a desire to attract participants to this program even at the risk of a larger percentage of free riders. The presence of the negative participant costs for measures in this program and other instances (please see the Company's response to Division 2-26) is the result of the methodological change of the application of the free rider values as described on Bates pages 73 and 74 of Mr. Zhu's testimony, and not as a result of program design decisions.

PUC 1-30  
**Miscellaneous Program Design**

Request:

On Bates page 281, in Section 4 Historic Valuation Studies, the Company references a leveraged study from MA “DNV, Upstream Lighting NTG, June 2021.” Is this study used as a basis to adjust values due to free ridership for programs or technologies other than upstream lighting?

Response:

No, the “DNV, Upstream Lighting NTG Study, June 2021” is only used to adjust values due to free ridership for upstream lighting measures.

PUC 1-31  
**Emissions**

Request:

On Bates page 72, the Zhu testimony states:

“AESC 2024 provides a non-zero value for carbon dioxide mitigation after 2033. While the study modeled compliance with the state’s Renewable Energy Standard in 2033, the study’s authors note that, because New England is a regional market and other states have longer timelines to achieve a carbon-free grid, the value of carbon mitigation even in Rhode Island post-2033 is not zero.”

- a. Do the authors assume:
  - 1. the supply of renewable energy is in equilibrium with regional demand,
  - 2. the supply of renewable energy leads changes (plus or minus) in regional demand,
  - 3. the supply of renewable energy lags changes (plus or minus) in regional demand, or
  - 4. something else?
- b. The information on Bates page 310 describes a marginal abatement technology of offshore wind. Does this mean that if a MWH of energy efficiency avoids consumption of energy that would otherwise occur in a state with a clean or renewable energy requirement, the efficiency measure avoids the incremental cost of a MWH of offshore wind?
- c. Please assume two jurisdictions: RI, which has a zero-emission mandate for electricity consumption in 2033, and BB, which has no mandate and can consume any type of energy for all time and has no impact on the growth of clean energy generation. Assume that a fossil fuel generation serves any consumption not met with clean energy (or energy efficiency) and that consumption in 2033 and 2034 is:

	2033	2034
RI	1 MWH	2 MWH
BB	4 MWH	4 MWH
Total	5 MWH	6 MWH

PUC 1-31, Page 2  
**Emissions**

If RI invests to serve 1 MWh increment in 2034 with energy efficiency instead of offshore wind, please confirm the impact on emissions:

- i. if clean energy supply is in equilibrium with demand, there is no impact,
- ii. if the clean energy supply increase would otherwise **lag** the increase in RI's demand, the energy efficiency **avoids the increase in emissions** that would otherwise occur in the period from 2034 until the incremental offshore wind is operational, and
- iii. if the clean energy supply increase would otherwise **lead** the increase in RI's demand, energy efficiency **avoids the decrease in emissions** that would otherwise occur in the period from when the incremental offshore wind is operational until 2034 when demand increases.

Response:

- a. AESC 2024, page 225-226, states "First, based on our renewable energy market fundamentals analysis, we anticipate a Class-1 RPS compliance surplus in each state, in each counterfactual, and in each study year through 2037. REC supply and demand are expected to be closest to equilibrium during the first three years of the study period. During this time, while current-year REC supply may trail current-year demand in one or more years, RPS-obligated entities currently hold large 'bank balances' (which refers to excess RPS compliance that LSEs collectively already have at their disposal) which can be used to fulfill RPS obligations and therefore provide a clear signal that no incremental renewable energy builds are required. In the middle years of the study period, regional REC surpluses of thousands of GWh per year are expected."
- b. The marginal value of a unit of energy efficiency would not necessarily avoid the incremental cost of a MWh of offshore wind. The MWh of energy on the margin that is avoided with energy efficiency is not provided by a renewable energy source unless the renewable energy standard is 100% for every state in the region in that year.
- c. The language of the question does not indicate whether the "demand" that is referred to is demand for clean electricity or total demand for electricity, whether that demand is in Rhode Island or regionwide, what the resource mix is in BB, and whether the condition in part (i) refers to 2033 or 2034. These factors could impact the Company's response to the hypotheticals posed. To be able to provide a response, the Company has assumed for the purposes of this response, that the questions refer to the status of the supply and demand

PUC 1-31, Page 3  
**Emissions**

in Rhode Island alone and that these are in equilibrium in 2033 before the increase in load occurs. Under those conditions, the Company believes that the hypothetical situations posed in each of the three scenarios are correct.

PUC 1-32  
**Emissions**

Request:

With reference to the quoted language in PUC 1-31, in a regional grid where all load is physically served by both clean and emitting generation:

- a. Does both the hourly and locational characteristics of an increase of consumption have an impact on the actual emissions that would otherwise be avoided by energy efficiency? For example, does avoiding one unit of consumption on-peak versus off-peak, or in summer versus in winter, have an impact on actual emission avoided from energy efficiency?
- b. Does the hourly and locational characteristics of the clean energy unit that would be dispatched to serve an increment of load have an impact on the actual emissions that would otherwise be served by fossil fuel generation? For example, does one unit of offshore wind generation versus solar generation have an impact on actual emissions?

Response:

- a. In the actual grid, increasing a unit of consumption in a specific location in any hour would marginally impact the dispatch of generation. The actual generation and, consequently, the emissions impact would depend on what generating units were operating at that time and what transmission constraints might be in play.

The Company notes, however, that the emissions factors used in the 2025 Annual Plan are the result of production simulation modeling conducted for AESC 2024. They are specifically presented in Table 171 of AESC 2024, titled "Modeled marginal electric sector CO2 emissions rates (lb per MWh), point of combustion." This table presents annual average values, in lbs/MWh, as well as summer and winter on-peak and off-peak values. This presentation infers sensitivity to the seasonality and time-sensitivity of emissions impacts. It does not convey any information about locational sensitivity.

- b. In the actual grid, the hourly and locational characteristics of the clean energy unit that would be dispatched to serve an increment of load could have an impact on the actual emissions that would otherwise be served by fossil fuel generation. The Company believes that, in the actual grid, all other things being equal, the emissions impact of one unit of solar generation and one unit of offshore wind generation are equivalent; they are both non-emitting, however, there could be locational differences that could affect regional emissions.

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**Emissions**

The same qualifications the Company provides in part (a) of this response about the differences between the actual grid and the AESC 2024-modeled grid apply to this part (b) of the response as well.



PUC 1-33  
**Emissions**

Request:

In response to the following, assume a year in which Rhode Island has met its clean energy requirement for electricity consumption. Consider the 365-day hourly load shape of:

1. the marginal MWH of electric energy consumed that year, and
2. the marginal MWH of energy efficiency.

Given that, as the Zhu testimony describes on Bates page 72, Rhode Island is served by a regional grid with non-zero emissions that relies on hourly unit commitment and dispatch:

- a. Do the cumulative hourly emissions from the incremental MWH of consumption depend on its hourly load shape throughout the year and the hourly marginal heat rate of the fleet?
- b. Do the relative cumulative emissions reduction over the year from 1 MWH of energy efficiency versus 1 MWH of offshore wind (OSW) generation depend on which alternative has a larger impact on the hourly marginal heat rate of the fleet throughout the year? Would the result further depend on which specific energy efficiency measure was being considered in the analysis, as measures have different load shape reductions?
- c. Does the AESC specifically allow this comparison? If so, please explain how. Please also provide which measure (EE or OSW) has a higher annual emissions reduction and provide any analysis supporting the response.
- d. If the answer to part c is that 1 MWH of OSW has greater emissions reductions than 1 MWH of energy efficiency, then would employing energy efficiency *increase* emissions compared to a baseline scenario in which the marginal unit serving Rhode Island's marginal demand is OSW?

Response:

While the Company has not located the referenced statement in Mr. Zhu's testimony, if the Company assumes, for purposes of this data request response, that Rhode Island is served by a regional grid with non-zero emissions that relies on hourly unit commitment and dispatch, the Company responds as follows:

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**Emissions**

- a. The cumulative hourly emissions from the hourly incremental MWh of consumption will depend on the hourly marginal heat rate of the fleet. The load shape of a marginal unit of consumption is a flat line of magnitude 1 MWh over the 8,760 hours of the year and the Company believes that it would not impact the emissions.
- b. The relative cumulative emissions reduction over the year from 1 MWh of energy efficiency versus 1 MWh of offshore wind (OSW) generation depends on which alternative has a larger impact on the hourly marginal heat rate of the fleet throughout the year. The result would further depend on which specific energy efficiency measure was considered in the analysis, as measures have different load shapes.
- c. AESC 2024 does not specifically allow for this comparison between clean energy resources such as energy efficiency or offshore wind. For Counterfactual #3 used by Rhode Island, the marginal unit of efficiency is added to determine the value of energy efficiency and emissions. The Company's understanding is that the amount of wind or any other resource is already built into the resource mix.
- d. Given the Company's response in subsection (c) above, it is not possible for the Company to answer this question.

The Narragansett Electric Company  
d/b/a Rhode Island Energy  
RIPUC Docket No. 24-39-EE  
In Re: 2025 Annual Energy Efficiency Plan  
Responses to Commission's First Set of Data Requests  
Issued November 12, 2024

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PUC 1-34  
**Emissions**

Request:

Referencing the Zhu testimony on Bates page 79, are the 34,938 short tons of carbon avoided in 2030 the avoidance for the year 2030 in Section 1.2.4 on Bates page 88, the cumulative avoidance by 2030, or something else? Confirm that this calculation and reporting is to highlight the statutory benefit of the program, and that the “minor changes” have not resulted in a change in the benefits calculation of the RI Test that has previously included benefits associated with cumulative lifetime emissions reduction.

Response:

The referenced 34,938 short tons of carbon avoided in 2030 is the avoidance for the year 2030. The Company confirms that this calculation and reporting is to highlight the statutory benefit of the program. There have not been changes in the benefits calculation of the RI Test. In the benefit-cost calculation, GHG benefits are still associated with cumulative lifetime emissions reductions.