STATE OF RHODE ISLAND PUBLIC UTILITIES COMMISSION

In Re: The Narragansett Electric Company	
d/b/a Rhode Island Energy	**Docket No. XXXX**
Annual Energy Efficiency Plan for 2023	

ANNUAL ENERGY EFFICIENCY PLAN FOR 2023

September 30, 2022

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INTRODUCTION

1 Introduction

The Narragansett Electric Company d/b/a Rhode Island Energy (Rhode Island Energy or the Company) submits this 2023 Annual Energy Efficiency and Conservation Procurement Plan (Plan or Annual Plan) as the third annual plan submitted within the fifth triennial plan (2021-2023 Three Year Energy Efficiency and Conservation Procurement Plan) in fulfillment of The Comprehensive Energy Conservation, Efficiency and Affordability Act of 2006.[1]

Energy efficiency is the most cost-effective way to meet customers' energy needs and is foundational to meeting Rhode Island's greenhouse gas emissions reduction mandates set forth in the 2021 Act on Climate legislation. Customers who directly participate in energy efficiency programs save energy and see direct cost savings in the form of lower energy bills. Energy efficiency also lowers long-term base load and peak demand and can reduce the need for additional generation, distribution, and transmission infrastructure, benefiting all customers, regardless of direct participation in the Company's efficiency programs. The purpose of the Annual Plan is to propose the programs the Company will deliver to help Rhode Island energy consumers meet their energy needs through cost effective, reliable, prudent, and environmentally responsible energy efficiency and demand response, and to identify their costs, benefits, and energy savings.

The Annual Plan identifies the energy savings goals for 2023 and describes the detailed strategies, programming, and investments the Company is undertaking to achieve these goals, in pursuit of the overarching goals, savings, and benefits outlined in the 2021 -2023 Three-Year Energy Efficiency Plan. In proposing this Plan, the Company is mindful of the prevailing economic conditions, including the recovery of the Rhode Island economy due to the impacts of the COVID-19 pandemic. The Company is also aware of the significant economic benefits that energy efficiency programming can offer towards recovery. The planned programs and budgets attempt to maintain flexibility to ensure continued delivery of energy efficiency services and maintain and build clean energy jobs for the 2023 program year.

This Plan is submitted in accordance with the Least Cost Procurement Law, R.I. Gen. Laws § 39-1-27.7, the basis for which is the Comprehensive Energy Conservation, Efficiency, and Affordability Act of 2006, R.I. Gen. Laws § 39-2-1.2, and the Least Cost Procurement Standards, as approved and adopted pursuant to Order No. 23890 in Docket No. 5015[2] (referred to herein as the "LCP Standards"). This Plan

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[1] The RI Legislature recently passed an update to the 2006 Least Cost Procurement Legislation, specifically impacting the company's transfer of funds to support the Efficient Buildings Fund administered by the Rhode Island Infrastructure Bank. Refer to R.I. Pub. Laws Ch. 224 (2021), http://webserver.rilin.state.ri.us/PublicLaws/law21/law21224.htm

[2] RI PUC Docket 5015, Least Cost Procurement Standards http://www.ripuc.ri.gov/eventsactions/docket/5015_LCP_Standards_05_28_2020_8.21.2020%20Clean%20Copy%20FINAL.pdf

has been developed by Rhode Island Energy with feedback provided by the Energy Efficiency Technical Working Group (EE TWG)[3] and the Energy Efficiency and Resource Management Council (EERMC) and the Energy Efficiency Equity Working Group (EWG).

The 2023 Plan satisfies the statutory requirements for Least Cost Procurement and the Least Cost Procurement Standards and is consistent with the approved Three-Year Energy Efficiency Procurement Plan (Three-Year Plan) for 2021-2023. The overarching goal of both Plans is to enable Rhode Island energy consumers to meet their energy needs through cost-effective, reliable, prudent, and environmentally responsible energy efficiency.

The Annual Plan is cost-effective, with a cost that is lower than the cost of energy supply for both electricity and natural gas portfolios, satisfying the requirements prescribed in R.I. Gen. Laws § 39-1-27.7 (a)(2) and the Standards. The Plan also satisfies PUC Order No. 22851 by demonstrating how it advances the Docket 4600 principles and goals for the electric system detailed in Section 12.[4]

1.1 Plan Summary

1.1.1 Savings

The primary goal of the Plan is to create energy and economic cost savings for Rhode Island consumers through energy efficiency. The electric portion of the Plan will save 734,645 lifetime MWh over the lifetime of the installed energy efficiency measures, 107,221 net annual MWhs, 16,437 net annual kW from passive energy efficiency, and 45,678 net annual kW from active demand response. The natural gas portion of the plan will save 3,179,772 lifetime MMBtu over the lifetime of installed natural gas measures and 280,344 annual MMBtu. For all fuels (electric, gas, oil, propane), combined the plan will save 6,422,781 net lifetime MMBtu and 667,997 net annual MMBtu. Energy savings are measured and verified by third-party evaluation firms.

1.1.2 Benefits

This Plan will create significant benefits for Rhode Island's residential, commercial, industrial, and income eligible energy customers. In total, the Plan is expected to create $309.5M in total benefits over the life of the installed electric, demand response, and natural gas energy efficiency measures.[5] Of these

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[3] Since 1991, a collaborative group has been meeting regularly to analyze and inform the Company's electric and gas energy efficiency programs. The name of this group was modified in 2019 to the Energy Efficiency Technical Working Group (EE TWG) to better reflect the roles of the stakeholders. Presently, members of the EE TWG include: The Company, the Division of Public Utilities and Carriers (Division or DPUC) and the Division's consultant, Synapse Energy Economics (Synapse), the City of Providence, Green Energy Consumers Alliance, the Office of Energy Resources, and Acadia Center. In addition, the George Wiley Center, the Center for Justice, the Rhode Island Infrastructure Bank (RIIB), and several EERMC members and representatives from the EERMC's Consulting Team participate in the EE TWG. Since 1991, membership in the EE TWG has varied because some organizations have withdrawn, and others have joined.

[4] PUC Report and Order No. 22851 accepting the Stakeholder Report. Written Order issued July 31, 2017.

[5] Total benefits does not include quantified economic benefits.

total benefits, $223.1M come from electric efficiency, passive demand reductions, and active demand response. $86.4M in benefits derive from natural gas efficiency.

Table 1 includes a high-level summary of the Electric-funded and Natural Gas-funded portions of the Plan. Table 2 represents a more detailed table of the programs included under the "Active Demand Response (kW)" column shown in Table 1.

Each $1 spent on the electric energy efficiency portfolio will create $1.96 in monetized benefits over the lifetime of the investment, and every $1 spent on the natural gas portfolio will create $2.23 in monetized benefits over the lifetime of the investments. A detailed summary of the benefits and costs included in the Rhode Island Test are included in Attachment 4 Rhode Island (RI) Benefit Cost Test.

1.1.3 Economic Impacts

The Company expects that investments made in energy efficiency under this Plan will add $304.2M to Rhode Island's Gross State Product (GSP), the equivalent of 2,826 job years. [6] The vast majority of jobs associated with the Annual Plan's energy efficiency investments are local because they are tied to the installation of equipment and materials. An analysis of Rhode Island Energy's 2021 energy efficiency programs found that 59% of companies that deliver services on behalf of the Company's energy efficiency programs are either headquartered or have a presence in Rhode Island.[7] Investments in energy efficiency contribute to Rhode Island's economy overall and benefit business owners and their employees who deliver these programs and services.

As described in Attachment 4, following what was done in the 2022 Annual Plan, the primary calculation of benefits conservatively excludes Economic Development because of concerns over double counting of benefits with other categories. The monetized RI Test benefits for the electric energy efficiency and demand response portfolio are calculated to be $223.1M. The monetized RI Test benefits for the gas portfolio are calculated to be $86.4M.

1.1.4 Environmental Benefits

The electric, gas, and delivered fuel energy efficiency measures proposed in this Plan will avoid over 78,217 short tons of carbon in 2023,[8] which contributes 1.2% toward Rhode Island's Act on Climate greenhouse gas emission reduction requirements of 45% below 1990 levels by 2030 and 0.56% of

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[6] Macroeconomic multipliers for the economic growth and job creation benefits of investing in cost-effective energy efficiency from "Economic Multipliers Update" filed in Docket 5189 on January 6, 2022. This is a correction to the multipliers in "Review of RI Test and Proposed Methodology" prepared for National Grid by the Brattle Group, January 31, 2019. These macroeconomic multipliers reflect the total impact to the Rhode Island economy and do not remove benefits counted elsewhere in the RI Test, so are shown as a separate economic impact analysis estimate.

[7] Guidehouse, "Rhode Island 2021 Energy Efficiency Workforce Analysis Report," June 1, 2022 (filed as part of National Grid's 2021 Year-End Report).

[8] While all energy savings seen in the plan are net, these emissions are calculated based on gross energy savings from EE measures. The marginal carbon emission rates are from "Avoided Energy Supply Components in New England: 2021 Report" Appendix G.

progress toward Rhode Island's Act on Climate greenhouse gas emission requirements of net-zero by 2050.[9] The Company believes that robust, ambitious energy efficiency programs should be a foundational element of any approach to achieving greenhouse gas emission reduction targets and supports the various efforts underway to holistically evaluate the least cost pathways to realizing economy wide emissions and leveraging the results of those efforts to inform future plans.

1.1.5 Funding

This Plan includes an investment of $110.7M in the cost-effective electric energy efficiency portfolio in 2023. If approved, this will be funded by $10.1 million in proceeds from the ISO New England (ISO-NE) Forward Capacity Market (FCM), revenues from the existing energy efficiency program charge of $0.01222 per kWh, and revenues from a fully reconciling mechanism of $0.00186 per kWh pursuant to R.I. Gen. Laws § 39-1-27.7(c)(5) to fully fund the cost-effective electric energy efficiency programs for 2023.[10]

This Plan also includes an investment of $37.8M in the cost-effective natural gas energy efficiency portfolio in 2023. If approved, this investment will be funded by revenues from the existing energy efficiency program charge of $1.354 per dekatherm for residential customers and $0.886 per dekatherm for non-residential customers plus revenues from a fully reconciling mechanism of $0.280 per dekatherm for residential customers and $0.194 per dekatherm for non-residential customers pursuant to R.I. Gen. Laws § 39-1-27.7(c)(5) to fully fund the cost-effective natural gas energy efficiency programs for 2023.[11]

The cost of procuring 734,645 net lifetime MWh electric energy efficiency savings through the Plan is $45.0M less than if that electric load was met by purchasing additional electric supply. The cost of procuring 3,179,772 MMBtu lifetime natural gas energy efficiency savings through the Plan is $5.3M less than if that natural gas load was met by purchasing additional natural gas supply.[12]

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[9] http://webserver.rilin.state.ri.us/Statutes/TITLE42/42-6.2/42-6.2-2.HTM
[10] See Attachment 5 Electric EE Program Tables, Table E-1 for list of funding sources and calculation of the charge.
[11] See Attachment 6 Gas EE Program Tables, Table G-1 for list of funding sources and calculation of the charge.
[12] For more information on how this was calculated, see Section 7.5 of the Main Text, "Cost of Annual Plan Compared to the Cost of Energy Supply"

Table 1. 2023 Energy Efficiency Program Plan Summary

Electric Programs by Sector [3]	Energy Efficiency Budget ($000)[1]	Customer Contribution ($000)	Annual Savings (MWh)	Lifetime Savings (MWh)	¢/lifetime kWh	Summer Annual Demand Savings (kW) [5]	Active Demand Response (kW)	Total Benefits ($000) [7]	RI Test B/C Ratio [7]	Participants [6]
Non-Income Eligible Residential	$33,891	$10,002	44,293	186,123	¢23.2	6,324	7,878	$70,501	2.08	331,108
Income Eligible Residential [3]	$16,788	$0	4,036	45,788	¢36.7	473	0	$26,589	1.58	5,897
Commercial and Industrial	$57,592	$28,149	58,888	502,673	¢16.5	9,640	37,800	$125,990	2.19	2,741
Regulatory [2]	$5,832									
Subtotal	**$114,105**	**$38,151**	**107,217**	**734,645**	**¢20.3**	**16,437**	**45,678**	**$223,080**	**1.96**	**339,746**
Gas Programs by Sector	**Energy Efficiency Budget ($000)[1]**	**Customer Contribution ($000)**	**Annual Savings (MMBtu)**	**Lifetime Savings (MMBtu)**	**$/lifetime MMBtu**		**Total Benefits ($000)**	**RI Test B/C Ratio**	**Participants**	
Non-Income Eligible Residential	$17,210	$5,268	134,602	1,255,993	$17.90		$30,894	1.37	139,117	
Income Eligible Residential	$9,139	$0	20,883	365,699	$24.99		$20,910	2.29	3,539	
Commercial and Industrial	$10,285	$3,451	124,859	1,588,079	$8.17		$34,572	2.52	755	
Regulatory [2]	$2,118									
Subtotal	**$38,751**	**$8,719**	**280,344**	**3,179,772**	**$14.61**		**$86,376**	**1.82**	**143,411**	
TOTAL Plan	**$152,856**	**$46,870**					**$309,456**	**2.02**	**483,157**	

(1) The Energy Efficiency Budget comes from E-2 and G-2 tables.

(2) Regulatory Includes contributions to the Office of Energy Resources. EERMC and RIIB have been excluded.

(3) In addition to Income Eligible Residential programs, Income Eligible customers can participate in all Non-Income Eligible Residential programs.

(4) Electric Programs are funded by the Electric Energy Efficiency Charge but also include Delivered Fuels energy savings.

(5) The Summer Annual Demand Response (kW) measures passive demand savings.

(6) The unit measure for participation varies by program. See Attachment 5, Table E-7 and Attachment 6, G-7 for participation goals by program.

(7) "Total Benefits" and the "RI Test B/C Ratio" continue to exclude economic benefits from the RI Test as in the 2022 Plan.

Table 2. 2023 Active Demand Response Program Plan Summary

Programs	Implementation Spending ($000)	Customer Contribution ($000)	Active Demand Response (kW)	$/kW [2]	Total Benefits ($000)	RI Test B/C Ratio	Participation
Residential	$1,985	$-	7,878	$252	$3,501	1.76	6,900
Commercial	$7,503	$-	37,800	$198	$13,678	1.82	216
Total	**$9,489**	$-	**45,678**	**$208**	**$17,180**	1.81	**7,116**

(1) All Residential electric customers (including Income Eligible customers) are eligible to participate in the Residential ConnectedSolutions program if they have the necessary equipment – a smart thermostat and central air conditioning, or a behind the meter battery.

(2) (Implementation Spending *1000) / Active Demand Response (kW)

(3) "Total Benefits" and the "RI Test B/C Ratio" no longer include economic benefits previously included in the RI Test in the 2020 and 2021 plans.

1.2 The Planning Process

This plan benefited from the planning process undertaken in the 2020 calendar year that resulted in the 2021 – 2023 Three-Year Plan. This Annual Plan reflects a refinement of the planning that was undertaken for the third year of the Three-Year Plan, including incorporating the latest Evaluation, Measurement, and Verification (EM&V) studies and Avoided Cost study. The Three-Year Plan was informed by the areas of opportunity identified in the Rhode Island Energy Efficiency Market Potential Study (Market Potential Study) commissioned by the EERMC and completed by Dunsky Energy Consulting in May 2020. This Annual Plan has also been guided by the LCP Standards in RI PUC Docket 5015. The Standards include an extensive set of "principles of program design" referenced in Section 2.1.1.

The Company has engaged the TWG and the EERMC and its consulting team throughout the planning process to leverage their expertise and seek their feedback. The Company is grateful for the substantive critiques and innovative ideas that have come through this process of continued engagement. In particular, the discussions of equity have helped shape and elevate the Company's explicit equity commitments, establishing equity as an overarching strategic objective of this Annual Plan and adding multiple specific, measurable actions across the portfolio of efficiency programs.

1.3 How to Read This Plan

For ease of review, this Plan has been organized to align with the revised LCP Standards. There are three overarching sections: Strategies and Approaches to Planning; Consistency with Standards; and Goals, Budget, and Funding Plan. The **Strategies and Approaches to Planning** section provides a discussion of the Company's approach to implementing the principles of program design outlined in the LCP Standards and provides summary program descriptions, along with the major enhancements and innovations planned for 2023. This section also includes a discussion of program participation, pilots and demonstrations and assessments, evaluation, measurement and verification, and coordination with other energy programs. The **Consistency with Standards** section explains how the Plan complies with the requirements for Cost Effectiveness, Reliability, Prudency (including a detailed discussion of equity and rate and bill impacts), Environmentally Responsible, and comparison to alternative cost of supply requirements, as set forth in the LCP Standards. **The Goals, Budget, and Funding Plan** detail these elements and discusses the performance incentive plan and performance metrics.

The eleven Attachments to this Annual Plan provide additional detail on specific Plan elements. **Attachment 1 Residential & IES Programs** and **Attachment 2 C&I Programs** provide detail on program eligibility criteria, offerings, implementation and delivery, customer feedback, 2023 changes with accompanying rationale, and proposed evaluations for each program. **Attachment 3 Evaluation, Measurement, and Verification Plan** reviews evaluation studies completed in 2022, details studies planned for 2023, and provides a recap of historical studies. **Attachment 4 RI Benefit Cost Test** presents the framework for assessing cost-effectiveness of this Annual Plan. **Attachments 5 and 6** contain funding, budgets, goals, and cost-effectiveness tables for the electric and gas energy efficiency programs, respectively. **Attachment 7 Rate and Bill Impacts** provides a detailed analysis of the bill impacts resulting from this Plan. **Attachment 8** details, for each sector, 2023 **Pilots, Demonstrations,**

and Assessments. **Attachment 9 Cross-Program Summary** documents how the programs described in this Plan relate to other specific Rhode Island Energy programs. **Attachment 10 Definitions** provides definitions of energy efficiency terms used throughout the annual plan.

STRATEGIES AND APPROACHES TO PLANNING

2 Programs and Priorities

2.1 Strategic Overview of Programs and Priorities

This Annual Plan is built as the third year of the 2021-2023 Three-Year Energy Efficiency Plan. The Three-Year Plan set the Company on a trajectory to ensure that Rhode Island has a robust and resilient energy efficiency infrastructure, particularly as the market for energy efficiency transforms with changes in the lighting market. This Annual Plan will help continue the trajectory of Rhode Island homes and businesses towards greater efficiency, while contributing to recovery from the COVID-19 pandemic and its impacts on customers and economic conditions. The Plan seeks to guarantee that all Rhode Island energy consumers, regardless of their geographic location, income, home ownership status, primary language, business size, or other relevant barriers are empowered to be active in their energy choices, control their energy use, and enjoy the economic, environmental, and cost savings benefits of energy efficiency.

The Plan supports continued innovation and evolution, building enabling tools to accelerate the transition of Rhode Island homes and businesses to increasing levels of efficiency in future years. It balances the pursuit of energy and financial savings from current technologies and programs with the need to also identify new technologies, finance channels, workforce development enhancements, and programs to continue delivering savings to Rhode Island customers for years to come. The Plan achieves savings by implementing the following key strategic priorities set out in the Three-Year Plan:

- Achieve cost optimization and efficiency.
- Drive adoption of comprehensive measures.
- Plan and deliver programs equitably, with the input and guidance of the Rhode Island Equity Working Group (EWG).
- Expand and deepen customer relationships to expand program participation.
- Expand and evolve Active Demand Response.

Section 2.1.1 explains how the principles of program design included in the LCP Standards have been applied to this Annual Plan, highlighting examples and providing direction on where deeper discussion may be found within the Plan. Sections 2.2, 2.3, and 2.4 provide high-level summaries of program designs and changes for 2023 to Residential, Income Eligible Services, and Commercial and Industrial Programs. Section 2.5 offers detail on the cross-cutting programs for 2023, including the Community-Based Initiative and codes and standards. Section 2.6 focuses on participation and outreach, planned participation, and the important enabler of workforce development, and equity. Lastly, Section 2.7 describes the Company's approach to equity in design and delivery of the 2023 programs.

2.1.1 Principles of Program Design

This Annual Plan has been guided by the LCP Standards as updated in RI PUC Docket 5015, which provide an extensive set of principles of program design. The bullets below summarize the principles and, if appropriate, in what Sections of this Plan they are addressed.

- Integration with other programs and policies - Section 5, Coordination with Other Energy Policies and Programs, provides details on the Plan's connection to specific state policies. Program descriptions in Attachments 1 and 2 also describe the dissemination of information on energy programs beyond those run directly by the Company.
- Innovation – Innovative strategies are outlined in Attachment 8, Pilots, Demonstrations and Assessments.
- Comprehensiveness – Examples of strategies to achieve deep comprehensive savings packages that emphasize whole building and whole system solutions are found in the Commercial and Industrial market sector approach and the Residential and Income Eligible whole building delivery program descriptions, in Attachments 2 and 1, respectively.
- Equity - Using an equity lens involves consideration of how to modify systemic and institutional structures that have made it easier for some customers to access the energy efficiency programs than others. Section 2.7 describes the Company's approach to equity in 2023.
- Build on Prior Plans – The experience and lessons of prior planning and regulatory approval processes informs the current program design, especially as 2023 is the third year of the 2021-23 Least Cost Procurement Plan.
- Build on Prior Programs – Programs are continuously evolving, building from one plan year to the next. Each program description in Attachments 1 and 2 has a section addressing program design changes for 2023.
- Planned Based on Potential Assessments - This Annual Plan in informed by the 2020 Market Potential Study, and the areas of opportunity identified within it – as well as the cost implications of achieving higher levels of potential – have been considered in the program planning process.
- Unlocks Capital and Effectively Uses Funding Sources - This Plan consistently looks beyond direct financial incentives and traditional financing strategies to design capital and program access strategies that respond to specific customer barriers, such as grants for overcoming pre-weatherization barriers, expanded HEAT loan, or third-party financing.
- Integration of Gas and Electric Energy Efficiency Programs – All programs are integrated across fuels where possible to optimize and benefit from synergies between the two energy systems
- Strategies to Achieve Targets – As noted above, the five overarching strategies highlighted in the Three Year Plan permeate this Annual Plan.
- Investments on Behalf of All Customers – All customers contribute to energy efficiency program funding and, in return, programs are designed so that all customers have the opportunity to participate. This element of equity is discussed further in Section 2.7.
- Efficacy - The Company has incorporated opportunities to balance the portfolio of energy savings measures and program approaches to drive higher cost efficiencies (i.e. the amount of

energy savings per dollar invested) and minimize the impact on customer bills. Efficacy also incorporates Workforce Development, which is described further in Section 2.6.1.

- Parity Among Sectors – The Plan examines the amount collected from the different sectors by the SBC, as compared to the program budgets by sectors, to ensure that sectors are generally receiving the benefits paid for.
- Cost-Effectiveness – Programs are cost-effective as required and shown in Attachments 5 and 6. The application of cost-effectiveness as a design principle at a program level involves a balancing of comprehensive, costly projects with long-term measures, with programming that requires less intensive customer support, such as upstream programming and Strategic Energy Management Planning with very large customers.

Further details on the Company's application of the Standards is found in Section 7. At the same time, the Plan is shaped by recent PUC guidance in Dockets 5076 and 5189 related to the performance incentive mechanism (PIM). The PIM focuses program administrator attention on the creation of lifetime benefits, efficiency in spending, and maximization of benefits flowing to customers.

As with any Plan, this Plan was developed using the best information available at the time. Should circumstances change as the year develops, the Company will take action in its capacity as Program Administrator to adapt as needed and inform stakeholders of the inability to execute a proposed strategy or commitment or the need to revise them.

2.2 Residential Programs

In 2023, the Company will continue all residential programs offered in 2022.

Table 3. Overview of 2023 Residential Energy Efficiency Programs

Program Name	Program Description
Energy*Wise* Single Family (Funded by Electric and Gas)	Energy*Wise* is a direct-to-customer in-home program that educates residents on how their home can become more energy efficient. The program offers single-family customers (buildings with 1-4 dwelling units) home energy assessments, weatherization services, and information regarding their energy usage. The program addresses base load electric use and heating, cooling, and water heating energy loads in all residential buildings. Participants receive energy efficiency recommendations and technical assistance, as well as financial incentives to replace inefficient items such as lighting fixtures, appliances, thermostats, and insulation. Upgrades to efficient lighting, advanced power strips, and water saving devices are made if opportunities exist during the initial visit. At the completion of the assessment, the customer receives an Energy Action Plan that indicates additional energy savings opportunities delivered through Rhode Island Energy's various programs. The program will continue to deliver finance opportunities to customers, such as the Heat Loan.

Program Name	Program Description
Multifamily (Funded by Electric and Gas)	This program offers comprehensive energy services for market-rate multifamily customers (buildings with 5+ dwelling units), including energy assessments, incentives for heating and domestic hot water systems, cooling equipment, lighting, and appliances. All types of multifamily properties are eligible. A primary point-of-contact is designated to manage, and coordinate services offered through the Company's existing portfolio. This program is offered in conjunction with the C&I Multifamily gas program where a site may have a commercial meter or office space but should be virtually indistinguishable to the customer as the Company's single point of contact will handle all program overlap and offer a seamless customer experience.
Residential New Construction and Building Energy Code Support (Funded by Electric and Gas)	The Residential New Construction (RNC) program promotes the construction of high-performing energy efficient single family, multifamily, and income eligible homes, as well as the education of builders, tradespeople, designers, and code officials.
Home Energy Reports (Funded by Electric and Gas)	The Home Energy Reports (HER) program encourages energy efficiency behavior through personalized print and email reports and a seamlessly integrated website. Each of the communication channels displays energy consumption patterns and contains a normative comparison to similarly sized and similarly heated homes, as well as to an energy reduction goal for each customer. The Company will continue to deliver Home Energy Reports that offer enhanced feedback tools to inspire customers to take actions that reduce their energy consumption and increase their participation in other energy efficiency programs.
Residential Consumer Products (Funded by Electric Only)	This program promotes the purchase of high efficiency household appliances, including kitchen appliances and electronics carrying the ENERGY STAR® label. This program trains retail sales staff about products. The program also offers refrigerator recycling.
Residential High-Efficiency Heating, Cooling, and Hot Water (ENERGY STAR® HVAC) (Funded by Electric and Gas)	This program promotes the installation of high efficiency central air conditioners for electric customers and new energy efficient natural gas related equipment including boilers, furnaces, windows, water heating equipment, thermostats, and boiler reset controls. Incentives for energy efficient air source heat pumps for space and water heating equipment are available for customers with electric resistance heating/hot water. Incentives are also available for air source heat pumps used as accessory heating and cooling devices in homes with a primary heating system that is natural gas, oil, or propane. The program provides training of contractors to increase accurate installation practices, testing of the

Program Name	Program Description
	high efficiency systems, tiered rebates for new ENERGY STAR® systems, and incentives for checking new and existing systems.
Residential ConnectedSolutions (Active Demand Response) (Funded by Electric)	ConnectedSolutions is Rhode Island Energy's demand response program that sends control signals to customer owned electric devices to reduce peak energy use and improve power quality on the grid. Consumers with eligible controllable equipment (e.g. Smart thermostats, batteries, and pool pumps) can enroll to participate in Connected Solutions. All electric consumers are eligible to participate in ConnectedSolutions.

2.2.1 Major Residential Program Changes for 2023

In 2023, the Company will continue to offer the programs listed above and will additionally focus on changes that improve equity and access and that leverage findings from the non-participant and participant studies.

In the multifamily program, the Company will increase focus and outreach on landlords and non-participants that have high propensity scores. It will also update multifamily marketing materials based on recommendations from the nonparticipant study, such as an updated brochure and new case studies. Lastly, the Company will continue to support multifamily opportunities within the Community Initiative.

These changes are expected to improve and expand access to the Company's programs and better serve communities in RI who historically have not participated in these programs.

Further detail on these and other changes may be found in Attachment 1.

2.3 Income Eligible Programs

The Company wants customers who meet the income eligibility requirements, have a high proportion of energy burden and/or difficulty paying their electric bills to participate in, and benefit from, the Company's energy efficiency programs. Therefore, the income eligible sector of the customer base is designated as a unique sector, and funding for this sector is subsidized by both non-income-eligible residential customers and commercial and industrial customers.

Table 4. Overview of 2021 Income Eligible Programs

Program Name	Program Description
Income Eligible Single Family	Income Eligible Single (IES) Family Services are delivered by local Community Action Program (CAP) agencies with oversight provided by a Lead Industry Partner. Three levels of home energy assessments are offered: (1) lighting and appliance, (2) heating and weatherization, and (3) comprehensive assessment. Customers who

Program Name	Program Description
(Funded by Electric and Gas)	qualify for the A-60 rate or for the Low-Income Home Energy Assistance Program (LIHEAP) are eligible to receive all services and equipment upgrades at no cost.
Income Eligible Multifamily* (Funded by Electric and Gas)	Comprehensive energy services for multifamily customers (buildings with 5+ dwelling units) that also meet the criteria for "income eligible" as defined in Attachment 1 Residential & IES Programs, Section 3. Multifamily. These services include energy assessments, incentives for heating and domestic hot water systems, Air Source Heat Pumps, cooling equipment, lighting, and appliances. In most cases, there are no costs to the customer for these services as most income eligible upgrades are covered at 100%.

*Income Eligible Multifamily is combined with Multifamily above.

2.3.1 Major Income Eligible Program Changes for 2023

In recent years, some CAP agencies have had difficulty meeting their budget goals due to insufficient staffing, while others have flourished and exceeded their goals. To improve the efficiency of this program, the Lead Industry Partner will facilitate the Interagency Referral program in 2023. This referral program will enable well-performing CAPs to take on more work in underperforming CAP territories to leverage those underutilized budgets. Doing so is expected to improve access to the program, increase participation, and improve equity by ensuring that underserved territories are better able to meet their goals and serve more customers.

2.4 Commercial and Industrial Programs

The Commercial and Industrial (C&I) programs consistently offer highly cost-efficient savings. In planning these programs, the Company continuously evaluates evolving customer needs and market dynamics to develop enhancements that secure deeper, more comprehensive savings while evolving program designs to drive market transformation across all customer classes and multiple end-uses.

The Company is observing a rapid reduction in claimable lighting savings due to a combination of market saturation and evaluation impacts that limit savings due to the rapid market transformation underway. Some initiatives focus on specific market segments, including industrial, grocery, chain restaurant, and telecommunications. Other enhancements make participation easier or more attractive (such as the Equipment and Systems Performance Optimization), provide attractive incentives for specific customer classes (especially Small Business), and other enhancements are designed to reduce barriers to comprehensive measure adoptions (e.g., the Whole Building Streamlined pathway in New Construction introduced in 2021). In addition to these focus areas, the plan describes the Company's ongoing initiatives. Program changes are described in more detail in Attachment 2 C&I Programs.

Table 5. Overview of 2023 Commercial and Industrial Energy Efficiency Programs

Program Name	Program Description
Large Commercial and Industrial New Construction and Building Energy Code Support (Funded by Electric and Gas)	This program encourages energy efficiency in new construction, major renovations, planned replacement of aging equipment, and replacement of failed equipment through financial incentives and technical assistance to developers, manufacturers, vendors, customers, and design professionals. C&I customers with annual electric consumption greater than 1,000,000 kWh per year are eligible. The program supports new construction projects with proactive technical assistance during design with energy modeling and analysis. Incentives are also offered to owner's design teams for their time and effort to meet program requirements. The program promotes and incentivizes the installation of high efficiency equipment in existing facilities during remodeling or equipment failure and replacement. A customer who does not install energy efficient equipment at the time of construction or equipment replacement will likely never make the investment or will do so at a much greater cost later. Operations Verification or quality assurance is also offered to ensure that the equipment and systems operate as intended. The program also promotes compliance with the building energy code and increased use of the Stretch Code to support the State's goals and objectives. In addition, it provides technical assistance in advancing the development and adoption of minimum efficiency standards for appliances and equipment. Finally, the program supports the State's Zero Energy Building (ZEB) goals through engagement and development of ZEB programs in the future.
Large Commercial and Industrial Retrofit (Funded by Electric and Gas)	This program incentivizes the replacement of existing equipment and systems with energy-efficient alternatives when the customer might otherwise not plan on making efficiency investments. This may include energy efficient equipment such as lighting, motors, and heating, ventilation and air conditioning (HVAC) systems, thermal envelope measures, and custom measures in existing buildings. All commercial, industrial, and institutional customers are eligible to participate. The Company offers technical assistance to customers to help them identify cost-effective efficiency opportunities and pays incentives to assist in defraying part of the material and labor costs associated with the energy efficient measures.

Program Name	Program Description
	The Company also offers education and training, such as the building operator certification (BOC) training, to support the implementation and adoption of energy efficiency.
Small Business Direct Install (Funded by Electric and Gas)	This is a retrofit program that provides turn-key solutions to customers that consume less than 1,000,000 kWh per year. As part of the program, customers receive a free on- site energy assessment and a customized report detailing recommended energy efficient improvements. Rhode Island Energy then completes retrofit installations at the customer's convenience. The program serves small businesses of all types from restaurants to non-profits, to small offices. Rhode Island Energy pays up to 70% of installation and equipment costs and customers can finance the remaining share of the project over as many as 60 months (typically 24) on their electric bill, interest free, using the Small Business Revolving Loan Fund, providing funds are available.
Commercial ConnectedSolutions (Active Demand Response) (Funded by Electric)	The Commercial Connected Solutions or Active Demand Response program is focused on reducing peak electric demand and associated costs for large and small commercial customers. All customers, regardless of size can participate. The program is technology neutral and provides a customer incentive for verifiable shedding of load in response to a signal or communication from the Company.
Commercial and Industrial Multifamily (Funded by Gas)	Comprehensive energy services for market-rate multifamily customers (buildings with five plus dwelling units) include energy assessments and incentives for heating and domestic hot water systems and weatherization. Coordinated services will be offered for all types of multifamily properties. An approach tailored for multifamily properties designates a primary point-of-contact to manage and coordinate services offered through the Company's existing portfolio, including Energy*Wise*, C&I Retrofit, Residential New Construction, Income Eligible, and the ENERGY STAR® HVAC programs.

2.4.1 Major Commercial and Industrial Program Changes for 2023

In 2023, the Company will:

- Scale up the Building Analytics initiative to help customers optimize the performance of HVAC and other systems.
- Improve technical processes by streamlining savings calculators, revisiting burdensome data collection practices, and better leveraging engineer site visits to identify EE opportunities.

- Expand on Small Business equity efforts to target women and minority owned enterprises through bilingual auditors, targeted marketing, collaboration with community organizations, and by making marketing materials available in other languages.
- Conduct targeted training activities to upskill the program delivery workforce on specific focus areas, such as HVAC, building controls, and building envelope.
- Monitor and help mitigate supply chain disruptions and inflation impacts.
- Sunset efforts that have failed to demonstrate the potential to generate significant cost-effective savings, including the Telecommunications Initiative and multiple demonstrations and assessments in order to reduce costs and focus resources on efforts that are successful or have greater future potential.

2.5 Cross-Cutting Programs

2.5.1 Community Solutions Initiative

Building upon the community-based approach, the Company will continue the **Community Solutions Initiative**. This initiative targets geographic communities that encompass multiple customer types, industrial and technology parks, and other organized communities such as industry groupings with common end uses (e.g., indoor agriculture). Community Solutions provides a single point of contact for a given community to access all available Company solutions, including energy efficiency, EVs, demand response, and emerging technologies.

To further develop Community Solutions, the company is identifying a medium-sized city with which to model this approach in 2023. This partnership will leverage the relationships and communication channels of our city partners to reach across sectors and programs (municipal, LCI, SBS, residential, etc.), while providing coordinated tracking and program management. We will collaborate with our partners to set goals and priorities for both city buildings and other community stakeholders (e.g., small businesses) based on the city's preferences. In 2023 the company will assess best practices and lessons learned and identify one to two additional communities with which to partner in future years.

Under this initiative, in 2020, the quasi-public Quonset Development Corporation (QDC) signed a three-year memorandum of understanding with the Company to provide businesses at the Quonset industrial park in North Kingstown with access to enhanced incentives and technical services to identify and implement energy efficiency projects. Participating customers range from small industrial businesses to some of the largest energy users in the state. In 2022, QDC was awarded the Govenor's Lead by Example Award (quasi-state agency category) for this effort. In 2023, the Company will continue to provide energy-related trainings in collaboration with QDC to expand program participation. The existing MOU (spanning 2020 to 2022) will be renewed and expanded to include new outreach collaboration, additional support, and new sites across the state working with QDC through the RI Ready Industrial Site Readiness Program (www.riready.org).

2.5.2 Codes and Standards Support

The Codes & Standards Technical Support Initiative (CSTS) develops and delivers technical guidance to a wide variety of stakeholders to support energy efficiency policies applicable to the state's building sector. CSTS is a highly cost-effective initiative that unlocks sources of typically long-lived energy savings and primarily benefits historical nonparticipants and customer segments considered "hard to reach" (HTR) by raising efficiency baselines market wide. CSTS saves energy by: (1) increasing overall market compliance with current minimum energy efficiency codes and standards, and (2) increasing the level of energy efficiency required by such policies. The Company has successfully demonstrated both approaches with respect to building energy codes.

In 2023, the Company will continue to support RI energy code compliance and advancement. CSTS compliance support activities include training (classroom, webinar, and in-field), a "hotline" for project-specific inquiries, and development and delivery of tools and resources that help fill market gaps. CSTS has a broad reach, but our primary audiences are building code officials, design professionals (architects, engineers), and builders/developers/contractors. CSTS will also continue to support energy code advancement by developing and delivering proposals to strengthen the efficiency of the RI energy code.

2.6 Participation and Outreach

In 2023, the Company will continue to drive participation through two main pathways – targeted programs and broad-based programs. Targeted programs include the Company's retrofit, new construction, product rebate, and small business initiatives. These programs serve to drive deeper savings to targeted customer segments and offer a wide array of energy efficiency measures. The Company also reaches broad participation by promoting products upstream and through Home Energy Reports. These broader based programs provide value by reaching a wide and diverse set of customers, helping to provide more customers with access to energy savings, as well as acting as a gateway to drive participation in other Company energy efficiency programs.

The Company has made steady progress with reaching new participants each year. From 2012-2021 the Company served approximately 69% of its electric customers and 46% of its gas customers from its targeted programs at least once (this analysis has removed duplicate participation across programs and across years from 2012-2021). When Home Energy Reports and C&I upstream lighting participation are added to these counts, a total of 97% of electric customers and 93% of gas customers participated over this period. Home Energy Reports are included here because the program offers significant savings and benefits to customers as well as drives customers to participate in other energy efficiency programs. See the 2021 Year-end Report for further details on participation through 2021.

In 2023, the Company will continue its efforts to reach customers that have never participated in its energy efficiency programs. The residential non-participant study indicated lower awareness of the energy efficiency programs among non-participants. A Comprehensive marketing campaign will be deployed in multiple languages in 2023 that will educate customers on the availability of the programs. The Company will be specifically focused on five communities with lower participation and will conduct additional outreach and engagement in those communities. The Company will continue to deliver

innovative strategies to increase customer participation and reach customer segments that are historically underrepresented. Also, the Company will continue to track participation trends and will again provide a detailed analysis in its 2023 Year-End Report showing additive and cumulative portfolio participation.

Each program described in this Plan seeks to drive customer participation to deliver the benefits of energy efficiency to customers throughout Rhode Island. The Plan is designed to provide equitable access to savings and programs across sectors and market segments. For 2023, the Company will continue to plan and report participation in 'net' terms, which takes into account free-ridership and spillover, which are commonly referred to as net-to-gross factors. This method of accounting for participants aligns participation numbers with energy savings numbers, which are already recorded in net terms. This approach provides a more accurate connection between energy savings and the number of customers who benefit from efficiency programs. Planned participation estimates are included in Attachment 5 Electric EE Program Tables, Table E-7 and Attachment 6 Gas EE Program Tables, Table G-7.

The following table describes the definitions for how Rhode Island Energy projects, tracks, and reports participation in the efficiency programs.

Table 6. Participation Definitions

Fuel	Sector	Program	Participation Unit
Gas	Commercial & Industrial	Large Commercial New Construction	Unique Billing Account
		Large Commercial Retrofit	Unique Billing Account
		Small Business Direct Install	Unique Billing Account
		C&I Multifamily	Housing Units
	Income Eligible Residential	Single Family – Income Eligible Services	Unique Billing Account
		Income Eligible Multifamily	Housing Units
	Residential	ENERGY STAR® HVAC	Unique Billing Account
		Energy*Wise*	Unique Billing Account
		Multifamily	Housing Units
		Home Energy Reports	Unique Billing Account
		Residential New Construction	Housing Units
Electric	Commercial & Industrial	Large Commercial New Construction	Unique Billing Account
		Large Commercial Retrofit	Unique Billing Account + Unique Customer names from Upstream Lighting
		Small Business Direct Install	Unique Billing Account
		Commercial ConnectedSolutions	Unique Billing Account
	Income Eligible Residential	Single Family – Income Eligible Services	Unique Billing Account
		Income Eligible Multifamily	Housing Units

Fuel	Sector	Program	Participation Unit
	Residential	ENERGY STAR® HVAC	Unique Billing Account
		Energy*Wise*	Unique Billing Account
		Multifamily	Housing Units
		Home Energy Reports	Unique Billing Account
		Residential New Construction	Housing Units
		Residential ConnectedSolutions (Direct Load Control)	Unique Billing Account
		ENERGY STAR® Products	Number of Rebates

The Company will estimate the number of unique participants for each program. For some programs such as ENERGY STAR® HVAC, one measure does not necessarily equal one participant. This is because a customer can purchase more than one measure. Therefore, the Company also considers the previous year's unique accounts to savings ratio in order to estimate the planned unique participants in 2023. This method allows for a better estimation of unique participants but can make it more difficult to compare planned numbers across years.

2.6.1 Workforce Development

In 2023, the Company plans to maintain its historical workforce development investments (see **Error! Reference source not found.**). In 2022, the Company began funding upskilling in specific areas where there is high confidence in delivering ratepayer benefits (see **Error! Reference source not found.**), and these efforts will continue in 2023. These investments drive customer benefits by improving installation quality and increasing the industry's capacity to install non-lighting measures in the near term while also accelerating industry adoption of the advanced controls and high-efficiency HVAC systems identified in the Market Potential Study as areas for growth.

This Plan includes significant investments to ensure a sufficient supply of highly skilled workers capacity to support customer adoption of high efficiency technologies, including advanced control systems and air source heat pumps. The "efficacy" principle of program design specifically calls for "practical partnerships with existing educational and job training entities." The Company will coordinate with the Department of Labor and Training's Real Jobs Rhode Island program[13], the RI Department of Education's PrepareRI initiative[14], and other entities to help promote existing solutions to reduce or eliminate duplication of effort and expenditures.

Error! Reference source not found. below shows continued workforce development activities, with 2023 budget levels providing a steady level of service compared to 2022. These efforts will be supplemented by sales and marketing focused training to program vendor/subcontractor sales and technical staff focused on promoting deeper savings measures to customers.

13 https://dlt.ri.gov/realjobsri/

14 https://www.prepare-ri.org/

Table 7 Continued Workforce Development Activities

Sector	WFD activity	Description	Target audience	2023 budget
Res	HVAC Check trainings	HVAC installation best practices training delivered as part of the HVAC program	HVAC technicians	$39,400
Res + IE	Zero Net Energy training	High performance building best practices training delivered as part of the Residential New Construction program	Design professionals builders / contractors	$20,000
IE	Miscellaneous IE training	Training on topics such as WiFi thermostats and ASHPs delivered as part of the Income Eligible Single Family program	Weatherization contractors, auditors	$50,000
C&I	Zero Net Energy training	High performance building best practices training delivered as part of the C&I New Construction and Major Renovations program	Design professionals developers / contractors	$20,000
C&I	BOC training	Building O&M best practices training delivered as part of the C&I Retrofit program	Facility managers, building maintenance staff	$37,000
All sectors	Codes & Standards – code compliance training	A suite of services which includes training sessions (classroom, webinar, and in-field), project-specific "hotline" support, and development and delivery of tools and resources to fill industry gaps.	Code officials, design professionals, builders / developers / contractors	$200,000

Residential workforce development will focus on continued collaboration between the Company and its vendors with entities such as Skills for RI's Future; the University of Rhode Island's Energy Fellows program; and the RI Builders Association and their affiliate Residential Construction Workforce Partnership. Several additional workforce development activities focusing on upskilling the C&I program workforce have been added for 2023 as shown in **Error! Reference source not found.**. The 2023 plan also includes funds for a vendor to coordinate C&I trainings. The new initiatives address workforce gaps in the following high-priority technology areas:

- Controls (Energy Management Systems (EMS), Building Automation Systems (BAS))
- Ventilation (Demand Controlled Ventilation (DCV), Energy Recovery Ventilators (ERV))
- Variable Frequency Drives (VFDs)
- HVAC
- Retro-commissioning (RCx)
- Lighting controls

Through this approach, the Company will upskill the local workforce to both improve installation quality of these measures and enable the transition to non-lighting measures highlighted by the Market Potential Study. The Company will also engage with other entities in recognition that these efforts fit within a larger workforce development ecosystem. As such, the Company will coordinate with the public and private entities comprising the RI energy efficiency workforce development network to help maximize impact and avoid duplication of efforts. For example, the Company will promote trainings organized by the Residential Construction Workforce Partnership[15], such as the previously mentioned Residential Construction Pre-Apprentice Energy Weatherization Auditor, Installer & Performance Evaluator Training Program that launched in 2021.

Table 8. New Workforce Development Activities for 2023

Sector	WFD activity	Description	Target audience	2023 budget
C&I	Controls Best Practices training (HVAC and Lighting Controls)	ASHRAE Guideline 36 training (Sequence of Operations)	Contractors / engineers	$20,000
		Lighting Design Lab (lighting controls) training	Contractors / engineers, program technical and sales staff	$30,000
C&I	Manufacturer-led trainings	The Company will coordinate and promote participation in existing manufacturer trainings in the following technology areas. • Building / HVAC Controls (e.g. Johnson Controls BAS and HVAC training courses) • DCV and ERV (e.g. Trane Engineers Newsletter Live Series) • VFDs (e.g. Danfoss Drives training) • HVAC (e.g. Mitsubishi heat pump training) • Lighting Controls (e.g. Acuity wired lighting systems course)		$50,000

C&I	Industry certifications	The Company will increase number of local certified individuals by sponsoring certifications in the following technology areas; sub-bullets provide example certifications.
		• Controls
		  ○ ISA Building Automation Systems
		  ○ BOMA Building Automation Systems Certificate
		• HVAC
		  ○ NATE Level 4
		  ○ ASHRAE Certified HVAC Designer
				$125,000

15 https://rcwpjobs.com/

- RCx
    - ASHRAE Building Commissioning Professional

2.7 Equity

The Company is committed to using the rigor of the Participation and Multifamily Census, as well as the Nonparticipant Market Barriers Study**,** to understand how biases may have impacted program and customer outcomes. In 2023 the Company commits to:

- Increasing outreach to underserved communities to encourage participation;
- Targeting outreach for landlords to increase participation among renters;
- Tracking minority and women owned businesses that are providing services to the Energy*Wise* program;
- Continuing to identify and encourage customers eligible for the discount rate to move to the discount rate;[16]
- Encouraging participation in Residential Income Eligible Services (IES) for new customers enrolled on the discount rate via a "welcome package"; and[17]
- Targeting woman and minority-owned businesses through marketing efforts, partnerships with local community organizations, bilingual facility auditors, and making marketing materials available in other languages.
- Utilizing the Company's new codes and standards advancement support service to target nonparticipant markets across all sectors. While the program is in its infancy, this approach overcomes traditional barriers of access by ensuring that efficiency levels are rising for all. See Section 2.5.2 Cross Cutting Programs, Codes and Standards Support for more information.

As part of the Company's 2021 Annual Energy Efficiency Program Plan (2021 Annual EE Plan) and 2021-2023 Energy Efficiency Program Plan (2021-2023 EE Plan), the Company committed to working with the RI Office of Energy Resources (OER) to co-host an Equity Working Group (EWG). The EWG prioritized fourteen recommendations, which the Company has used to develop additional, overarching equity-related enhancements for 2022. **Error! Reference source not found.** describes the progress in each of these areas and plans for 2023.

Table 9. EWG Recommendations and 2023 Plan Enhancements

THIS SECTION WILL BE UPDATED IN THE FINAL DRAFT

[16] See Attachment 1 Residential & IES Programs, Section 4 Income Eligible Services.
[17] See Attachment 1 Residential & IES Programs, Section 4 Income Eligible Services.

Rhode Island Energy Efficiency Equity Working Group (EWG) Recommendations for Rhode Island Energy's Annual Energy Efficiency Plan for 2022	
1. Develop multilingual marketing and outreach materials. Use accessible language to target audiences in each publication.	
2022 Progress / 2023 Plans	
2. Hire multilingual staff and partner with trusted leaders who have the same ethnic background and that frequent popular community gathering places such as community centers and faith-based organizations.	
2022 Progress / 2023 Plans	
3. Include in messaging that Rhode Island Energy is not code enforcement so residents can feel more comfortable.	
2022 Progress / 2023 Plans	
4. Develop age-appropriate marketing strategies to connect with various age groups that live in a household such as utilizing social media, apps, and text messaging to reach new audiences and help engage customers with their energy usage.	
2022 Progress / 2023 Plans	
5. Partner with other home visiting programs to expand the reach and impact of Rhode Island Energy's energy efficiency programs.	
2022 Progress / 2023 Plans	
6. Allocate a proportion of Energy Efficiency marketing budgets to municipalities for mailing energy efficiency materials; some municipalities use third parties for mailing.	
2022 Progress / 2023 Plans	

7. Provide incentives to community groups that are serving vulnerable populations.	
2022 Progress / 2023 Plans	
8. Develop a mechanism that allows participation or action to occur immediately after the marketing step.	
2022 Progress / 2023 Plans	
9. Benchmark Energy Efficiency Program participation data for race, geography, socioeconomic status, language, age of home, age of owner, age of renter, heating fuel type, type and age of heating /hot water/cooling systems.	
2022 Progress / 2023 Plans	
10. Track late payments and shut offs.	
2022 Progress / 2023 Plans	
11. Align energy efficiency programs with healthcare and partner to achieve healthcare goals, promote further engagement, and sharing health outcome and impact data.	
2022 Progress / 2023 Plans	
12. Perform a full review of all HR policies and remove outdated policies that restrict hiring such as background checks.	
2022 Progress / 2023 Plans	
13. Reduce barriers to professional development, as well as entry into the energy efficiency workforce.	
2022 Progress / 2023 Plans	

14. Collaborate with local diverse community organizations to train and certify potential workers (Progresso Latino, Hispanic chamber of commerce, Cape Verdean community development).	
2022 Progress / 2023 Plans	

The Company will provide updates on the implementation of these enhancements in Q2 and Q4 of the Company's 2022 Annual Energy Efficiency Quarterly Reports to the Public Utilities Commission. The EWG will continue to meet quarterly during 2022.

3 Pilots, Demonstrations, and Assessments

In accordance with Docket 4600-A PUC Guidance Document,[18] this Plan includes a description of Commercial, Industrial, and Residential pilots, demonstrations and assessments. These are all vehicles that may be used to identify, test, analyze, and deliver new creative and innovative solutions and services that are technically feasible, desirable by customers, and viable for inclusion in the portfolio. The Company will continue to systematically review opportunities to add to the portfolio through a consistent and transparent process. Please refer to Attachment 8 for additional details on evaluations for pilots, demonstrations and assessments.

Consistent with PUC Guidance, the company uses the following definitions for pilots, demonstrations, and assessments.

> **Pilots**: a small-scale, targeted program that is limited in scope, time, and spending and is designed to test the feasibility of a future program or rate design. Pilots are designed to test technologies and approaches to energy management not included in the core energy efficiency programs that could potentially become a new, standalone program. Given the scope of adding a new core program to the Company portfolio, it is likely that pilots will require a long-term commitment and broader set of stakeholder input, Savings associated with Pilots will not contribute to shareholder incentives. Pilots may be evaluated with either an independent or a vendor evaluation.
>
> **Demonstrations**: A demonstration will test the feasibility of a new product or offering for inclusion in existing programs. It is generally expected that demonstrations will be less time and resource intensive than pilots, since generally there is greater certainty around a narrow, incremental idea added to a program rather than a totally new set of offerings. Savings associated with demonstration projects may contribute to shareholder incentives. Demonstrations may be evaluated with either an independent or a vendor evaluation.

[18] Docket 4600-A PUC Guidance Document, October 27, 2017. Section V. Pilots.

Assessments: An assessment will be deployed for solutions that address a particular gap or program need but have significant uncertainty around the effectiveness or potential of the solution to realize savings. Because of the uncertainty, assessments will not include field demonstrations or customer installations. Instead, assessments will focus on information gathering to equip Company staff to make a more informed decision of whether and how to proceed with the idea. It is possible that an assessment could recommend further demonstration of the idea or determine the solution should exit the review process. Savings associated with assessments may not contribute to shareholder incentives. Assessments may be evaluated with an independent evaluation, vendor evaluation, or internal review.

The Company will coordinate efforts with internal and external stakeholders, such as Evaluation, Measurement, and Verification (EM&V), Customer Energy Management (CEM), OER, and EERMC, at various points in the development process to ensure appropriately rigorous evaluation and attention is given to each pilot, demonstration, and assessment. Updates will be provided to OER and the EERMC consultant team on a quarterly basis and will solicit input during the Company's collaborative annual planning process.

4 Evaluation Measurement and Verification Plan

EM&V provides independent verification of impacts to ensure that savings and benefits claimed by the Company through its energy efficiency programs are accurate and credible. EM&V also provides insight into market characteristics and guidance on energy efficiency program design to improve the delivery of cost-effective programs.

To verify the impacts of programs on energy savings, the Company hires independent third-party consulting firms to regularly conduct evaluation studies as part of its evaluation, measurement, and verification process. These evaluations incorporate industry standard methods such as engineering analysis, metering analysis, billing analysis, site visits, surveys, and market studies to realize the actual energy savings of a measure. The EERMC and OER provide direct oversight of each evaluation study conducted. Every year, the results of the studies are used to update the benefit-cost calculations during planning. Attachment 3 EM&V Plan lists the evaluations that have occurred since 2010 that are still being used and their influence on program planning. All completed evaluations are submitted electronically to the PUC; final reports of evaluations completed in prior years are available in the dockets for previous years, on the EERMC website[19], or upon request.

Additionally, the EM&V Plan for 2023 is presented in Attachment 3 and includes brief descriptions of each of the proposed studies. The areas proposed for study in 2023 were chosen based on a number of factors: the relative amount of savings in that program or end use, the vintage of the most recent evaluation study, the relative precision of the recent evaluation study, recommendations from previously completed studies, and the available evaluation budget. This list may be added to as the year progresses and different evaluation priorities are identified. In particular, the Company will consider the

[19] https://rieermc.ri.gov/plans-reports/evaluation-studies/

value of using evaluations from other jurisdictions as well as adding Rhode Island-specific impact or process evaluations, as appropriate, that will help inform the Company's efforts towards achieving the goals of least cost procurement.

5 Coordination with Other Energy Policies and Programs

Continuing to provide the best value to Rhode Island customers necessitates that the Company coordinate with other parts of the energy system, rather than pursuing savings programs and strategies in isolation. In 2023 the Company will continue to seek ways to implement the energy efficiency portfolio of programs in coordination with other Company filings and activities, described below. Efforts have also been taken to ensure the 2023 Annual Plan is aligned with relevant state policies and objectives, with specific coordination opportunities detailed below.

5.1 System Reliability Procurement

During the 2023 program year, the Company's energy efficiency programs will continue their longstanding coordination with SRP plans and filings, including the development of the Non-Pipelines Alternative (NPA) program within the SRP pathway. Energy efficiency, among other demand side management solutions, has potential to be a component to meet a variety of situations in which NWAs and NPAs are considered. SRP filings will continue to be made separately from the energy efficiency filings while any charge associated with SRP will be accounted for in the energy efficiency charge. One opportunity for 2023 will be to test location-targeted marketing in heavily loaded feeder areas.

5.2 Advanced Metering Functionality (AMF), Grid Modernization (Grid Mod), Rate Cases, Renewables

On January 21, 2021, the Company filed its proposed Grid Modernization Plan and Updated Advanced Metering Functionality Business Case in RI PUC Docket 5114[20] and 5113[21], respectively. The RI PUC stayed both dockets pending further consideration following the issuance of a final Order in Division Docket No. D-21-09, Petition for Authority to Transfer Ownership of the Narragansett Electric Company to PPL Rhode Island Holdings, LLC, Petition of PPL Corporation, PPL Rhode Island Holdings, LLC, National Grid USA, and the Narragansett Electric Company.[22] Following receipt of Federal, State of Rhode Island and State of Massachusetts regulatory approvals associated with the transaction, PPL Corporation acquired The Narrangansett Electric Company on May 25th, 2022 and rebranded the utility as Rhode Island Energy. The Company will file to withdraw the previously filed AMF business case and Grid Mod

[20] In re: The Narragansett Electric Company d/b/a National Grid – Grid Modernization Plan. RI PUC Docket 5114: http://www.ripuc.ri.gov/eventsactions/docket/5114page.html

[21] In re: The Narragansett Electric Company d/b/a National Grid – Updated Advanced Metering Functionality Business Case. RI PUC Docket 5113: http://www.ripuc.ri.gov/eventsactions/docket/5113page.html

[22] RI PUC Docket 5113, Order 24089: http://www.ripuc.ri.gov/eventsactions/docket/5113-5114-NGrid-Ord24089%20(7-14-2021).pdf:

Plan and is working toward filing an updated AMF business case this fall and Grid Mod plan by the end of the year.

5.3 Act on Climate

The Act on Climate Legislation was signed into law by Governor McKee in April 2021. This legislation accelerates the timeline of legislated GHG reductions in RI and mandates the specified reduction levels. Specifically, 10% below 1990 levels by 2020; 45% below 1990 levels by 2030 (previously 2035); 80% below 1990 levels by 2040 (previously 2050); and net-zero emissions by 2050 (new). Moving forward, the Company's energy efficiency programs will continue to set energy reduction goals that contribute to these statewide GHG emissions reduction targets and will report GHG emissions reductions in quarterly and annual reports. Tables E-6A and G-6A in Attachments 5 and 6 include the projected carbon reductions from the 2023 Plan.

5.3.1 Electrification, Heat Pumps, and Delivered Fuel Policy and Objectives

The Company plans to continue to offer enhanced incentives for customers installing heat pumps using allocated RGGI funds from OER, to the degree that those funds extend into 2023. At this time, the Company does not have visibility to a direct regulatory pathway to the promotion of electrification for delivered fuel customers by way of electric or gas system benefit charge collections.

5.4 Accounting for New Codes and Standards

With an update to the state energy code (to the 2018 International Energy Conservation Code (IECC)) in early 2022, new construction savings opportunities have been reduced relative to prior years due to rising baselines. There is a possibility that the Rhode Island legislature will adopt the IECC 2021 model code in 2023. If that takes effect, this will increase baselines and further reduce program-influenced new construction opportunities.

6 Multi-Year Strategies

In the revised LCP Standards adopted by the PUC in Docket 5015, the PUC directed the Company to identify investment strategies for which implementation and budget requests (or revenue collection) are expected to span multiple years. In addition to the budgets and targets required for the rest of the portfolio, the PUC directed that the Company may separately provide budgets and goals for multi-year strategies. The requirement applies to both the Annual and Three-Year Energy Efficiency Plans.

There is no such multi-year commitment envisioned for 2023.

CONSISTENCY WITH STANDARDS

7 Least Cost Procurement Law and Standards

This Annual Plan is submitted in accordance with the Least Cost Procurement Law, R.I. Gen. Laws § 39-1-27.7, the basis for which is the Comprehensive Energy Conservation, Efficiency, and Affordability Act of 2006, R.I. Gen. Laws § 39-2-1.2, and the Least Cost Procurement Standards as approved and adopted

pursuant to Order No. 23890 in Docket No. 5015. The Standards guide how energy efficiency services are delivered – in a manner that is optimally cost-effective, reliable, prudent, and environmentally responsible. Least-Cost Procurement that is Energy Efficiency and Conservation Procurement shall also be lower than the cost of additional energy supply.

The Company has assessed each of these requirements in developing this Plan. Details on the Company's approach to considering each of these elements are included in this section. In addition, further detail on the cost-effectiveness screening of the proposed investments is in Attachment 4 RI Benefit Cost Test, with detail on rate and bill impacts in Attachment 7.

7.1 Cost Effectiveness

7.1.1 Interpretation of Standard

The RI Test compares the present value of the total lifetime benefits derived from efficiency savings to the total costs of acquiring those savings (i.e., program and customers' costs). According to the Standards, "any program with a quantified benefit-cost ratio greater than 1.0 (i.e., where quantified benefits are greater than quantified costs), should be considered cost-effective. Consistent with the PUC's guidance issued in Docket No. 4600, qualitative benefits and costs may be considered in determining cost-effectiveness. The portfolio must be cost-effective and programs must be cost-effective."[23]

7.1.2 Compliance with Standard

The Company has analyzed the cost-effectiveness for the proposed 2023 portfolio and programs using the RI Test as required by Docket 4600[24] and the LCP Standards.[25] The portfolio and programs proposed for 2023 satisfy these criteria for cost-effectiveness.

As provided for in the Docket 4600 RI Test Framework, benefits include primary fuel energy savings (electricity and natural gas), the value of other resource (fuel and water) benefits, price effects, non-embedded greenhouse gas reduction benefits, economic development benefits, non-embedded NO_x reduction benefits, the value of improved reliability, and non-energy impacts (NEIs). Costs include all projects costs, program planning and administration, sales, technical assistance and training, evaluation, and the performance incentive. To illustrate the detailed components of the RI Test as well as the sources of the values, the Company has provided Attachment 4 RI Benefit Cost Test. The RI Test as applied to the 2023 Annual Plan utilizes the regional avoided cost study, referred to as AESC 2021, completed by Synapse Energy Economics in May 2021 that provided the monetization of most benefit categories in the 2019 – 2021 Annual Plans and the 2021 – 2023 Three-Year Plan. The monetization of

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[23] RI PUC Docket 5015, LCP Standards, Section 3.2N

[24] RI PUC Docket 4600, http://www.ripuc.ri.gov/eventsactions/docket/4600page.html

[25] RI PUC Docket 5015, LCP Standards http://www.ripuc.ri.gov/eventsactions/docket/5015_LCP_Standards_05_28_2020_8.21.2020%20Clean%20Copy%20FINAL.pdf

benefits also incorporates the latest EM&V results that affect claimable savings in the programs. Attachment 4 provides additional detail on changes in the avoided costs.

Attachment 5, Table E-5 shows that the proposed portfolio of electric programs, including active demand response, is expected to have a benefit/cost ratio of 1.47 in the presentation of BCR results, which means that approximately $1.47 in monetized lifetime benefits is expected to be created for each $1 spent on the portfolio. Attachment 6, Table G-5 shows that the proposed portfolio of gas programs is expected to have a benefit/cost ratio of 1.82 in the presentation of BCR results, which means that $1.82 in lifetime benefits is expected to be created for each $1 spent on the portfolio. The tables in Attachments 5 and 6 also demonstrate cost-effectiveness at a program level.

7.1.3 Other Economic Impacts

Cost-effectiveness results do not include economic impacts such as employment and gross state product impacts from energy efficiency investments. Per agreement with stakeholders, economic impacts are shown separately from the benefit-cost analysis in Attachment 5, Table E-5 (Economic Benefits) and Attachment 6, Table E-6 (Economic Benefits). With the isolation of economic impacts, all programs and portfolios still achieve benefit-cost ratios of at least 1.00. In addition, the RI Test and the Docket 4600 Framework guidance also indicate that categories of the Framework can be considered qualitatively in the assessment of cost effectiveness. When considering the significant economic activity generated directly by the programs, including supporting 1,011 FTEs associated with the programs and more than 1,000 companies involved, as well as non-quantified benefits, a reasonable assumption is that the macroeconomic benefits of the programs are positive and potentially significant and, were those benefits included in the RI Test screening as quantified benefits, the programs would achieve more favorable benefit-cost ratios.

7.2 Reliability

7.2.1 Interpretation of Standard

The Standards for reliability create an expectation that the Company will be able to deliver the programs described herein and that the savings realized from program delivery are accurate estimated and measured. In addition, as applicable, programs should be scalable and be tailored to meet specific system needs.

7.2.2 Compliance with Standard

The programs developed under this Annual Plan will continue the Company's extensive history of offering best-in-class energy efficiency programs to customers. The Company continues to collaborate with a diverse set of stakeholders including the EERMC, OER, Division, and community and advocacy organizations to continually analyze the programs and identify opportunities for improvement.

In building this Annual Plan, the Company's Customer Energy Management team worked closely with industry experts, vendors, and program implementation professionals to assess the current state of existing programs, the potential for program scalability, the economic environment, and the ability to deliver reliable energy savings as a result.

Supporting the Company's efforts to deploy energy efficiency to Rhode Island customers is a robust and long-standing evaluation, measurement, and verification (EM&V) apparatus. As noted in Section 4, the Company hires independent third-party consulting firms to regularly conduct evaluation studies as part of its EM&V process. A distinct group of personnel within Rhode Island Energy that includes analysts with specialized skills in engineering, statistics, and economics are tasked with the EM&V function and coordinate all elements of the EM&V process internally and externally. Evaluations incorporate industry standard methods to assess the actual energy and demand savings of measures incented by the programs. All elements of the EM&V process are closely monitored by the EERMC, their Consultants, and OER. The EM&V process is continual, and every year results from EM&V studies are used to update the savings in the benefit cost calculation of the measure, programs, and portfolios. In addition, process evaluations and market studies conducted in the EM&V process provide an independent perspective on the performance of the programs and provide insight into the state of the market and ways that the Company can address new opportunities with its programs.

In total, these EM&V processes provide a transparent, externally vetted approach to ensuring that claimed savings provide an accurate picture as possible of the impact of the Company's energy efficiency programs, accounting for spillover, free ridership, and other industry standard adjustment factors

The EM&V process also supports the Company's participation in the ISO-NE Forward Capacity Market (FCM). Passive demand savings achieved via electric energy efficiency and Combined Heat and Power projects, and verified by the EM&V process, continue to participate in the FCM as Passive On-Peak Demand Resources. As detailed further in Section 9.2.3, the Company bids the passive demand savings attributed to energy efficiency measures and Combined Heat and Power facilities in the FCM and manages the associated capacity resources to maximize the resulting FCM revenue. The EM&V process provides the necessary verification of claimed savings in order to meet the high standards for participation in the ISO-NE FCM.

7.3 Prudency

7.3.1 Interpretation of Standard

The Company has considered, and continues to consider, several key components in the analysis of prudency. These components can be summarized as considerations about the proposed investments on the following:

- Support for the purposes of Least Cost Procurement
- Synergy savings through alternatives that meet multiple needs
- Management of risks to ratepayers and the distribution company
- Effective use of funding sources
- Equitable in the allocation of costs, benefits, and services
- Rate and bill impacts
- Continuity of implementation efforts

7.3.2 Compliance with Standard

For the proposed investments detailed in this Plan, the Company has assessed each of these elements and how they can be balanced to provide a comprehensive set of programs that will be achievable within known and anticipated constraints.

Purposes of Least Cost Procurement. This plan secures cost effective energy efficiency resources to support the electric and gas system through the creation of customer benefits in various components enumerated in both the RI Test, comparison with the Cost of Supply, as well as the Performance Incentive Mechanism.

Synergy savings. Program design seeks out synergies in customer participation, through a comprehensive view of savings opportunities whererever possible and tiered incentive offers. As an example of the way that the proposed investments in this plan address multiple needs, the electric demand response program continues to grow in magnitude of savings and offerings while utilizing channels and technologies that drive not only energy savings but also reduced cost and deferred infrastructure benefits that flow from reducing peak demand.

Management of risks. Energy efficiency investments are generally low risk investments. Savings have been well researched and documented through evaluation studies and the Company has confidence, based on those studies, that predicted savings will be realized. Continued research through new evaluation studies contribute to continuous program improvement and increasing levels of confidence. Furthermore, many programs include customer education, post-installation inspection, or commissioning to provide a foundation for assumptions about savings persistence. This further reduces risk to ratepayers. Furthermore, when the savings are reliably estimated, it serves to increase confidence and reduce risk related to the energy efficiency resource in distribution planning.

Effective use of funding. As describe in Section 9.2, the Company has identified a number of funding sources to support the Plan budget. Furthermore, several sources of financing are offered to customers to enable program budgets to go further to achieve Plan targets. Finally, effective use of funding is represented in the mix of measures and incentives planned in order to balance the portfolio to achieve the Plan's objectives.

Equitable Allocation of Cost and Benefits.[26] The Company has assessed equitable allocation among sectors along dimensions of collections, budgets, and savings. As shown in Figure 1, there is approximate parity between the collections by a customer class and its resulting budget and savings in the electric portfolio. The only exception is the income-eligible sector where part of the collections from the residential and C&I customer classes are used to help cover the income-eligible sector funding needs.

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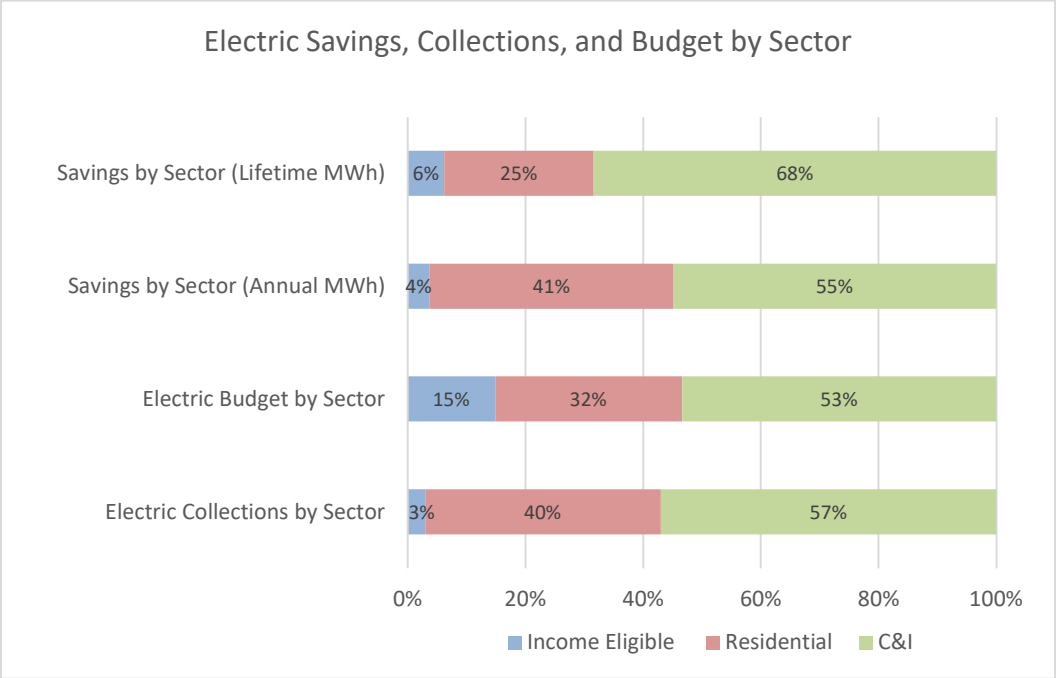
[26] The Company differentiates equitable allocation from considerations of equity of opportunity which are addressed in Section 2.7 and other areas of the Plan.

The income-eligible budget is higher compared to its savings due to several factors: incentives are 100% of the cost, the programs are more expensive because they are delivered in-home (compared to at retail sites or via rebates) which requires more labor and management, and the programs have fewer economies of scale (compared to C&I). $25.9 million is budgeted for the delivery of the gas and electric income eligible sector programs, 24% and 15% of the total funding for each fuel portfolio respectively in 2023. Taken together, these investments represent 16.96% of the overall electric and gas portfolio budgets.

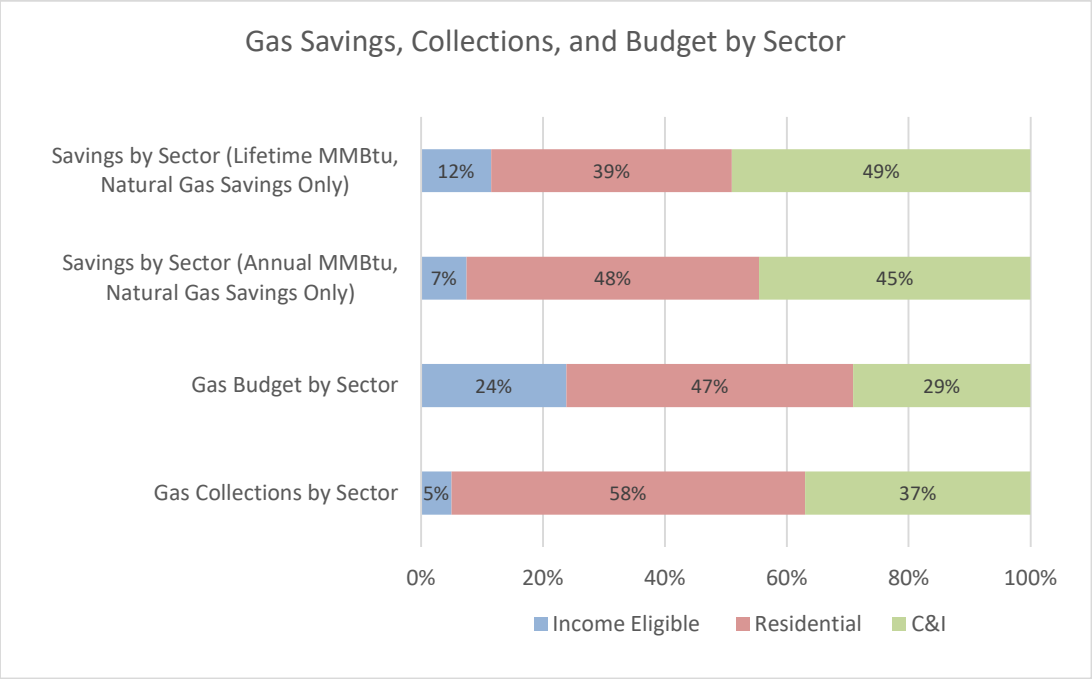
Figure 1. 2023 Graphical representation of Attachment 5 Table E-1, E-7, and total Electric Savings by Sector, Cumulative



For the gas portfolio, there is also parity between the collections by a customer class and the resulting savings. There is less equitable allocation between budgets and savings. This is due to several factors. First, the energy efficiency program charge varies by customer segment, which changes collections. Second, C&I projects tend to create more savings per dollar. This is due to larger economies of scale, larger projects, different delivery channels that require less labor or management and are more cost-effective, evaluation factors such as free-ridership and spillover, and different customer opportunities.

Given these considerations, as well as the continued interest in supporting income eligible programs, the allocation of costs and benefits is prudently equitable.

Figure 2. 2023 Graphical representation of Attachment 6 Table G-1, G-7, and total Gas Savings by Sector, Cumulative



Rate and Bill Impacts. *THIS SECTION WILL BE UPDATED IN THE FINAL DRAFT; ATTACHMENT 7 WILL BE DISTRIBUTED DURING THE WEEK OF JULY 18.*
The Company has assessed the rate and bill impacts of the proposed portfolios. Summary results for the rate and bill impacts are included in the tables below, while additional detail on results and methodology are available in Attachment 7 to this Plan. Electric programs are projected to generate slight upward movement on long term rates between tk% and tk%. For both residential and C&I participants, modeling shows a reduction in bills between tk% and tk%. Natural gas programs are projected to generate slight upward movement on long term rates between tk% and tk%. For the income eligible customer participants, the Small C&I participants, and Large C&I participants, modeling shows a reduction in bills between tk% and tk%. Details on the methods and results from both models are provided in Attachment 7, Rate & Bill Impacts.

Table 10 and Table 11 summarize the results of the electric and natural gas rate and bill analyses for the 2023 proposed programs, respectively. All electric sectors see slight increases in long term rates. With the exception of residential (all programs w/o HERs and all programs), average electric customers see small decreases in overall bills. All participant electric customers see decrease in their long-term bills. All gas sectors see a slight increase in long term rates due to their participation. With the exception of the Income Eligible sector, the average gas customer sees a small increase in long term bills. On the other hand, the average gas participant experiences a reduction in long term bills across all sectors.

Table 10: Rate and Bill Impact Results for the Electric Portfolio

Sector	Levelized net change in rates due to 2023 Programs	Long Term Average Change in Bills		
		Non-Participants	Average Customer	Average Participant
Residential (Model 1: HERs only)				
Residential (Model 2: All Programs Except HERs)				
Residential (Model 3: All Programs)				
Income Eligible (Model 1: HERs only)				
Income Eligible (Model 2: All Programs Except HERs)				
Income Eligible (Model 3: All Programs)				
Small C&I				
Medium C&I				
Large C&I				

Table 11: Rate and Bill Impact Results for the Natural Gas Portfolio

Sector	Levelized net change in rates due to 2023 Programs	Long Term Average Change in Bills		
		Non-Participants	Average Customer	Average Participant
Residential (Model 1: HERs only)				
Residential (Model 2: All Programs Except HERs)				
Residential (Model 3: All Programs)				
Income Eligible				
Small C&I				
Large C&I				

When the HER program is considered in isolation (Model 1), average participants see a reduction in bills of on average tk% for residential electric, tk% for income eligible electric, and tk% for gas. These results can largely be attributed to the relatively short duration of savings from this program. When all other residential programs except HERs are considered together (Model 2), average participants see tk%, tk%, and tk% reductions in average bills for electric residential, electric income eligible, and gas customers respectively. Lastly, when all residential programs are considered together (Model 3), long-term average changes in bills are negative for electric residential (tk%) and electric income eligible (tk%), and very slightly positive for gas (tk%). As discussed in more detail in Attachment 7, this result is largely a byproduct of the modeling approach that combines the short-lived HER program with other longer-lived measures. The Company submits that these rate and bill impacts demonstrate a prudent investment of ratepayer funds in the pursuit of the objectives of Least Cost Procurement.

For 2023, at the request of stakeholders, the Company has developed an estimate of the delivered fuel bill impacts experienced by participants in electric energy efficiency programs who heat with delivered fuels. While delivered fuels are unregulated, including this with electric bills provides a sense of the impact on overall energy bills of the electric energy efficiency programs. Details on this are included in Attachment 7 as well.

The Company also includes an assessment of the Year-over-Year change in rates from 2022 to 2023 driven by the funding plan and budgets discussed later in this Plan. In developing the proposed level of investment in this plan, the Company considered the PUC's commentary and rulings at the December 22, 2020, August 11, 2021, and January 25, 2022 open meetings during which the PUC indicated

support for budget increases of up to 5 percent for years 2022 and 2023 in the Three-Year Plan.[27] The Company has steered based on these rulings as an indicator of prudency in development of the subsequent 2023 Annual Plan coupled with broader impacts of the plan as a whole. While the overall budget growth proposed in this plan is approximately a 5% increase above the budget level approved in the 2022 Annual Plan, several factors contribute to the change in the energy efficiency charges being less than 5%. These factors, which were projected in the 11-month indicative energy efficiency charges set forth in the Company's compliance filing dated January 27, 2022 which took effect February 1, 2022, include the budget levels, other sources of funding, fund balances, and anticipated electric loads and natural gas sales. These elements are discussed further in Section 9 of this Plan. Table 12 summarizes the changes in rates based on the E-1 and G-1 tables.

Table 12. Summary of Changes in Rates between 2022 and 2023

Rate Category	2022	2023	2022 – 2023 Growth
Gas Residential SBC ($/therm)	0.1354	tk	Tk%
Gas C&I SBC ($/therm)	0.0886	tk	Tk%
Electric SBC ($/kWh)	0.01222	tk	Tk%

Continuity of implementation efforts. While not explicitly spelled out in the Standards, the Company has historically considered the continuity of implementation efforts as an element of prudency. Contintuity of implementation efforts means changing the scope or scale of programs in a way that is sensitive to maintaining and developing a skilled workforce and sensitive to the prevailing economic conditions in the marketplace. The Company generally informs vendors of planned program changes to enable them to prepare their workforce as necessary, for example to ramp up or provide training. The Company also pays attention to this aspect of continuity because, absent continuity, skilled workforce may move to other jobs which could result in disruptions of energy efficiency services to customers.

7.4 Environmentally Responsible

7.4.1 Interpretation of Standard

Environmental responsibility includes compliance of the energy efficiency plan with state policies, particularly pollution reduction. It further requires proper valuation of environmental costs and benefits in the plan.

7.4.2 Compliance with Standard

The energy efficiency programs and portfolios described in the Annual Plan are environmentally responsible. As detailed in Section 5.3, the recently passed Act on Climate stipulates aggressive,

[27] PUC's guidance on 5% budget target confirmed in Order No. 24225, written order issued on September 21, 2021. http://www.ripuc.ri.gov/eventsactions/docket/5076-NGrid-Ord24225%20(9-21-2021).pdf.

mandatory, and time-bound emissions reductions for the state. This Annual Plan seeks to continue the progress that has been made in reducing emissions by providing customers across all sectors with ways to reduce their energy consumption. Energy efficiency therefore contributes directly to meeting the Act on Climate's goals. In addition to direct emissions reductions benefits, energy efficiency investments reduce the potential environmental costs and footprint of avoided infrastructure investments, support the ongoing growth and development of a sustainable, green job ecosystem in Rhode Island, and contribute to the realization of other state environmental policy goals and initiatives.

Both electric and natural gas efficiency portfolios will make a meaningful contribution to reduction in emissions by driving reductions in customer energy usage in both the short and long term. As shown in Attachments 5 and 6, the electric and natural gas portfolios, considered together, will reduce emissions by 78,217 short tons of carbon in 2023[28] . The values of non-embedded avoided carbon are calculated using avoided cost values determined in AESC 2021: he non-embedded values of CO_2 and NO_x benefits generated by the 2023 annual plan over the lifetime of the measures are $61,328,373 and $3,676,649, respectively. These monetized values of emissions are included as benefit streams in the RI Test benefit-cost assessment and in the assessment of cost of supply for the portfolio; however, they are excluded from the calculation of net benefits in the Performance Incentive Mechanism.

As noted in Section **Error! Reference source not found.**, this Annual Plan includes several activities designed to support upskilling of the green workforce. In providing for these jobs and demonstrating the availability and attractiveness of local, green jobs to Rhode Island's existing and emerging workforce, the Company's energy efficiency programs help to ensure that the local workforce will exist to support the state's environmental policy goals.

Educating and engaging residential and business customers on the potential environmental impacts and benefits of the implementation of energy efficiency measures is a foundational element of the Company's energy efficiency go-to-market strategy and also contributes to the environmental responsibility of the Plan. Whether in the form of conveying potential environmental benefits of customer recommendations through Home Energy Reports, Energy*Wise* home energy assessments, or retail marketing initiatives, or by connecting SMB audits or large C&I customer sales efforts to business customer sustainability initiatives, the Company's energy efficiency program presence continue to help to support the prominence of environmental issues in customers' minds. Additionally, through the Community-Based Initiative, the Company partners with municipalities and works through local energy and environmental sustainability committees to connect individual customers' energy efficiency decisions and actions to broader municipal sustainability goals and messages. In doing so, the Company's programs continue to link energy savings and efficiency to real and visible benefits for the communities in which their residents and small business reside.

[28] While all energy savings seen in the plan are net, these emissions are calculated based on gross energy savings from EE measures. The marginal carbon emission rates are from "Avoided Energy Supply Components in New England: 2021 Report" Appendix G.

7.5 Cost of Annual Plan Compared to the Cost of Energy Supply

7.5.1 Interpretation of Standard

In accordance with the LCP Standards, the Company assessed the cost of incremental energy supply and the cost of energy efficiency using all applicable costs enumerated in the Rhode Island Benefit Cost Framework (Framework) approved by the PUC in Docket 4600-A and the Rhode Island Test as described in Attachment 4 RI Benefit Cost Test. This method is substantially the same as that used in the 2022 Plan.

The Company is proposing an adjustment to the methodology regarding utility non-energy impacts to align with how utility non-energy impacts are treated in the performance incentive mechanism. Called "Utility NEIs," they include non-energy impacts of decreased costs to the utility[29] from installing energy efficiency measures. The cost of supply methodology has been updated to include these costs, which is reflected in Table 13.

7.5.2 Compliance with Standard

Based on the Company's calculation, the total cost of energy efficiency for the electric portfolio is $152.3M and the total cost of electric supply to meet the same need would be $197.3M. This is a total savings of $45.0M over the life of the installed energy efficiency measures from investing in energy efficiency instead of electric supply. The total cost of energy efficiency for the natural gas portfolio is $47.5M and the total cost of natural gas supply to meet the same need would be $52.8M. This is a total savings of $5.3M over the life of the installed energy efficiency measures from investing in energy efficiency instead of natural gas supply. The methodology for calculating Cost of Supply is detailed below.

The RI Test is an appropriate mechanism to determine which costs to include in this assessment. The RI Test, as detailed in Attachment 4, captures the aspects of the Framework that pertain to energy efficiency programs. For the purposes of this assessment, the avoided cost values in the RI Test can also be applied as the costs of procuring additional energy supply. The RI Test also details what is considered a cost of energy efficiency. These are costs incurred by the utility to implement the Plan and the expense borne by the customer for its share of the energy efficiency measure cost.

The Company proposes to use the costs described in Table 13 to compare the cost of energy efficiency to the cost of energy supply. The categories listed in this table are all used in the RI Test, as defined in Attachment 4 of the Plan. As directed by the LCP Standards, the Company provides an explanation for why cost categories are either appropriate or not appropriate for inclusion in the assessment of the cost of energy supply compared to the cost of energy efficiency.

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[29] This includes the NEIs of bad-debt write-off, terminations & reconnections, customer calls and collections, notices, and safety related emergencies.

Table 13. List of the Costs of Energy Efficiency and Costs of Energy Supply

Costs of Energy Efficiency		
Cost	**Included (Y/N)**	**Explanation**
Utility Costs	Yes	These costs are incurred to achieve implementation of energy efficiency measures and programs. Includes all costs in Tables E-2 and G-2.
Participant Costs	Yes	Customer contribution to the installation cost of the efficient measure. Customer costs included in Tables E-5 and G-5.

Costs of Energy Supply		
Cost	**Included (Y/N)**	**Explanation**
Electric Energy Costs	Yes	Represents the cost of purchasing electric energy supply.
Electric Generation Costs	Yes	Represents cost of generation capacity in ISO-NE.
Electric Transmission Capacity Costs	Yes	Represents Pool Transmission Facilities (PTF) cost.
Electric Distribution Capacity Costs	Yes	Represents the cost of distribution capacity related to increased load.
Natural Gas Costs	Yes	Represents the cost of purchasing natural gas supply.
Fuel Costs	Yes	Non-regulated delivered fuels are an energy supply cost to customers that utilize these fuels for heating. The fuel costs in this category are separate from those embedded in the cost of the electric market. While not a direct cost of electric energy supply, Rhode Island Energy includes incentives for delivered fuel energy efficiency measures in its electric portfolio. Therefore, to achieve symmetry with costs associated with electric energy efficiency, delivered fuels costs should be included in this comparison.
Water and Sewer Costs	No	While avoided water and sewer costs are a benefit of installing certain energy efficiency measures, they are not a direct cost of energy supply.
Non-Energy Impact Costs	No	With the exception of the three NEIs listed below, while non-energy impacts are a benefit of installing certain energy efficiency measures, they are not a direct cost of energy supply.
• Income Eligible Rate Discount	Yes	Costs associated with energy being sold at the income eligible rate
• Arrearages	Yes	Costs associated with arrearage carrying costs as a result of customers not being able to pay their energy bills
• Utility	Yes	Costs associated with utility carrying costs as a result of customers encountering issues with utility services or paying their bills.
Price Effects	Yes	Represents costs associated with the impact of demand reduction on ISO-NE energy and capacity markets.

Non-embedded Greenhouse Gas Reduction Costs	Yes	Represents the social cost of carbon. The social cost of carbon is the cost associated with meeting the goals of the Resilient Rhode Island Act. Carbon emissions come from the production of energy and should be considered a cost of supplying that energy.
Economic Development	No	While economic development is a benefit of investment in energy efficiency measures it is not a direct cost of energy supply.
Non-embedded Nitrous Oxide (NOx) Costs	Yes	NOx emissions come from the production of energy and therefore the health impacts of NOx emissions should be considered part of the cost of supplying that energy.
Reliability Costs	Yes	Increased energy demand can lead to declining reserve margins and decrease reliability so should be associated with the cost of energy.

For the assessment, the Company applies the above costs of supply to the lifetime electricity, lifetime MMBtu of delivered fuels, demand, and natural gas savings for each measure included in the Plan in present value terms. The costs of the 2023 Plan occur only in 2023 and are therefore not discounted.

Table 14. Costs of Energy Efficiency and Costs of Energy Supply

Benefits	Electric	Gas
Electric Energy	$49,030,392	$593,695
Electric Generation	$6,515,981	$281,364
Electric Transmission Capacity	$17,896,767	$387,145
Electric Distribution Capacity	$20,332,721	$383,412
Natural Gas	$(1,236,061)	$27,031,407
Fuel	$24,212,640	$0
Price Effects	$35,683,743	$1,114,112
Non-Embedded Greenhouse Gas Reduction	$41,199,172	$20,129,201
Non-Embedded NOx	$1,421,428	$2,255,221
Reliability	$1,899,524	$34,661
Income Eligible Rate Discount	$92,447	$69,063
Arrearages	$66,879	$146,619
Utility	$147,679	$333,462
Cost of Supply	**$197,263,312**	**$52,759,361**
Costs	**Electric**	**Gas**
Program Implementation Expenses	$110,714,481	$37,751,232
Customer Contribution	$38,150,598	$8,718,703
Shareholder Incentive	$3,390,165	$1,000,000
Cost of EE	**$152,225,244**	**$47,469,935**
Difference	**$45,008,068**	**$5,289,426**

GOALS, BUDGET, AND FUNDING PLAN

Funding, budgets, goals, and cost-effectiveness information is provided in Attachment 5 Electric EE Program Tables for the proposed electric energy efficiency programs and in Attachment 6 Gas EE Program Tables for the proposed natural gas energy efficiency programs.

8 Savings Goals

In 2023, the Company will primarily measure performance based on lifetime energy savings. Lifetime energy savings units align with the energy savings Targets as set by the EERMC, and approved by the PUC, in Docket 5023.[30] The Company recognizes the long-term value of developing and achieving lifetime energy savings goals because of the focus on longer term customer savings and benefits. The electric portfolio will measure energy savings in units of lifetime MWh and the gas portfolio will measure energy savings in units of lifetime MMBtu. For comparability with past plans, the Company will continue to track and report on annual energy savings as has been done for the duration of the programs. Electric demand savings, from passive energy efficiency savings and active demand response, will continue to be measured and reported in annual units of kW.

The Company will also track net annual and lifetime all-fuel MMBtu (electric, gas, oil, and propane) savings for both the electric and gas portfolios[31]. Tracking net annual and lifetime all-fuel savings (MMBtu) more fully captures the net effect of all-fuel savings efforts (electric, oil, and propane). The tracking effort will provide useful information and benchmarking for state efforts to support decarbonization of the thermal energy sector and better support State and Company greenhouse gas reduction goals now and in the future.

Carbon reductions will be calculated and reported as a secondary goal in 2023 consistent with the Standards and the Act on Climate.[32]

Savings goals for the electric portfolio are presented in Attachment 5 and for the natural gas portfolio in Attachment 6.

8.1 Annual Plan Compared to the Three-Year Plan

The energy and cost savings for the 2023 program year are consistent with the objectives and requirements of Least Cost Procurement.

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[30] RI PUC Docket 5023, http://www.ripuc.ri.gov/eventsactions/docket/5023page.html
[31] See Tables E6-A and G6-A for calculation of annual and lifetime MMBtu of all fuels

[32] See Tables E6-A and G6-A for calculation of annual short tons of CO2.

Table 15. Comparison of 2023 Electric Portfolio in Three-Year Plan Compliance Filing and 2023 Annual Plan

Electric Portfolio	2023 in 3YP Compliance Filing	2023 Annual Plan	% Change
Net Annual Savings (MWh)	131,873	107,221	-18.7%
Net Lifetime Savings (MWh)	1,333,218	734,645	-44.9%
Total Benefits (RI Test)[33]	$ 646,450,249	$223,091,936	-65.5%
Total Budget	$ 128,755,600	$110,714,481	-14.0%
Benefit Cost Ratio (RI Test)	4.29	1.47	-65.7%
Cost/Lifetime kWh	$ 0.109	$0.203	86.2%
EE Program Charge per kWh	$ 0.01726	$0.01036	-40.0%

Table 16. Comparison of 2023 Gas Portfolio in Three-Year Plan Compliance Filing and 2023 Annual Plan

Gas Portfolio	2023 in 3YP Compliance Filing	2023 Annual Plan	% Change
Net Annual Savings (MMBtu)	440,421	280,344	-36.3%
Net Lifetime Savings (MMBtu)	4,447,108	3,179,772	-28.5%
Total Benefits (RI Test)	$151,000,725	$86,375,476	-42.8%
Total Budget	$38,558,829	$37,751,232	-2.1%
Benefit Cost Ratio (RI Test)	3.08	1.82	-40.9%
Cost/Lifetime MMBtu	$10.63	$14.61	37.4%
C&I EE Program Charge per Dth	$0.787	$0.692	-12.1%
Residential EE Program Charge per Dth	$1.131	$1.074	-5.0%

The Company has proposed goals consistent with Least Cost Procurement, however there are some notable differences between the goals proposed in the 2023 Annual Plan and the Three-Year Plan Compliance Filing. First, the electric net lifetime energy savings goal is decreasing by 44.9%. This is mainly driven by evaluation results which significantly reduced the measure lives, and claimable lifetime energy savings, of Commercial and Industrial (C&I) lighting measures.[34] C&I lighting energy savings contributed to approximately 760,263 net lifetime MWh (57%) of the electric portfolio's net lifetime target for 2023 in the 2021-2023 Compliance Filing. In the 2023 Annual Plan, C&I lighting energy savings contributed to approximately 314,656 net lifetime MWh (43%) of the electric portfolio's net lifetime goal for the 2023 Annual Plan. This decline in C&I lighting energy savings and associated benefits is the

[33] 2023 Total Benefits in the Three-Year Plan included monetized economic benefits. In this table total benefit have been updated to exclude monetized economic benefits. For the 2023 in 3YP Compliance Filing, this resulted in a reduction of total electric benefits from $564M to $288M and a reduction in the electric Benefit Cost Ratio (RI Test) from 3.93 to 2.01. This also resulted in a reduction of total natural gas benefits from $144M to $98M and a reduction in the natural gas Benefit Cost Ratio (RI Test) from 3.09 to 2.12. For the 2023 Annual Plan monetized economic benefits are quantified but omitted from the primary presentation of benefits here. The exclusion of monetized economic benefits also applies to the Benefit Cost Ratio (RI Test).

[34] These results are adopted from a Massachusetts Market Characterization study, completed in March 2021. Rhode Island traditionally adopts the results of this study but is planning to do a RI-specific study for application in 2023.

primary contributor to the 44.9% decline in the lifetime MWh goal, the 86.2% increase in the Cost/Lifetime kWh, the 65.5% decline in the total electric benefits (RI Test) and the corresponding 65.7% decline in the B/C Ratio (RI Test) from the 2023 3YP compliance filing to the 2023 annual plan.

For both electric and gas portfolio differences, another major driver for the decrease in benefits can be attributed to increased inflation where less savings are achieved for every dollar spent. The amount of inflation that has occurred in recent months was not factored into the 2021 – 2023 Three-Year Plan, but has been considered in 2023 planning. Furthermore, differences in benefits despite relatively similar spend may be attributed to updates from the recently completed regional avoided cost study, referred to as AESC 2021, completed by Synapse Energy Economics as an update and replacement of the AESC 2018 Study that provided the monetization of most benefit categories in the 2019 – 2021 Annual Plans and the 2021 – 2023 Three-Year Plan.

9 Funding Plan and Budgets

In developing the budgets and funding plans for this 2023 Annual Plan, the Company took into account the traditional factors (anticipated 2022 year-end fund balances and anticipated 2023 sales volumes[35]) that always impact the relationship between requested implementation budgets and the required customer surcharges necessary to fund the proposed plan.

9.1 Budgets

Based on guidance from the RI PUC at the December 22, 2020 and January 25, 2022 open meetings, the Company is adhering to the 5% target budget increase communicated by the PUC in its approval of the 2021- 2023 Three Year Plan and 2022 Annual Plan. The Company has considered areas for potential growth but must balance this with the prudency requirements of the Standards.

The portfolio of energy efficiency programs and services for 2023 will have an overall budget of approximately $114.1M for electric programs and $38.8M for natural gas programs. The budget is segmented into three sectors: residential income eligible, residential non-income eligible, and commercial and industrial. Proposed sector and program budgets are provided in Attachment 5 Electric EE Program Tables, Table E-2 and Attachment 6 Gas EE Program Tables, Table G-2. A comparison of these proposed budgets to the 2022 budget is provided in Attachment 5, Table E-4 and Attachment 6, Table G-4.

The Company will continue the practice of funding commitments established in the 2014 Plan, Docket 4451. Specifically, the Company will continue to make funding commitments for projects with a

[35] The 2023 Annual Plan will be submitted to the RI PUC on October 1, 2022, consistent with the revised LCP Standards issued by the RI PUC in 2020. Given this updated timeline compared to prior years, the Company may not be able to include its updated annual electric load forecast for the October 1st filing. When the electric forecast is available, the Company will provide an updated filing to the RI PUC, consistent with past practice when incremental information on in-year spend is available following filing.

projected one time incentive in excess of $3 million. For all other projects, except those with incentives greater than $3 million, there would be no commitment budget.

9.2 Funding Plan

The 2023 budgets for cost-effective electric and natural gas efficiency investments are dependent on a number of projections that inform the amount of funding, including projections of electricity and natural gas sales, year-end 2022 large C&I program commitments, capacity payments received from ISO-NE (electric only), and year-end 2022 spending. The sources of funding and the amounts of the funding proposed for the 2023 energy efficiency programs are shown in Table E-1 for electric programs and Table G-1 for natural gas programs. Annual Plan funding sources are described in the sections that follow.

9.2.1 Energy Efficiency Charges

The sources of funding for the 2023 electric programs are shown in Attachment 5 Electric EE Program Tables, Table E-1. To collect these funding sources for the 2023 cost-effective programs, the Company proposes: (1) one line on the customers' bill labeled "Energy Efficiency Charge" at $0.01036 per kWh, as calculated in Attachment 5, Table E-1 (composed of the existing energy efficiency program charge of $0.01222 per kWh plus a fully reconciling funding mechanism charge of $0.00186 per kWh in accordance with the requirements of R.I. Gen. Laws § 39-1-27.7); (2) projected Large C&I commitments from 2022, if any; (3) projected carryover of the year-end 2022 fund balance, as applicable, including interest at the rate in effect for customer deposits; (4) forecast revenue generated by ISO-NE's Forward Capacity Market (FCM); and (5) other potential outside revenue sources, including but not limited to those generated through RGGI permit auctions. Funding sources do not include revolving loan funds.

The sources of funding for the 2023 natural gas programs are shown in Attachment 6 Gas EE Program Tables, Table G-1. The Company proposes that the 2023 budget should be funded from the following sources: (1) one line on the customers' bill labeled "Energy Efficiency Charge" at $1.074 per dekatherm for residential customers and $0.692 per dekatherm for non-residential customers as calculated in Attachment 6, Table G-1 (composed of the existing energy efficiency program charge of $1.354 per dekatherm plus a fully reconciling funding mechanism of $0.280 per dekatherm for residential customers and the existing energy efficiency program charge of $0.886 per dekatherm plus a fully reconciling funding mechanism of $0.194 for non-residential customers in accordance with the requirements of R.I. Gen. Laws § 39-1-27.7); (2) projected carryovers or under-recoveries of the year-end 2022 fund balance, including interest at the rate in effect for customer deposits. Funding sources do not include revolving loan funds.

The 15% decline in the proposed EE Program Charge per kWh is driven by a positive 2022 year end fund balance forecast of $28.1M. The decrease in the C&I and Residential Program Charge per Dth is driven by the positive 2022 Year End Gas Fund Balance forecast of $4.8M.

The Company forecasts electric energy deliveries and gas loads for a variety of filings. In the context of the Annual Energy Efficiency Plan, the forecasts primarily factor into the calculation of the per-unit

energy charges that fund the gas and electric energy efficiency portfolios. At the time of the first draft, an updated gas forecast based on the June 2022 release has been incorporated and an updated electric forecast based on the September 2021 release has been incorporated. These forecasts have been provided by National Grid under the Transition Service Agreement between PPL and National Grid. The sections below provide an overview of the forecasting processes for the electric energy delivery and gas load forecasts.

Electric Forecast Summary. The electric energy deliveries forecast is developed in several steps. The first step was to "reconstitute," that is add-back or subtract, as applicable, the impacts of energy efficiency ("EE"), solar-photovoltaics ("PV"), electric vehicles ("EV"), and electric heat pumps ("EH") to the historical monthly energy dataset. This set of programs and technologies is termed Distributed Energy Resources ("DERs"), and the reconstituted data is termed "gross" to reflect the fact that it represents data prior to the impacts of DERs.

The second step is to develop an econometric forecast of gross energy deliveries based on Rhode Island economic conditions, normal weather, and days billed, as appropriate, using this reconstituted dataset. The economic conditions are from Moody's economy outlook. The weather variables considered are cooling degree days ("CDDs") and heating degree days ("HDDs"). Normal weather is defined by the average CDDs and HDDs of the most recent ten years. Due to the unavailability and / or great uncertainties of long-term weather forecasts, it is a common practice to use normal weather for long-term load forecasting.

The third step is to create the "net" forecast by adjusting the gross forecast by the projections for future DERs. Impacts for EE and PV (reflecting decreased electric load on the system) are subtracted from the gross forecast, impacts of EV (reflecting increased electric load on the system) are added to the gross forecast, and impacts of EH are added to or subtracted from the gross forecast depending on the season to create the net forecasts. These forecasts were first developed in terms of revenue classes – residential, commercial, and industrial. They were then allocated to the various rate classes using the current revenue to rate class percentages from the Company's billing system.

Gas Forecast Summary. The Company's gas load forecast is based on a comprehensive methodology for forecasting retail customer load requirements using a series of econometric models to determine the changes expected for Residential Heating, Residential Non-Heating, Commercial, and Industrial markets. To determine the projected growth over the forecast period, the econometric models used historical economic, demographic, and energy price data, and weather data to determine total energy demand.

The product of the Company's retail demand forecast is a forecast of meter counts, use-per-customer, and volume by month by internal rate code under normal weather conditions. The Company's retail demand forecast is then converted to wholesale supply requirements at the Company's city gates based on the relationship between city gate volumes (including supplementals) and weather on the daily level. The product of the Company's wholesale customer requirements forecast is a forecast of volume by day under normal and design weather conditions."

9.2.2 Fund Balances

The Company estimates that the electric projected fund balance at year-end 2022 will be $28.1M, as shown in Line 3, Attachment 5, Table E-1; the gas fund balance at year-end 2022 is estimated to be $4.8M, as shown in Line 2 Attachment 6, Table G-1. For the first draft, the Company has included 2022 year end fund balance forecasts (electric and gas) on line 2 of the E-1 and G-1 tables in Attachment 5 and Attachment 6, respectively. The fund balance forecasts include estimated implementation expenses and estimated earned performance incentives.

Adjustments for 2022 Year-End Fund Balance. The 2022 year-end fund balance will be a function of actual implementation expenses and Company earned performance incentive through year-end 2022. Consistent with recent practice, on November 17, 2022[36] the Company will provide updated year-end fund balance forecasts, reflecting updated sales, collection, and program expenditure forecasts through year-end to provide the PUC with time to review the Company's proposed charges in advance of the Annual Plan hearing. This would allow the charges, if approved, to have an effective date of January 1, 2023. This will allow the Company to begin collecting the most accurate charge possible at the start of the program year and avoid any market confusion surrounding the status and implementation of the 2023 energy efficiency programs. If the actual year-end 2022 fund balance as filed in the Year-End Report is higher or lower than that amount projected in the November 17, 2022 revised Tables E-1 and G-1, any deviation will be fully reconciled in the next program year in accordance with the requirements of R.I. Gen. Laws § 39-1-27.7.

Two adjustments have been applied to the 2022 year-end fund balance. In the 2022 Annual Plan, the Company had included cost recovery of the FCM Penalty of $332,804.[37] The Company has subsequently agreed to not seek cost recovery of that penalty, and a credit of $332,804 has been applied to Line 4 of Table E-1. Second, the fund balance includes a $2,294,914.95 credit from shareholder funds, with interest, to the fund balance which the Company made in May and June, 2022 based on the Company's involvement in Docket 22-05-EE. That amount has been allocated to the electric and gas fund balances appropriately.

9.2.3 ISO-NE Capacity Market Revenue

Consistent with the LCP Standards, Annual Plan, and PUC decisions regarding annual plans since 2008, the kW-demand savings achieved via the electric energy efficiency and Combined Heat and Power programs continue to participate in the FCM as Passive On-Peak Demand Resources. The Company will manage and direct the revenues by bidding the demand savings attributed to energy efficiency measures and Combined Heat and Power facilities in the FCM and managing the associated capacity resources to maximize the resulting FCM revenue. The revenues from measures installed through this

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[36] This date is being moved up two weeks due to the Annual Plan Filing date being moved up two weeks from October 15th to October 1st.

[37] Refer to Docket 5208 for more information.

Plan, as well as all previous Plans, will continue to be reinvested in energy savings for the life of the measure.

The Company is to recover all prudently incurred FCM expenses from ISO-NE capacity-payment revenue generated by the demand savings from efficiency programs represented by the Company. The Company expects that capacity payments received from the ISO-NE will exceed its administrative and Evaluation, Measurement and Verification (EM&V) compliance costs of participation in the FCM and will result in additional funds being made available to fund efficiency programs for customers. If these participation costs exceed the capacity payments, the Company may recover its prudently incurred costs from the energy efficiency program fund. Only prudently incurred expenses are deducted from ISO-NE capacity payments or the energy efficiency program fund.

In addition, as part of the FCM, all qualified auction participants are required to post Financial Assurance to provide security that the promised resource will deliver the promised MW at the promised time. If, as a result of circumstances beyond the Company's control,[38] the Company is unable to provide all or a portion of the megawatts of capacity proposed in its qualification packages and capacity auction bids, some or all the financial assurance monies would be forfeited.

9.2.4 RGGI Funding

RGGI funding is allocated to the State of Rhode Island based on quarterly auctions for emissions allowances. The OER develops a plan for the allocation of auction proceeds. In 2022, a portion of RGGI proceeds has been allocated to the Company in three specific work area:

- Enhanced incentives for deliverable fuel to electric efficient heating equipment
- Weatherization of Small Businesses
- Enhanced incentive for moderate income residential customers

Funds that are not spent in 2022 may be rolled over to 2023.

9.2.5 Exceptions to the Natural Gas Energy Efficiency Program Charge

All natural gas used for distributed generation projects approved since 2014 will be subject to the natural gas energy efficiency surcharge.[39]

The 2006 Act allows the PUC to exempt natural gas used for manufacturing processes from the energy efficiency surcharge where the customer has established a self-directed program to invest in and

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[38] Such circumstances may include legislative action to alter the EE Program Charge or discontinue the Company's authority to implement the energy efficiency programs underlying the Qualifications Package or a PUC decision limiting the Company's role in bidding the demand savings acquired through program efforts into the FCM.

[39] Natural gas used for distributed generation (excluding natural gas used by emergency generators) for distributed generation projects approved under the energy efficiency programs in 2013 and prior years - independent of the date those facilities become commercially operable – are not subject to the energy efficiency surcharge when natural gas used for that purpose can be clearly identified through uniquely metered use and when so requested in writing by the customer.

achieve best effective energy efficiency in accordance with a plan approved by the PUC and subject to periodic review and approval by the PUC. Consistent with prior PUC decisions, the Company has developed recommendations for a process under which a manufacturer may submit its self-directed program and the required annual reports for approval. The Company recognizes that this process may need to be reviewed and modified after the PUC has accumulated sufficient experience with these programs. Any customer that receives this exemption from the natural gas energy efficiency program charge will not be eligible to receive natural gas energy efficiency program services.

9.2.6 Budget Management

Deviations from the planned budget for 2023 are possible during the program year. The Company contemplates three scenarios, and will address them as follows:

- The Company's expenditures for 2023 may exceed the total budget by up to 10% so long as written notification is provided to the EERMC, OER, PUC, and DPUC for any deviation. The Company will track expected expenditures relative to planned budgets and will report to stakeholders through inclusion in the quarterly reports, or earlier, if the Company believes such overage is likely to occur. Any such notification will occur as soon as possible, and no later than the distribution of the Company's Third Quarter Report in mid-November 2023 and must explain the need for a higher budget and must justify how the expenditures are reasonably consistent with the original annual plan and in accordance with Least Cost Procurement.

- The Company agrees that, during 2023, if the Company anticipates that continued operation of its programs is likely to result in actual expenditures exceeding the total budget by more than 10%, the Company will seek a vote of approval from the EERMC. OER commits to making all reasonable efforts to schedule such vote as soon as feasible following notification, but no later than thirty days from receipt of notification. The PUC will not provide advance approval of expenditures exceeding the total budget by more than 10%. The Company will be required to demonstrate to the PUC that the transfer or overspend was prudent. Support from the Division, OER, and EERMC will be considered in the PUC's review of prudency.

- During a program year, if the Company did not anticipate and notify stakeholders identified above that its actual expenditures would exceed the total budget by more than 10%, but actual expenditures do exceed such threshold, such expenditures above 110% of approved budget will be at the Company's risk, and in order to secure cost recovery, the Company will bear the burden of demonstrating the reasonableness of its actions to the PUC, including an explanation of why the over-spending occurred and how the expenditures are reasonably consistent with the original plan and in accordance with Least Cost Procurement. Such demonstration would be required to be part of the 2023 Year-End Report, if not sooner.

In each of these three instances, the PUC retains its traditional ratemaking authority to review the prudency and reasonableness of the Company's actions.

9.2.7 Notification of Large Customer Incentives

The Company shall inform the PUC, DPUC, OER, and EERMC in writing of any energy efficiency incentive annual offer in excess of $3 million per a measure. The Company shall inform the DPUC, OER, and EERMC in writing of any CHP project with a net output of 1 MW or greater (where net is the nameplate MW output minus CHP auxiliary kW). The process for notification of CHP projects is described in Attachment 2 C&I Programs.

To prevent customer delays and to facilitate the Company's ability to meet customer expectation and annual energy savings goals, the OER, EERMC and Division agree to ask questions and provide comments on any non-CHP energy efficiency incentive annual offer in excess of $3 million within thirty days. The Company, through its own discretion, may proceed with an incentive offer. The incentive, and any other related proposals will be authorized to proceed after thirty days from the date on which the Company notified the PUC, OER, Division, and EERMC of the incentive unless the PUC suspends the filing and/or issues an order within such 30-day period to extend the time for purposes of further review.

10 Performance Incentive Plan

The RI PUC approved a performance incentive mechanism (PIM) for 2021 – 2023 in Docket 5076 that changed the way that the Company measures and earns a performance incentive.[40] The PIM, as approved in Docket 5076, established the measurement of performance as a net benefits framework based on a set of prioritized benefit categories. This prioritizes utility system impacts over resource benefits generated by the programs and omits the societal benefits. The "netting" calculation incents budget controls so that the benefits are achieved in line with the portfolio budgets as proposed in the Plan.

Equation 1. Illustrative Calculation of Net Benefits for Performance Incentive Mechanism

$$Total\ Benefits = (100\%\ of\ Utility\ System\ Benefits + 50\%\ of\ Resource\ Benefits)$$

$$Net\ Benefits = (100\%\ of\ Utility\ System\ Benefits + 50\%\ of\ Resource\ Benefits) - (Programmatic\ Costs + \ Regulatory\ Costs)$$

The PIM measures performance at the sector and fuel level:

- Non-Income Eligible Residential Electric
- Income Eligible Residential Electric
- Commercial and Industrial Electric
- Non-Income Eligible Residential Gas
- Income Eligible Residential Gas

[40] Refer to Appendix A of PUC Report and Order No. 24225; written order issued on September 21, 2021 for final guidance on the PIM as approved in PUC Docket 5076. http://www.ripuc.ri.gov/eventsactions/docket/5076-NGrid-Ord24225%20(9-21-2021).pdf.

- Commercial and Industrial Gas

In the non-income eligible residential and income eligible residential sectors, the calculation of net benefits using the above calculation of prioritized benefits results in negative net benefits, so the earning opportunities for each fuel's portfolio are allocated to the C&I sector. The PIM also includes Service Quality Adjustments (SQAs) in the non-income eligible residential and income eligible residential sectors which require the Company to achieve defined levels of performance equal to the sum of prioritized total benefits. If the defined levels of service (total benefits) are not achieved in the residential and income eligible sectors, the SQAs apply reductions to any realized earnings in the commercial and industrial sector. The SQAs also include a cost component that adjusts the realized performance, and consequently any reduction of C&I earnings, based on how the realized expenditures in the residential and income eligible sectors compare to planned budgets. The SQAs therefore provide a similar incentive signal as the "netting" calculation in the core of the PIM and provide the Company with signals that savings and benefits should be pursued and prioritized in each sector, rather than exclusively the Commercial and Industrial sector where the earning opportunity resides.

In addition, the PIM calculations include a set of potential adjustments that are intended to further incent the company to maintain budget controls in the delivery of savings, and therefore prioritized benefits, by adjusting earnings under this mechanism based on cost relative to budget. The Company is not proposing structural changes to the PIM for 2023.

Attachment 5, Table E-8A and Attachment 6, G-8A show the categories of benefits that are included in the PIM calculations, categories omitted from the PIM, and the weighting assigned to those benefits in the calculation. The categories of benefits are also summarized in Table 20 below. The monetized benefits included in the PIM are calculated from a subset of benefit categories included in the RI Test, calculated using the same methods and inputs as the RI Test.

Table 17. Electric Energy Efficiency Portfolio Benefits Alignment for PIM Calculations

Benefit	PIM Categorization	Percent Allocation in PIM Calculation
Summer Generation	Electric Utility System Benefits	100%
Capacity DRIPE		
Transmission		
Distribution		
Reliability		
Winter Peak Electric Energy		
Winter Off Peak Electric Energy		
Summer Peak Electric Energy		
Summer Off Peak Electric Energy		
Electric Energy DRIPE		
Utility Non-Energy Impacts (NEIs)		
Non-Embedded Carbon		
Natural Gas and Natural Gas DRIPE	Resource Benefits	50%
Oil and Oil DRIPE		
Propane		
Water		

Benefit	PIM Categorization	Percent Allocation in PIM Calculation
Non Resource (NEIs)	Other Not Included Benefits	0%
Non-Embedded NOx		
Economic		

Table 18. Gas Energy Efficiency Portfolio Benefits Alignment for PIM Calculations

Benefit	PIM Categorization	Percent Allocation in PIM Calculation
Natural Gas	Gas Utility System Benefits	100%
Natural Gas DRIPE		
Utility Non Energy Impacts (NEIs)		
Summer Generation	Resource Benefits	50%
Capacity DRIPE		
Transmission		
Distribution		
Reliability		
Winter Peak Electric Energy		
Winter Off Peak Electric Energy		
Summer Peak Electric Energy		
Summer Off Peak Electric Energy		
Electric Energy DRIPE		
Oil and Oil DRIPE		
Propane		
Water		
Non Resource (NEIs)	Other Not Included Benefits	0%
Non-Embedded Carbon		
Non-Embedded NOx		
Economic		

Tables E-8B and G-8B show the costs that are used in the "netting" calculations in the PIM, and that are incorporated in the SQAs in the sectors to which they apply. The core of the costs included in the PIM is the "Eligible PIM Budget"[41] derived from Attachment 5, Table E-3 and Attachment 6, Table G-3. The Eligible PIM budget is calculated based on the total budget from Tables E-2 and G-2 with commitments, EERMC costs, pilot costs, assessment costs, and performance incentive value removed.

The Company has two recommendations regarding the current definition of PIM inputs:

1) The Company proposes removing legislatively-mandated transfers to the Rhode Island Infrastructure Bank (RIIB) and the Office of Energy Resources (OER) from PIM-eligible costs. Rhode Island General Laws Title 39, Chapter 2, Section 39-2-1.2, Article (n) states that the RIIB transfer, "shall be eligible to be used in any energy efficiency, renewable energy, or demand-side management project financing program administered by the Rhode Island Infrastructure

[41] In Plans prior to 2023, Tables E-3 and G-3 showed the derivation of what was called the Spending Budget. This was a vestige of the prior performance incentive mechanism and the Tables have been re-formulated for 2023 to show the determination of the Eligible PIM Budget.

Bank **notwithstanding any other restrictions on the use of such collections set forth**."(emphasis added).[42] Article (j) of the same section states that the OER transfer can be used, "for activities associated with planning, management, and evaluation of energy-efficiency programs, renewable energy programs, system reliability, least-cost procurement, and with regulatory proceedings, contested cases, and **other actions pertaining to the purposes, powers, and duties of the office of energy resources**."(emphasis added).[43] Both quotes show that the RIIB and OER legislative transfers can be used for projects and initiatives other than energy efficiency programs administered by the Company. Therefore, neither transfer should be included in a PIM which is focused specifically on guiding Company's investments of energy efficiency funds to create net benefits to customers. The Company is not proposing the same exclusion for the funds transferred to the EERMC under section (j) from PIM-eligible costs, because the primary focus of the EERMC is oversight of the Company's programs.

2) The Company believes that the exclusion of carbon benefits from the PIM is not consistent with the Environmentally Responsible section of the LCP Standards. Even though the full value of carbon-associated environmental damages is not properly monetized in energy markets, and are therefore beyond the direct influence of the Commission and the Company, the Company respectfully suggests that the PUC consider recognizing within the PIM – consistent with the Standards and the Act on Climate - the importance of reduced carbon emissions in Rhode Island in guiding utility investments and, further, count the non-embedded carbon benefit calculated in benefit-cost analyses as a utility system benefit in the PIM for both the electric and gas programs.

The 2021 and 2022 Plan review process has indicated that the incentive pool is reset every year. For 2022, the Division proposed the application of three metrics to determine the incentive pool:[44] percentage of planned PIM-eligible net benefits (primary), basis points, and return on avoided capital costs. For 2023, the Company proposes to maintain the gas and electric incentive pools at the same amounts as the incentive pools for 2022. The Company is seeking electric performance incentives of $3.4 million (through non-income eligible and C&I) and natural gas performance incentives of $1.0 million (all through C&I). The Company believes that these amounts are consistent with PIM guidance and the Division's framework as follows:

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[42] Rhode Island General Laws, Title 39 Public Utilities and Carriers, Chapter 2 Duties of Utilities and Carriers, Section 39-2-1.2. http://webserver.rilegislature.gov//Statutes/TITLE39/39-2/39-2-1.2.htm

[43] Ibid

[44] Corrected Attachment to Division Responses to National Grid Data Requests Set 1, submitted by the Division in Docket 5189 on January 6th 2022. http://www.ripuc.ri.gov/eventsactions/docket/5189-DIV%20Corrected%20Attachment%20to%20Division%20Reponses%20to%20National%20Grid%20Data%20Request%20Set%201.pdf

In 2022, the Division proposed that the target electric incentive pool be set at 15% of planned PIM-eligible net benefits. In 2023, the $3.4 million pool equals 11% of 2023 planned PIM-eligible net benefits, which is under the 15% threshold set by the Division.

In 2022, the Division proposed that the target gas incentive pool provide the Company with 21 basis points. In 2023, the unchanged $1.0 million pool will again provide the Company with 21 basis points.

Tables E-8C and G-8C show the final summarizations of the calculations for the PIM and SQAs, including target earning opportunities and maximum earning opportunities.

11 Future Performance Metrics

The Company does not propose any additional or future performance metrics. As noted in Section 8, in 2023, consistent with the Standards and Act on Climate, the Company plans to report on carbon and NOx reductions as secondary goals.

12 Advancing Docket 4600 Principles and Goals

Along with the quantitative benefits detailed in the Plan, as measured by the RI Test, the energy efficiency investments and innovation planned for 2023 also advance the Docket 4600 principles and goals.[45]

The Docket 4600-A Guidance Document directed that "the proposing party must provide accompanying evidence that addresses how the proposal advances, detracts from, or is neutral to each of the stated goals of the electric system."[46]

To meet this directive, the Company describes how the Plan either advances, detracts, or remains neutral on achieving the Docket 4600 goals for the electric system in Table 19.

Table 19. Docket 4600 Goals for the Electric System

4600 Goals for Electric System	Advances/Detracts/Neutral
Provide reliable, safe, clean, and affordable energy to Rhode Island customers over the long term.	Advances: The Plan gives customers tools to reduce their energy consumption. The safest, most reliable, most affordable energy is energy that is never used. Lowering energy consumption avoids investments in the installation, upgrade, or replacement of transmission and distribution infrastructure, and reduces strain on the system.
Strengthen the Rhode Island economy, support economic competitiveness, retain, and create	Advances: The Plan will create significant economic benefits in Rhode Island. The Company

[45] PUC Report and Order No. 22851 accepting the Stakeholder Report. Written Order issued July 31, 2017.
[46] Approved final clean version of Guidance Document 10/27/17.

4600 Goals for Electric System	Advances/Detracts/Neutral
jobs by optimizing the benefits of a modern grid and attaining appropriate rate design structures.	expects that investments made in energy efficiency under this Plan will add $304.2M to Rhode Island's Gross State Product (GSP), equivalent to 2,826 job-years.
Address the challenge of climate change and other forms of pollution.	Advances: The Plan will avoid 78,217 short tons of carbon in 2023 from the installed measures as well as reduce other pollutants associated with the generation and combustion of electricity, natural gas, and delivered fuels.
Prioritize and facilitate increasing customer investment in their facilities (efficiency, distributed generation, storage, responsive demand, and the electrification of vehicles and heating) where that investment provides recognizable net benefits.	Advances: The Plan provides incentives for customers to invest in cost-effective energy efficiency measures in their facilities and participate in demand response programs and provides handoffs to other programs including EV charging programs.
Appropriately compensate distributed energy resources for the value they provide to the electricity system, customers, and society.	Neutral
Appropriately charge customers for the cost they impose on the grid.	Neutral
Appropriately compensate the distribution utility for the services it provides.	Advances: The performance incentive contained in this Plan compensates the Company for achieving the energy savings goals through delivering cost-effective energy efficiency programs to customers while aligning with the PUC's PIM principles.
Align distribution utility, customer, and policy objectives and interests through the regulatory framework, including rate design, cost recovery, and incentive.	Advances: The Plan aligns Company, customer, and policy objectives and interests by incentivizing energy savings measures that enable customers to manage and reduce their energy consumption, which in turn contributes to the greenhouse gas reduction goals of the 2021 Act on Climate, Power Sector Transformation goals, Heating Sector Transformation goals, and the 100% Renewable Electricity goal while allowing the Company to earn a performance incentive.

CONCLUSION

13 Miscellaneous Provisions

- Other than as expressly stated herein, this Plan establishes no principles and shall not be deemed to foreclose any party from making any contention in any future proceeding or investigation before the PUC.
- Other than as expressly stated herein, the approval of this Plan by the PUC shall not in any way constitute a determination as to the merits of any issue in any other PUC proceeding.
- Rhode Island Energy may convene the Energy Efficiency Technical Working Group no less than six times in 2023 to review the status and performance of the Company's 2023 energy efficiency programs and advise the Company on potential energy efficiency programs for 2024.

14 Reporting Requirements

In 2023, the Company will provide quarterly reports to the EERMC, the Division, OER, the EE TWG, and the PUC on the most currently available program performance for both natural gas and electric efficiency programs. These reports will include a comparison of budgets and goals by program to actual expenses and savings on a year-to-date basis, and a status report on revolving loan funds. Consistent with PUC Order 24225 and R.I. Gen. Laws § 39-1-27.7, the Company will work with the Rhode Island Infrastructure Bank on appropriate loan fund reporting for 2021. Starting with the 2022 payment, RIIB must report direct to the PUC. The Company reports will also include a summary of program progress and will highlight issues by sector for EERMC, Division, OER, and Technical Working Group attention. Within the C&I sector, there will be separate highlighting of large and small customer program progress and issues. Beginning in the second quarter, the quarterly reports also include a forecast of expected results.

- Beginning with the 2019 Year End Report, the Company provided detailed costs schedules that were developed in collaboration with the Rhode Island Division of Public Utilities and Carriers. The Company proposes to submit detailed cost schedules in the 2023 Year End Report. In addition, the Company also proposes to submit confidential vendor schedules to the PUC, with a motion for protective treatment. These confidential vendor schedules detail costs to individual vendors and other external entities.
- The Company will provide to the EE TWG, and file with the PUC its 2023 Year-End Report no later than June 1, 2024. This report will include achieved natural gas and electric energy savings in 2023 and earned incentives for 2023.
- The Company will provide the EE TWG with a summary of evaluation results that have been incorporated into the Annual Plan within the annual plan, including a description of the impact of those results in planning the Company's 2023 programs, in the Plan to be filed by October 1, 2022.

15 Requested Rulings

The Company respectfully requests that the PUC approve the 2023 Annual Energy Efficiency Plan as presented in this document and the supporting attachments in its entirety. The plan has been developed with careful consideration of the linkages between all parts. The specific components of this plan for which the Company requests approval include:

- The savings goals, programs, measures, budgets, and associated customer collections required to fund the energy efficiency programs in 2023.
- The pilots, demonstrations, and assessments the Company proposes for program year 2023 and the associated budgets and customer collections required to fund those efforts.
- The performance incentive mechanism and associated earning opportunity provided in this Annual Plan.

ATTACHMENTS

Annual Plan Attachment 1. Residential and Income Eligible Energy Efficiency Solutions and Programs

Annual Plan Attachment 2. Commercial and Industrial Energy Efficiency Solutions and Programs

Annual Plan Attachment 3. Evaluation, Measurement & Verification Plan

Annual Plan Attachment 4. Rhode Island Benefit Cost Test Description

Annual Plan Attachment 5. Electric Energy Efficiency Program Tables

Annual Plan Attachment 6. Gas Energy Efficiency Program Tables

Annual Plan Attachment 7. Rate and Bill Impacts

Annual Plan Attachment 8. Pilots, Demonstrations & Assessments

Annual Plan Attachment 9. Cross-Program Summary

Annual Plan Attachment 10. Definitions