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Rhode Island Energy™
a PPL company

March 18, 2024

VIA ELECTRONIC MAIL

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

RE: Docket No. 23-35-EE – The Narragansett Electric Company's d/b/a Rhode Island Energy's Combined 2024-2026 Energy Efficiency Three-Year Plan and Annual Energy Efficiency Plan for 2024
Compliance Filing – Rhode Island Energy Inflation Reduction Act Analysis

Dear Ms. Massaro:

On behalf of The Narragansett Electric Company d/b/a Rhode Island Energy (the "Company"), enclosed please find Rhode Island Energy's Inflation Reduction Act Analysis. This filing is being made in accordance with directives issued by the Public Utilities Commission ("PUC") at an Open Meeting on December 19, 2023.

Specifically, the PUC issued the following directive:

> That within 90 days, Rhode Island Energy will provide information needed to inform how Rhode Island Energy allocates funding from the System Benefits Charge to energy efficiency programs and measures when federal funded energy efficiency offerings are made available by the state energy office. The Commission will expect the Company to prioritize measures and programs that are consistent with the Least Cost Procurement Statute, specifically, the Company shall show how it plans to prioritize electric and natural gas energy efficiency measures and programs that are lower than the cost of additional electric and natural gas supply and cost effective. The Company will provide the following analysis:
>
> (a) Identify all Inflation Reduction Act energy efficiency incentives for measures including pre weatherization that are included in the Company's Three-Year or Annual Energy Efficiency Plan;

(b) For each identified measure, specify:

(i) Annual and lifetime electric, natural gas, and delivered fuel savings per measure, and to the extent possible, planned quantities;
(ii) Measure level cost benefit ratios using all of the benefits listed in tables E6 and G6 excluding economic benefits;
(iii) Measure level cost benefit ratios excluding non-electric, non-gas, non-electric and social benefits in tables E6 and G6;
(iv) Measure level energy efficiency cost per lifetime kilowatt hour and cost of supply per lifetime kilowatt hour; and
(v) Measure level energy efficiency cost per lifetime kilowatt hour and cost of supply per lifetime kilowatt hour excluding delivered fuel benefits and costs; and

(c) For each measure identified in (a), address the following questions: Should the measure be funded by the System Benefit Charge? If the answer is "yes", please specify whether the measure should be fully or partially funded by the System Benefit Charge. If the measure should be fully funded by the System Benefit Charge, please explain whether and how this recommendation is consistent with the Least Cost Procurement Statute. And, if the measure should be partially funded by ratepayers [the System Benefit Charge], please explain the basis for allocating cost between ratepayers and federal funds and how this recommendation is consistent with the Least Cost Procurement principles.

Thank you for your attention to this filing. If you have any questions, please contact me at 401-784-4263.

Sincerely,

Andrew S. Marcaccio

Enclosures

cc: Docket No. 23-35-EE Service List

Rhode Island Energy Inflation Reduction Act Analysis

Introduction

This filing by Rhode Island Energy (the Company) is in response to the Commission's decision in Docket 23-35-EE regarding an analysis of the potential use of federal Inflation Reduction Act (IRA) funds to supplement ratepayer funds for eligible measures in the Company's energy efficiency programs. The intent of the analysis is to show how the Company plans to prioritize measures and programs that are consistent with the Least Cost Procurement Statute, specifically, electric and natural gas energy efficiency measures and programs that are lower than the cost of additional electric and natural gas supply and cost effective, with a goal of optimizing the allocation of ratepayer System Benefit Charge (SBC) funds to the extent possible. There are programmatic and practical implications to consider as well when combining SBC and IRA funds, which are detailed in this report.

This analysis is separate from the 2025 annual energy efficiency planning process, which will be based, in part, on how the Office of Energy Resources ultimately decides to allocate the IRA funds.

Order

That within 90 days, Rhode Island Energy will provide information needed to inform how Rhode Island Energy allocates funding from the System Benefits Charge (SBC) to energy efficiency programs and measures when federal funded energy efficiency offerings are made available by the state energy office. The Commission will expect the Company to prioritize measures and programs that are consistent with the Least Cost Procurement (LCP) Statute, specifically, the Company shall show how it plans to prioritize electric and natural gas energy efficiency measures and programs that are lower than the cost of additional electric and natural gas supply and cost effective.

The Company will provide the following analysis:

(a) identify all Inflation Reduction Act energy efficiency incentives for measures including pre weatherization that are included in the Company's Three-Year or Annual Energy Efficiency Plan;

(b) for each identified measure, specify:

(i) annual and lifetime electric, natural gas, and delivered fuel savings per measure, and to the extent possible, planned quantities;

(ii) measure level cost benefit ratios using all of the benefits listed in tables E6 and G6 excluding economic benefits;

(iii) measure level cost benefit ratios excluding non-electric, non-gas, non-electric and social benefits in tables E6 and G6;

(iv) measure level energy efficiency cost per lifetime kilowatt hour and cost of supply per lifetime kilowatt hour;

(v) measure level energy efficiency cost per lifetime kilowatt hour and cost of supply per lifetime kilowatt hour excluding delivered fuel benefits and costs; and

(c) for each measure identified in (a), address the following questions:

(i) Should the measure be funded by the System Benefit Charge?

If the answer is "yes", please specify whether the measure should be fully or partially funded by the System Benefit Charge.

A. If the measure should be fully funded by the System Benefit Charge, please explain whether and how this recommendation is consistent with the Least Cost Procurement Statute.

B. If the measure should be partially funded by ratepayers [the System Benefit Charge], please explain the basis for allocating cost between ratepayers and federal funds and how this recommendation is consistent with the Least Cost Procurement principles.

IRA Overview

The federal Inflation Reduction Act is a broad funding mechanism that spans many economic sectors. For energy efficiency, there are two main rebate programs for which Rhode Island is eligible for $64 million combined (approximately $32 million each) to be used by 2031 (up to 20% of which may be used for program administration):

Home Electrification and Appliance Rebates (HEAR)

The Home Electrification and Appliance Rebates program offers rebates for the installation of specific measures (see list in the Appendix). To be eligible for this program, a participant must have income at or below 150% of the area median income (AMI). States may allow a household to receive a rebate for a qualified electrification project as part of new construction. However, states are not required to provide rebates for new construction. OER has confirmed that pre-weatherization is not eligible for IRA funding.

Home Efficiency Rebates Program (HER)

The Home Efficiency Rebates program provides funding for improvements in home energy performance based on the percentage of energy savings in the home, rather than specific measures. There are specified minimum savings thresholds required to be met to be eligible for IRA funding. The rebates are tiered based on the income level of the recipient. New construction projects are not eligible for incentives under this program.

More details on these programs are provided in the Appendix of this document.

Part (a): Identifying Measures

2024-2026 Plan Measures Eligible for IRA Incentives

Given the structure of Home Efficiency Rebates program, the Company made the determination to include almost all Residential and Income Eligible equipment that reduces household energy consumption for the purposes of this analysis.

The Company did not include the new construction measures offered through the Residential New Construction program. The incentives offered under this program are not associated with any specific measures, but rather tiered based on energy savings levels. The IRA Home Efficiency Rebates program, though similar in design to the Company's Residential New Construction Program, does not offer incentives for new construction projects, hence the omission of these incentives from consideration. The Company's Residential New Construction Program does offer incentives for substantial home rehabilitation, and those are included in this analysis. The Home Electrification and Appliance Rebates Program does offer the possibility of eligibility for new construction projects (it is at the discretion of the state administrator), but the incentives under that program are not performance based but rather equipment specific. Any equipment eligible for an incentive under the Home Electrification and Appliance Rebates Program that is also eligible for an incentive under the Company's programs is included in this analysis.

A list of all electric and gas measures included in this analysis can be found in the Appendix, Exhibits 1 & 2.

Part (b) Measure Level Calculations

This analysis uses values from the benefit cost models of the approved 2024 Annual Energy Efficiency Plan compliance filing. Please see the appendix, Exhibits 1 and 2 for these values. These values are based on the 2021 Avoided Energy Supply Cost (AESC) Study, since the 2024 AESC Study was not finalized when this analysis commenced. The Company notes that some benefit cost model inputs for 2025 planning may change due to updated avoided costs in the 2024 AESC Study, new evaluation results, or reallocation of budgets. Therefore, this analysis should not be considered final for future planning purposes.

(i) Annual and Lifetime electric, natural gas, & delivered fuel savings

These values have been pulled from the benefit cost models for the approved 2024 Annual Energy Efficiency Plan compliance filing. Please see the appendix, Exhibits 1and 2 for these values.

The Tables below contain a list of the costs and benefits included in each calculation for each section in Part (b). The subsequent sections provide details about the calculations.

Electric			(ii) measure level cost benefit ratios using all of the benefits listed in tables E6 and G6 excluding economic benefits	(iii) measure level cost benefit ratios excluding non-electric, non-gas, non-electric and social benefits in tables E6 and G6	(iv) measure level energy efficiency cost per lifetime kilowatt hour	(iv) measure level cost of supply per lifetime kilowatt hour	(v) measure level energy efficiency cost per lifetime kilowatt hour	(v) measure level cost of supply per lifetime kilowatt hour excluding delivered fuel benefits and costs
Costs		Participant Cost	Y	Y	Y	Y	Y	Y
		Incentive Cost	Y	Y	Y	Y	Y	Y
		Other Program Costs	N	N	N	N	N	N
Benefits	Electric Energy	Electric Energy	Y	Y	N	Y	N	Y
		Electric Energy DRIPE, Intrastate	Y	Y	N	Y	N	Y
		Electric Energy DRIPE, Rest of Pool	Y	Y	N	Y	N	N
		Cross-DRIPE	Y	Y	N	Y	N	Y
	Capacity	Summer Generation	Y	Y	N	Y	N	Y
		Capacity DRIPE, Intrastate	Y	Y	N	Y	N	Y
		Capacity DRIPE, Rest of Pool	Y	Y	N	Y	N	N
		PTF Transmission	Y	Y	N	Y	N	N
		Distribution	Y	Y	N	Y	N	Y
		Reliability	Y	Y	N	Y	N	Y
	Non-Electric	Natural Gas	Y	N	N	Y	N	Y
		Cross-DRIPE	Y	N	N	Y	N	Y
		Oil and Oil DRIPE	Y	N	N	Y	N	N
		Other-Resource	Y	N	N	Y *(no water)*	N	N
		Utility NEI	Y	Y	N	Y	N	Y
		Non-Resource	Y	N	N	N	N	N
	Societal	Carbon Benefits	Y	N	N	Y	N	Y
		NOx Benefits	Y	N	N	Y	N	Y
		Economic	N	N	N	N	N	N

Gas			(ii) measure level cost benefit ratios using all of the benefits listed in tables E6 and G6 excluding economic benefits	(iii) measure level cost benefit ratios excluding non-electric, non-gas, non-electric and social benefits in tables E6 and G6	(iv) measure level energy efficiency cost per lifetime MMBtu	(iv) measure level cost of supply per lifetime MMBtu	(v) measure level energy efficiency cost per lifetime MMBtu	(v) measure level cost of supply per lfietime MMBtu excluding delivered fuel benefits and costs
Costs		Participant Cost	Y	Y	Y	Y	Y	Y
		Incentive Cost	Y	Y	Y	Y	Y	Y
		Other Program Costs	N	N	N	N	N	N
Benefits	Natural Gas	Natural Gas	Y	Y	N	Y	N	Y
		Cross-DRIPE	Y	Y	N	Y	N	Y
	Electric Energy	Electric Energy	Y	N	N	Y	N	Y
		Electric Energy DRIPE, Intrastate	Y	N	N	Y	N	Y
		Electric Energy DRIPE, Rest of Pool	Y	N	N	Y	N	N

Gas			(ii) measure level cost benefit ratios using all of the benefits listed in tables E6 and G6 excluding economic benefits	(iii) measure level cost benefit ratios excluding non-electric, non-gas, non-electric and social benefits in tables E6 and G6	(iv) measure level energy efficiency cost per lifetime MMBtu	(iv) measure level cost of supply per lifetime MMBtu	(v) measure level energy efficiency cost per lifetime MMBtu	(v) measure level cost of supply per lfietime MMBtu excluding delivered fuel benefits and costs
		Cross-DRIPE	Y	N	N	Y	N	Y
	Capacity	Summer Generation	Y	N	N	Y	N	Y
		Capacity DRIPE, Intrastate	Y	N	N	Y	N	Y
		Capacity DRIPE, Rest of Pool	Y	N	N	Y	N	N
		PTF Transmission	Y	N	N	Y	N	N
		Non-PTF Transmission	Y	N	N	Y	N	Y
		Distribution	Y	N	N	Y	N	Y
		Reliability	Y	N	N	Y	N	Y
	Non-Gas/ Electric	Oil and Oil DRIPE	Y	N	N	Y	N	N
		Other-Resource	Y	N	N	Y *(no water)*	N	N
		Utility NEI	Y	Y	N	Y	N	Y
		Non-Resource	Y	N	N	N	N	N
	Societal	Carbon Benefits	Y	N	N	Y	N	Y
		NOx Benefits	Y	N	N	Y	N	Y
		Economic	N	N	N	N	N	N

(ii) Measure level cost benefit ratios using all the benefits listed in tables E6 and G6 excluding economic benefits

This value was calculated as follows:

Total Benefits divided by Total Resource Cost

Other program costs were excluded from this calculation to focus on measure level costs and benefits, absent program expenses. Other program costs are, in most cases, fixed and do not scale directly with measure costs and were thus omitted. This calculation is equivalent to the calculation used to determine the Rhode Island Test BCR.

(iii) Measure level cost benefit ratios excluding non-electric, non-gas, and social benefits in tables E6 and G6

This value was calculated as follows:

Specified System Benefits divided by Total Resource Cost

(iv) Measure level energy efficiency cost per lifetime kilowatt hour and cost of supply per lifetime kilowatt hour

Cost per Lifetime kWh ($/kWh)
Total Resource Cost divided by Net Lifetime MWh, divided by 1000 to convert into kWh

Net Cost of Supply per Lifetime kWh
Benefits Minus Expenses divided by Net Lifetime MWh, divided by 1000 to convert into kWh

Exhibits 3 through 7 show net cost of supply for each measure (when possible to calculate).

Though the Home Electrification and Appliance Rebates program does not offer incentives for natural gas equipment, many natural gas measures could contribute to the reduction in energy consumption necessary to qualify for the Home Efficiency Rebates program. The Company included those calculations for gas measures that could be eligible for IRA funding, for metrics (iv) and (v) (see below).

Cost per Lifetime MMBtu ($/MMBtu)
Total Resource Cost divided by Total Net Lifetime MMBtu Savings

Net Cost of Supply per Lifetime MMBtu
Total Cost of Supply (Benefits Minus Expenses) divided by Total Net Lifetime MMBtu Savings

(v) Measure level energy efficiency cost per lifetime kilowatt hour and cost of supply per lifetime kilowatt hour excluding delivered fuel benefits and costs

Cost per Lifetime kWh ($/kWh)
Total Resource Cost divided by Net Lifetime MWh, divided by 1000 to convert into kWh

Net Cost of Supply per Lifetime kWh (excluding delivered fuel benefits and costs)
Total Cost of Supply (Benefits minus expenses – intrastate and without delivered fuels) divided by Net Lifetime MWh, divided by 1000 to convert to kWh

Net Cost of Supply per Lifetime MMBtu (excluding delivered fuel benefits and costs)
Total Cost of Supply (Benefits minus expenses – intrastate and without delivered fuels) divided by Net Lifetime MMBtu

As with item (ii) above, other program costs were excluded from these calculations to focus on measure level costs and benefits, absent program expenses.

Part (c) Should the Measure be Funded by the System Benefit Charge (SBC)?

During the energy efficiency planning process, the Company considers many factors when determining whether to offer an incentive, in compliance with Least Cost Procurement. These include:

- Measure level cost effectiveness
- Program level cost effectiveness
- Measure less expensive than cost of additional supply
- Absence of non-SBC funding sources
- Measure part of a complementary bundled package of measures
- Incentive helps achieve equitable distribution of efficiency funding
- Measure helps meet carbon reduction targets
- Measure helps improve reliability
- Program continuity
- Market potential for the measure

A specific measure need not meet all these criteria, but all the measures offered in the 2024-2026 Efficiency Plan meet at least one. Based on that most recent planning exercise, all measures considered in this analysis should be funded by the SBC to some extent. Additional complexity arises, though, when determining the amount of SBC funding allocated for each measure.

In the current 2024-2026 energy efficiency plan, not all measures that might be eligible for IRA incentives are fully funded by the SBC. This analysis focuses only on the portion of the measure cost covered by the SBC funded incentive. More than a third of the analyzed measures require a participant contribution or financing to cover the balance of the project cost. Incentives offered under the Income Eligible Single Family and Multifamily Programs do cover 100% of measure costs and represent another third of the measures considered. The final third are measures fully funded by the SBC but not included in an income eligible program.

The Company, in its analysis, reviewed each measure to determine if it should be funded at its current SBC level and, if not, where IRA funding might be allocated. The analysis is based on benefit cost ratio and cost of supply, but other LCP factors need to be considered in the final determination and are outlined later in this document.

In framing the outline for this analysis, the Commission identifies two different definitions for cost-effectiveness and less expensive than the cost of additional supply. Another interpretation of the cost-effectiveness and cost of supply requirements that complies with the Least Cost Procurement Standards is

- RI Test BCR (ii) of one or greater and
- Cost to deliver that measure is lower than the cost of additional supply (iv)

There are measures that satisfy these conditions, but not the Commission's conditions for this analysis. Under these circumstances, the Company submits that measures that meet these criteria should continue to be supported by SBC funds at current levels, because, as documented in the 2024 Plan, they meet the standards of prudency, reliability, and environmental responsibility. Giving weight to these standards provides justification for funding these measures and consistency with the Least Cost Procurement Statute.

1. Measures that do not require IRA funding allocation

BCR Greater than 1.0, Less than Cost of Additional Supply

If an individual measure meets the following criteria:

- RI Test BCR (ii) of 1.0 or greater
- BCR excluding non-electric, non-gas, and social benefits (iii) of 1.0 or greater
- Cost to deliver that measure is lower than the cost of additional supply (iv)
- Cost to deliver that measure is lower than the cost of additional supply, excluding delivered fuel benefits (v)

that measure should not require any IRA funding allocation. These measures are cost-effective and less than the cost of supply, both with and without delivered fuel benefits. The benefit of these measures to the utility system exceeds their costs. This includes income eligible measures as well as market rate residential measures.

The individual measures are listed in the Appendix under Exhibit 3.

2. Potential Allocation of IRA Funding for Measures

(A) BCR Greater than 1.0, Measure Costs Greater than Cost of Additional Supply

If an individual measure has a RI Test BCR (ii) greater than one but the cost of the measure is greater than the cost of supply (v), it could be a candidate to allocate IRA funding. For these measures the costs outweigh the benefits (when delivered fuel benefits and non-energy impacts are excluded), and the programs could potentially benefit from another source to help cover these incentives and reallocate this funding to other measures.

The total electric incentive budget for these measures is $7.87 million, with EnergyWise weatherization measures as the largest line items (representing 98% of the total):

- EnergyWise Weatherization of Single-Family Homes, Delivered Fuels: $800,750
- EnergyWise Weatherization of Single-Family Homes, Oil: $6,000,000
- EnergyWise Weatherization of Single-Family Homes, Electric: $924,000

All three of these measures do require a customer contribution. These measures have benefits that exceed costs per the RI Test, but the benefits for the utility system (excluding interstate and delivered fuel benefits) do not exceed costs.

The measures highlighted in this section represent significant weatherization activities performed by the Company with SBC funding. The Home Efficiency Rebates program encompasses weatherization activities; however, because that program's incentives are performance based rather than prescriptive, weatherization projects may not meet the performance hurdles necessary to qualify for IRA rebates without project-specific analysis. The Home Electrification and Appliance Rebates program also includes weatherization as an eligible measure, but that program is limited to residents making less than 150% of area median income while the weatherization services offered under EnergyWise are for market-rate, not income eligible, customers, who would not be eligible.

In addition to the EnergyWise weatherization budgets listed above, the Company currently budgets $4.875 million for home energy assessments as part of the EnergyWise programs. These assessments do not directly save energy but rather determine if a weatherization project is feasible and, if it is, the appropriate scope of work for weatherization activities. IRA funds cannot be used for audit activities, and it would be difficult to separate these costs and services from weatherization.

For many residential customers, the EnergyWise programs represent the first step towards improving the efficiency of their homes. The Company plans to weatherize over two thousand homes in 2025 and these weatherization efforts open the door to deeper and more comprehensive efficiency improvements such as HVAC and domestic hot water equipment upgrades (measures that are cost effective even when societal and delivered fuels benefits are excluded from the BCR calculation). When a market rate homeowner interested in energy efficiency asks where to begin, they are pointed to the EnergyWise programs. This is a critical pathway for all residential energy efficiency in Rhode Island and any changes to the funding or structure of EnergyWise would have to be carefully evaluated.

These measures are listed in the Appendix under Exhibit 4.

(B) Income Eligible Program Measures

IRA funds could be used for incentives for this sector, as all are currently funded at 100% through the SBC. Outside funding would be beneficial for the measures that meet both of the following criteria:

- BCR less than 1.0 when non-electric, non-gas, and social benefits are removed from that calculation (ii) AND
- Costs exceed the cost of additional supply when delivered fuel benefits are included and excluded (v) OR
- kWh Cost of supply calculation is not feasible because measures do not save electricity

All Income Eligible programs are cost-effective (based on the RI Test BCR) and Income Eligible participation has consistently lagged other sectors. The incentives offered through these programs support the equitable distribution of and participation in SBC-funded investments outlined in the LCP standards. Income Eligible funding also augments federally funded Weatherization Assistance Program (WAP) funding. The Company has a long history of collaboration with the Community Action Programs (CAPs) that deliver WAP, and this collaboration allows both federal and SBC funds to reach a broader customer base than either would in isolation. Income-eligible customers often do not have the means to fund efficiency measures on their own.

The Company has budgeted nearly $19 million for incentives in the Income Eligible electric and gas sectors for 2025, almost a third of total funding available for the duration of the IRA programs. Since IRA funding would be insufficient to replace SBC funding for these programs, the task becomes identifying the income-eligible measures best supported by IRA funding. The Company's analysis suggests that measures for delivered fuel heated customers would be the most likely candidates for IRA funding. These measures typically have costs that far exceed the cost of additional supply and deliver negligible utility system benefits. IRA funding for these measures would allow the Company to allocate SBC resources to other Income Eligible measures with more favorable economics, such as electric resistance to heat pump conversions. Delivered fuel measures would not be eligible for an IRA incentive under the Home Electrification and Appliance Rebates Program, but only through the Home Efficiency Rebates Program. The Home Electrification and Appliance Rebates Program does not incentivize natural gas or delivered fuel measures.

A list of Income Eligible measures that are candidates for potential IRA funding allocation is in the Appendix under Exhibit 5.

(C) RI Test BCR Greater than or equal to 1.0, No Electric Cost of Supply Calculation

In the electric programs, for non-income eligible measures with a RI Test BCR greater than one that do not save electric energy, a total cost of supply per kWh calculation is not feasible. Nearly all are offered through either the single or multifamily EnergyWise programs to customers that utilize delivered fuels for heating (ex. showerheads, aerators, pipe wrap).

The total 2025 incentive budget for these measures is approximately $100,000 so their impact on overall program budgets is negligible. All these measures have a BCR less than one when non-electric, non-gas, and social benefits are excluded from that calculation and cost more than the

cost of additional supply from a total cost of supply per MMBtu perspective. These measures would benefit from an alternative source of funding, such as the IRA, as their cost to implement outweighs their benefit to the utility system.

Most of the measures that fit these criteria are delivered through the weatherization programs, and, from a program delivery perspective, it does not make sense to install them outside of the context of those programs. Showerheads, aerators, and pipe wrap are often installed at the time of a home energy assessment and should be bundled with the other measures in those programs. If supplemental funding were made available for those programs (highlighted in Part A above), these measures should be included alongside those measures in any incentive calculations.

The individual measures are listed in the Appendix under Exhibit 6.

(D) Measures with a RI Test BCR (ii) Less than One

Some measures offered through the electric programs have a RI Test BCR of less than one. These measures and their SBC funded incentive budgets are listed below.

Electric Program	Measure Name	End Use	Total SBC Incentive
Energywise Single Family	WiFi Thermostat - AC Only	HVAC	$2,610
Energywise Single Family	Pre-weatherization	Envelope	$162,663
Energywise Multifamily	CUSTOM CIRCULATOR	Custom Measures	$9,600
Energywise Multifamily	Heat Pumps	HVAC	$252,000

Pre-weatherization is unique among these measures in that it does not save energy but is necessary for proceeding with the weatherization process. As a result, it is not feasible to calculate a BCR or cost of supply for pre-weatherization. OER has confirmed that pre-weatherization is not eligible for IRA funding.

Three gas measures fall in this category as well:

Gas Program	Measure Name	End Use	Total SBC Incentive
Energywise Multifamily	Duct Sealing	Envelope	$10,282
C&I Multifamily	Heating, Custom	HVAC	$480,000
Residential New Construction	Renovation Rehab - Tier 3	Energy Star Homes	$5,370

As with the electric measures, the most significant budget is for custom heating measures for C&I Multifamily. Meeting Multifamily program goals continues to be a challenge and the addition of outside funding in this instance could be beneficial in increasing program participation.

(E) Gas Measures with a BCR (iii) Less than 1.0, Costs less than the cost of additional supply when delivered fuel benefits are excluded (v)

The utility system BCR only contains gas resource benefits and utility non-energy impacts. The cost of supply contains additional costs, but also contains large benefit streams such as carbon dioxide and nitrogen oxides. Therefore, the magnitude of the GHG benefits would lead to a positive cost of supply but a utility system BCR less than 1.0. This phenomenon only happens with gas measures. The incentive budget for these measures is $1.2 million.

This category mostly includes measures utilized in the course of a home weatherization project, like aerators, insulation, air sealing, and thermostats. Given their role in supporting a comprehensive approach to home weatherization and environmental benefits, the Company would recommend maintaining current SBC funding levels.

The Company notes that energy efficiency has been proven over the years to be a reliable resource and a means of reducing greenhouse gases associated with fossil fuel consumption. An interruption or dislocation in the delivery of planned amounts of energy efficiency due to insufficient funding could adversely affect the environmental benefits associated with the programs.

These measures are listed in Exhibit 7.

3. Potential Methodology for Calculating IRA Funding Allocations

For the categories of measures described in Section 2 above, the analysis suggests that IRA funding could be used to supplement SBC funding. To calculate the magnitude of IRA funding, the Company devised a methodology to allocate IRA funding in proportion to the ratio of the BCR excluding non-electric, non-gas, and social benefits in tables E6 and G6 (iii) over the RI Test BCR (ii). This approach scales SBC funding to anticipated utility system benefits.

For example, if a measure has a RI Test BCR of 1.0 and a BCR (iii) of 0.75, the company could allocate IRA funds to cover 25% of the incentive (1-(0.75/1.0)). The Company believes this would provide a fair approximation of the utility system benefits that are appropriate to support with ratepayer funds.

Based on this methodology, an initial analysis, without accounting for other LCP and program design considerations, estimates that the current programs could allocate approximately $20 million in annual funding from the IRA. Given the structure of the IRA, most of the measures considered in this analysis would only be eligible for rebates under the Home Efficiency Rebates program, which has $32 million in total funding over the life of IRA, including up to 20% of administrative funds. Therefore, the IRA funds could only be allocated for one full year at that rate (and some carryover to a second year), and then revert back to SBC funds. That number would

decrease based on other LCP and program design considerations, which have not yet been quantified.

4. IRA Specific Considerations

In addition to the analysis conducted above, the Company emphasizes the detailed and collaborative process that informs energy efficiency planning. The intent of this analysis is not to make any declarative statements about utilizing IRA incentives for program measures, especially when the Company will not be the party that ultimately decides how IRA funds will be allocated in Rhode Island. Rather, the Company hopes to propose a potential framework for evaluating those measures that might benefit from outside funding to optimize ratepayer funds. The availability of IRA funding for measures should not unduly influence future program planning discussions, especially considering the current uncertainty about the ultimate application of those funds in RI.

It is worth noting that the federal funding allocated to the IRA is not guaranteed. A change in federal leadership could lead to the cancellation of all or part of the IRA funding at any point in the future.

IRA Funding Levels versus Program Budgets

The Home Efficiency Rebates and Home Electrification and Appliance Rebates programs offered through the IRA have a combined allocation of $64 million for Rhode Island and the programs are available through September 30, 2031. This amounts to a little over $9 million per year for incentives, though this number does not account for the up to 20% administrative costs associated with these programs, so the actual number available to Rhode Island residents will be less than $9 million per year. By contrast, the Company's 2024 residential and income eligible incentive budget is $50 million ($32 million electric, $18 million natural gas). Subsequent years of the Company's 2024-2026 annual efficiency plan propose funding at a similar scale to 2024. While this analysis contemplates scenarios where IRA funding might support measures currently funded by the SBC until those funds run out, the resources provided by the IRA are considerably less than program budgets. Furthermore, IRA funds are temporary and should not be considered permanent replacements for SBC funds.

Considerations for Other Sources of Funding

Other sources of funding come with transaction and administrative costs beyond the scope of this analysis. The Company offers funding via long-established mechanisms, familiar to many homeowners and service providers (energy auditors, contractors, Community Action Agencies, etc.). Any new source of funding, such as the IRA, will require additional application processes, contractor and consumer education, program specific eligibility criteria, income verification procedures, and data requirements. Though additional or alternative funding might be available for certain measures, securing funding from a different source necessitates that anyone seeking this funding participate in a separate process from the ones established by the Company to receive SBC

funded incentives. It is also likely that the coordination with IRA funding would require additional costs for the administration of SBC funded programs.

For the IRA programs, DOE requires extensive, complex administrative processes that differ from the Company's programs. The Home Efficiency Rebate program, under the "modeled" pathway, for example, requires a full energy audit and energy modeling prior to award of any rebate. The "measured" pathway requires 9 to 12 months of measured energy use prior to awarding rebates. The Home Efficiency Rebate program also has detailed requirements for data collection, energy savings analysis, and reporting from every household receiving a rebate.

While incorporating IRA funding might be advisable in certain circumstances, it will not be a straightforward endeavor to replace SBC funds with IRA funds. This will be considered prior to any adjustments in Company incentives.

5. Changes in Supply Costs and Other Inputs

When addressing the question of whether a measure should be funded by the SBC, it is important to note that the inputs used in this analysis are subject to change. The recently released2024 Avoided Energy Supply Component Study (AESC 2024)[1] in New England illustrates this point. In many cases the values of avoided energy costs have increased in this most recent AESC analysis relative to the prior study in 2021. Such an increase could change the results of the measure-level BCR or cost of supply analyses based on AESC 2021 presented in this memorandum.

Evaluation results, administrative costs, and numerous other factors shift over time as well. From an implementation standpoint, the Company seeks to avoid a scenario where the program measure mix and incentives shift too rapidly from year to year, introducing uncertainty into the market. This would be counter to an interpretation of prudency, where vendors and participants cannot rely on program stability and choose to exit the market. For that reason, the Company suggests that decisions about adjustments to or allocations of incentive funding allow for some bandwidth around targets, particularly the strict requirement that the cost of a measure be less than the cost of supply.

Conclusion

This analysis identifies measures eligible for IRA funding and evaluates those measures through the lens of several different cost effectiveness metrics. The Company has evaluated the suitability of these measures for System Benefit Charge funding based on various criteria, including alignment with LCP standards. The Company designed a methodology for potential allocations of IRA funding for certain measures, with a goal of optimizing the use of SBC resources, both existing and future.

[1] https://www.synapse-energy.com/avoided-energy-supply-costs-new-england-aesc

Along with the potential benefits of additional funding through the IRA, the Company acknowledges challenges such as added administrative complexity and the temporary nature of IRA funds. It prioritizes the importance of program stability and reliability in achieving long-term goals and reiterates the need for careful consideration in integrating IRA funds into existing energy efficiency programs. The Company advocates for a balanced approach that prioritizes program effectiveness and sustainability while leveraging IRA funds as a supplementary resource.

Appendix

IRA Program Background

Home Efficiency Rebates Program

The Home Efficiency Rebates program provides funding for improvements in home energy performance. The Department of Energy (DOE) provides two pathways to evaluate home energy performance levels eligible for IRA funding: modeled and measured energy savings. It is up to the state level program administrator (in this case the Rhode Island Office of Energy Resources (OER)) to determine which of these pathways will be available to residents. As of the time of this memo, this decision has not yet been made by OER. Both single-family and multifamily homes are eligible for this program. The rebates are tiered based on the income level of the recipient. New construction projects are not eligible for incentives under this program.

The Home Efficiency Rebate modeled and measured pathways are summarized in the tables below:

Single-Family		
Modeled Energy Savings	**Income Level**	**Rebate Amount**
20%-34%	Less than 80% AMI*	Lesser of $4,000 or 80% of project cost
	80% AMI and greater	Lesser of $2,000 or 50% of project cost
35% or greater	Less than 80% AMI*	Lesser of $8,000 or 80% of project cost
	80% AMI and greater	Lesser of $4,000 or 50% of project cost

Multifamily		
Modeled Energy Savings	**Income Level**	**Rebate Amount**
20%-34%	A building with at least 50% of households with incomes less than 80% AMI*	Lesser of $4,000 per dwelling unit or 80% of project cost
	A building with at least 50% of households with incomes 80% AMI and greater	$2,000 per dwelling unit up to $200,000 per building
35% or greater	A building with at least 50% of households with incomes less than 80% AMI *	Lesser of $8,000 per dwelling unit or 80% of project cost
	A building with at least 50% of households with incomes 80% AMI and greater	$4,000 per dwelling unit up to $400,000 per building

Single-Family		
Measured Energy Savings	**Income Level**	**Rebate Amount**
15% or greater	Less than 80% AMI	kWh, or kWh equivalent, payment rate equal to $4,000 for a 20% reduction of energy use for the average home in the State or 80% of project cost*†
	80% AMI and greater	kWh, or kWh equivalent, payment rate equal to $2,000 for a 20% reduction of energy use for the average home in the State or 50% of project cost*
Multifamily		
Measured Energy Savings	**Income Level**	**Rebate Amount**
15% or greater	A building with at least 50% of households with incomes less than 80% AMI	kWh, or kWh equivalent, payment rate equal to $4,000 for a 20% reduction of energy use per dwelling for the average multifamily building in the State or 80% of project cost*†
	A building with at least 50% of households with incomes 80% AMI and greater	kWh, or kWh equivalent, payment rate equal to $2,000 for a 20% reduction of energy use per dwelling for the average multifamily building in the State or 50% of project cost

Home Electrification and Appliance Rebates

The Home Electrification and Appliance Rebates program offers rebates for the installation of specific measures. To be eligible for this program, a participant must have income at or below 150% of the area median income (AMI). As with the Home Efficiency Rebates program, both single and multifamily residences are eligible. As stated in Section 4.2.2 of the Program Requirements provided by DOE, states may allow a household to receive a rebate for a qualified electrification project as part of new construction within the Home Electrification and Appliance Rebates Program. However, states are not required to provide rebates for new construction. The table below summarizes the measures, rebates, and income levels for the Home Electrification and Appliance Rebates:

Product Rebates		
Upgrade Type	**Qualified Product**	**Rebate Amount Not to Exceed**
Appliance	Heat Pump Water Heater	$1,750
	Heat Pump for Space Heating or Cooling	$8,000
	Electric Stove, Cooktop, Range, Oven, or Heat Pump Clothes Dryer	$840
Building Materials	Electric Load Service Center	$4,000
	Insulation, Air Sealing, and Ventilation	$1,600
	Electric Wiring	$2,500
Maximum Rebate		$14,000
Rebate Limitations		
Eligible Rebate Recipient	**Income Level**	**Rebate Amount Not to Exceed**
LMI Household or Eligible entity representative representing LMI household	Less than 80% AMI	100% of qualified project cost
	80%-150% AMI	50% of qualified project cost
Owner of multifamily building or Eligible entity representative representing owner of multifamily building	At least 50% of residents with income less than 80% AMI	100% of qualified project cost
	At least 50% of residents with income of 81%-150% AMI	50% of qualified project cost

Exhibit 1: Electric Measures Eligible for IRA Rebates

Measure Information			*(ii) Electric Savings*		*(ii) Natural Gas Savings*		*(ii) Delivered Fuel Savings*						*Carbon Reductions*		*Total MMBtu Savings*	
Program	**Measure Name**	**End Use**	**Net Annual MWh**	**Net Lifetime MWh**	**Net Annual Gas Savings (MMBtu)**	**Net Lifetime Gas Savings (MMBtu)**	**Net Annual Oil Savings (MMBtu)**	**Net Lifetime Oil Savings (MMBtu)**	**Net Annual Propane Savings (MMBtu)**	**Net Lifetime Propane Savings (MMBtu)**	**Annual Delivered Fuel Savings**	**Lifetime Delivered Fuel Savings**	**Annual Carbon Reductions (Short Tons)**	**Lifetime Carbon Reductions (Short Tons)**	**Total Net Annual MMBtu Savings**	**Total Net Lifetime MMBtu Savings**
EW SF	Programmable Thermostat, Oil	HVAC	38.31	727.90	-	-	2,937.15	55,805.81	-	-	2,937.15	55,805.81	251.54	4,779.25	3,067.86	58,289.41
EW SF	Weatherization, Others	Envelope	14.56	291.20	-	-	-	-	2,821.00	56,420.00	2,821.00	56,420.00	201.80	4,035.96	2,870.68	57,413.57
EW SF	Smart Strip	Process	561.44	2,807.18	-	-	-	-	-	-	-	-	221.28	1,106.38	1,915.62	9,578.09
EW SF	Showerhead - Oil	Hot Water	-	-	-	-	1,034.28	15,514.20	-	-	1,034.28	15,514.20	83.26	1,248.89	1,034.28	15,514.20
EW SF	Weatherization, Electric	Envelope	191.44	3,828.83	-	-	-	-	-	-	-	-	75.45	1,509.04	653.20	13,063.95
EW SF	Programmable Thermostat - Elec	HVAC	80.10	1,521.87	-	-	-	-	-	-	-	-	31.57	599.81	273.30	5,192.63
EW SF	Showerhead - Elec	Hot Water	134.16	2,012.37	-	-	-	-	-	-	-	-	52.88	793.13	457.75	6,866.21
EW SF	Pipe Insulation, Oil	Envelope	-	-	-	-	554.95	3,884.68	-	-	554.95	3,884.68	44.67	312.72	554.95	3,884.68
EW SF	Programmable Thermostat, Others	HVAC	1.02	19.38	-	-	-	-	78.18	1,485.48	78.18	1,485.48	5.84	110.88	81.66	1,551.59
EW SF	WiFi Thermostat - Electric	HVAC	23.86	262.45	-	-	-	-	-	-	-	-	9.40	103.44	81.41	895.48
EW SF	Refrigerator Brush	Refrigeration	62.35	311.74	-	-	-	-	-	-	-	-	24.57	122.86	212.73	1,063.66
EW SF	Pipe Insulation, Electric	Envelope	46.41	324.90	-	-	-	-	-	-	-	-	18.29	128.05	158.37	1,108.56
EW SF	Pipe Insulation, Others	Envelope	-	-	-	-	-	-	151.35	1,059.46	151.35	1,059.46	10.52	73.63	151.35	1,059.46
EW SF	WiFi Thermostat - Oil	HVAC	0.91	10.00	-	-	93.99	1,033.84	-	-	93.99	1,033.84	7.92	87.17	97.09	1,067.97
EW SF	Showerhead - Other	Hot Water	-	-	-	-	-	-	48.13	722.01	48.13	722.01	3.35	50.18	48.13	722.01
EW SF	Electric Resistance to MSHP	HVAC	92.83	1,578.15	-	-	-	-	-	-	-	-	36.59	621.99	316.74	5,384.63
EW SF	WiFi Thermostat - Others	HVAC	0.30	3.33	-	-	-	-	31.33	344.61	31.33	344.61	2.30	25.26	32.36	355.99
EW SF	Aerator, Oil	Hot Water	-	-	-	-	23.24	162.70	-	-	23.24	162.70	1.87	13.10	23.24	162.70
EW SF	Aerator, Electric	Hot Water	3.85	26.95	-	-	-	-	-	-	-	-	1.52	10.62	13.14	91.96
EW SF	WiFi Thermostat - AC Only	HVAC	0.39	4.30	-	-	-	-	-	-	-	-	0.15	1.69	1.33	14.65
EW SF	Aerator, Others	Hot Water	-	-	-	-	-	-	3.10	21.69	3.10	21.69	0.22	1.51	3.10	21.69
EW SF	Pre-weatherization	Envelope	-	-	-	-	-	-	-	-	-	-	-	-	-	-
EW SF	Weatherization, Oil	Envelope	109.03	2,180.51	-	-	21,123.65	422,472.96	-	-	21,123.65	422,472.96	1,743.42	34,868.47	21,495.64	429,912.85

Measure Information			*(ii) Electric Savings*		*(ii) Natural Gas Savings*		*(ii) Delivered Fuel Savings*						*Carbon Reductions*		*Total MMBtu Savings*	
Program	**Measure Name**	**End Use**	**Net Annual MWh**	**Net Lifetime MWh**	**Net Annual Gas Savings (MMBtu)**	**Net Lifetime Gas Savings (MMBtu)**	**Net Annual Oil Savings (MMBtu)**	**Net Lifetime Oil Savings (MMBtu)**	**Net Annual Propane Savings (MMBtu)**	**Net Lifetime Propane Savings (MMBtu)**	**Annual Delivered Fuel Savings**	**Lifetime Delivered Fuel Savings**	**Annual Carbon Reductions (Short Tons)**	**Lifetime Carbon Reductions (Short Tons)**	**Total Net Annual MMBtu Savings**	**Total Net Lifetime MMBtu Savings**
IE SF	Wi-Fi Thermostat - AC Only	HVAC	0.47	5.15	-	-	-	-	-	-	-	-	0.18	2.03	1.60	17.56
IE SF	Domestic Hot Water Measure, Oil	Hot Water	-	-	-	-	14.40	187.20	-	-	14.40	187.20	1.16	15.07	14.40	187.20
IE SF	Wi-Fi Thermostat - Other	HVAC	0.11	1.19	-	-	-	-	16.68	183.48	16.68	183.48	1.20	13.22	17.05	187.53
IE SF	HP Water Heaters	Hot Water	6.85	102.72	2.00	30.00	0.40	6.00	0.28	4.20	0.68	10.20	2.87	43.01	26.05	390.68
IE SF	Early Retirement Clothes Washer Propane DHW & Elec Dryer	Hot Water	5.23	73.25	-	-	-	-	20.48	286.72	20.48	286.72	3.49	48.80	38.33	536.64
IE SF	Wi-Fi Thermostat - Oil	HVAC	0.56	6.14	-	-	86.49	951.39	-	-	86.49	951.39	7.18	79.01	88.39	972.33
IE SF	Heating System Retrofit - Boiler, Other	HVAC	0.06	1.47	-	-	-	-	31.60	726.80	31.60	726.80	2.22	51.09	31.82	731.82
IE SF	Heating System Retrofit - Furnace, Other	HVAC	0.11	1.90	-	-	-	-	55.30	940.10	55.30	940.10	3.89	66.09	55.68	946.60
IE SF	Early Retirement Clothes Washer Gas DHW & Gas Dryer	Hot Water	5.70	79.86	277.76	3,888.64	-	-	-	-	-	-	18.50	258.96	297.22	4,161.11
IE SF	Heating System Retrofit - Furnace, Oil	HVAC	0.26	4.42	-	-	202.80	3,447.60	-	-	202.80	3,447.60	16.43	279.27	203.69	3,462.68
IE SF	Replacement Freezer	Refrigeration	51.62	619.38	-	-	-	-	-	-	-	-	20.34	244.11	176.11	2,113.32
IE SF	Weatherization, Other	HVAC	-	-	-	-	-	-	252.00	1,764.00	252.00	1,764.00	17.51	122.60	252.00	1,764.00
IE SF	Smart Strips	Process	185.36	926.82	-	-	-	-	-	-	-	-	73.06	365.28	632.46	3,162.32
IE SF	Window AC Replacements	Envelope	162.73	1,952.78	-	-	-	-	-	-	-	-	64.14	769.64	555.24	6,662.90
IE SF	Dehumidifier Rebate	Process	239.81	4,076.70	-	-	-	-	-	-	-	-	94.51	1,606.73	818.22	13,909.71
IE SF	Heating System Retrofit - Boiler, Oil	HVAC	1.55	35.65	-	-	1,209.00	27,807.00	-	-	1,209.00	27,807.00	97.94	2,252.51	1,214.29	27,928.64
IE SF	Weatherization, Electric	Envelope	233.89	4,677.80	-	-	-	-	-	-	-	-	92.18	1,843.64	798.03	15,960.65
IE SF	Replacement Refrigerator	Refrigeration	649.60	9,743.96	-	-	-	-	-	-	-	-	256.02	3,840.34	2,216.42	33,246.37
IE SF	Weatherization, Del Fuel	Envelope	22.52	450.30	-	-	3,081.00	61,620.00	-	-	3,081.00	61,620.00	256.89	5,137.88	3,157.82	63,156.42
IE SF	MSHP - Electric Resistance	HVAC	1,244.31	21,153.27	-	-	-	-	-	-	-	-	490.41	8,337.03	4,245.59	72,174.96
EW MF	Programmable Thermostat - Elec w/ AC	HVAC	99.80	1,896.21	-	-	-	-	-	-	-	-	39.33	747.35	340.52	6,469.88
EW MF	Insulation - Oil	Envelope	-	-	-	-	277.91	6,947.73	-	-	277.91	6,947.73	22.37	559.29	277.91	6,947.73
EW MF	Insulation - Elec w/AC	Envelope	31.25	781.29	-	-	-	-	-	-	-	-	12.32	307.93	106.63	2,665.77
EW MF	Air Sealing - Elec	Envelope	17.83	356.59	-	-	-	-	-	-	-	-	7.03	140.54	60.83	1,216.69
EW MF	Showerhead - Elec	Hot Water	21.62	324.30	-	-	-	-	-	-	-	-	8.52	127.81	73.77	1,106.50

Measure Information			*(ii) Electric Savings*		*(ii) Natural Gas Savings*		*(ii) Delivered Fuel Savings*						*Carbon Reductions*		*Total MMBtu Savings*	
Program	**Measure Name**	**End Use**	**Net Annual MWh**	**Net Lifetime MWh**	**Net Annual Gas Savings (MMBtu)**	**Net Lifetime Gas Savings (MMBtu)**	**Net Annual Oil Savings (MMBtu)**	**Net Lifetime Oil Savings (MMBtu)**	**Net Annual Propane Savings (MMBtu)**	**Net Lifetime Propane Savings (MMBtu)**	**Annual Delivered Fuel Savings**	**Lifetime Delivered Fuel Savings**	**Annual Carbon Reductions (Short Tons)**	**Lifetime Carbon Reductions (Short Tons)**	**Total Net Annual MMBtu Savings**	**Total Net Lifetime MMBtu Savings**
EW MF	Smart Strips	Process	45.44	227.20	-	-	-	-	-	-	-	-	17.91	89.55	155.04	775.22
EW MF	Showerhead - Oil	Hot Water	-	-	-	-	44.53	667.93	-	-	44.53	667.93	3.58	53.77	44.53	667.93
EW MF	TSV Showerhead - Elec	Hot Water	7.65	114.69	-	-	-	-	-	-	-	-	3.01	45.20	26.09	391.32
EW MF	Programmable Thermostat - Oil	HVAC	0.28	5.27	-	-	15.31	290.82	-	-	15.31	290.82	1.34	25.49	16.25	308.81
EW MF	Pipe Wrap DHW - Elec	Hot Water	3.96	59.40	-	-	-	-	-	-	-	-	1.56	23.41	13.51	202.66
EW MF	Air Sealing - Elec w/AC	Envelope	1.37	27.46	-	-	-	-	-	-	-	-	0.54	10.82	4.68	93.68
EW MF	Aerator - Elec	Hot Water	6.04	42.30	-	-	-	-	-	-	-	-	2.38	16.67	20.62	144.33
EW MF	Insulation - Other	Envelope	0.06	1.61	-	-	-	-	6.12	153.00	6.12	153.00	0.45	11.27	6.34	158.49
EW MF	Air Sealing - Oil	Envelope	-	-	-	-	10.27	205.36	-	-	10.27	205.36	0.83	16.53	10.27	205.36
EW MF	TSV Showerhead - Oil	Hot Water	-	-	-	-	12.05	180.79	-	-	12.05	180.79	0.97	14.55	12.05	180.79
EW MF	Showerhead - Other	Hot Water	-	-	-	-	-	-	4.69	70.31	4.69	70.31	0.33	4.89	4.69	70.31
EW MF	Aerator - Other	Hot Water	-	-	-	-	-	-	6.36	44.53	6.36	44.53	0.44	3.09	6.36	44.53
EW MF	TSV Showerhead - Other	Hot Water	0.04	0.63	-	-	-	-	2.68	40.18	2.68	40.18	0.20	3.04	2.82	42.32
EW MF	Aerator - Oil	Hot Water	-	-	-	-	8.04	56.25	-	-	8.04	56.25	0.65	4.53	8.04	56.25
EW MF	Pipe Wrap DHW - Oil	Hot Water	-	-	-	-	2.39	35.78	-	-	2.39	35.78	0.19	2.88	2.39	35.78
EW MF	Pipe Wrap DHW - Other	Hot Water	-	-	-	-	-	-	0.25	3.77	0.25	3.77	0.02	0.26	0.25	3.77
EW MF	CUSTOM CIRCULATOR	Custom Measures	3.61	54.08	-	-	-	-	-	-	-	-	1.42	21.31	12.30	184.53
EW MF	VFD	Motors/Drives	116.24	1,511.08	-	-	-	-	-	-	-	-	45.81	595.55	396.60	5,155.79
EW MF	Heat Pumps	HVAC	85.88	1,717.68	-	-	-	-	-	-	-	-	33.85	676.98	293.04	5,860.72
IE MF	Air Sealing - Other	Envelope	-	-	-	-	-	-	-	-	-	-	-	-	-	-
IE MF	Aerator - Oil	Hot Water	-	-	-	-	3.42	23.94	-	-	3.42	23.94	0.28	1.93	3.42	23.94
IE MF	TSV Showerhead - Oil	Hot Water	-	-	-	-	2.88	43.20	-	-	2.88	43.20	0.23	3.48	2.88	43.20
IE MF	TSV Showerhead - Other	Hot Water	-	-	-	-	-	-	2.88	43.20	2.88	43.20	0.20	3.00	2.88	43.20
IE MF	Air Sealing - Elec	Envelope	1.61	32.29	-	-	-	-	-	-	-	-	0.64	12.73	5.51	110.17
IE MF	Aerator - Electric	Hot Water	3.18	22.26	-	-	-	-	-	-	-	-	1.25	8.77	10.85	75.97

Measure Information			*(ii) Electric Savings*		*(ii) Natural Gas Savings*		*(ii) Delivered Fuel Savings*						*Carbon Reductions*		*Total MMBtu Savings*	
Program	**Measure Name**	**End Use**	**Net Annual MWh**	**Net Lifetime MWh**	**Net Annual Gas Savings (MMBtu)**	**Net Lifetime Gas Savings (MMBtu)**	**Net Annual Oil Savings (MMBtu)**	**Net Lifetime Oil Savings (MMBtu)**	**Net Annual Propane Savings (MMBtu)**	**Net Lifetime Propane Savings (MMBtu)**	**Annual Delivered Fuel Savings**	**Lifetime Delivered Fuel Savings**	**Annual Carbon Reductions (Short Tons)**	**Lifetime Carbon Reductions (Short Tons)**	**Total Net Annual MMBtu Savings**	**Total Net Lifetime MMBtu Savings**
IE MF	CUSTOM CIRCULATOR	Custom Measures	2.77	41.58	-	-	-	-	-	-	-	-	1.09	16.39	9.46	141.87
IE MF	Showerhead - Other	Hot Water	-	-	-	-	-	-	7.56	113.40	7.56	113.40	0.53	7.88	7.56	113.40
IE MF	TSV Showerhead - Elec	Hot Water	2.55	38.27	-	-	-	-	-	-	-	-	1.01	15.08	8.71	130.59
IE MF	Air Sealing - Elec w/AC	Envelope	1.62	32.30	-	-	-	-	-	-	-	-	0.64	12.73	5.51	110.21
IE MF	LED Fixture - Common Ext	Lighting	38.23	38.23	-	-	-	-	-	-	-	-	15.07	15.07	130.43	130.43
IE MF	Smart Strips	Process	14.61	73.03	-	-	-	-	-	-	-	-	5.76	28.78	49.84	249.18
IE MF	Showerhead - Oil	Hot Water	-	-	-	-	31.50	472.50	-	-	31.50	472.50	2.54	38.04	31.50	472.50
IE MF	LED Fixture - Common Int	Lighting	72.10	72.10	-	-	-	-	-	-	-	-	28.42	28.42	246.01	246.01
IE MF	Insulation - Other	Envelope	-	-	-	-	-	-	10.00	250.00	10.00	250.00			10.00	250.00
IE MF	Air Sealing - Oil	Envelope	-	-	-	-	27.18	543.60	-	-	27.18	543.60	2.19	43.76	27.18	543.60
IE MF	LED Fixture - Linear, Common Int	Lighting	97.85	97.85	-	-	-	-	-	-	-	-	38.57	38.57	333.86	333.86
IE MF	Insulation - Elec with AC	Envelope	13.23	330.75	-	-	-	-	-	-	-	-	5.21	130.36	45.14	1,128.52
IE MF	Showerhead - Elec	Hot Water	21.70	325.46	-	-	-	-	-	-	-	-	8.55	128.27	74.03	1,110.46
IE MF	Programmable Thermostat - Elec with AC	HVAC	18.49	351.25	-	-	-	-	-	-	-	-	7.29	138.44	63.08	1,198.48
IE MF	Custom	Lighting	60.85	912.75	-	-	-	-	-	-	-	-	23.98	359.74	207.62	3,114.30
IE MF	VFD	Motors/Drives	130.90	1,963.47	-	-	-	-	-	-	-	-	51.59	773.85	446.62	6,699.35
IE MF	Insulation - Oil	Envelope	-	-	-	-	380.01	9,500.25	-	-	380.01	9,500.25	30.59	764.77	380.01	9,500.25
IE MF	CUSTOM CHP	HVAC	119.75	2,395.00	(290.63)	(5,812.67)	-	-	-	-	-	-			117.95	2,359.08
IE MF	Heat Pumps	HVAC	438.74	8,774.80	-	-	-	-	-	-	-	-	172.92	3,458.37	1,496.98	29,939.62
HVAC	Electric Resistance to MSHP	HVAC	5,594.94	95,114.01	-	-	-	-	-	-	-	-	2,205.11	37,486.81	19,089.94	324,529.00
HVAC	WiFi programmable thermostat with cooling (oil)	HVAC	55.24	607.66	-	-	8,562.51	94,187.61	-	-	8,562.51	94,187.61	711.05	7,821.60	8,751.00	96,260.95
HVAC	MiniSplit HP	HVAC	716.16	12,174.65	-	-	-	-	-	-	-	-	282.26	4,798.34	2,443.52	41,539.92
HVAC	Central Heat Pump	HVAC	295.14	5,902.82	-	-	-	-	-	-	-	-	116.32	2,326.45	1,007.02	20,140.42
HVAC	ECM Pumps	HVAC	418.49	8,369.76	-	-	-	-	-	-	-	-	164.94	3,298.73	1,427.88	28,557.62
HVAC	WiFi programmable thermostat with cooling (gas)	HVAC	9.36	102.91	1,450.10	15,951.13	-	-	-	-	-	-	88.52	973.70	1,482.02	16,302.26

Measure Information			*(ii) Electric Savings*		*(ii) Natural Gas Savings*		*(ii) Delivered Fuel Savings*						*Carbon Reductions*		*Total MMBtu Savings*	
Program	**Measure Name**	**End Use**	**Net Annual MWh**	**Net Lifetime MWh**	**Net Annual Gas Savings (MMBtu)**	**Net Lifetime Gas Savings (MMBtu)**	**Net Annual Oil Savings (MMBtu)**	**Net Lifetime Oil Savings (MMBtu)**	**Net Annual Propane Savings (MMBtu)**	**Net Lifetime Propane Savings (MMBtu)**	**Annual Delivered Fuel Savings**	**Lifetime Delivered Fuel Savings**	**Annual Carbon Reductions (Short Tons)**	**Lifetime Carbon Reductions (Short Tons)**	**Total Net Annual MMBtu Savings**	**Total Net Lifetime MMBtu Savings**
HVAC	Mini Split Heat Pump QIV	HVAC	31.19	530.26	-	-	-	-	-	-	-	-	12.29	208.99	106.43	1,809.24
HVAC	HPWH, Electric - <55 gallon	Hot Water	41.49	539.40	(2.42)	(31.50)	(12.12)	(157.51)	(1.70)	(22.05)	(13.81)	(179.56)	15.12	196.54	125.34	1,629.37
HVAC	CoolSmart HP Digital Check	HVAC	21.80	108.98	-	-	-	-	-	-	-	-	8.59	42.95	74.37	371.84
HVAC	CoolSmart HP QIV ES	HVAC	7.25	130.52	-	-	-	-	-	-	-	-	2.86	51.44	24.74	445.32
HVAC	Window -Electric Resistance	Envelope	3.14	53.45	-	-	-	-	-	-	-	-	1.24	21.07	10.73	182.36
HVAC	Window -Propane	Envelope	0.17	2.86	-	-	-	-	14.40	244.80	14.40	244.80	1.07	18.14	14.97	254.54
HVAC	CoolSmart AC QIV ES	HVAC	1.10	19.80	-	-	-	-	-	-	-	-	0.43	7.81	3.75	67.57
HVAC	Window -Oil	Envelope	0.17	2.86	-	-	14.40	244.80	-	-	14.40	244.80	1.23	20.83	14.97	254.54
HVAC	Window -Heat Pump	Envelope	1.66	28.15	-	-	-	-	-	-	-	-	0.65	11.10	5.65	96.05
HVAC	HPWH, Electric - >55 gallon, UEF 2.70	Hot Water	68.81	894.48	-	-	-	-	-	-	-	-	27.12	352.54	234.77	3,051.96
RCP	Pool pump (variable)	Process	588.52	3,531.13	-	-	-	-	-	-	-	-	231.95	1,391.71	2,008.04	12,048.21
RCP	Refrigerator Recycling	Refrigeration	1,299.43	5,197.72	-	-	-	-	-	-	-	-	512.14	2,048.55	4,433.65	17,734.62
RCP	Room air cleaners	Process	196.89	1,771.98	-	-	-	-	-	-	-	-	77.60	698.38	671.78	6,046.00
RCP	Freezer Recycling	Refrigeration	112.96	903.68	-	-	-	-	-	-	-	-	44.52	356.16	385.42	3,083.37
RCP	Smart Strips	Process	362.67	1,813.35	-	-	-	-	-	-	-	-	142.94	714.69	1,237.43	6,187.15
RCP	Dehumidifier Recycling	Process	206.30	825.21	-	-	-	-	-	-	-	-	81.31	325.24	703.90	2,815.61
RCP	Clothes Washer Most Efficient	Hot Water	31.30	438.15	-	-	-	-	-	-	-	-	12.33	172.69	106.78	1,494.97
RCP	Dryer Most Efficient	Process	14.35	229.60	-	-	-	-	-	-	-	-	5.66	90.49	48.96	783.41
RCP	Low E Storm Windows, electric heat	HVAC	9.01	180.27	-	-	-	-	-	-	-	-	3.55	71.05	30.75	615.08
RCP	Low Flow Showerhead w/ TSV - Other	Hot Water	-	-	-	-	-	-	52.61	789.21	52.61	789.21	3.66	54.85	52.61	789.21
RCP	Room AC Most Efficient	HVAC	10.64	127.65	-	-	-	-	-	-	-	-	4.19	50.31	36.29	435.53
RCP	Low Flow Showerhead w/ TSV - Oil	Hot Water	-	-	-	-	58.69	880.31	-	-	58.69	880.31	4.72	70.86	58.69	880.31
RCP	Low Flow Showerhead w/ TSV - Elec	Hot Water	10.98	164.72	-	-	-	-	-	-	-	-	4.33	64.92	37.47	562.04
RCP	Refrigerator Most Efficient	Refrigeration	31.44	377.25	-	-	-	-	-	-	-	-	12.39	148.68	107.26	1,287.17
RCP	Low E Storm Windows, other heat	HVAC	0.20	3.94	-	-	29.91	598.27	-	-	29.91	598.27	2.49	49.71	30.59	611.70

Measure Information			*(ii) Electric Savings*		*(ii) Natural Gas Savings*		*(ii) Delivered Fuel Savings*						*Carbon Reductions*		*Total MMBtu Savings*	
Program	**Measure Name**	**End Use**	**Net Annual MWh**	**Net Lifetime MWh**	**Net Annual Gas Savings (MMBtu)**	**Net Lifetime Gas Savings (MMBtu)**	**Net Annual Oil Savings (MMBtu)**	**Net Lifetime Oil Savings (MMBtu)**	**Net Annual Propane Savings (MMBtu)**	**Net Lifetime Propane Savings (MMBtu)**	**Annual Delivered Fuel Savings**	**Lifetime Delivered Fuel Savings**	**Annual Carbon Reductions (Short Tons)**	**Lifetime Carbon Reductions (Short Tons)**	**Total Net Annual MMBtu Savings**	**Total Net Lifetime MMBtu Savings**
RCP	Thermostatic Shut-off Valve - Other	Hot Water	-	-	-	-	-	-	14.95	224.26	14.95	224.26	1.04	15.59	14.95	224.26
RCP	Thermostatic Shut-off Valve - Oil	Hot Water	-	-	-	-	16.92	253.76	-	-	16.92	253.76	1.36	20.43	16.92	253.76
RCP	Thermostatic Shutoff Valve - Elec	Hot Water	2.99	44.85	-	-	-	-	-	-	-	-	1.18	17.68	10.20	153.03
RCP	Dehumidifier Most Efficient	Appliances	6.10	103.62	-	-	-	-	-	-	-	-	2.40	40.84	20.80	353.56
RCP	Advanced Power Strips - Tier 2	Process	14.52	72.58	-	-	-	-	-	-	-	-	5.72	28.60	49.53	247.63
RCP	Tricklestar Keyboard	Process	2.85	14.24	-	-	-	-	-	-	-	-	1.12	5.61	9.72	48.59
RNC	Renovation Rehab - Tier 1, Elec		33.47	725.24	-	-	1,650.37	35,763.69	-	-	1,650.37	35,763.69	146.05	3,164.81	1,764.58	38,238.22
RNC	Renovation Rehab - Tier 2, Elec		168.86	3,658.67	-	-	-	-	703.49	15,244.62	703.49	15,244.62	115.44	2,501.47	1,279.64	27,727.99
RNC	Renovation Rehab - Tier 3, Elec		25.12	544.32	-	-	-	-	-	-	-	-	9.90	214.53	85.72	1,857.22

Exhibit 2: Gas Measures Eligible for IRA Rebates

Measure Information			*(ii) Electric Savings*		*(ii) Natural Gas Savings*		*(ii) Delivered Fuel Savings*		*Carbon Reductions*		*Total MMBtu Savings*	
Program	**Measure Name**	**End Use**	**Net Annual MWh**	**Net Lifetime MWh**	**Net Annual Gas Savings (MMBtu)**	**Net Lifetime Gas Savings (MMBtu)**	**Annual Delivered Fuel Savings**	**Lifetime Delivered Fuel Savings**	**Annual Carbon Reductions (Short Tons)**	**Lifetime Carbon Reductions (Short Tons)**	**Total Net Annual MMBtu Savings**	**Total Net Lifetime MMBtu Savings**
EW SF	Weatherization	Envelope	150.46	3,009.19	28,802.23	576,044.56	-	-	1,744.23	34,884.60	29,315.60	586,311.91
EW SF	Aerator	Hot Water	-	-	81.44	570.07	-	-	4.76	33.35	81.44	570.07
EW SF	WiFi thermostat	HVAC	1.09	11.98	112.50	1,237.47	-	-	7.01	77.11	116.21	1,278.33
EW SF	Showerhead	Hot Water	-	-	890.91	13,363.62	-	-	52.12	781.77	890.91	13,363.62
EW SF	Pipe Wrap	HVAC	-	-	1,239.93	8,679.53	-	-	72.54	507.75	1,239.93	8,679.53
EW SF	Programmable thermostat	HVAC	26.76	508.48	2,051.78	38,983.77	-	-	130.58	2,480.96	2,143.09	40,718.72
IE SF	Boiler	HVAC	2.40	55.20	1,185.00	27,255.00	-	-	70.27	1,616.17	1,193.19	27,443.34
IE SF	Furnace	HVAC	0.72	12.24	355.50	6,043.50	-	-	21.08	358.37	357.96	6,085.26
IE SF	Weatherization	Envelope	32.55	651.00	4,340.00	86,800.00	-	-	266.72	5,334.38	4,451.06	89,021.21
IE SF	Wi-Fi Thermostat, Gas	HVAC	0.80	8.80	111.60	1,227.60	-	-	6.84	75.28	114.33	1,257.63
EW MF	Heating, Custom	HVAC	-	-	740.70	11,110.50	-	-	43.33	649.96	740.70	11,110.50
EW MF	Demand Circulator	Hot Water	-	-	116.50	1,747.50	-	-	6.82	102.23	116.50	1,747.50
EW MF	Pipe Wrap (Water Heating)	Hot Water	-	-	11.30	169.49	-	-	0.66	9.92	11.30	169.49
EW MF	Duct Insulation, MF	Envelope	-	-	3.23	80.67	-	-	0.19	4.72	3.23	80.67
EW MF	Low Flow Showerhead - w/TSV	Hot Water	-	-	36.59	548.78	-	-	2.14	32.10	36.59	548.78
EW MF	Faucet aerator	Hot Water	-	-	75.50	528.48	-	-	4.42	30.92	75.50	528.48
EW MF	Low Flow Showerhead - Showerhead	Hot Water	-	-	195.86	2,937.87	-	-	11.46	171.87	195.86	2,937.87
EW MF	Programmable thermostat	HVAC	6.59	125.12	340.62	6,471.74	-	-	22.52	427.91	363.09	6,898.65
EW MF	Duct Sealing	Envelope	-	-	0.14	2.72	-	-	0.01	0.16	0.14	2.72
EW MF	Wi-Fi programmable thermostat (controls gas heat only)	HVAC	0.69	7.55	50.95	560.50	-	-	3.25	35.77	53.30	586.27
EW MF	MF Shell Insulation	Envelope	-	-	1,988.39	49,709.70	-	-	116.32	2,908.02	1,988.39	49,709.70
EW MF	Air Sealing	Envelope	-	-	1,289.28	25,785.60	-	-	75.42	1,508.46	1,289.28	25,785.60
IE MF	Faucet aerator	Hot Water	-	-	69.12	483.84	-	-	4.04	28.30	69.12	483.84

Measure Information			*(ii) Electric Savings*		*(ii) Natural Gas Savings*		*(ii) Delivered Fuel Savings*		*Carbon Reductions*		*Total MMBtu Savings*	
Program	**Measure Name**	**End Use**	**Net Annual MWh**	**Net Lifetime MWh**	**Net Annual Gas Savings (MMBtu)**	**Net Lifetime Gas Savings (MMBtu)**	**Annual Delivered Fuel Savings**	**Lifetime Delivered Fuel Savings**	**Annual Carbon Reductions (Short Tons)**	**Lifetime Carbon Reductions (Short Tons)**	**Total Net Annual MMBtu Savings**	**Total Net Lifetime MMBtu Savings**
IE MF	Air Sealing	Envelope	-	-	157.10	3,141.98	-	-	9.19	183.81	157.10	3,141.98
IE MF	Custom	Other	-	-	2,535.21	38,028.11	-	-	148.31	2,224.64	2,535.21	38,028.11
IE MF	HEATING _Custom_LI	HVAC	-	-	5,956.50	89,347.50	-	-	348.46	5,226.83	5,956.50	89,347.50
IE MF	Insulation	Envelope	-	-	735.24	18,380.90	-	-	43.01	1,075.28	735.24	18,380.90
IE MF	Pipe Wrap (Water Heating)	Hot Water	-	-	12.96	194.40	-	-	0.76	11.37	12.96	194.40
IE MF	Low Flow Showerhead - Showerhead	Hot Water	-	-	127.53	1,912.95	-	-	7.46	111.91	127.53	1,912.95
IE MF	Programmable thermostat	HVAC	13.22	171.91	684.00	8,892.00	-	-	45.23	587.94	729.12	9,478.56
C&I MF	Heating, Custom	HVAC	-	-	2,991.40	44,871.00	-	-	175.00	2,624.95	2,991.40	44,871.00
C&I MF	Demand Circulator	Hot Water	-	-	233.00	3,495.00	-	-	13.63	204.46	233.00	3,495.00
C&I MF	Low Flow Showerhead w/ Thermostatic Valve	Hot Water	-	-	9.44	141.62	-	-	0.55	8.28	9.44	141.62
C&I MF	Pipe Wrap (Water Heating)	Hot Water	-	-	36.16	470.06	-	-	2.12	27.50	36.16	470.06
C&I MF	Faucet aerator	Hot Water	-	-	28.96	86.88	-	-	1.69	5.08	28.96	86.88
C&I MF	Wi-Fi programmable thermostat (controls gas heat only)	HVAC	0.12	1.37	9.26	101.91	-	-	0.59	6.50	9.69	106.59
C&I MF	MF Shell Insulation	Envelope	-	-	56.92	1,422.93	-	-	3.33	83.24	56.92	1,422.93
C&I MF	Air Sealing	Envelope	-	-	234.60	4,692.00	-	-	13.72	274.48	234.60	4,692.00
C&I MF	Programmable thermostat	HVAC	5.61	106.53	290.02	5,510.30	-	-	19.18	364.34	309.15	5,873.79
HVAC	Combo Condensing Boiler/Water Heater - 95% AFUE	HVAC	-	-	4,820.63	110,874.58	-	-	282.01	6,486.16	4,820.63	110,874.58
HVAC	Forced Hot Water Boiler - >=95% AFUE	HVAC	-	-	1,861.41	31,644.05	-	-	108.89	1,851.18	1,861.41	31,644.05
HVAC	Furnace w/ ECM - 97% AFUE	HVAC	-	-	515.10	8,756.72	-	-	30.13	512.27	515.10	8,756.72
HVAC	WiFi Thermostat, Gas - Heat Only	HVAC	-	-	1,003.86	11,042.42	-	-	58.73	645.98	1,003.86	11,042.42
HVAC	WiFi Thermostat, Gas - Cooling and Heating	HVAC	1.87	20.60	290.27	3,192.99	-	-	17.72	194.91	296.66	3,263.27
HVAC	Programmable Thermostat	HVAC	-	-	204.59	3,887.30	-	-	11.97	227.41	204.59	3,887.30
HVAC	Low Flow Showerhead	Hot Water	-	-	367.97	5,519.53	-	-	21.53	322.89	367.97	5,519.53
HVAC	Triple Pane Windows	Envelope	0.07	1.14	5.76	97.92	-	-	0.36	6.18	5.99	101.82
HVAC	TSV Showerhead	Hot Water	-	-	41.45	621.78	-	-	2.42	36.37	41.45	621.78

Measure Information			*(ii) Electric Savings*		*(ii) Natural Gas Savings*		*(ii) Delivered Fuel Savings*		*Carbon Reductions*		*Total MMBtu Savings*	
Program	**Measure Name**	**End Use**	**Net Annual MWh**	**Net Lifetime MWh**	**Net Annual Gas Savings (MMBtu)**	**Net Lifetime Gas Savings (MMBtu)**	**Annual Delivered Fuel Savings**	**Lifetime Delivered Fuel Savings**	**Annual Carbon Reductions (Short Tons)**	**Lifetime Carbon Reductions (Short Tons)**	**Total Net Annual MMBtu Savings**	**Total Net Lifetime MMBtu Savings**
HVAC	ENERGY STAR STORAGE WATER HEATER .64 UEF (med draw)	Hot Water	(0.40)	(3.59)	23.22	208.98	-	-	1.20	10.81	21.86	196.72
HVAC	Thermostatic Shut-Off Valve	Hot Water	-	-	12.27	183.98	-	-	0.72	10.76	12.27	183.98
HVAC	ENERGY STAR ON DEMAND WATER HEATER 0.87 UEF	Hot Water	(9.19)	(174.53)	1,495.37	28,411.99	-	-	83.86	1,593.31	1,464.03	27,816.49
RNC	Renovation Rehab - Tier 1, Gas		-	-	94.50	2,278.66	-	-	5.53	133.30	94.50	2,278.66
RNC	Renovation Rehab - Tier 2, Gas		-	-	215.46	5,226.52	-	-	12.60	305.75	215.46	5,226.52
RNC	Renovation Rehab - Tier 3, Gas		-	-	28.85	699.94	-	-	1.69	40.95	28.85	699.94

Exhibit 3: Measures that Do Not Require an IRA Allocation

Electric Measures

Measure Information			*(ii) measure level cost benefit ratios using all of the benefits listed in tables E6 and G6 excluding economic benefits*	*(iii) measure level cost benefit ratios excluding non electric, non gas, non electric and social benefits in tables E6 and G6*	*Net Cost of Supply (Benefits Minus Expenses)*	*(iv) measure level cost of supply per lifetime kilowatt hour*	*(iv) measure level cost of supply per lifetime MMBtu*	*Total Net Cost of Supply (Benefits Minus Expenses) Intrastate and w/o Delivered Fuels*	*(v) measure level cost of supply per lifetime kilowatt hour excluding delivered fuel benefits and costs*	*(v) measure level cost of supply per lifetime MMBtu excluding delivered fuel benefits and costs*
Program	**Measure Name**	**End Use**	**Benefit / Cost Ratio**	**Utility System Benefit / Cost Ratio**	**Net Cost of Supply (Benefits Minus Expenses)**	**Net Cost of Supply per Lifetime kWh**	**Net Cost of Supply per Lifetime MMBtu**	**Net Cost of Supply (Benefits Minus Expenses) Intrastate and w/o Delivered Fuels**	**Net Cost of Supply per Lifetime kWh (Intrastate and w/o Delivered Fuels)**	**Net Cost of Supply per Lifetime MMBtu (Intrastate and w/o Delivered Fuels)**
EW SF	Programmable Thermostat, Oil	HVAC	13.47	1.41	$1,891,968.17	$2.60	$32.46	$15,944.70	$0.02	$0.27
EW SF	Smart Strip	Process	3.80	2.78	$426,131.08	$0.15	$44.49	$264,445.84	$0.09	$27.61
EW SF	Programmable Thermostat - Elec	HVAC	9.16	7.54	$303,275.15	$0.20	$58.40	$220,215.73	$0.14	$42.41
EW SF	Showerhead - Elec	Hot Water	18.99	12.02	$304,235.54	$0.15	$44.31	$233,633.65	$0.12	$34.03
EW SF	Programmable Thermostat, Others	HVAC	19.00	1.41	$74,068.41	$3.82	$47.74	$424.43	$0.02	$0.27
EW SF	WiFi Thermostat - Electric	HVAC	1.98	1.55	$30,723.06	$0.12	$34.31	$10,888.78	$0.04	$12.16
EW SF	Refrigerator Brush	Refrigeration	2.44	1.83	$41,199.94	$0.13	$38.73	$20,556.05	$0.07	$19.33
EW SF	Pipe Insulation, Electric	Envelope	8.63	6.32	$55,022.93	$0.17	$49.63	$38,655.11	$0.12	$34.87
EW SF	Electric Resistance to MSHP	HVAC	2.15	1.74	$113,183.27	$0.07	$21.02	$75,480.03	$0.05	$14.02
EW SF	Aerator, Electric	Hot Water	6.12	3.38	$4,043.12	$0.15	$43.96	$2,685.30	$0.10	$29.20
IE SF	HP Water Heaters	Hot Water	1.91	1.39	$7,374.49	$0.07	$18.88	$4,018.49	$0.04	$10.29
IE SF	Smart Strips	Process	4.10	2.95	$145,800.72	$0.16	$46.11	$92,418.35	$0.10	$29.22
IE SF	Dehumidifier Rebate	Process	6.03	5.14	$676,442.60	$0.17	$48.63	$490,756.98	$0.12	$35.28
EW MF	Programmable Thermostat - Elec w/ AC	HVAC	11.97	8.57	$402,636.27	$0.21	$62.23	$291,833.21	$0.15	$45.11
EW MF	Insulation - Elec w/AC	Envelope	22.29	1.50	$37,146.72	$0.05	$13.93	$29,362.20	$0.04	$11.01
EW MF	Showerhead - Elec	Hot Water	28.34	17.87	$50,589.43	$0.16	$45.72	$38,944.13	$0.12	$35.20
EW MF	Smart Strips	Process	3.63	2.66	$33,929.58	$0.15	$43.77	$20,843.33	$0.09	$26.89
EW MF	TSV Showerhead - Elec	Hot Water	22.54	14.30	$17,675.95	$0.15	$45.17	$13,557.49	$0.12	$34.65

Measure Information			*(ii) measure level cost benefit ratios using all of the benefits listed in tables E6 and G6 excluding economic benefits*	*(iii) measure level cost benefit ratios excluding non electric, non gas, non electric and social benefits in tables E6 and G6*	*Net Cost of Supply (Benefits Minus Expenses)*	*(iv) measure level cost of supply per lifetime kilowatt hour*	*(iv) measure level cost of supply per lifetime MMBtu*	*Total Net Cost of Supply (Benefits Minus Expenses) Intrastate and w/o Delivered Fuels*	*(v) measure level cost of supply per lifetime kilowatt hour excluding delivered fuel benefits and costs*	*(v) measure level cost of supply per lifetime MMBtu excluding delivered fuel benefits and costs*
Program	**Measure Name**	**End Use**	**Benefit / Cost Ratio**	**Utility System Benefit / Cost Ratio**	**Net Cost of Supply (Benefits Minus Expenses)**	**Net Cost of Supply per Lifetime kWh**	**Net Cost of Supply per Lifetime MMBtu**	**Net Cost of Supply (Benefits Minus Expenses) Intrastate and w/o Delivered Fuels**	**Net Cost of Supply per Lifetime kWh (Intrastate and w/o Delivered Fuels)**	**Net Cost of Supply per Lifetime MMBtu (Intrastate and w/o Delivered Fuels)**
EW MF	Pipe Wrap DHW - Elec	Hot Water	18.32	15.07	$9,182.95	$0.15	$45.31	$7,050.01	$0.12	$34.79
EW MF	Air Sealing - Elec w/AC	Envelope	6.08	3.53	$6,761.14	$0.25	$72.17	$4,253.94	$0.15	$45.41
EW MF	Aerator - Elec	Hot Water	13.01	6.72	$7,218.85	$0.17	$50.01	$5,087.76	$0.12	$35.25
EW MF	VFD	Motors/Drives	1.48	1.09	$63,882.11	$0.04	$12.39	$26,907.04	$0.02	$5.22
IE MF	Air Sealing - Elec	Envelope	117.88	2.79	$2,802.28	$0.09	$25.44	$2,272.35	$0.07	$20.63
IE MF	Aerator - Electric	Hot Water	13.16	6.72	$3,852.93	$0.17	$50.72	$2,731.31	$0.12	$35.95
IE MF	TSV Showerhead - Elec	Hot Water	22.57	14.30	$5,990.07	$0.16	$45.87	$4,615.72	$0.12	$35.35
IE MF	Air Sealing - Elec w/AC	Envelope	120.79	5.69	$6,055.70	$0.19	$54.95	$4,392.64	$0.14	$39.86
IE MF	Smart Strips	Process	3.70	2.66	$11,081.78	$0.15	$44.47	$6,875.49	$0.09	$27.59
IE MF	Insulation - Elec with AC	Envelope	45.06	1.40	$16,037.39	$0.05	$14.21	$11,694.60	$0.04	$10.36
IE MF	Showerhead - Elec	Hot Water	28.71	17.87	$51,549.09	$0.16	$46.42	$39,862.03	$0.12	$35.90
IE MF	Programmable Thermostat - Elec with AC	HVAC	11.72	7.95	$69,882.92	$0.20	$58.31	$51,298.56	$0.15	$42.80
HVAC	Electric Resistance to MSHP	HVAC	2.21	1.78	$6,971,858.21	$0.07	$21.48	$4,699,502.97	$0.05	$14.48
HVAC	WiFi programmable thermostat with cooling (oil)	HVAC	5.97	1.96	$3,969,490.70	$6.53	$41.24	$183,564.06	$0.30	$1.91
HVAC	MiniSplit HP	HVAC	2.37	1.90	$1,104,183.14	$0.09	$26.58	$691,783.02	$0.06	$16.65
HVAC	Central Heat Pump	HVAC	7.30	6.27	$906,150.69	$0.15	$44.99	$686,684.90	$0.12	$34.09
HVAC	ECM Pumps	HVAC	1.47	1.22	$347,092.78	$0.04	$12.15	$176,664.98	$0.02	$6.19
HVAC	WiFi programmable thermostat with cooling (gas)	HVAC	3.91	1.96	$408,644.29	$3.97	$25.07	$300,467.41	$2.92	$18.43
HVAC	Mini Split Heat Pump QIV	HVAC	1.82	1.35	$32,492.23	$0.06	$17.96	$14,261.31	$0.03	$7.88
HVAC	HPWH, Electric - <55 gallon	Hot Water	3.19	2.77	$59,446.09	$0.11	$36.48	$43,521.33	$0.08	$26.71
HVAC	CoolSmart HP Digital Check	HVAC	1.63	1.16	$8,297.09	$0.08	$22.31	$2,048.93	$0.02	$5.51

Measure Information			*(ii) measure level cost benefit ratios using all of the benefits listed in tables E6 and G6 excluding economic benefits*	*(iii) measure level cost benefit ratios excluding non electric, non gas, non electric and social benefits in tables E6 and G6*	*Net Cost of Supply (Benefits Minus Expenses)*	*(iv) measure level cost of supply per lifetime kilowatt hour*	*(iv) measure level cost of supply per lifetime MMBtu*	*Total Net Cost of Supply (Benefits Minus Expenses) Intrastate and w/o Delivered Fuels*	*(v) measure level cost of supply per lifetime kilowatt hour excluding delivered fuel benefits and costs*	*(v) measure level cost of supply per lifetime MMBtu excluding delivered fuel benefits and costs*
Program	**Measure Name**	**End Use**	**Benefit / Cost Ratio**	**Utility System Benefit / Cost Ratio**	**Net Cost of Supply (Benefits Minus Expenses)**	**Net Cost of Supply per Lifetime kWh**	**Net Cost of Supply per Lifetime MMBtu**	**Net Cost of Supply (Benefits Minus Expenses) Intrastate and w/o Delivered Fuels**	**Net Cost of Supply per Lifetime kWh (Intrastate and w/o Delivered Fuels)**	**Net Cost of Supply per Lifetime MMBtu (Intrastate and w/o Delivered Fuels)**
HVAC	CoolSmart HP QIV ES	HVAC	3.70	3.03	$15,464.25	$0.12	$34.73	$11,044.98	$0.08	$24.80
HVAC	Window -Electric Resistance	Envelope	2.88	2.12	$8,184.97	$0.15	$44.88	$4,344.85	$0.08	$23.83
RCP	Pool pump (variable)	Process	4.85	4.23	$1,195,909.68	$0.34	$99.26	$628,290.99	$0.18	$52.15
RCP	Refrigerator Recycling	Refrigeration	3.72	2.77	$854,852.27	$0.16	$48.20	$507,126.96	$0.10	$28.60
RCP	Room air cleaners	Process	9.48	7.46	$369,858.42	$0.21	$61.17	$253,497.20	$0.14	$41.93
RCP	Freezer Recycling	Refrigeration	5.26	4.00	$155,397.90	$0.17	$50.40	$102,864.14	$0.11	$33.36
RCP	Smart Strips	Process	2.52	1.84	$225,275.97	$0.12	$36.41	$120,832.21	$0.07	$19.53
RCP	Dehumidifier Recycling	Process	4.48	3.05	$116,230.02	$0.14	$41.28	$79,189.68	$0.10	$28.13
RCP	Clothes Washer Most Efficient	Hot Water	4.75	3.81	$55,698.15	$0.13	$37.26	$40,318.30	$0.09	$26.97
RCP	Dryer Most Efficient	Process	8.11	6.89	$36,786.64	$0.16	$46.96	$27,142.38	$0.12	$34.65
RCP	Low E Storm Windows, electric heat	HVAC	18.55	16.71	$38,676.64	$0.21	$62.88	$28,952.54	$0.16	$47.07
RCP	Room AC Most Efficient	HVAC	5.92	5.25	$36,080.12	$0.28	$82.84	$22,707.82	$0.18	$52.14
RCP	Low Flow Showerhead w/ TSV - Elec	Hot Water	17.53	9.72	$24,656.66	$0.15	$43.87	$18,741.49	$0.11	$33.35
RCP	Refrigerator Most Efficient	Refrigeration	2.00	1.62	$37,442.07	$0.10	$29.09	$17,760.78	$0.05	$13.80
RCP	Thermostatic Shutoff Valve - Elec	Hot Water	6.41	3.99	$5,821.13	$0.13	$38.04	$4,210.55	$0.09	$27.51
RCP	Dehumidifier Most Efficient	Appliances	2.11	1.83	$10,873.39	$0.10	$30.75	$6,035.94	$0.06	$17.07
RCP	Advanced Power Strips - Tier 2	Process	1.44	1.05	$4,549.62	$0.06	$18.37	$369.42	$0.01	$1.49
RNC	Renovation Rehab - Tier 1, Elec		22.32	1.63	$1,203,678.59	$1.66	$31.48	$32,848.04	$0.05	$0.86
RNC	Renovation Rehab - Tier 2, Elec		11.16	3.29	$1,046,907.93	$0.29	$37.76	$264,400.91	$0.07	$9.54
RNC	Renovation Rehab - Tier 3, Elec		1.28	1.07	$15,678.41	$0.03	$8.44	$3,956.83	$0.01	$2.13

Exhibit 3: Measures that Do Not Require an IRA Allocation

Gas Measures

Measure Information			*(ii) measure level cost benefit ratios using all of the benefits listed in tables E6 and G6 excluding economic benefits*	*(iii) measure level cost benefit ratios excluding non electric, non gas, non electric and social benefits in tables E6 and G6*	*Net Cost of Supply (Benefits Minus Expenses)*	*(iv) measure level cost of supply per lifetime kilowatt hour*	*(iv) measure level cost of supply per lifetime MMBtu*	*Total Net Cost of Supply (Benefits Minus Expenses) Intrastate and w/o Delivered Fuels*	*(v) measure level cost of supply per lifetime kilowatt hour excluding delivered fuel benefits and costs*	*(v) measure level cost of supply per lifetime MMBtu excluding delivered fuel benefits and costs*
Program	**Measure Name**	**End Use**	**Benefit / Cost Ratio**	**Utility System Benefit / Cost Ratio**	**Net Cost of Supply (Benefits Minus Expenses)**	**Net Cost of Supply per Lifetime kWh**	**Net Cost of Supply per Lifetime MMBtu**	**Net Cost of Supply (Benefits Minus Expenses) Intrastate and w/o Delivered Fuels**	**Net Cost of Supply per Lifetime kWh (Intrastate and w/o Delivered Fuels)**	**Net Cost of Supply per Lifetime MMBtu (Intrastate and w/o Delivered Fuels)**
EW SF	Showerhead	Hot Water	12.43	3.76	$158,977.47		$11.90	$158,977.47		$11.90
EW SF	Pipe Wrap	HVAC	4.40	1.99	$100,427.11		$11.57	$100,427.11		$11.57
EW SF	Programmable thermostat	HVAC	6.89	3.25	$663,111.59	$1.30	$16.29	$615,706.30	$1.21	$15.12
IE SF	Wi-Fi Thermostat, Gas	HVAC	4.26	1.05	$13,107.36	$1.49	$10.42	$12,044.62	$1.37	$9.58
EW MF	Demand Circulator	Hot Water	8.00	4.03	$21,001.66		$12.02	$21,001.66		$12.02
EW MF	Pipe Wrap (Water Heating)	Hot Water	9.27	4.67	$2,076.86		$12.25	$2,076.86		$12.25
EW MF	Duct Insulation, MF	Envelope	4.84	3.11	$941.14		$11.67	$941.14		$11.67
EW MF	Low Flow Showerhead - w/TSV	Hot Water	11.69	3.29	$6,384.20		$11.63	$6,384.20		$11.63
EW MF	Faucet aerator	Hot Water	5.44	1.22	$4,976.38		$9.42	$4,976.38		$9.42
EW MF	Low Flow Showerhead - Showerhead	Hot Water	16.26	4.86	$36,166.23		$12.31	$36,166.23		$12.31
EW MF	Programmable thermostat	HVAC	3.61	1.11	$87,509.44	$0.70	$12.69	$75,844.64	$0.61	$10.99
EW MF	MF Shell Insulation	Envelope	9.53	1.15	$322,045.71		$6.48	$322,045.71		$6.48
IE MF	Faucet aerator	Hot Water	7.70	1.70	$5,324.02		$11.00	$5,324.02		$11.00
IE MF	Pipe Wrap (Water Heating)	Hot Water	45.76	4.67	$2,382.06		$12.25	$2,382.06		$12.25
IE MF	Low Flow Showerhead - Showerhead	Hot Water	16.46	4.86	$23,549.10		$12.31	$23,549.10		$12.31
IE MF	Programmable thermostat	HVAC	5.02	1.38	$148,772.70	$0.87	$15.70	$129,735.09	$0.75	$13.69
C&I MF	Demand Circulator	Hot Water	7.82	4.39	$47,718.42		$13.65	$47,718.42		$13.65
C&I MF	Low Flow Showerhead w/ Thermostatic Valve	Hot Water	11.67	3.25	$1,640.27		$11.58	$1,640.27		$11.58
C&I MF	Pipe Wrap (Water Heating)	Hot Water	8.21	3.97	$5,789.78		$12.32	$5,789.78		$12.32
C&I MF	MF Shell Insulation	Envelope	479.40	1.08	$8,461.58		$5.95	$8,461.58		$5.95

Measure Information			*(ii) measure level cost benefit ratios using all of the benefits listed in tables E6 and G6 excluding economic benefits*	*(iii) measure level cost benefit ratios excluding non electric, non gas, non electric and social benefits in tables E6 and G6*	*Net Cost of Supply (Benefits Minus Expenses)*	*(iv) measure level cost of supply per lifetime kilowatt hour*	*(iv) measure level cost of supply per lifetime MMBtu*	*Total Net Cost of Supply (Benefits Minus Expenses) Intrastate and w/o Delivered Fuels*	*(v) measure level cost of supply per lifetime kilowatt hour excluding delivered fuel benefits and costs*	*(v) measure level cost of supply per lifetime MMBtu excluding delivered fuel benefits and costs*
Program	**Measure Name**	**End Use**	**Benefit / Cost Ratio**	**Utility System Benefit / Cost Ratio**	**Net Cost of Supply (Benefits Minus Expenses)**	**Net Cost of Supply per Lifetime kWh**	**Net Cost of Supply per Lifetime MMBtu**	**Net Cost of Supply (Benefits Minus Expenses) Intrastate and w/o Delivered Fuels**	**Net Cost of Supply per Lifetime kWh (Intrastate and w/o Delivered Fuels)**	**Net Cost of Supply per Lifetime MMBtu (Intrastate and w/o Delivered Fuels)**
C&I MF	Air Sealing	Envelope	4.40	1.08	$31,396.54		$6.69	$31,396.54		$6.69
C&I MF	Programmable thermostat	HVAC	6.54	1.92	$93,111.30	$0.87	$15.85	$83,179.41	$0.78	$14.16
HVAC	Programmable Thermostat	HVAC	6.90	3.66	$50,302.35		$12.94	$50,302.35		$12.94
HVAC	Low Flow Showerhead	Hot Water	17.02	4.42	$67,161.14		$12.17	$67,161.14		$12.17
HVAC	TSV Showerhead	Hot Water	12.13	2.82	$7,015.40		$11.28	$7,015.40		$11.28
HVAC	Thermostatic Shut-Off Valve	Hot Water	4.70	1.34	$1,575.21		$8.56	$1,575.21		$8.56
HVAC	ENERGY STAR ON DEMAND WATER HEATER 0.87 UEF	Hot Water	2.15	1.22	$181,719.68	-$1.04	$6.53	$186,990.35	-$1.07	$6.72

Exhibit 4: BCR Greater than 1.0, Measure Costs Greater than Cost of Additional Supply

Electric Measures

Measure Information			*(ii) measure level cost benefit ratios using all of the benefits listed in tables E6 and G6 excluding economic benefits*	*(iii) measure level cost benefit ratios excluding non electric, non gas, non electric and social benefits in tables E6 and G6*	*Net Cost of Supply (Benefits Minus Expenses)*	*(iv) measure level cost of supply per lifetime kilowatt hour*	*(iv) measure level cost of supply per lifetime MMBtu*	*Total Net Cost of Supply (Benefits Minus Expenses) Intrastate and w/o Delivered Fuels*	*(v) measure level cost of supply per lifetime kilowatt hour excluding delivered fuel benefits and costs*	*(v) measure level cost of supply per lifetime MMBtu excluding delivered fuel benefits and costs*
Program	**Measure Name**	**End Use**	**Benefit / Cost Ratio**	**Utility System Benefit / Cost Ratio**	**Net Cost of Supply (Benefits Minus Expenses)**	**Net Cost of Supply per Lifetime kWh**	**Net Cost of Supply per Lifetime MMBtu**	**Net Cost of Supply (Benefits Minus Expenses) Intrastate and w/o Delivered Fuels**	**Net Cost of Supply per Lifetime kWh (Intrastate and w/o Delivered Fuels)**	**Net Cost of Supply per Lifetime MMBtu (Intrastate and w/o Delivered Fuels)**
EW SF	Weatherization, Others	Envelope	2.73	0.06	$1,656,198.55	$5.69	$28.85	-$1,086,544.53	-$3.73	-$18.92
EW SF	Weatherization, Electric	Envelope	1.26	0.81	-$99,827.47	-$0.03	-$7.64	-$316,981.57	-$0.08	-$24.26
EW SF	WiFi Thermostat - Oil	HVAC	3.48	0.29	$26,805.24	$2.68	$25.10	-$8,947.41	-$0.89	-$8.38
EW SF	WiFi Thermostat - Others	HVAC	4.92	0.29	$14,451.75	$4.33	$40.60	-$2,982.47	-$0.89	-$8.38
EW SF	Weatherization, Oil	Envelope	1.95	0.06	$5,675,381.21	$2.60	$13.20	-$8,136,045.44	-$3.73	-$18.92
EW MF	Air Sealing - Elec	Envelope	2.89	0.51	-$37,312.72	-$0.10	-$30.67	-$47,418.98	-$0.13	-$38.97
EW MF	Programmable Thermostat - Oil	HVAC	10.93	0.89	$9,414.72	$1.79	$30.49	-$316.20	-$0.06	-$1.02
EW MF	Insulation - Other	Envelope	37.53	-	$6,877.29	$4.27	$43.39	-$428.40	-$0.27	-$2.70
EW MF	TSV Showerhead - Other	Hot Water	26.63	-	$1,889.32	$3.01	$44.65	-$74.40	-$0.12	-$1.76
HVAC	Window -Propane	Envelope	2.64	0.14	$6,722.06	$2.35	$26.41	-$5,444.00	-$1.91	-$21.39
HVAC	CoolSmart AC QIV ES	HVAC	1.26	1.02	$656.89	$0.03	$9.72	-$1,231.32	-$0.06	-$18.22
HVAC	Window -Oil	Envelope	2.00	0.14	$2,799.17	$0.98	$11.00	-$5,444.00	-$1.91	-$21.39
HVAC	Window -Heat Pump	Envelope	1.62	0.96	$468.61	$0.02	$4.88	-$1,199.58	-$0.04	-$12.49
HVAC	HPWH, Electric - >55 gallon, UEF 2.70	Hot Water	1.09	0.86	$11,539.88	$0.01	$3.78	-$20,025.75	-$0.02	-$6.56
RCP	Low E Storm Windows, other heat	HVAC	9.18	0.36	$18,025.96	$4.58	$29.47	-$1,523.88	-$0.39	-$2.49
RCP	Tricklestar Keyboard	Process	1.34	1.12	$1,242.98	$0.09	$25.58	-$548.21	-$0.04	-$11.28

Exhibit 4: BCR Greater than 1.0, Measure Costs Greater than Cost of Additional Supply

Gas Measures

Measure Information			*(ii) measure level cost benefit ratios using all of the benefits listed in tables E6 and G6 excluding economic benefits*	*(iii) measure level cost benefit ratios excluding non electric, non gas, non electric and social benefits in tables E6 and G6*	*Net Cost of Supply (Benefits Minus Expenses)*	*(iv) measure level cost of supply per lifetime kilowatt hour*	*(iv) measure level cost of supply per lifetime MMBtu*	*Total Net Cost of Supply (Benefits Minus Expenses) Intrastate and w/o Delivered Fuels*	*(v) measure level cost of supply per lifetime kilowatt hour excluding delivered fuel benefits and costs*	*(v) measure level cost of supply per lifetime MMBtu excluding delivered fuel benefits and costs*
Program	**Measure Name**	**End Use**	**Benefit / Cost Ratio**	**Utility System Benefit / Cost Ratio**	**Net Cost of Supply (Benefits Minus Expenses)**	**Net Cost of Supply per Lifetime kWh**	**Net Cost of Supply per Lifetime MMBtu**	**Net Cost of Supply (Benefits Minus Expenses) Intrastate and w/o Delivered Fuels**	**Net Cost of Supply per Lifetime kWh (Intrastate and w/o Delivered Fuels)**	**Net Cost of Supply per Lifetime MMBtu (Intrastate and w/o Delivered Fuels)**
EW SF	Weatherization	Envelope	1.21	0.52	-$892,169.58	-$0.30	-$1.52	-$1,017,964.37	-$0.34	-$1.74
HVAC	Forced Hot Water Boiler - >=95% AFUE	HVAC	1.02	0.46	-$144,821.07		-$4.58	-$144,821.07		-$4.58
HVAC	Furnace w/ ECM - 97% AFUE	HVAC	1.10	0.37	-$82,441.42		-$9.41	-$82,441.42		-$9.41
HVAC	Triple Pane Windows	Envelope	1.53	0.38	-$55.48	-$0.05	-$0.54	-$315.99	-$0.28	-$3.10
RNC	Renovation Rehab - Tier 1, Gas		2.31	0.56	-$4,321.53	-	-$1.90	-$4,321.53	-	-$1.90

Exhibit 5: Income Eligible Program Measures to Consider for Incentive Reduction

Electric Measures

Measure Information			*(ii) measure level cost benefit ratios using all of the benefits listed in tables E6 and G6 excluding economic benefits*	*(iii) measure level cost benefit ratios excluding non electric, non gas, non electric and social benefits in tables E6 and G6*	*Net Cost of Supply (Benefits Minus Expenses)*	*(iv) measure level cost of supply per lifetime kilowatt hour*	*(iv) measure level cost of supply per lifetime MMBtu*	*Total Net Cost of Supply (Benefits Minus Expenses) Intrastate and w/o Delivered Fuels*	*(v) measure level cost of supply per lifetime kilowatt hour excluding delivered fuel benefits and costs*	*(v) measure level cost of supply per lifetime MMBtu excluding delivered fuel benefits and costs*
Program	**Measure Name**	**End Use**	**Benefit / Cost Ratio**	**Utility System Benefit / Cost Ratio**	**Net Cost of Supply (Benefits Minus Expenses)**	**Net Cost of Supply per Lifetime kWh**	**Net Cost of Supply per Lifetime MMBtu**	**Net Cost of Supply (Benefits Minus Expenses) Intrastate and w/o Delivered Fuels**	**Net Cost of Supply per Lifetime kWh (Intrastate and w/o Delivered Fuels)**	**Net Cost of Supply per Lifetime MMBtu (Intrastate and w/o Delivered Fuels)**
IE SF	Wi-Fi Thermostat - AC Only	HVAC	2.66	0.62	-$2,482.21	-$0.48	-$141.32	-$4,187.74	-$0.81	-$238.41
IE SF	Domestic Hot Water Measure, Oil	Hot Water	36.41	-	$5,872.85		$31.37	-$320.00		-$1.71
IE SF	Wi-Fi Thermostat - Other	HVAC	7.79	0.25	$7,879.86	$6.63	$42.02	-$1,337.32	-$1.13	-$7.13
IE SF	Early Retirement Clothes Washer Propane DHW & Elec Dryer	Hot Water	2.85	0.94	$15,780.30	$0.22	$29.41	-$1,662.32	-$0.02	-$3.10
IE SF	Wi-Fi Thermostat - Oil	HVAC	6.02	0.25	$25,650.96	$4.18	$26.38	-$6,909.51	-$1.13	-$7.11
IE SF	Heating System Retrofit - Boiler, Other	HVAC	3.16	0.05	$13,966.47	$9.49	$19.08	-$20,894.69	-$14.19	-$28.55
IE SF	Heating System Retrofit - Furnace, Other	HVAC	2.35	0.04	$8,681.02	$4.56	$9.17	-$37,062.49	-$19.47	-$39.15
IE SF	Early Retirement Clothes Washer Gas DHW & Gas Dryer	Hot Water	1.29	0.13	-$26,096.42	-$0.33	-$6.27	-$29,790.76	-$0.37	-$7.16
IE SF	Heating System Retrofit - Furnace, Oil	HVAC	1.96	0.04	-$25,515.43	-$5.77	-$7.37	-$137,960.51	-$31.21	-$39.84
IE SF	Replacement Freezer	Refrigeration	1.40	1.05	$28,717.55	$0.05	$13.59	-$2,107.57	$0.00	-$1.00
IE SF	Weatherization, Other	HVAC	1.97	0.43	$21,741.60		$12.33	-$88,190.41		-$49.99
IE SF	Window AC Replacements	Envelope	2.67	0.69	-$195,873.31	-$0.10	-$29.40	-$407,321.51	-$0.21	-$61.13
IE SF	Heating System Retrofit - Boiler, Oil	HVAC	2.62	0.05	$82,069.14	$2.30	$2.94	-$812,056.82	-$22.78	-$29.08
IE SF	Weatherization, Electric	Envelope	3.22	0.91	$21,725.10	$0.00	$1.36	-$228,757.62	-$0.05	-$14.33
IE SF	Replacement Refrigerator	Refrigeration	1.27	1.01	$329,456.11	$0.03	$9.91	-$104,848.75	-$0.01	-$3.15
IE SF	Weatherization, Del Fuel	Envelope	4.25	0.51	$1,365,591.19	$3.03	$21.62	-$850,443.45	-$1.89	-$13.47
IE SF	MSHP - Electric Resistance	HVAC	1.31	0.77	-$112,780.26	-$0.01	-$1.56	-$618,150.02	-$0.03	-$8.56
IE MF	Air Sealing - Other	Envelope	114.37	-	-$350.00			-$350.00		
IE MF	Aerator - Oil	Hot Water	12.48	-	$725.75		$30.32	-$95.00		-$3.97

Measure Information			*(ii) measure level cost benefit ratios using all of the benefits listed in tables E6 and G6 excluding economic benefits*	*(iii) measure level cost benefit ratios excluding non electric, non gas, non electric and social benefits in tables E6 and G6*	*Net Cost of Supply (Benefits Minus Expenses)*	*(iv) measure level cost of supply per lifetime kilowatt hour*	*(iv) measure level cost of supply per lifetime MMBtu*	*Total Net Cost of Supply (Benefits Minus Expenses) Intrastate and w/o Delivered Fuels*	*(v) measure level cost of supply per lifetime kilowatt hour excluding delivered fuel benefits and costs*	*(v) measure level cost of supply per lifetime MMBtu excluding delivered fuel benefits and costs*
Program	**Measure Name**	**End Use**	**Benefit / Cost Ratio**	**Utility System Benefit / Cost Ratio**	**Net Cost of Supply (Benefits Minus Expenses)**	**Net Cost of Supply per Lifetime kWh**	**Net Cost of Supply per Lifetime MMBtu**	**Net Cost of Supply (Benefits Minus Expenses) Intrastate and w/o Delivered Fuels**	**Net Cost of Supply per Lifetime kWh (Intrastate and w/o Delivered Fuels)**	**Net Cost of Supply per Lifetime MMBtu (Intrastate and w/o Delivered Fuels)**
IE MF	TSV Showerhead - Oil	Hot Water	22.60	-	$1,337.35		$30.96	-$80.00		-$1.85
IE MF	TSV Showerhead - Other	Hot Water	31.28	-	$2,031.52		$47.03	-$80.00		-$1.85
IE MF	CUSTOM CIRCULATOR	Custom Measures	0.68	0.53	-$2,523.21	-$0.06	-$17.79	-$3,501.07	-$0.08	-$24.68
IE MF	Showerhead - Other	Hot Water	43.57	-	$5,392.75		$47.56	-$150.00		-$1.32
IE MF	LED Fixture - Common Ext	Lighting	0.51	0.25	-$16,601.94	-$0.43	-$127.28	-$18,961.24	-$0.50	-$145.37
IE MF	Showerhead - Oil	Hot Water	31.42	-	$14,877.22		$31.49	-$625.00		-$1.32
IE MF	LED Fixture - Common Int	Lighting	0.45	0.17	-$54,009.93	-$0.75	-$219.55	-$58,459.71	-$0.81	-$237.64
IE MF	Insulation - Other	Envelope	48.55	-	$9,637.41		$38.55	-$2,300.00		-$9.20
IE MF	Air Sealing - Oil	Envelope	142.26	-	$16,940.40		$31.16	-$630.00		-$1.16
IE MF	LED Fixture - Linear, Common Int	Lighting	0.23	0.17	-$73,535.37	-$0.75	-$220.26	-$79,574.33	-$0.81	-$238.34
IE MF	Custom	Lighting	0.40	0.31	-$180,823.06	-$0.20	-$58.06	-$202,432.20	-$0.22	-$65.00
IE MF	VFD	Motors/Drives	0.88	0.67	-$33,054.59	-$0.02	-$4.93	-$74,693.41	-$0.04	-$11.15
IE MF	Insulation - Oil	Envelope	68.33	-	$292,182.66		$30.76	-$12,190.00		-$1.28
IE MF	CUSTOM CHP	HVAC	2.77	0.44	-$323,949.04	-$0.14	-$137.32	-$365,433.57	-$0.15	-$154.91
IE MF	Heat Pumps	HVAC	0.91	0.76	-$103,939.54	-$0.01	-$3.47	-$270,441.18	-$0.03	-$9.03

Exhibit 5: Income Eligible Program Measures to Consider for Incentive Reduction

Gas Measures

Measure Information			*(ii) measure level cost benefit ratios using all of the benefits listed in tables E6 and G6 excluding economic benefits*	*(iii) measure level cost benefit ratios excluding non electric, non gas, non electric and social benefits in tables E6 and G6*	*Net Cost of Supply (Benefits Minus Expenses)*	*(iv) measure level cost of supply per lifetime kilowatt hour*	*(iv) measure level cost of supply per lifetime MMBtu*	*Total Net Cost of Supply (Benefits Minus Expenses) Intrastate and w/o Delivered Fuels*	*(v) measure level cost of supply per lifetime kilowatt hour excluding delivered fuel benefits and costs*	*(v) measure level cost of supply per lifetime MMBtu excluding delivered fuel benefits and costs*
Program	**Measure Name**	**End Use**	**Benefit / Cost Ratio**	**Utility System Benefit / Cost Ratio**	**Net Cost of Supply (Benefits Minus Expenses)**	**Net Cost of Supply per Lifetime kWh**	**Net Cost of Supply per Lifetime MMBtu**	**Net Cost of Supply (Benefits Minus Expenses) Intrastate and w/o Delivered Fuels**	**Net Cost of Supply per Lifetime kWh (Intrastate and w/o Delivered Fuels)**	**Net Cost of Supply per Lifetime MMBtu (Intrastate and w/o Delivered Fuels)**
IE SF	Boiler	HVAC	1.67	0.31	-$503,955.17	-$9.13	-$18.36	-$503,955.17	-$9.13	-$18.36
IE SF	Furnace	HVAC	1.26	0.23	-$178,844.42	-$14.61	-$29.39	-$179,137.63	-$14.64	-$29.44
IE SF	Weatherization	Envelope	2.60	0.37	-$728,880.35	-$1.12	-$8.19	-$763,685.25	-$1.17	-$8.58
IE MF	Custom	Other	1.74	0.52	-$69,006.13		-$1.81	-$69,006.13		-$1.81
IE MF	HEATING _Custom_LI	HVAC	0.99	0.56	-$40,769.33		-$0.46	-$40,769.33		-$0.46

Exhibit 6: RI Test BCR Greater than 1.0, No Cost of Supply Calculation

Electric Measures

Measure Information			*(ii) measure level cost benefit ratios using all of the benefits listed in tables E6 and G6 excluding economic benefits*	*(iii) measure level cost benefit ratios excluding non electric, non gas, non electric and social benefits in tables E6 and G6*	*Net Cost of Supply (Benefits Minus Expenses)*	*(iv) measure level cost of supply per lifetime kilowatt hour*	*(iv) measure level cost of supply per lifetime MMBtu*	*Total Net Cost of Supply (Benefits Minus Expenses) Intrastate and w/o Delivered Fuels*	*(v) measure level cost of supply per lifetime kilowatt hour excluding delivered fuel benefits and costs*	*(v) measure level cost of supply per lifetime MMBtu excluding delivered fuel benefits and costs*
Program	**Measure Name**	**End Use**	**Benefit / Cost Ratio**	**Utility System Benefit / Cost Ratio**	**Net Cost of Supply (Benefits Minus Expenses)**	**Net Cost of Supply per Lifetime kWh**	**Net Cost of Supply per Lifetime MMBtu**	**Net Cost of Supply (Benefits Minus Expenses) Intrastate and w/o Delivered Fuels**	**Net Cost of Supply per Lifetime kWh (Intrastate and w/o Delivered Fuels)**	**Net Cost of Supply per Lifetime MMBtu (Intrastate and w/o Delivered Fuels)**
EW SF	Showerhead - Oil	Hot Water	21.03	-	$478,584.36		$30.85	-$30,420.00		-$1.96
EW SF	Pipe Insulation, Oil	Envelope	10.08	-	$119,967.34		$30.88	-$13,213.20		-$3.40
EW SF	Pipe Insulation, Others	Envelope	14.59	-	$48,967.00		$46.22	-$3,603.60		-$3.40
EW SF	Showerhead - Other	Hot Water	27.15	-	$33,745.78		$46.74	-$1,544.40		-$2.14
EW SF	Aerator, Oil	Hot Water	5.93	-	$4,316.76		$26.53	-$1,261.26		-$7.75
EW SF	Aerator, Others	Hot Water	7.48	-	$896.27		$41.31	-$180.18		-$8.31
EW MF	Insulation - Oil	Envelope	102.51	-	$219,880.84		$31.65	-$2,713.20		-$0.39
EW MF	Showerhead - Oil	Hot Water	32.74	-	$21,030.44		$31.49	-$883.50		-$1.32
EW MF	Air Sealing - Oil	Envelope	13.26	-	$6,032.51		$29.38	-$605.20		-$2.95
EW MF	TSV Showerhead - Oil	Hot Water	22.87	-	$5,596.79		$30.96	-$334.80		-$1.85
EW MF	Showerhead - Other	Hot Water	44.89	-	$3,343.51		$47.56	-$93.00		-$1.32
EW MF	Aerator - Other	Hot Water	16.12	-	$2,032.81		$45.65	-$176.70		-$3.97
EW MF	Aerator - Oil	Hot Water	12.48	-	$1,705.12		$30.32	-$223.20		-$3.97
EW MF	Pipe Wrap DHW - Oil	Hot Water	22.15	-	$1,120.95		$31.33	-$53.01		-$1.48
EW MF	Pipe Wrap DHW - Other	Hot Water	32.99	-	$178.52		$47.40	-$5.58		-$1.48
RCP	Low Flow Showerhead w/ TSV - Other	Hot Water	23.16	-	$36,363.29		$46.08	-$2,211.60		-$2.80
RCP	Low Flow Showerhead w/ TSV - Oil	Hot Water	18.38	-	$26,601.97		$30.22	-$2,280.00		-$2.59
RCP	Thermostatic Shut-off Valve - Other	Hot Water	8.81	-	$9,447.97		$42.13	-$1,513.20		-$6.75
RCP	Thermostatic Shut-off Valve - Oil	Hot Water	7.07	-	$6,812.51		$26.85	-$1,513.20		-$5.96

Exhibit 7: Gas Measures with a BCR (iii) Less than 1.0, Costs less than the cost of additional supply when delivered fuel benefits are excluded

Measure Information			*(ii) measure level cost benefit ratios using all of the benefits listed in tables E6 and G6 excluding economic benefits*	*(iii) measure level cost benefit ratios excluding non electric, non gas, non electric and social benefits in tables E6 and G6*	*Net Cost of Supply (Benefits Minus Expenses)*	*(iv) measure level cost of supply per lifetime kilowatt hour*	*(iv) measure level cost of supply per lifetime MMBtu*	*Total Net Cost of Supply (Benefits Minus Expenses) Intrastate and w/o Delivered Fuels*	*(v) measure level cost of supply per lifetime kilowatt hour excluding delivered fuel benefits and costs*	*(v) measure level cost of supply per lifetime MMBtu excluding delivered fuel benefits and costs*
Program	**Measure Name**	**End Use**	**Benefit / Cost Ratio**	**Utility System Benefit / Cost Ratio**	**Net Cost of Supply (Benefits Minus Expenses)**	**Net Cost of Supply per Lifetime kWh**	**Net Cost of Supply per Lifetime MMBtu**	**Net Cost of Supply (Benefits Minus Expenses) Intrastate and w/o Delivered Fuels**	**Net Cost of Supply per Lifetime kWh (Intrastate and w/o Delivered Fuels)**	**Net Cost of Supply per Lifetime MMBtu (Intrastate and w/o Delivered Fuels)**
EW SF	Aerator	Hot Water	3.77	0.93	$4,380.05		$7.68	$4,380.05		$7.68
EW SF	WiFi thermostat	HVAC	1.99	0.84	$11,634.65	$0.97	$9.10	$10,188.40	$0.85	$7.97
EW MF	Heating, Custom	HVAC	1.27	0.74	$38,592.32		$3.47	$38,592.32		$3.47
EW MF	Wi-Fi programmable thermostat (controls gas heat only)	HVAC	1.95	0.66	$4,364.44	$0.58	$7.44	$3,452.10	$0.46	$5.89
EW MF	Air Sealing	Envelope	3.08	0.79	$90,909.98		$3.53	$90,909.98		$3.53
IE MF	Air Sealing	Envelope	11.50	0.78	$10,577.43		$3.37	$10,577.43		$3.37
IE MF	Insulation	Envelope	32.04	0.86	$67,412.96		$3.67	$67,412.96		$3.67
C&I MF	Faucet aerator	Hot Water	3.27	0.71	$502.10		$5.78	$502.10		$5.78
C&I MF	Wi-Fi programmable thermostat (controls gas heat only)	HVAC	1.86	0.60	$698.79	$0.51	$6.56	$532.91	$0.39	$5.00
HVAC	Combo Condensing Boiler/Water Heater - 95% AFUE	HVAC	1.07	0.67	$87,439.82		$0.79	$87,439.82		$0.79
HVAC	WiFi Thermostat, Gas - Heat Only	HVAC	1.93	0.97	$80,339.98		$7.28	$80,339.98		$7.28
HVAC	WiFi Thermostat, Gas - Cooling and Heating	HVAC	2.19	0.97	$31,186.83	$1.51	$9.56	$28,601.58	$1.39	$8.76
HVAC	ENERGY STAR STORAGE WATER HEATER .64 UEF (med draw)	Hot Water	1.62	0.92	$840.91	-$0.23	$4.27	$1,019.39	-$0.28	$5.18
RNC	Renovation Rehab - Tier 2, Gas		2.16	0.73	$9,938.64	-	$1.90	$9,938.64	-	$1.90

Certificate of Service

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

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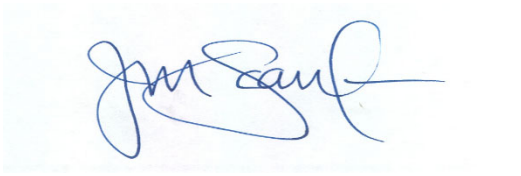

Joanne M. Scanlon

March 18, 2024
Date

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

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