2021 - 2023 Energy Efficiency Plan
Outline Memorandum
April 23, 2020

Dear EERMC Councilmembers and Energy Efficiency Technical Working Group Members,

The Narragansett Electric Company, d/b/a National Grid (Company) is providing this 2021 – 2023 Energy Efficiency Plan Outline Memorandum (Outline) to provide stakeholders a preview of key themes for the upcoming plan with early insights regarding the major changes and topics that will be addressed in the coming draft of the 2021 – 2023 Energy Efficiency Plan (Plan). The Outline highlights programmatic and policy enhancements that are changes from previous Plans. The Outline also includes the table of contents and major content areas that will be included in the Draft Plan. Together, the introduction of program and policy enhancement priorities and the outline of the full plan are offered to facilitate a robust and fruitful discussion with stakeholders that will result in a plan development process that is transparent, focused on areas of critical importance to achieving the ambitious shared energy goals, and will result in a plan that optimizes customer benefits and cost. The Company requests that reviewers provide any written input on the contents of this Outline by May 6, 2020 with an expectation that those comments will inform the first draft of the plan.

The Company has focused on six primary strategies across Commercial and Industrial, Residential, and Income Eligible Service sectors.

- **Deepen customer relationships and increase participation across all customer classes;**
- **Drive comprehensive measure adoption through program enhancement tailored to customers and technology-based opportunities;**
- **Expand active demand response;**
- **Explore cutting-edge technologies;**
- **Focus on strategies to restore and improve Rhode Island's efficiency industry in response to COVID-19 impacts; and**
- **Expand financing and seek alternative funding to support program development and customer adoption to minimize impact on customer surcharge.**

The inclusion of this Outline in this year's planning process, follows the 2020 Annual Plan process, providing stakeholders with approximately 11 weeks of additional review, as compared to the 2018 – 2020 Energy Efficiency Plan planning process.

The addition of the Outline and extended review time are intended to relieve some of the time pressure stakeholders have faced in the previous review process. However, there is some information that simply is not available this early in the current planning cycle and therefore will be provided later. For example, this Outline does not include preliminary 2021 – 2023 savings goals, benefits, or budgets because detailed bottom-up planning and cost benefit screening has not yet taken place.

Further, when reviewing this Outline, please note the following:

- Reviewers of this Outline should take into consideration that guidance on Three-Year Plan

content is not yet finalized from the PUC and that adjustments to the content and structure should be expected once guidance is issued in the form of the revised Least-Cost Procurement Standards.

- This Outline should not be considered as a complete list of topics that will be addressed in the first draft of the Plan and is not binding. Subject to further discussions with stakeholders and analysis during the planning process, content included here may be modified reflecting the early stage at which this Outline is provided.
- This Outline highlights areas that will be covered where they are noticeably different, or of a larger focus, than in previous years.
- This Outline, and the subsequent plan document, will only address energy efficiency. System Reliability Procurement is not part of this plan document. This is a change from recent filings. The 2018 – 2020 plan addressed both Energy Efficiency and System Reliability Procurement.[1]
- The Outline below is based on the 2018 – 2020 Three Year Plan but is not an exact match. This Outline has been modified to account for anticipated adjustments to the Plan content and format based on forthcoming PUC guidance in the LCP Standards revisions and based on input from stakeholders on preferred content and format.[2] In some instances, there are headers or sections in this outline with no content. In those cases, the content will not be available until drafts of the plan are developed. In other cases, the Outline provides a qualitative description of what the section will contain in the Plan.
- The Company may refine and consolidate the text to make a more readable and accessible final document.

With these stated understandings, the Company hopes this document is helpful in highlighting the areas of focus for the Company in developing the Plan and makes clear areas where stakeholders may expect to see program enhancements addressed in the first draft. We look forward to working together to build and deliver on an ambitious three-year energy efficiency plan that will continue to keep Rhode Island at the forefront of energy efficiency and deliver Rhode Island consumers innovative, cost effective energy services.

[1] RI PUC Docket 4684: http://www.ripuc.ri.gov/eventsactions/docket/4684page.html
[2] RI PUC Docket 5015: http://www.ripuc.ri.gov/eventsactions/docket/5015page.html

Table 1. 2021-2023 Three-Year Plan (3YP) Timeline for Stakeholder Involvement

3YP Outline Memo	3YP Outline Memo - Planning Update	Draft 3YP - Written comments	Draft 3YP - Discussion opportunities	Final 3YP & Filing
•**April 23:** 3YP outline shared with EERMC •**April 30:** EERMC Presentation of Plan Outline •**May 6:** Stakeholder comments due	•**May 8:** TWG meeting •**May 21:** EERMC meeting to discuss planning process	•**June 11:** Draft 3YP shared with stakeholders •**July 3:** Stakeholder comments due	•**June 12:** TWG meeting to present/gather input on draft 3YP •**June 18:** EERMC meeting to discuss draft 3YP •**July 10:** TWG meeting to recap/discuss stakeholder comments	•**July 3-August 13:** Development of final draft 3YP in consultation with stakeholders •**August 20:** EERMC vote on 3YP •**September 1:** File 3YP with PUC

1 Contents

Pre-Filed Testimony

The Company will pre-file testimony with the Plan that addresses the Cost-Effectiveness of the Plan, prudency, reliability, environmental responsibility, and the cost of additional supply compared to the Plan.

Executive Summary

This subsection will provide a concise summary of the contents of the three-year plan, including major themes.

2 Introduction

2.1 Purpose and Benefits of Energy Efficiency

This subsection will provide background on the fundamental components of EE. What is EE? What is the motivation for EE programs and what are their anticipated impacts (i.e. why is EE important? What can EE affect/impact?).

2.2 Purpose of the Three-Year Plan

This subsection will describe the three- year plan's purpose as it relates to Least-Cost Procurement, the Standards, and the Annual Plans. The content of the three-year plan, in contrast to the annual plans will be described, as well as how this plan differs from the prior three-year plan. This section will also note any specific requests that are made of the PUC. *Note that this section could change significantly if the three-year plan becomes a binding document.*

2.3 Least-Cost Procurement Law and Standards

This subsection will summarize how the plan fulfills the requirements of Least-Cost Procurement Law and the Least-Cost Procurement Standards. This subsection will also point to other parts of this document that describe how the Plan meets each of the components of the LCP Standards.

2.3.1 Prudency

[Intentionally Blank]

2.3.2 Reliability

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2.3.3 Environmentally Responsible

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2.3.4 Cost Effective

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2.3.5 Cost of Supply

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3 Priorities

This section provides information on the key priorities identified by the National Grid Commercial and Industrial, Residential, and Income Eligible Services strategy teams in order to improve or change programs, address new markets, and reduce customer barriers. This section will also detail alignment with policies influencing energy efficiency and stakeholder priorities. As in the last three-year plan, this section will be organized around sectors rather than programs***. The subsections below indicate the priorities as identified by strategy teams at this stage of planning. These priorities may be adjusted during the planning process.***

Innovation is a fundamental driver of planning priorities for the 2021-2023 Three-Year Plan across Commercial and Industrial, Residential, and Income Eligible sectors. The substantial decline in savings associated with high efficiency lighting, which contributed high savings with relatively easy customer adoption in recent programs, creates an irreplaceable low-cost and low-barrier saving opportunity. It must be recognized that cost to achieve savings will increase as efficient lighting opportunities continue to diminish in importance in the portfolio. Subsequent offerings will require much more intense promotion, customer education, support, and higher incentives. The Company is committed to building a comprehensive multi-pronged approach to build a portfolio that continues to deliver great customer and community benefits while balancing a desire to minimize impact on the customer surcharge.

The Company will continue to innovate program design and bring new, innovative technologies into the portfolio. We will research new market strategies and focus simultaneously on the viability of new technologies and their integration into program design in a staged approach that supports bringing them to scale. The Company intends to continue to optimize existing systems and explore new systems and processes that reduce the upfront costs of serving customers. Together these efforts will allow the Company to continuously improve the customer experience and create even greater value for customers in securing long-term savings.

The teams are focused on six primary strategies across Commercial and Industrial, Residential, and Income Eligible Service sectors.

- **Deepen customer relationships and increase participation across all customer classes;**
- **Drive comprehensive measure adoption through program enhancement tailored to customers and technology-based opportunities;**
- **Expand active demand response;**
- **Explore cutting-edge technologies;**
- **Focus on strategies to restore and improve Rhode Island's efficiency industry in response to COVID-19 impacts; and**
- **Expand financing and seek alternative funding to support program development and customer adoption to minimize impact on customer surcharge**

3.1 Commercial and Industrial

3.1.1 Deepen Customer Relationships and Increase Participation Across All Customers

New energy management frameworks for commercial, industrial, and small business customers: The objective is both to increase participant engagement and to create a culture of continuous energy efficiency improvement. The Company will examine the best practices of customers that have historically successfully engaged in a continuous path of increasing energy efficiency. By identifying best practices and translating those into the tailored frameworks we can share these models with customers who have not engaged as deeply on efficiency. We anticipate frameworks will help customers establish energy management teams, review consumption data and trends, and create energy action plans with annual energy reduction targets. The energy management frameworks will be tailored to each of the business segments (i.e. commercial, industrial and small business). In conjunction with this effort the commercial and industrial teams will focus on enhancing continuing education for building managers and facilities operators under our **workforce development efforts.**

Enhanced incentives for bundling of measures: The Company will explore providing enhanced incentives to customers that commit to implementing comprehensive energy efficiency measures within a specified timeframe. The objective is to balance longer-term and shorter-term energy savings, and to accelerate customer investments in energy efficiency.

Explore enhancing finance offers for C&I: The Company will identify any gaps in the large selection of financing products currently offered to C&I customers, and opportunities to enhance finance offers, while also educating customers on the value and appropriate timing of current and future finance tools.

3.1.2 Program Enhancements Tailored to Specific Customers

New Commercial Real Estate and Nursing Home Initiatives are being explored and may be added to the Company's successful industry-specific initiatives. There are several challenges to delivering tailored services to both these market subsegments, including the relatively small size of the nursing home subsegment and the complexity of ownership structures and customer identification inherent in the commercial real estate market. In addition, COVID-19 may create new challenges in these subsegments as core market dynamics change based on COVID-19 impacts. Finalization and implementation of segment plans will depend upon designs that overcome these challenges in a cost-efficient manner. The current Grocery Initiative, the Chain Restaurant Initiative, and the Industrial Initiative have succeeded in engaging customers by providing tailored information from trusted industry-knowledgeable advisors. These advisors help the company offer a tailored approach to concerns and opportunities unique to the segments. These programs will also continue to be refined in the three-year plan.

New program enhancement for our large Commercial & Industrial customers includes exploring supporting customers to catalogue their energy using equipment data. Creating this shared data catalogue will allow the Company to provide customers increased insights to optimize energy using equipment, including modifications and replacement timing. This strategy is tied to our overarching strategy to drive more continuous customer engagement that supports increasing customer adoption of energy efficiency measures over time.

New program enhancements for small business customers include exploring remote auditing for certain small business customers and exploring offering services similar to the residential program for

the subset of lower kWh consuming small businesses (5,000 to 25,000 kWh, half to 2.5 x of a typical residential customer). Both efforts recognize the inherent challenges for small business with limited time, staff and expertise to engage with the efficiency programs. These efforts focus on making small business efficiency programming easy and accessible.

The Company will work to expand community partnerships to bring in new customers. An emphasis in the new three-year plan will be to work with municipalities to help recruit small businesses and recruit industrial parks to participate in energy efficiency.

A new zero energy tier will be incorporated into the core New Construction program for both commercial and residential programs. The Company will take lessons from the zero-energy pilot program and begin adapting the New Construction program. The company will incorporate the successful elements tested in the pilot (i.e. achieving stretch code energy performance and all electric construction) into a revised top tier of performance and will align the incentive and support structure that is core to the customer experience of the New construction program. This will both simplifying customer participation by having eh zero energy path seamless with the new construction path while simultaneously providing all new construction projects an incentive to push toward achievement of the net zero energy tier.

3.1.3 Technology Based Opportunities to Drive Comprehensive Savings

HVAC & Controls: The Company will look to identify all near-term HVAC failures and approach the customer with enhanced incentives for bundling new HVAC systems with controls. Additionally, the Company will research strategies to increase the installation of control systems on existing HVAC units.

Lighting Controls: The company will look to increase customer adoption of network lighting controls and luminaires with lighting controls.

Heat Pumps (Air Source) and VRF Systems: The Company will look to define the characteristics that make for the successful deployment of Air Source Heat Pumps and VRF systems in commercial and industrial market segments.

Storage: The Company will look to scale storage with various customer segments to reduce peak demand.

Adoption of these advanced technologies are dependent on the program enhancement strategies described above and successful workforce development efforts.

3.1.4 Expanding Active Demand Response

The Company will continue to grow the existing active demand response program, including customer-initiated active demand response, generators, battery storage, and thermostats, across all its the customer segments (commercial, industrial, and small business customers).

Explore adding electric vehicles to the active demand response portfolio if it does not adversely affect the evaluation of the electric vehicle time of use charging pilot.

3.1.5 Exploring Cutting-Edge New Technologies

Fuel cells: The Company commits to researching the performance, barriers and potential market size for fuel cell installation in Rhode Island.

Geothermal District System: The Company will explore appropriate incentives and pathways for geothermal systems for commercial and residential customers, in this three-year plan.

3.2 Residential and Income Eligible

3.2.1 Deepen Customer Relationships and Increase Participation Across All Customers

Customer management systems: The Company will **i**mprove its tools and processes to continuously engage residential customers. The Company will explore opportunities to improve our ability to time marketing and targeting of customers to when they are most likely to need system upgrades. By educating customers on efficiency upgrades when they may be in the market for a replacement, the Company anticipates a better overall customer experience and less stress associated with the overall system purchase.

Enhanced incentives for increased savings: The Company will seek to design a method to provide enhanced incentives for customers that invest in deeper energy savings over a specific timeframe. The objective is to develop an ongoing relationship with the customer to serve as a trusted resource, so customers continue to utilize the energy efficiency rebates for ongoing energy upgrades.

Equity: The Plan is designed to ensure equity, and in the context of energy efficiency that means programs are serving all customer segments, that the energy efficiency rate has parity, and that the energy efficiency services provide help to the most vulnerable customers that may pay a higher proportion of their income towards energy costs.

3.2.2 Technology Based Opportunities to Drive Comprehensive Savings

Air Source Heat Pumps: The Company will support air source heat pumps to the extent possible within regulatory guidelines, which currently support replacement of electric resistance heating systems with air source heat pumps and supporting customers in accessing high efficiency heat pumps for accessory heating and cooling, but not conversion or displacement for delivered fuels.

3.2.3 Expand Active Demand Response

Connected Solutions: The Company will continue to grow its residential active demand response program offerings by expanding participation in existing Connected Solutions offerings. Additionally, when the RI time-of-use electric vehicle pilot concludes, the Company will investigate offering an active demand response electric vehicle offering.

3.2.4 Program Enhancements Tailored to Residential and Income Eligible Services (IES) Customers

Multifamily: The Company will increase the agility of all of the multifamily programs (residential income eligible, residential non-income eligible, and commercial & industrial) to respond the significant changes in the market, including the continued loss of lighting savings and the need to more rapidly incorporate

new and more complicated to deploy technologies. The Company will prioritize program refinements based on evaluation results, market influence, and market saturation of technologies. We will engage with vendors and stakeholders to further inform the program redesign examination conducted in 2020 with a goal to create a more nimble and adaptive program.

EnergyWise: The Company will assess lessons learned from deployment of virtual home energy assessments during the COVID-19 response and make improvements to the EnergyWise program as appropriate. Changes that help unlock savings opportunities beyond lighting or improve cost to achieve savings will receive particular attention.

Income Eligible Services (IES) Single Family: The Company will improve upon the 2019 Process Evaluation recommendations, which we have already begun implementing. The focus remains on workforce development, equity, and enhanced program delivery models to serve income eligible customers. IES will assess the introduction of virtual energy audits during the COVID-19 response and incorporate strategies into the IES program as appropriate.

New Construction Zero-Energy Tier: A new zero energy tier will be incorporated into the core New Construction program for both commercial and residential programs. The Company will begin adapting the New Construction program with lessons from the zero-energy pilot program. The company will incorporate the successful elements tested in the pilot (i.e. achieving stretch code energy performance and all electric construction) into a revised top tier of performance and will align the incentive and support structure that is core to the New construction program. This will both simplify customer participation by having the zero-energy path seamless with the new construction path while simultaneously providing all new construction projects an incentive to push toward achievement of the net zero energy tier.

3.3 Cross-Cutting Priorities

Codes & Standards: The Company is currently working to reach agreements with stakeholders on how its Codes & Standards development activities will be evaluated. The Company anticipates once agreement is reached, the Company will increase investment in providing technical guidance to upcoming state and local policy changes. The policy opportunities include development and adoption of energy codes (base and stretch), appliance/equipment standards, existing building performance standards, and home and building labeling/benchmarking/transparency policies.

Workforce Development: The Company is working to understand and respond to the evolving impacts of the COVID-19 pandemic on the energy efficiency workforce. The required shut-down of all energy efficiency activity involving entering businesses or residences has forced many energy-efficiency vendors to institute furloughs and layoffs. When it becomes possible to resume full operations, workers and firms may have shifted permanently out of energy efficiency work. The Company must do its part to prepare to restore and expand the Rhode Island efficiency workforce.

In addition, the halt to all work in customer workplaces and homes has significant impacts on the pipeline of projects. The programs will be hard pressed to replace the implementation projects that were halted and the assessments that would have delivered new customer efficiency opportunities into the pipeline. Finally, the Company must prepare for customers across all classes being more

conservative in their appetite for efficiency investments given more pressing recovery investment needs and on-going economic uncertainty. The company must therefore consider new and potentially novel ways to increase program savings opportunities which will necessitate retraining and new trainings for the efficiency workforce needed for this three-year plan.

In addition to the COVID-19 recovery efforts noted above, the Company will expand its workforce development activities relative to pre-COVID-19 levels. The Company anticipates making significant investments in workforce development in the next three-year plan. This includes but is not limited to:

- Supporting training of the residential efficiency workforce and technical students.
- Enhancing continuing education for building managers and facilities operators
- Educating current vocational students as to the opportunities in the energy efficiency field.

These efforts will be coordinated across the commercial and industrial and residential teams, and the appropriate state and local authorities to reduce or eliminate duplication of effort and expenditures.

Seek ways to optimize the cost to achieve savings across the portfolio: With the understanding that the cost to achieve savings will increase as lighting opportunities are eliminated and the contribution to portfolio savings, the Company will seek cost efficiencies across the portfolio, including exploring enhancements to financing efforts across all sectors and identifying and utilizing external sources of funding in order to support program development and customer adoption to minimize impact on customer surcharge.

3.4 Multi-year strategies for the three-year plan

This subsection will identify areas of focus for the Company that span multiple years in the 2021 – 2023 period, as indicated as a potential new requirement of the LCP Standards from the PUC's redlined Standards. Areas the Company is exploring for inclusion in this section include:

Combined Heat and Power: Combined Heat and Power (CHP) and Fuel Cell projects involve long cultivation, planning and design timelines and complex approval processes.

Rhode Island Infrastructure Bank (RIIB): The Company's financing partnership work with the RIIB similarly includes larger infrastructure project funding that integrates multiple streams and requires multi-party coordination. The Company will explore hiring a data architect to assist National Grid, RIIB, and OER in creating shared reporting platform that integrates the Efficient Buildings Fund (EBF) data from all three parties. The intention is to create a single access point that provides greater clarity on the status and success of projects for partners and stakeholders.

4 Savings Goals and Potential

This section will provide the numerical energy and demand savings goals for the three years addressed by the plan. Goals will be presented in units of lifetime savings (MWh for electric and MMBtu for gas), annual savings, and all-fuels MMBtu savings to be consistent with past plans and enhance comparability for future plans.

4.1 EERMC Three-Year Savings Targets

This subsection will refer to the savings targets as proposed by the EERMC and the Targets that are ultimately approved by the PUC in Docket 5023.

4.2 Three-Year Goals

This subsection will detail how the three-year goals for energy efficiency (electric and gas) and demand response were developed and what those goals are. This subsection will additionally describe how the recently-completed market potential study was used to inform the goal setting process, and why and how the goals differ from the Targets from PUC Docket 5023, should they deviate from the PUC's approved Targets.

Table 2. 2021 – 2023 Electric Portfolio Savings Summary

Electric Programs	**2021**	**2022**	**2023**
Savings and Benefits			
Annual Electric Savings (MWh)			
Annual Electric Savings (MMBtu)			
Annual Delivered Fuel Savings (MMBtu)			
Annual Total Savings (MMBtu)			
Lifetime Electric Savings (MWh)			
Lifetime Electric Savings (MMBtu)			
Lifetime Delivered Fuel Savings (MMBtu)			
Lifetime Total Savings (MMBtu)			
Savings as a Percent of Sales			
Annual Passive Peak Demand Savings (kW)			
Winter Passive Peak Demand Savings (kW)			
Active Peak Demand Savings (kW)			
Total Benefits (RI Test)			
Costs			
Total Funding Required			
Cost per lifetime kWh			
EE Program Charge per kWh			
Benefit Cost Ratio (RI Test)			
Participation			

Table 3. 2021 – 2023 Natural Gas Portfolio Savings Summary

Electric Programs	2021	2022	2023
Savings and Benefits			
Annual Natural Gas Savings (MMBtu)			
Lifetime Natural Gas Savings (MMBtu)			
Savings as a Percent of Sales			
Total Benefits (RI Test)			
Costs			
Total Funding Required			
Cost per lifetime MMBtu			
Residential EE Program Charge per Dth			
C&I EE Program Charge per Dth			
Benefit Cost Ratio (RI Test)			
Participation			

5 Funding Plan

This section will describe funding that will support three-year plan budget requirements and fulfill the statutory mandate of Least-Cost Procurement. The Company plans to explore additional funding sources for the Three-Year Plan in order to reduce impacts to the System Benefit Charge (SBC). Funding sources may include the following, as necessary and available:

- Existing System Benefit Charge
- Forward Capacity Market Revenues
- Regional Greenhouse Gas Initiative Auction Proceeds
- Climate Cap and Trade legislation or regulation
- Fully reconciling funding mechanism consistent with R.I. Gen. Laws § 39-1-27.7
- Other sources

6 Cost Effectiveness

This section will describe the implementation of the Rhode Island Test as applied to the energy efficiency portfolio and programs. This section will also describe the inputs to the screening, such as the most recent regional avoided cost study, economic benefit multipliers, environmental benefits, and when we expect the inputs to be revised.

6.1 RI Test

This subsection will provide detail on the RI Test and the application of Docket 4600, as well as any enhancements made to the test from the prior year's annual plan. This subsection will also include details on possible areas for improvements for the RI Test in the future to populate more categories of information in the Docket 4600 Benefit-Cost Framework.

6.2 Comparison of TRC Test to RI Test

This subsection will compare the Total Resource Cost (TRC) Test to the RI Test consistent with the last several plans. The Company will continue to compare the RI Test to the TRC Test for comparability with past plans and to provide an alternative view of the cost effectiveness of the portfolio.

6.3 Cost of Supply

This subsection will provide detail on the cost of supply calculations used to determine whether the plan meets the LCP Standard requirement that energy efficiency and conservation investments be less than the cost of supply. The Company plans to use the same methodology as applied in the 2020 Annual Plan to assess cost of supply.

6.4 Environmentally Responsible

This subsection will describe how the plan is environmentally responsible, including by detailing the environmental benefits generated by the plans and quantified in the benefit cost analysis.

7 Rate and Bill Impacts

This section will provide a brief qualitative description of the rate and bill impacts of energy efficiency and the benefits that energy efficiency can generate for rate payers at reasonable cost. The Company will continue to provide rate and bill impacts in annual filings. The Company will provide a brief description of the updated gas approach that we are beginning to develop with an external consultant. Results of that project are anticipated to more closely match the structure and outputs from the existing electric rate and bill impact model and be available for use in the 2021 annual plan filing.

8 Pilots, Demonstrations, Assessments

This section will detail the Company's focus areas for pilots, demonstrations, and assessments during the term of the Three-Year Plan. The Company will continue to identify opportunities to test, analyze, and deliver new creative and innovative solutions and services for customers that are technically feasible, desirable, and viable for inclusion in the portfolio. The Company plans to explore logical program extensions like new or substitute measures, adaptations to program or delivery approaches to drive incremental improvement, and completely new offers. The Company expects to use evaluation studies, customer and market research, and stakeholder feedback to identify areas for potential exploration and will prioritize efforts based on materiality, speed of development, and area of impact. Each customer segment and saving technologies have unique barriers to adoption and will be assessed on a situational basis.

8.1 Ongoing Pilots, Demonstrations, Assessments

This subsection will detail ongoing pilots, demonstrations, and assessments initiated in prior plans that will continue during at least part of the 2021-2023 Three-Year Plan term, which currently include:

- Zero Net Energy Buildings
- Strategic Energy Management

8.2 Anticipated Areas of Exploration for Future Pilots, Demonstrations, Assessments

This subsection will provide guidance for the areas that may be explored in the term of the Three-Year Plan. The Company anticipates investigating new solutions and services for customers across all sectors and segments and each program intervention type (retrofit, lost opportunity, upstream/midstream, optimization, and active demand reduction). Additionally, the Company will look for opportunities for new intervention types to continue to maintain our leadership status and innovation while continuing to support state priorities.

9 Evaluation Measurement and Verification

9.1 EM&V Process and Outlook for the Next Three Years

This subsection will provide a short overview of the EM&V Process in Rhode Island, including description of how EM&V studies influence program savings, program designs, and what areas may be explored through EM&V studies in the next three years, including coordination with pilots, demonstrations, and assessments.

9.2 EM&V Studies Influencing Savings and Programs in the Three-Year Plan

The table below indicates ongoing studies that may influence savings and program design in the Three-Year Plan. Note that some listed studies intended to inform the three-year planning process may be delayed from their anticipated completion date (indicated below) due to the ongoing COVID-19 pause in many EM&V studies and program activities, while others are intended to inform the 2021 Annual Plan. With continued uncertainty around COVID-19 this set of studies should be expected to change during the next several months.

Table 4.Ongoing EM&V Studies that may Influence the 2021 – 2023 Energy Efficiency Plan

Sector	Study name	Description	Expected Study completion(* indicates possible delay due to COVID)
Res	RI-20-RX-EWSFImpact – Impact Evaluation of EnergyWise Single Family Program	The study will verify energy savings estimates for measures offered through the EnergyWise Single Family program. The results will be used to update savings assumptions for each electric, natural gas, propane and oil measures and/or measure groups installed from 2017 and/or 2018.	**July 2020***
Res	RI-20-RX-EWSFProcess – Process Evaluation of EnergyWise Single Family Program	The study will assess the overall effectiveness of EnergyWise Single Family program delivery and new program elements (i.e. 100% landlord incentive and the Department of Energy home energy scores). This study will also assess free-ridership/spillover rates, offering a qualitative complement to the EnergyWise Single Family impact evaluation.	**September 2020 (will inform 2021 Plan)***
Res	RI-20-RX-EWMFImpact – Impact Evaluation of EnergyWise Multifamily Program	The study will verify energy savings estimates for measures offered through the EnergyWise Multifamily program. The results will be used to update savings assumptions for electric, natural gas, propane and oil measures offered through the program in 2017 and/or 2018.	**July 2020***
Res	RI-20-RX-IEMFImpact – Impact Evaluation of Income Eligible	The study will verify energy savings estimates for measures offered through the Income-Eligible Multifamily program. The results will be used to update savings assumptions for electric, natural gas,	**July 2020***

Sector	Study name	Description	Expected Study completion(* indicates possible delay due to COVID)
	Multifamily Program	propane and oil measures offered in 2017 and/or 2018.	
Res	RI-20-RX-EWMFProcess – Process Evaluation of EnergyWise Multifamily Program	The study will examine customer participation, vendor participation, and overall program processes of the EnergyWise Multifamily program. The evaluation will also assess free-ridership/spillover rates, offering a qualitative complement to the EnergyWise Multifamily impact evaluation.	**September 2020 (will inform 2021 Plan)***
Res	RI-20-RX-IEMFProcess – Process Evaluation of Income Eligible Multifamily Program	The study will examine landlord and tenant participation, vendor participation, and overall program processes of the Income-Eligible Multifamily program. The study will assess effectiveness of program delivery procedures, determine barriers to program delivery and participation offering a qualitative complement to the Income-Eligible impact evaluation.	**September 2020 (will inform 2021 Plan)***
Res	RI-20-RX-HERImpact – Impact Evaluation of the Home Energy Reports Program	The study will verify electric and natural gas savings for each group of participating customers in the HER program for periods 2017 through 2019. The study will also assess how the HER program impacts participation in other energy efficiency programs.	**July 2020**
Res	RI-20-RE-UpstrLight – Residential Lighting Market Assessment	This study will include lighting market assessment studies including 2019 shelf stocking data analysis and 2019 sales data analysis to inform planning activities for both retail and direct install lighting in 2021 and beyond.	**July 2020**
Cross-cutting	RI-20-XX-CSNC – Residential and Commercial New Construction and Code Compliance Study	The study will calculate the savings projected to be achieved by the Code Compliance program for the 2021-2023 period by updating the 2017 residential and commercial code compliance potential savings and attribution studies. The methodology used will be determined when the policy decision has been made on whether or not to deem savings for the Code Compliance program.	**July 2020**
Cross-cutting	RI-19-XE-HPmarket – Heat Pump Market Assessment	The study will assess the status of the heat pump market and the potential for future growth of heat pumps in Rhode Island for displacing electric heat and for fuel switching for space heating and resulting cooling. The study will collect data from heat pump	**June 2020***

Sector	Study name	Description	Expected Study completion(* indicates possible delay due to COVID)
	(continued from 2019)	owners, contractors, manufacturers and distributors and review existing research and evaluation in the small commercial and residential markets to understand the current status of both supply-side and demand-side markets, trends, and perceptions.	
Cross-cutting	RI-19-XX-M&VLegislation – Legislated M&V Study (continued from 2019)	The study will verify claimed energy savings from the Company's energy efficiency programs and review the Company's evaluation process as required by the M&V legislation in Rhode Island. The Company is providing full cooperation and will carefully review all recommendations and implement those that are feasible when developing future evaluations.	**January 31, 2020 (based on workplan) Still in progress, OER is leading this study**
C&I	RI-20-CG-CustGasPY18 – Impact Evaluation of PY2018 Custom Gas Installations	The study will verify natural gas savings estimates for a sample of custom gas projects through site-specific inspection, metering, and analysis. The results of this study will be used to determine the realization rates for custom gas energy efficiency offerings based on installations from 2018.	**July 2020***
C&I	RI-19-CE-CustElec – Impact Evaluation of PY2018 Custom Electric Installations (continued from 2019)	The study will verify electric savings estimates for a sample of both lighting and non-lighting custom electric projects through site-specific inspection, metering, and analysis. The results of this study will be used to determine the final realization rates for custom electric energy efficiency offerings based on installations from 2018.	**July 2020***
C&I	RI-20-CX-FRSO – Commercial and Industrial Free-Ridership and Spillover Study	The study will assess free-ridership and spillover values based on behavior of both participants and nonparticipants of C&I energy efficiency programs. The results will be used to quantify the net impacts of C&I electric and natural gas energy efficiency programs in Rhode Island. This study will include both custom and prescriptive measures from new construction and retrofit programs.	**July 2020*** **(Likely to postpone study due to COVID)**
Demo	RI-20-CX-SEM – Strategic Energy Management	The study will review the methodologies and processes used to obtain and calculate the savings claimed. The results will be used to assist in	**TBD**

Sector	Study name	Description	Expected Study completion(* indicates possible delay due to COVID)
	Demonstration Evaluation	monitoring and making continuous improvements to the demonstration.	
Demo	RI-20-CG-SBHP – Small Business Heat Pump Demonstration Evaluation	The Company is exploring a go-to market strategy for cold climate heat pumps for small business customers building on its 2019 demonstration. The study will evaluate those installations from both an impact and a process standpoint.	**TBD**

10 Performance Incentive Plan

[Intentionally Blank]

10.1 Proposed Performance Incentive

At this time, the Company plans to propose a performance incentive that is decoupled from the portfolio budgets. Conversations with stakeholders during the 2020 Annual Plan development process indicated a strong desire by all parties to move away from the performance incentive structure that has historically been used, which ties the Company's earning opportunity to the plan budget. This subsection will further detail the changes that are proposed from the prior performance incentive structure.

10.2 Stakeholder Engagement

This section will describe the stakeholder engagement process the Company led to develop the Performance Incentive Mechanism proposed in the Three-Year Plan. The Company plans to work with the EERMC, OER, DPUC, to develop and propose a performance incentive.

11 Coordination with Other Energy Policies, Programs, and Dockets

This section will detail the coordination of the Three-Year Plan with other Company filings and activities. Subsections will also describe how the Three-Year Plan aligns with state policies and other objectives. The subsections indicate key areas for coordination.

11.1 Heat Pump Policy and Objectives

[Intentionally Blank]

11.1.1 Heating Sector Transformation (HST)

11.1.2 Heat Pump Implementation, and Education

11.1.3 Delivered Fuels

11.2 Power Sector Transformation (PST)

[Intentionally Blank]

11.3 Rate Cases

[Intentionally Blank]

11.4 ISR

[Intentionally Blank]

11.5 Integration with Renewables

[Intentionally Blank]

11.6 Codes Program and Accounting for New Codes

[Intentionally Blank]

12 Timeline

12.1 Annual Plan Development Schedule

This subsection will provide a high-level summary of the deadlines for annual plan development in each year, including the expected filing dates for annual plans. At the time of this outline's development, the Company assumes that timelines and filings are unchanged based on the LCP Standards revision process. This section will be updated as needed based on the revised LCP Standards.

Table 5. Schedule for Subsequent Annual Plan Filings

Annual Plan	Expected Filing Date
2021 Annual Plan	November 1, 2020
2022 Annual Plan	October 15, 2021
2023 Annual Plan	October 15, 2022

12.2 Annual Plan Development Process

This subsection will describe the coordination process undertaken each year with EERMC, OER, DPUC, and other stakeholders through the TWG to inform the plans in each year following from the Three-Year Plan.

13 Conclusion and Requested Rulings

The Company will request that the PUC rule on the following, consistent with the draft revisions to the LCP Standards provided by PUC staff:

- The three-year savings goals and strategies for Energy Efficiency and Conservation Procurement programs and portfolio;
- The three-year budgets for Energy Efficiency and Conservation Procurement;
- The three-year performance incentive plan for Energy Efficiency and Conservation Procurement;

- Other recommendations or requests contained in and supported by the Three-Year Plan.

Appendix A. Planning Schedule for 2021-2023 Three-Year Plan

Readers of this memorandum should note that this planning calendar may change pending finalization of the LCP Standards by the RI PUC.

Color Key
Purple = Evaluation Team Deliverable Date
Blue = Stakeholder Comment Due Date
Red = National Grid Deliverable Dates

April 2020

April 10 – EE Technical Working Group Meeting
April 20 – Request that PUC rules on Standards & Targets by this date
April 23 – National Grid issues EE 3YP Outline Memorandum to EERMC
April 30 – EERMC Meeting
- Present and review Outline Memorandum for EE 3YP

May 2020

May 6 – Stakeholder comments due on EE 3YP Outline Memorandum
May 8 – EE Technical Working Group Meeting
May 21– EERMC Meeting
- Discuss EE 3YP planning process

May 21 – Evaluation changes locked for first draft of EE 3YP

June 2020

June 11 – National Grid submits first draft of EE 3YP to EERMC
June 12 – National Grid submits first draft 3YP BCA models to EERMC Consultant Team
June 12 – EE Technical Working Group Meeting
- Present first draft of EE 3YP
- Input from TWG members on first draft of EE 3YP

June 18 – EERMC Meeting
- Review first draft EE 3YP

July 2020

July 3 – Stakeholder comments and input from all parties on first draft EE 3YP and BC Model due to National Grid
July 10 – EE Technical Working Group Meeting
- Summary of stakeholder comments/discussion on the draft

July 3 to August 13 – National Grid and stakeholders' development of final draft EE 3YP
July 16 – EERMC Meeting
- National Grid interim update presentation to EERMC

August 2020

August 5 – Deadline for EM&V to incorporate evaluation changes for the EE 3YP

August 13 – National Grid submits final draft of EE 3YP to EERMC

August 14 – EE Technical Working Group Meeting

August 17 – National Grid submits final 3YP BCA models to EERMC Consultant Team

August 20 – EERMC Meeting

- Vote on EE 3YP

September 2020

September 1 – National Grid files EE 3YP with PUC

September 4 – Submit final 3YP BCA models to EERMC Consultant Team for recordkeeping

October 2020

Mid October – Anticipated PUC Hearing on the 2021 – 2023 Three Year Plan

Appendix B. Program List by Sector

This appendix provides a reference for readers indicating which programs are contained in each sector: Residential, Income Eligible, and Commercial and Industrial. For additional detail on the programs, please refer to Attachments 1 and 2 of the 2020 Annual Plan.[3]

Table 6. Electric and Natural Gas Programs

Sector	Electric Programs	Natural Gas Programs
Residential Sector	Residential New Construction	Residential New Construction
	Energy Star® HVAC	Energy Star® HVAC
	EnergyWise	EnergyWise
	EnergyWise Multifamily	EnergyWise Multifamily
	Home Energy Reports	Home Energy Reports
	Energy Star® Lighting	
	Residential Consumer Products	
Income Eligible Sector	Single Family – Income Eligible Services	Single Family – Income Eligible Services
	Income Eligible Multifamily	Income Eligible Multifamily
Commercial and Industrial Sector	Large Commercial New Construction	Large Commercial New Construction
	Large Commercial Retrofit	Large Commercial Retrofit
	Small Business Direct Install	Small Business Direct Install
		Commercial and Industrial Multifamily

[3] See National Grid's 2020 Annual Energy Efficiency Plan filed in RI PUC Docket 4979: http://www.ripuc.ri.gov/eventsactions/docket/4979-NGrid-EEPP2020%20(10-15-19).pdf

Appendix C. Definitions

This appendix provides a reference to commonly used terms in the efficiency plans. It is adapted from the set of definitions included with the 2020 Annual Energy Efficiency Plan and will be updated for the 2021 – 2023 Three-Year Energy Efficiency Plan. Not all terms contained in this set of definitions is used in the plan outline memorandum.

Assessment
An Assessment tests a measure, a bundle of measures, or a solution, that can be delivered as part of an existing program where the savings are not known but will be explored as part of the Assessment, through independent evaluation or a vendor evaluation. The scope of evaluation for an Assessment depends on the specifics of the Assessment. Assessments are not included in the calculation of the Performance Incentive.

Customer Contribution/Customer Cost
The financial cost of a Measure and/or Service that is not covered by the Customer Incentive.

Customer Incentive
Financial support and/or services (e.g., rebates, on-bill repayment) provided to Participants as an attempt to motivate the installation of measures and/or changes in behavior to achieve changes in energy usage. (See Rebate)

On-Bill Repayment (OBR)
A financial mechanism that allows customers to pay back the Customer Contribution/Customer Cost of a Measure and/or Service on their energy bill.

Demand Response
Active Demand Response: The reduction or shifting of energy use by customers during peak periods, (peak event) when the load on the electric grid or gas distribution system is high.

Passive Demand Response: Energy efficiency measures that permanently shift or reduce electricity use. Examples include, energy efficient appliances, lighting, advanced cooling and heating systems and equipment.

Evaluation: Independent
An independent evaluation uses a third-party evaluation vendor that has been selected via a competitive RFP process for the specified evaluation or in the recent past for evaluation services for EE Programs. An independent evaluation can be both, a process as well as an impact evaluation.

Evaluation: Vendor
A vendor evaluation is conducted by a vendor installing a technology, measure, strategy or solution, or can be conducted by a Technical Assistance (TA) vendor who conducts a savings analysis for the installed technology, measure or an energy saving strategy. A vendor evaluation can only be an impact evaluation.

Non-Participant
A customer that does not directly participate in a Program.

Participant
A customer that reduces or otherwise modifies their energy end use patterns due to involvement in a Program. [4]

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. It is incumbent upon the proponent of a pilot to define these limits in a proposal for Public Utilities Commission (PUC) review. Ideally, a pilot can provide net benefits and achieve goals, but the primary design and value of a pilot is to test rather than to achieve. A Pilot is not included in the calculation of the Shareholder Incentive.

Portfolio
A collection of Programs. The electric portfolio contains Programs that primarily focus on delivering electricity savings and the natural gas portfolio contains Programs that primarily focus on delivering natural gas savings. A portfolio is required to be cost-effective.

Program
A collection of defined services and/or measures that are carried out by National Grid and/or its vendors and subcontractors that:

- target a specific market segment, customer class, or defined end use;
- are designed to influence customer behavior to achieve changes in energy usage, equipment preferences, investment, and maintenance practices; and,
- are guided by a specific savings goal and have a benefit-cost ratio.
- Programs are typically made up of the following categories that contribute to the overall program savings goals and benefit-cost ratios.
    - **Sub-Program**
      Within the Commercial and Industrial Sector, a Sub-Program is a further grouping of measures within a program. An example is the Upstream Lighting Sub-Program within the Commercial and Industrial Sector.
    - **Measure**
      A piece of equipment or customer action that reduces or otherwise modifies energy end use patterns. This is the most granular level of categorization. For example, an LED bulb would be considered a measure.
    - **Measure Group or End Use**
      A group of measures with similar characteristics within a program. For example, the measure group LED in the Residential lighting program includes several types of LED bulbs and the Compressed Air measure group within the Large Commercial New Construction program contains all the compressed air measures within that program.

[4] Participation is measured differently in different programs, for example for several programs a participant may be a customer electric or gas account, in contrast the Residential Consumer Products program measures participation by the number of rebates processed.

- **Services**
  A range of activities to support customer awareness, education, and adoption of energy saving and energy modification opportunities including free technical **assistance**, training, analysis, and reports.

- **Initiative**
  An Initiative is a "go to" market strategy within a Program that promotes a subset of measures or services within that program and/or targets a certain segment of customers. An example includes the Grocery Initiative within the Large Commercial and Industrial Retrofit Program.

- **Assessment**
  (See Assessment)

- **Demonstration**
  A Demonstration tests a new technology or solution that is delivered as part of an existing program where a technical assessment has estimated the savings and determined that the measure is likely to be cost effective. A technology tested through a Demonstration can become part of the offerings of a Program. A Demonstration is included in the calculation of the Performance Incentive.

Performance Incentive/Shareholder Incentive
A financial incentive that the Company has an opportunity to earn based on performance in fulfilling the savings goals of the approved Annual Plan. The Performance Incentive is authorized and established through annual EE Plans by R.I. Gen. Laws § 39-1-27.7(e) and § 39-1-27.7.1.

Rebate
A financial incentive paid to a Participant to obtain a specific act, typically the installation of equipment. A rebate can also be paid to manufacturers and suppliers of measures to lower the price at the point of sale to the customer.

Sector
A grouping of Participants by customer rate classes by which Programs are organized. There are three sectors: Residential, Income-Eligible, and Commercial and Industrial.

Technical Assistance (TA) Study
A technical assistance (TA) study assesses a measure or group of measures for savings and costs and is performed by a third-party technical assistance vendor. It quantifies electric and gas savings, along with delivered fuel and non-energy benefits. This is done by completing some or all of the following activities: facility benchmarking and/or walkthrough, equipment metering of analysis of building energy management system data, determination of measure baseline, engineering analysis of the operation of the baseline and proposed measures and building energy simulations. The TA vendor performs a benefit-cost screening to assess the estimated payback for the customer along with the impact of costs and savings. A TA study report is presented to the customer which outlines the methodology followed to determine estimated project savings, cost, and project payback, along with the results of the study.

Technical Assessment
A technical assessment of a technology or a measure is engineering research conducted to determine the savings of a new technology that may not be widely adopted in the market.