2020 SYSTEM RELIABILITY PROCUREMENT

2021-2023 THREE-YEAR PLANREPORT

Table of Contents

Appendices

Table of Terms

Term	Definition
AMF	Advanced Metering Functionality
Approximate Value	The estimated net present value of deferring the wires investment for the required timeframe.
BCA	Benefit-Cost Analysis
BCR	Benefit-Cost Ratio
Capex	Capital expenditure
CEM	Customer Energy Management
CHP	Combined Heat and Power
CRM	Cost Recovery Mechanism
CSA	Construction Service Agreement
DER	Distributed Energy Resources
DG	Distributed Generation
Division	Division of Public Utilities and Carriers
DPAM	Distribution Planning and Asset Management
DR	Demand Response
DSP	Distribution System Planning
EE	Energy Efficiency
EE Plan	Energy Efficiency Program Plan
EEP	Energy Efficiency Program
EERMC	Energy Efficiency and Resource Management Council
EPC	Engineering, Procurement, and Construction
EPS	Electric Power System
ESA	Energy Service Agreement
ESS	Energy Storage System
FERC	Federal Energy Regulatory Commission
Framework	Rhode Island Docket 4600 Benefit-Cost Framework
GHG	Greenhouse gas
GMP	Grid Modernization Plan
ISO	Independent Systems Operator
ISO-NE	ISO New England, Inc.
ISR	Infrastructure, Safety and Reliability Plan
kW	Kilowatt
kWh	Kilowatt-hour
LCP	Least-Cost Procurement
MW	Megawatt
MWh	Megawatt-hour
NECEC	Northeast Clean Energy Council
NERC	North American Energy Reliability Corporation

Term	Definition
NOAA	National Oceanic and Atmospheric Administration
NPA	Non-Pipeline Alternatives
NPV	Net Present Value
NWA	Non-Wires Alternative
O&M	Operations and Maintenance
OER	Office of Energy Resources
Opex	Operational expenditure
PIM	Performance Incentive Mechanism
Portal	Rhode Island System Data Portal
PST	Power Sector Transformation
PUC	Public Utilities Commission
PV	Photovoltaic
RFP	Request for Proposals
RNG	Renewable Natural Gas
SRP	System Reliability Procurement
T&D	Transmission and Distribution
TEC-RI	The Energy Council of Rhode Island
TWG	Technical Working Group

~~2021-20230~~ SYSTEM RELIABILITY PROCUREMENT 2021-2023 ~~REPORT~~THREE-YEAR PLAN

1. Executive Summary

The purpose of System Reliability Procurement (SRP) is to identify targeted alternative solutions, through customer-side and grid-side opportunities, for the electric distribution system that are cost-effective, reliable, prudent and environmentally responsible and provide the path to lower supply and delivery costs to customers in Rhode Island.

The role of National Grid[1] with respect to SRP is to identify potential Non-Wires Alternative (NWA) opportunities, to source viable solutions that address system needs and reduce, avoid, or defer transmission and distribution (T&D) wires investments, and to support projects and programs that enable such activity.

The Company summarizes the rulings requested of the Public Utilities ~~UC~~Commission (PUC)[2] in the table below.

Table 1: Summary of Requested Rulings for SRP in 2021-2023

SRP Section	SRP Initiative/Proposal	Requested Ruling
5	SRP Funding Mechanism	The Company requests the PUC approve the Company's proposal that opex-based SRP investments be funded through the System Benefit Charge, or Energy Efficiency (EE) Charge, on customers' bills.
5	SRP Funding Mechanism	The Company requests the PUC approve the Company's proposal that capex-based SRP investments be filed and proposed in an SRP Investment Proposal.
6	SRP Performance Incentive Mechanism	The Company requests the PUC approve the Company's proposed performance incentive mechanism (PIM) for calendar years 2021 through 2023.

[1] The Narragansett Electric Company d/b/a National Grid (National Grid or Company).
[2] "RIPUC." *State of Rhode Island Public Utilities Commission and Division of Public Utilities and Carriers*, State of Rhode Island, www.ripuc.ri.gov/.

SRP Section	SRP Initiative/Proposal	Requested Ruling
810	NPAs in System Planning	The Company requests the PUC approve the development plan for the Non-Pipeline Alternatives (NPA) program in calendar years 2021 through 2023.
12	SRP Timeline: Year-End Reports	The Company requests the PUC approve the annual reporting plan for SRP Year-End Reports for calendar years 2021 through 2023.

The Company summarizes the anticipated funding requests and their cost recovery mechanisms (CRM) for 2021 through 2023requests approval from the Public Utilities Commission (PUC) for the proposals as stated in the 2020 SRP Report, which are summarized in in the table below. These anticipated costs may change over time, given changes in system load demand, need for market engagement, or other activity.The table in Section 5 contains further detail to the initiatives and proposals, their cost recovery mechanisms (CRM), and their projected future costs.

Table 2: Summary of Anticipated 20201-2023 SRP Funding Requests and Proposals

SRP Section	SRP Initiative/Proposal	CRM	CY 2021	CY 2022	CY 2023
6.1	SRP Incentive Mechanism, 2020 Savings-Based EarningsIncentive	EE Charge	unk.	unk.	unk.
7	NWAs in System Planning	unk.	unk.	unk.	unk.
6.188	NPAs in System Planning	unk.	unk.	unk.	unk.
9	Rhode Island System Data Portal	EE Charge	$0	$0	$0
10	SRP Market Engagement	EE Charge	$0	$0	$0
		Total	**$0**	**$0**	**$0**

Please note that the cells that state "unk." in Table 2 indicate unknowns because SRP plan and project development during future years will determine applicable funding requests for those items. Also note that the CRM for NWAs and NPAs is unknown until the proposal stage, based on the specific solution's ownership model.

The commitments that do not require SRP funding, but which are included in the 202110-2023 SRP PlanReport, are summarized in the following table.

Table 3: Summary of 20201-2023 SRP Report Commitments

SRP Section	SRP Commitment
7	The Company plans to continue analyzing its current NWA screening and development processes to determine how NWAs might be best considered as both complete and partial solutions.
88.1	The Company commits to performing further background research on NPAs, to exploring how NPAs align with Company policy and the Least Cost Procurement Standards (LCP Standards), and to build out the NPA program over calendar years 2021 through 2023. The Company commits to engaging with stakeholders to discuss and understand opportunities and challenges regarding NPAs.As part of the Company's reevaluation process, it was determined that the Company should pursue third-party solutions for these previously identified NWA opportunities from the East Bay Study. The Company will commit to developing an NWA RFP for the East Bay opportunity.
11	The Company recognizes that improved synchronization between SRP and Power Sector Transformation (PST), the Energy Efficiency Program Plan (EE Plan), the Infrastructure, Safety and Reliability (ISR) Plan, the Grid Modernization Plan (GMP), and the Advanced Metering Functionality (AMF) Business Case is necessary and intends to maintain and improve coordination between these filings.
11	Therefore, the Company commits to continued stakeholder engagement and continued participation in enhanced discussions regarding SRP, NWA, and related policy and programs with stakeholders.

Sections 1 through 3 are informative sections that outline the background of SRP, the Company's overall proposal, and the regulatory basis for SRP.

Section 5 details the funding request and associated customer charge for this SRP Report. In this section, the Company requests approval on the proposed funding request for the projects and initiatives included in this SRP Report. Please note that the CRM for SRP is the SRP Factor, or the "Proposed System Reliability Factor per kWh" value in Table S-1, which folds into the energy efficiency (EE) charge on customers' bills.

Section 6 describes the incentive mechanism for SRP. The incentive mechanism contains savings-based incentives and earned incentives to further advance

achievement of Least-Cost Procurement (LCP) goals. In this section, the Company requests approval on the proposed earnings for the action-based incentive items achieved in calendar year 2018.

Sections 7 is an informative section that details the Company's alignment with Docket 4600 principles and goals.

Section 8 is an informative section that holistically details the load growth forecast of the electric distribution system in Rhode Island in coordination with NWA planning and opportunities.

Section 9 is an informative section that details how NWAs are part of the electric distribution planning process. This section also identifies area studies relevant to NWA opportunities and analyses.

Section 10 details the South County East NWA opportunities. This section provides information from the South County East Area Study which details the potential for NWA opportunities in the Towns of Narragansett and South Kingstown. In this section, the Company requests approval on the proposed South County East NWA opportunities and their respective funding requests.

Section 11 details the Rhode Island System Data Portal (Portal) and associated resources and its current implementation status. The Company commits to coordination work regarding hourly data for further Portal enhancement in this section.

Section 12 describes market engagement efforts the Company performs with respect to SRP. The Company currently implements the 2019 SRP Marketing and Engagement Plan, as detailed in this section and included as an appendix. In this section, the Company requests approval on the proposed 2020 SRP Outreach and Engagement Plan and its respective funding request.

Section 13 is an informative section that describes coordination with Power Sector Transformation and the Energy Efficiency Program, Grid Modernization and Advanced Metering Functionality, and Infrastructure, Safety and Reliability plans.

Section 15 contains the miscellaneous provisions and signature pages of the settling parties for this 2020 SRP Report.

A new potential solution pathway in system planning is Non-Pipeline Alternatives (NPAs). The Company commits to performing background research on NPAs and exploring how NPAs align with Company policy and the Least-Cost Procurement Standards (LCP Standards) for the next

~~update in the Three-Year Plan review. The Company commits to engaging with stakeholders to discuss and understand opportunities and challenges regarding NPAs.~~

The proposals and information the Company presents in this SRP ~~Report~~ Plan advance Power Sector Transformation (PST)[3] goals, align with Docket 4600[4] principles, are coordinated with the Company's other programs and filings, and adhere to ~~the~~ Least-Cost Procurement (LCP) law.

[3] "Power Sector Transformation Initiative." *State of Rhode Island Public Utilities Commission and Division of Public Utilities and Carriers*, State of Rhode Island Office of the Governor Gina M. Raimondo, 8 Nov. 2017, www.ripuc.ri.gov/utilityinfo/electric/PST_home.html.
[4] "Docket No. 4600 and Docket No. 4600-A." *RIPUC*, Rhode Island Public Utilities Commission, 2 Nov. 2018, www.ripuc.ri.gov/eventsactions/docket/4600page.html.

2. Introduction

The Company is pleased to submit this ~~annual 2020~~1-2023 System Reliability Procurement 2021-2023 Three-Year Plan~~Report~~ (~~SRP Plan~~Report) to the PUC. This~~e~~ Plan~~SRP Report~~ has been developed by National Grid through an iterative process with the SRP Technical Working Group (the SRP TWG).[5]~~6~~~~7~~

This Plan is being jointly submitted as a Stipulation and Settlement (Settlement) between the Acadia Center, Division of Public Utilities and Carriers (Division), the Energy Efficiency and Resource Management Council (EERMC), Green Energy Consumers Alliance~~8~~, the Office of Energy Resources (OER), Northeast Clean Energy Council (NECEC), The Energy Council of Rhode Island (TEC-RI), and National Grid (together, the Parties). This Plan addresses a range of topics discussed by members of the SRP TWG regarding the Company's Plan ~~SRP Report~~ for calendar years 202~~0~~1 through 2023.

National Grid respectfully seeks approval of this ~~2020 SRP Report~~Plan and its integral proposals in accordance with the guidelines set forth in Section 4~~2~~ of the LCP Standards.

[5] Members of the SRP TWG presently include the Company, Acadia Center, the Division, Green Energy Consumers Alliance, OER, NECEC, TEC-RI, ~~Green Energy Consumers Alliance, Acadia Center,~~ several EERMC members, and representatives from the EERMC's Consulting Team.

[6] "The Collaborative." *RI Energy Efficiency & Resource Management Council*, RI Energy Efficiency & Resource Management Council, https://rieermc.ri.gov/thecollaborative/.

~~[7] "The Collaborative." *RI Energy Efficiency & Resource Management Council*, RI Energy Efficiency & Resource Management Council, https://rieermc.ri.gov/thecollaborative/.~~

~~[8] Formerly People's Power & Light.~~

3. Regulatory Basis for System Reliability Procurement

Commented [CM1]: Aligns with LCP 1.3.A, 4.4.C

This SRP ~~Report~~ Plan is submitted in accordance with the Least-Cost Procurement law, R.I. Gen. Laws § 39-1-27.7,[9] the basis for which is the Comprehensive Energy Conservation, Efficiency, and Affordability Act of 2006[10] (the 2006 Act) and as amended in May 2010. The 2006 Act provides the statutory framework for least-cost procurement, including system reliability, in the State of Rhode Island. The 2006 Act provides a unique opportunity for Rhode Island to identify and procure cost-effective customer-side and distributed resources with a focus on alternative solutions to the ~~traditional~~ standard supply and infrastructure options. These alternative solutions may deliver savings to customers by deferring or removing the need for distribution system investment and improving overall system reliability over time.

This SRP ~~Report~~ Plan is also submitted in accordance with the Rhode Island PUC's revised "Least Cost Procurement Standards," which the PUC approved in Docket No. ~~4~~5015~~684~~ (LCP Standards).[11] The LCP~~east Cost Procurement~~ law, R.I. Gen. Laws § 39-1-27.7, requires standards and guidelines for system reliability. On ~~S~~July 23~~eptember 8~~, 2020~~18~~ in Docket 5015~~4684~~, the PUC unanimously approved the revised standards for system reliability, finding that the standards were consistent with the policies and provisions of R.I. Gen. Laws § 39-1-27.7.1(e)(4),(f) and R.I. Gen. Laws § 39-1-27.7.3.

Commented [CM2]: TBD
Footnote reference pending publication of latest finalized LCP Standards.

> ***§ 39-1-27.7. System reliability and least-cost procurement.*** *– Least-cost procurement shall comprise system reliability and energy efficiency and conservation procurement as provided for in this section and supply procurement as provided for in § 39-1-27.8, as complementary but distinct activities that have as common purpose meeting electrical energy needs in Rhode Island, in a manner that is optimally cost-effective, reliable, prudent and environmentally responsible.*[12]

The ~~Least Cost Procurement~~LCP law further states that SRP resources are intended to include, but are not limited to, the following:

> *(i) Procurement of energy supply from diverse sources, including, but not limited to, renewable energy resources as defined in chapter 26 of this title;*

[9] "Title 39 Public Utilities and Carriers." *State of Rhode Island General Laws*, State of Rhode Island General Assembly, http://webserver.rilin.state.ri.us/Statutes/title39/39-1/39-1-27.7.HTM.

[10] "The Comprehensive Energy Conservation, Efficiency and Affordability Act of 2006." *State of Rhode Island General Assembly*, 25 Apr. 2006, http://www.ripuc.org/eventsactions/docket/3759-RIAct.pdf.

[11] "Least Cost Procurement Standards." *State of Rhode Island Public Utilities Commission and Division of Public Utilities and Carriers*, Energy Efficiency and Resource Management Council, 8 Sep. 2018, http://www.ripuc.org/eventsactions/docket/4684-LCP-Standards-FINAL.pdf.

~~[12] "Title 39 Public Utilities and Carriers." *State of Rhode Island General Laws*, State of Rhode Island General Assembly, http://webserver.rilin.state.ri.us/Statutes/title39/39-1/39-1-27.7.HTM.~~

(ii) Distributed generation, including, but not limited to, renewable energy resources and thermally leading combined heat and power systems, which is reliable and is cost-effective, with measurable, net system benefits;

(iii) Demand response, including, but not limited to, distributed generation, back-up generation and on-demand usage reduction, which shall be designed to facilitate electric customer participation in regional demand response programs, including those administered by the independent service operator of New England ("ISO-NE") and/or are designed to provide local system reliability benefits through load control or using on-site generating capability;

SRP resources include, in part, NWA ~~initiatives~~investments. Section ~~2~~4.4.A.~~3.A~~ of the LCP Standards requires that the Company identify T&D projects that meet certain screening criteria for potential NWAs that reduce, avoid, or defer T&D wires investments. See Section 7 for detail regarding NWAs.

~~The definition and requirements of NWAs are as follows:~~

~~NWA Definition:~~ ~~Non-Wires Alternatives is the inclusive term for any targeted electrical grid investment that is intended to defer or remove the need to construct or upgrade components of a distribution and/or transmission system, or "wires investment".~~

~~NWA Requirements:~~ ~~These NWA investments are required to be cost effective and are required to meet the specified electrical grid need.~~

~~Cost-effectiveness involves comparison of the total benefits, of applicable benefit factors from the Rhode Island Benefit Cost Model Test (RI Test), to the total cost of the proposed NWA solution, as assessed in benefit-cost analysis (BCA). The NWA investment is considered cost-effective if the benefit-cost ratio (BCR) for the NWA is greater than 1.0. The BCA methodology for NWA proposals is consistent with the language in the LCP Standards section 2.3.F and Docket 4600 framework.~~

~~An NWA can include any action, strategy, program, or technology that meets this definition and these requirements. The Company is currently engaged in ongoing discussions with stakeholders about non-clean energy and how it is considered in NWA solutions, proposals, and investment decisions.~~

~~Some technologies and methodologies that can be applicable as an NWA investment include demand response, solar, energy storage, combined heat and power (CHP), microgrid, conservation or energy efficiency measure, and other distributed energy resources (DERs) and distributed generation (DG). NWA projects can include these and other investments individually or in combination to meet the specified need in a cost-effective manner.~~

~~The maximum amount payable for NWA resources will be an annualized amount of the Approximate Value for the NWA opportunity. This Approximate Value is a net present value (NPV) calculated from 60~~100% of the deferral value of the otherwise~~-~~needed localized wires investment option, which by default are location-based avoided costs. The 10~~60% rate is the application of the Rhode Island Locational Incentive, as described in the 2019 SRP Report, to provide greater value to Rhode Island customers. The rate was previously pegged at 60% of the deferral value, as described in the 2019 SRP Report; however, the Company has experienced reduced market engagement following this derated incentive. The Approximate Value is stated in NWA requests for proposals (RFPs) to help inform third-party solution providers whether their NWA solution bid is cost-effective for the need. Any contracts to procure NWAs would have to be approved by the PUC, as required for all non-tariff contracts.~~

Sections 4.4 and ~~4.6.B~~2.5.A~~ ~~ of the LCP Standards further require the Company to submit, by November 21~~November December 7~~, 2020 and triennially thereafter~~1 of each year~~, an ~~n annual~~ SRP Three-Year Plan~~Report~~ that includes, among other information, the proposed Performance Incentive Mechanism (PIM) for SRP, proposed screening criteria for SRP investments, ~~a summary of where NWAs were considered,~~ strategies that enhance procurement of SRP investments, ~~identification of projects where NWAs were selected as a preferred solution,~~ the general procurement process for SRP, the evaluation process and criteria for SRP investments, ~~an implementation and funding plan for selected NWA projects, recommendations for demonstrating distribution or transmission projects for which the Company will use selected NWA reliability and capacity strategies~~and a proposed annual reporting plan for implementation updates of SRP investments~~, and the status of any previously approved NWA projects~~. For additional discussion on the criteria for NWA analysis, please see Section 7.

In addition to NWA opportunities, SRP resources can also include other efforts that adhere to the Least-Cost Procurement goals; that these resources be *complementary but distinct activities that have a common purpose of meeting electrical energy needs in Rhode Island, in a manner that is optimally cost-effective, reliable, prudent and environmentally responsible*.

3.1 Cost Test

In accordance with Section 1.3.B of the revised Standards, the Company adheres to the Rhode Island Benefit-Cost Test (RI Test) for all SRP investment proposals. The Company has developed the Rhode Island Non-Wires Alternative Benefit-Cost Analysis Model (RI NWA BCA Model), which is a derivative of the RI Test and utilizes the same Docket 4600 Benefit-Cost Framework, to more accurately assess NWA opportunities benefits and costs. Please see Appendix 23 for the RI NWA BCA Model.

The shift to using the RI NWA BCA Model has been a positive development for SRP. Per the currently-effective Standards, this specialized derivative of the RI Test is created using the RI Framework and accounts for applicable policy goals, PUC orders, regulations, guidelines, and

Commented [CM3]: Aligns with LCP 1.3.B

other policy directives; accounts for all relevant, important aspects; is symmetrical by including both costs and benefits for each relevant type of impact; is forward-looking by capturing the benefit-cost analysis over the life of the investment; and is ~~y~~transparent in its application and calculation.

Accounting for all costs and benefits associated with System Reliability Procurement provides a more robust accounting of the societal benefits that SRP investments deliver to electric and gas customers, the state, and society.

The cost test and cost-effectiveness analyses of SRP investments use avoided ~~-~~cost impact factors developed by Synapse Energy Economics as part of the "Avoided Energy Supply Components in New England: 2018 Report" (2018 AESC Study), sponsored by New England's electric and gas energy efficiency program administrators.[13] The state level avoided costs reflect current and expected market conditions and are highly influenced by the cost of fossil fuels and expectations about ISO-New England's forward capacity market. Company-specific transmission and distribution capacity values are also included. The cost-effectiveness analyses also include estimates of ~~some~~ economic benefits applicable to System Reliability Procurement.

The Company will use the RI NWA BCA Model, as detailed in Appendix 2, for assessing Rhode Island NWAs.

~~The cost test and cost-effectiveness analyses of SRP investments use avoided cost impact factors developed by Synapse Energy Economics as part of the "Avoided Energy Supply Components in New England: 2018 Report" (2018 AESC Study), sponsored by New England's electric and gas energy efficiency program administrators.[14] The avoided costs reflect current and expected market conditions and are highly influenced by the cost of fossil fuels and expectations about ISO-New England's forward capacity market. Company-specific transmission and distribution capacity values are also included. The cost-effectiveness analyses also include estimates of some economic benefits applicable to System Reliability Procurement.~~

3.2 Cost-Effective

Cost-effectiveness involves a net present value (NPV) comparison of the total benefits, of applicable benefit factors from the 2018 AESC Study, to the total cost of the proposed SRP investment, as assessed in benefit-cost analysis (BCA). The SRP investment is considered cost-effective if the benefit-cost ratio (BCR) for the resource is greater than 1.0. The BCA methodology for SRP proposals is consistent with the language in the LCP Standards Section 1.3.C and Docket 4600 Framework.

Commented [CM4]: Aligns with LCP 1.3.C

[13] Synapse Energy Economics, *Avoided Energy Supply Components in New England: 2018 Report*, Amended October 24, 2018.
~~[14] Synapse Energy Economics, *Avoided Energy Supply Components in New England: 2018 Report*, Amended October 24, 2018.~~

3.3 Reliable

SRP investments are reliable in that they must always meet the system need or support the sourcing of solutions that are evaluated to meet the system need. When procuring an SRP investment, such as an NWA solution, the following aspects are considered under the Project Reliability criterion: level of availability given a contingency or peak load event~~,~~ (e.g. market participation), reliability, maintenance, fuel availability, response time, and level of customer engagement as applicable~~, and maturity of technology proposed~~. These aspects indicate how reliable a proposed solution may be in addition to meeting the system need and are in accordance with Section 1.3.D of the revised Standards.~~.~~

Commented [CM5]: Aligns with LCP 1.3.D

3.4 Prudent

SRP investments are prudent and in line with Section 1.3.E of the LCP Standards in that they consider cost deferral, the overall timeline of solution implementation, and the lifetime of any procured solution. When procuring an SRP investment, SRP proposal evaluation includes schedule criteria such as meeting the need date, project milestones, and timing of project planning and permitting. Additionally, for solutions that involve physical assets, any applicable ratings degradation of the asset is considered and factored in to the solution procurement.

Commented [CM6]: Aligns with LCP 1.3.E

3.5 Environmentally Responsible

While maintaining an agnostic view with technology type and in line with Section 1.3.F of the Standards, SRP investments are environmentally responsible because SRP investments include, as part of their evaluation criteria, consideration of customer impact~~,~~ and ~~what~~the aesthetic, economic, acoustic, and general environmental impacts an SRP solution may have.

Commented [CM7]: Aligns with LCP 1.3.F

3.6 Lower than the Cost of the Best-Fit Standard Option

In accordance with Section 1.3.H of the LCP Standards, SRP investments are compared with the cost of the best-fit standard option. This includes comparison between the alternative non-wires or non-pipes option and the standard option for applicable cost categories enumerated in the Rhode Island Docket 4600 Benefit-Cost Framework (Framework) or, at a minimum, in~~of~~ the Total Resource Cost Test.[15]

Commented [CM8]: TBD terminology

Commented [CM9]: Aligns with LCP 1.3.H

~~TBD additional language~~

[15] "Docket No. 4443 - RI Energy Efficiency and Resource Management Council (EERMC) - Proposed Energy Efficiency Savings Targets for National Grid's Energy Efficiency Procurement for the Period 2015 - 2017 Consistent with Least Cost Procurement (Filed 9/17/13)." *State of Rhode Island Public Utilities Commission and Division of Public Utilities and Carriers*, Energy Efficiency and Resource Management Council, 17 Sept. 2013, www.ripuc.ri.gov/eventsactions/docket/4443page.html.

4. SRP Program Design and Planning Principles

The SRP program is designed ~~in order~~ to achieve optimal cost-effectiveness for the electric and gas systems and for Rhode Island customers, while ~~still~~ maintaining the safety and operational reliability of such systems and integral assets.

The SRP program and its constituent investments are planned in accordance with LCP law and the LCP Standards as detailed in Section 3, the guidance and process aligned with electric distribution planning as detailed in Section 7 and the in-development guidance and process with gas distribution planning as proposed in Section 8, and in coordination with other Company programs and initiatives as detailed in Section 11.

Potential areas of focus for SRP for calendar years 2021 through 2023 include the following:

- Identification of system needs for the gas and electric systems
- Identification of potential NWA opportunities
- Identification of potential NPA opportunities, including NPA pilot opportunities, as the NPA program is developed
- Development of National Grid's NPA program
- Continued and improved market engagement, including sourcing potential NWA and NPA solutions
- Continued stakeholder engagement
- Continuous program and process improvement

Generally, the perennial needs of the electric and gas systems are safety, reliability, cost-effective operations, meeting demand, and system capacity. The Company has a greenhouse gas (GHG) emissions reduction goal and blueprint, the *Northeast 80x50 Pathway*[16], that it aims to achieve 80% reduction in GHG by 2050. National Grid has further environmental policy and goals regarding reducing pollution, protecting wildlife and wetlands, minimizing climate change, and more as detailed on the Company's environmental policy webpage.[17]

Rhode Island state goals and initiatives include Executive Order 20-01[18] that mandates "to meet one hundred percent (100%) of the state's electricity demand with renewable energy resources by

Commented [CM10]: In fulfillment of LCP Standards 4.2.A, 4.2.D, and 4.3.A

Commented [CM11]: Aligns with LCP 4.2.A

Commented [CM12]: Aligns with LCP 4.3.A

[16] "Northeast 80x50 Pathway." *National Grid's Northeast 80x50 Pathway*, National Grid USA, Inc., 15 June 2018, www.nationalgridus.com/news/Assets/80x50-White-Paper-FINAL.pdf.
[17] "Environmental Policy & Programs: National Grid." *Environmental Policy & Programs | National Grid*, National Grid USA, Inc., 2020, www.nationalgridus.com/Our-Company/Environmental-Policy-and-Programs.
[18] R.I. Executive Order No. 20-01 (Jan. 17, 2020), https://governor.ri.gov/documents/orders/Executive-Order-20-01.pdf.

2030", Executive Order 19-06 [19] that mandates the path forward for Heating Sector Transformation, the integral components of Power Sector Transformation[~~20~~], and the integral components of the Resilient Rhode Island Act of 2014[21].

~~SRP investments how they affect other programs (Portal and NWAs to D-planning)~~
~~TBD text~~

[19] R.I. Executive Order No. 19-06 (July 8, 2019), https://governor.ri.gov/documents/orders/Executive%20Order%2019-06.pdf.
[~~20~~] ~~"Power Sector Transformation Initiative." *State of Rhode Island Public Utilities Commission and Division of Public Utilities and Carriers*, State of Rhode Island Office of the Governor Gina M. Raimondo, 8 Nov. 2017, www.ripuc.ri.gov/utilityinfo/electric/PST_home.html.~~
[21] "CHAPTER 42-6.2 Resilient Rhode Island Act of 2014 – Climate Change Coordinating Council." *Chapter 42-6.2 - Index of Sections*, State of Rhode Island General Assembly, 2014, http://webserver.rilin.state.ri.us/Statutes/TITLE42/42-6.2/INDEX.HTM.

SRP Timeline

The Standards outline the following timeline for the development of the program implementation plans and detailed budgets. National Grid will work with the EERMC and the SRP TWG to meet these deadlines:

- SRP Three-Year Plans
  - By November 19, 2020 and triennially thereafter: The EERMC will vote whether to endorse the Energy Efficiency Procurement Plan.
  - December 7, 2020 and triennially thereafter: Submit the System Reliability Procurement Plan for three years of implementation beginning January 1 of the following year.

- SRP Investment Proposals
  - The Company will file SRP Investment Proposals as needed, and will aim to file SRP Investment Proposals alongside, and separately from, annual Infrastructure, Safety, and Reliability (ISR) Plans when possible.

- SRP Year-End Reports
  - National Grid will submit a Year-End Report to the EERMC and the SRP TWG for their review and comment annually at least one week before the EERMC's scheduled meeting prior to the filing date that year.
  - The EERMC shall vote whether to endorse the Annual Plan prior to the prescribed filing date, annually.
  - March 1, 2021 and annually thereafter: Submit the Year-End Report detailing plan implementation for the preceding calendar year.

4.5. SRP Funding Mechanism~~Funding Request for System Reliability Procurement~~

The Company proposes to fund the projects and initiatives included in ~~this~~ SRP Investment Proposals ~~SRP Report~~ through the applicable cost recovery mechanism.[22]

For SRP proposals composed of operational expenditure (opex), the Company proposes that such investments be funded through the System Benefit Charge, or Energy Efficiency (EE) ~~charge~~Charge, on customers' bills~~, as has been done historically~~. Such opex-type SRP investments may include third-party owned and operated NWA projects, new enhancements to the Rhode Island System Data Portal, or SRP market engagement work.

For SRP investments, such as NWAs or NPAs, composed of capital expenditure (capex), the Company proposes that such investments be filed and proposed in an SRP Investment Proposal. The Company also proposes that specific capex tracking factors would be used to track funding allocated to such capex-based SRP investments. Such capex-type alternative investments may include Company-owned and operated NWA or NPA projects.

~~The tables below illustrate the breakdown of the Company's funding request and the proposed customer charge associated with SRP for 20201.~~

~~All funding requests made in this Report are factored into the SRP cost recovery mechanism, which is the SRP Factor, or the "Proposed System Reliability Factor per kWh" value in Table S-1, which folds into the EE charge on customers' bills.~~ All funding requests made in SRP Investment Proposals are factored into the respective SRP cost recovery mechanism, which is the SRP Factor, or the "Proposed System Reliability Factor per kWh" value, which folds into the EE Charge on customers' bills. The proposals and funding requests in ~~this~~ SRP Investment Proposals~~Report~~ are not complemented by or funded through other Company programs or plans.

Please note that administrative costs for SRP plan development and stakeholder meetings are covered by the work of full-time employees (FTEs) and are included in the current rate case. Only additional, incremental costs for plan implementation of proposed projects and programs are included in the funding request for SRP.

The Company estimates that the incremental costs stated in the table below will be required in 2021~~0~~ through 2023 to implement the projects and initiatives detailed in this ~~Report~~Plan. Please

[22] ~~Administrative costs for SRP plan development and stakeholder meetings are covered by the work of full-time employees (FTEs) and are included in the current rate case. Only additional, incremental costs for plan implementation of proposed projects and programs are included in the funding request for SRP.~~

note that the costs stated for calendar years following 202~~0~~1 are informative to detail potential future costs. These potential future costs could change in subsequent ~~annual~~ SRP Investment Proposals~~SRP Reports~~, based on the finalized proposal made in a specific year.

Please note that the costs for new enhancements to the Rhode Island System Data Portal and the SRP Market Engagement program are expected to be $0 for calendar years 2021 through 2023.

The Company requests approval for recovery of these proposed funds[23].

5.1 Planned Funding Requests for 2021-2023

Table 4: Detailed Summary of 2020 Planned Funding Requests for SRP in 2021-2023 SRP Funding Request

SRP Section	SRP Initiative/Proposal	CRM	CY 2021	CY 2022	CY 2023
6.1	SRP Incentive Mechanism, Savings-Based EarningsIncentive	EE Charge	unk.	unk.	unk.
7	NWAs in System Planning	unk.	unk.	unk.	unk.
8	NPAs in System Planning	unk.	unk.	unk.	unk.
9	Rhode Island System Data Portal	EE Charge	$0	$0	$0
10	SRP Market Engagement	EE Charge	$0	$0	$0
		Total	**$0**	**$0**	**$0**

Please note that the cells that state "unk." in Table 4 indicate unknowns because SRP plan and project development during future years will determine applicable funding requests for those items. Also note that the CRM for NWAs and NPAs is unknown until the proposal stage, based on the specific solution's ownership model.

Please reference Section 9.3 for why funding requests are not applicable in future years for the Narragansett 17F2 NWA Project line item.

[23] Administrative costs for SRP plan development and stakeholder meetings are covered by the work of full-time employees (FTEs) and are included in the current rate case. Only additional, incremental costs for plan implementation of proposed projects and programs are included in the funding request for SRP.

Table S-1: RI SRP 2020 Funding Sources

Table S-1
National Grid
System Reliability Procurement
Funding Sources
$(000)

	2020
(1) **2020 SRP Budget:**	**$81.2**
(2) **Projected Year-End Fund Balance and Interest:**	**-$1,001.3**
(3) **Customer Funding Required:**	**$1,082.6**
(4) **Forecasted kWh Sales:**	**7,113,299,305**
(5) **Proposed System Reliability Factor per kWh:**	**$0.00015**
(6) **Energy Efficiency Program charge per kWh, excluding uncollectible recovery:**	**$0.01267**
(7) **Total Proposed Energy Efficiency Charge per kWh, excluding uncollectible recovery:**	**$0.01282**
(8) **Energy Efficiency Program Charge per kWh, including uncollectible recovery:**	**$0.01298**

Notes
(1) The projected SRP Budget includes only additional funds for SRP. It does not include costs associated with focused energy efficiency.
(2) "Total Proposed Energy Efficiency Charge per kWh, excluding uncollectible recovery" is the sum of the "Proposed System Reliability Factor per kWh" and "Energy Efficiency Program charge per kWh, excluding uncollectible recovery" lines.
(3) All dollar amounts shown are in $current year.
(4) Table lines (6), (7), and (8) are included here for reference from Table E-1 of the Energy Efficiency Program Plan.

Please note that in Table S-1 the Proposed System Reliability Factor per kWh for 2020 is relatively high at $0.00015 compared to prior years because of the following reason:

For 2020, the SRP Factor is positive $0.00015 due to a negative projected SRP fund balance. The negative fund balance is due in part to an error that was identified in National Grid's SRP fund balance tracking spreadsheet in September 2019. The error was that the "Proposed System Reliability Factor per kWh" was not updated for the SRP program years for 2016, 2017, and 2018 and resulted in over-apportioning revenues to SRP.

Once the error was identified, an adjustment was made to reapportion revenue from SRP back to EE; the proposed 2020 EE Program Charge incorporates this adjustment. The 2019 "Proposed System Reliability Factor per kWh" and January 2019 adjustment will cause SRP to become underfunded for 2019, resulting in an increase in the "Proposed System Reliability Factor per kWh" in 2020. The Company projects the 2020 ending balance for SRP to be in line with revenue requirements for the period.

This error led to an over-collection in SRP of approximately $1M over three years. The $1M that was over-collected has been reallocated back to EE and immediately used as a revenue to support 2019 EE activities. This reconciliation back to customers is incorporated in the 2020 customer charge referenced in Attachment 5, Table E-1 (which includes both SRP and EE).

National Grid has modified the SRP fund balance tracking spreadsheet to mitigate future errors in reporting SRP activity. Going forward, the SRP Factor will be inputted by year to align the filed SRP Factor and current reporting period. Data input by year ensures input of the current SRP Factor and provides visibility into prior period factors for an additional control point. Additionally, an independent review for the SRP fund balance tracking spreadsheet will be conducted cross-departmentally and with input from the SRP program lead.

~~5.~~6. SRP Performance Incentive Mechanism

Commented [CM13]: Aligns with LCP 1.4, 4.4.D

This section details the SRP Performance Incentive Mechanism and ~~involved action based~~, savings-based~~, and earned incentives~~ incentives to advance LCP goals.

The Company and the Parties have agreed on savings-based metrics for the Company to earn incentives on work completed through SRP in years 202~~0~~1 through 2023.

~~5.1 SRP Action-Based Incentives for 2020~~

~~The Company is not proposing any action-based incentives for 2020.~~

~~5.2 Earned Incentives from 2019 SRP Report~~

~~There were no approved action-based incentive items from the 2019 SRP Report.~~

~~5.3 Earned Incentives from 2018 SRP Report~~

~~The Company proposed the following actions and associated percentages of the 2018 SRP budget that can be earned as described in the 2018 SRP Report.~~

~~Table 4: Summary of 2018 SRP Report Action-Based Incentives~~

~~Section~~	~~Action~~	~~Date~~	~~Action Complete?~~	~~% of 2018 SRP Budget~~	~~Calculated Earnings~~
~~Rhode Island System Data Portal & Heat Map Resources~~	~~Complete an Initial Version of the Portal~~	~~June 30, 2018~~	~~Yes~~	~~1%~~	~~$2,373~~
~~Rhode Island System Data Portal & Heat Map Resources~~	~~Complete DG-Focused Map~~	~~September 30, 2018~~	~~Yes~~	~~1%~~	~~$2,373~~
~~Rhode Island System Data Portal & Heat Map Resources~~	~~Complete a Stakeholder Review Process of Location-Based Avoided Costs~~	~~August 31, 2018~~	~~No~~	~~1%~~	~~N/A~~
~~Market Engagement with NWAs~~	~~Develop and Deploy an Initial Marketing & Engagement Plan~~	~~March 31, 2018~~	~~Yes~~	~~1%~~	~~$2,373~~
~~Rhode Island System Data Portal & Heat Map Resources~~	~~Issue at least two new RFPs for NWA Resources~~	~~December 31, 2018~~	~~Yes~~	~~2%~~	~~$4,746~~
				~~Total Earn to Date~~	~~$11,865~~

~~Regarding the potential incentive earnings to date, the status and calculated earnings are detailed as follows:~~

- ~~The completed action-based incentive items for calendar year 2018 are:~~
  - ~~The initial version of the Portal was completed by June 30, 2018.~~
  - ~~The initial version of the Hosting Capacity (DG-focused) map was completed by September 30, 2018.~~
  - ~~An initial version of the SRP Marketing & Engagement Plan was developed and deployed by March 31, 2018.~~
  - ~~The two new RFPs for NWA resources were issued by December 31, 2018.~~

- ~~The stakeholder review process of location-based avoided costs was not completed by the assigned date. Please see Section 12.1 for further information on the Company's intent for continued stakeholder engagement with regard to the review process of location-based avoided costs.~~

- ~~The 2018 SRP budget spend for calendar year 2018 is $237,306.~~

- ~~The total achieved percentage of 2018 SRP budget spend is 5%.~~

- ~~The total potential incentive earnings are calculated from the total achieved percentage multiplied by the 2018 SRP budget spend for calendar year 2018.~~

- ~~Therefore, the total potential incentive earnings to date is calculated to be $11,865.~~

~~5.4~~6.1 SRP Savings-Based Incentives

Commented [CM14]: In development with regard to locational incentives and PIM research.

The Company will be able to earn savings-based incentives for DERs that are installed as a result of ~~NWA~~ SRP RFPs. The Company will be obligated to demonstrate that DERs were installed as a result of ~~NWA~~ SRP ~~opportunities~~investments. This demonstration would require:

1. An affidavit from the DER provider that Company marketing influenced their decision to site, and
2. Confirmation that the DER was installed by the in-service need date of the SRP opportunity~~in the current year of the SRP Report (e.g. calendar year 2020)~~, and
3. Measured output at the feeder during peak hours showing the specific DER's contribution to peak load reduction.

For the Company to earn savings-based incentives on DERs, the DERs must be deemed cost-effective according to the Rhode Island cost-effectiveness framework established in the Commission's Docket 4600 Guidance Document. DERs that are statutory such as net metering and the RE Growth program are assumed to be cost-effective as per the PUC's initial guidance in the Docket 4600 process.

Savings associated with programs for which the Company earns an incentive from other sources (e.g. RE Growth) will not be included in the Company's savings-based incentive calculation.

The savings-based incentive will allow the Company to earn a share of the net benefits of the installed DERs that meet the demonstration criteria described above. Net benefits are defined as the remaining sum left after total costs have been subtracted from the total benefits; net benefits are synonymous with savings in the context of the savings-based incentive. Net benefits will be calculated for DER projects using the Utility Cost Test, which includes only the "power sector" costs and benefits in the Rhode Island cost-effectiveness framework. Participant and societal costs and benefits will not be included for the purpose of determining the shared savings incentive amount. The Utility Cost Test provides the clearest indication of the extent to which DERs reduce costs for all customers. Net benefits will include the location-based avoided distribution costs, if applicable, prepared by the Company, as described above. The location-based avoided distribution costs are the deferral value of the wires investment.

The net benefits of the DERs will be shared by allocating 20% to the Company and 80% to customers, with the share to the Company apportioned annually over the lifetime of the ~~NWA~~ SRP project. The Company earns its apportioned annual share for each year the installed DER meets the three demonstration requirements listed above.

$$Company\ Share = Net\ Benefits \times 20\%$$

$$Apportioned\ Annual\ Company\ Share = \frac{Net\ Benefits \times 20\%}{\#Years\ of\ \sout{NWA}SRP}$$

$$Customer\ Share = Net\ Benefits \times 80\%$$

The savings-based incentive mechanism would be applied to the net benefits of the ~~NWA~~ SRP project(s) proposed in SRP Investment Proposals~~this SRP Report~~, as well as any projects installed and marketed as a result of the other SRP initiatives proposed in ~~this~~ the SRP Investment Proposals~~report~~, to the extent they meet the criteria outlined in this section and the projects or initiatives result from RFPs. ~~The savings-based incentive mechanism, assuming the Company meets the threshold requirements for earning the incentive, is illustrated below in the calculation of the savings-based incentive associated with the NWA project(s) proposed in this SRP Report.~~

~~There are no applicable NWA projects in this SRP Report for savings-based incentives in calendar year 2020.~~

~~5.5~~6.2 SRP Performance Incentive Mechanism Proposal

The Company requests approval of the proposed PIM as detailed in Section 6.1 for calendar years 2021 through 2023.earnings for the action-based incentive items achieved in calendar year 2018 as detailed in Section 0.

6. RI NWA BCA ModelAdvancing Docket 4600 Principles and Goals

This section illustrates how the 2020 SRP Report advances Docket 4600 principles and goals through the information it provides and proposals the Company puts forth.

The Docket 4600-A Guidance Document directs 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."[24]

Along with the quantitative benefits detailed in the Plan, as measured by the RI Test, this SRP Report advances or is neutral to Docket 4600 principles and goals.[25]

To meet this directive, the Company describes in the table below how the SRP Report either advances, detracts, or remains neutral on achieving Docket 4600 goals for the electric system.

Docket 4600 articulates several distinct goals for the electric system in Rhode Island:

- Provide reliable, safe, clean, and affordable energy to Rhode Island customers over the long term (this applies to all energy use, not just regulated fuels);
- Strengthen the Rhode Island economy, support economic competitiveness, retain and create jobs by optimizing the benefits of a modern grid and attaining appropriate rate design structures;
- Address the challenge of climate change and other forms of pollution;
- 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;
- Appropriately compensate distributed energy resources for the value they provide to the electricity system, customers, and society;
- Appropriately charge customers for the cost they impose on the grid;
- Appropriately compensate the distribution utility for the services it provides;
- Align distribution utility, customer, and policy objectives and interests through the regulatory framework, including rate design, cost recovery, and incentives.

[24] Approved final clean version of Guidance Document 10/27/17.

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

Table 5: 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.	Neutral: This is neutral because, in the 2020 SRP Report, there are no new NWA proposals. The SRP Report provides for safe, clean, and affordable energy to customers through new NWA proposals. These NWA proposals are mandated to be cost-effective, reliable, prudent and environmentally responsible.
Strengthen the Rhode Island economy, support economic competitiveness, retain and create jobs by optimizing the benefits of a modern grid and attaining appropriate rate design structures.	Neutral: This is neutral because, in the 2020 SRP Report, there are no new NWA proposals. The SRP Report strengthens the RI economy by engaging economic benefits of the RI Test model through NWA project proposals. Additionally, the Company will be engaging with third-party vendors to provide solutions where needed by customers and the electric grid in a cost-effective manner.
Address the challenge of climate change and other forms of pollution.	Advances: This advances Docket 4600 because, in the 2020 SRP Report, the 2020 SRP Report addresses the challenge of climate change and other forms of pollution with the commitment to perform background research on NPAs. SRP adheres to the Least Cost Procurement law, which mandates, in part, that SRP activities meet electrical energy needs in Rhode Island in a manner that is optimally environmentally responsible. These SRP activities include proposed NWA projects.

~~4600 Goals for Electric System~~	~~Advances/Detracts/Neutral~~
~~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.~~	~~Neutral:~~ ~~This is neutral because, in the 2020 SRP Report, there are no new NWA proposals.~~ ~~The SRP Report promotes investment in NWAs, which include such technologies as battery storage, demand response, energy efficiency, and distributed generation.~~
~~Appropriately compensate distributed energy resources for the value they provide to the electricity system, customers, and society.~~	~~Neutral:~~ ~~This is neutral because, in the 2020 SRP Report, there are no new NWA proposals and the Company has not entered into a contractual agreement with a DER provider through SRP.~~ ~~The SRP Report appropriately compensates DERs when the Company enters an agreement for an NWA project with a third-party DER solution provider. NWA project contracting follows the LCP Standards and LCP law, and therefore compensates DERs in a cost-effective manner.~~
~~Appropriately charge customers for the cost they impose on the grid.~~	~~Neutral:~~ ~~This is neutral because, in the 2020 SRP Report, there are no new NWA proposals.~~ ~~The Company implements locational incentives, as detailed in the 2019 SRP Report, to engage the market and enable NWAs on the electric distribution grid for targeted system needs that customer-side resources impose on the grid. These incentives are reflected in the cost for NWA projects.~~

4600 Goals for Electric System	Advances/Detracts/Neutral
Appropriately compensate the distribution utility for the services it provides.	Advances: This advances Docket 4600 because, in the 2020 SRP Report, the Company requests approval of the proposed earnings for the action based incentive items achieved in calendar year 2018. The incentive mechanism contained in this SRP Report compensates the Company for achieving SRP and NWA technologies goals through delivering effective SRP resources and programs to customers.
Align distribution utility, customer, and policy objectives and interests through the regulatory framework, including rate design, cost recovery, and incentive.	Advances: This advances Docket 4600 because, in the 2020 SRP Report, the Company commits to several stakeholder and policy objectives such as: continued NWA process analysis to discover any optimizations, coordination work regarding hourly data on the Portal, coordination between Company programs and filings, actively avoid double-counting shareholder incentives in SRP projects, host stakeholder discussions regarding the electric forecasting process, development and implementation of a data access plan, and continued overall stakeholder engagement with SRP.

7. Forecasted Load Growth for NWA Opportunities

This section provides an overview and update on forecasted load growth for locations in Rhode Island that have the potential for NWA opportunities.

The Company's electric distribution system serves close to 500,000 customers in 38 cities and towns in Rhode Island. The residential class accounts for approximately 41% of the Company's total Rhode Island load, the commercial class accounts for approximately 49%, and the industrial class accounts for approximately 10%.

The forecasted load growth rates for cities and towns in Rhode Island are shown in Appendix 2.

Section 8.5 addresses forecasted load growth in the Washington County area, which the South County East NWA opportunities plan to address. As seen in Sections 8.1 through 8.4, the average annual growth rates are projected to be negative over the next 10 years.

The Company has not presently identified other NWA opportunities through the distribution system planning (DSP) process, which is detailed in Section 9.

The Company accounts for energy efficiency, solar photovoltaic (PV) DC, electric vehicles (EV), and demand response (DR) impacts in the Company's electric peak load forecasting as shown in Appendix 2.

7.1 Forecasted Load Growth in Bristol County

The Bristol County area annual weather-adjusted summer peak is expected to decrease at an average annual growth rate of -0.2% for the next 10 years. This rate is less than the statewide average annual growth rate of 0.0%.

7.2 Forecasted Load Growth in Kent County

The Kent County area annual weather-adjusted summer peak is expected to decrease at an average annual growth rate of -0.2% for the next 10 years. This rate is less than the statewide average annual growth rate of 0.0%.

7.3 Forecasted Load Growth in Newport County

The Newport County area annual weather-adjusted summer peak is expected to decrease at an average annual growth rate of -0.2% for the next 10 years. This rate is less than the statewide average annual growth rate of 0.0%.

7.4 Forecasted Load Growth in Providence County

The Providence County area annual weather-adjusted summer peak is expected to decrease at an average annual growth rate of -0.3% for the next 10 years. This rate is less than the statewide average annual growth rate of 0.0%.

7.5 Forecasted Load Growth in Washington County

The Washington County area annual weather-adjusted summer peak is expected to increase at an average annual growth rate of 0.7% for the next 10 years. This rate is greater than the statewide average annual growth rate of 0.0%.

The towns of Narragansett, Kenyon, and Peace Dale are targeted by the South County East NWAs: Narragansett 42F1 NWA and South Kingstown NWA. The South Kingstown NWA involves parts of the electric distribution grid in the towns of Kenyon and Peace Dale while the Narragansett 42F1 NWA targets the electric distribution grid in the town of Narragansett. Please see Section 10 for further detail on these NWA opportunities.

7. NWAs in System Planning

This section details the Company's Non-Wires Alternative (NWA) program in Rhode Island.

~~8.~~

~~This section illustrates the NWA planning process for distribution system planning.~~

~~The terms "potential NWA opportunity" or "NWA opportunity" refer to a non-wires investment option that has been identified for a specific electric grid need but which has not yet been confirmed as an NWA project for implementation in place of the wires investment option.~~

~~An area study is an analysis for a specific, bounded area, typically with respect to a substation and its feeders or a geographical demarcation, that assesses the electric grid characteristics and the health of its equipment.~~

~~The initial system assessment consists of a detailed analysis of facilities and system performance within the identified study geographic and electric scope. Initial system assessments are the first step to gather information for area studies and other system evaluations.~~

~~Potential NWA opportunity screening and analysis are included as a standard part of the electric distribution system planning process. The Company can potentially own non-wires assets and acquire Company-owned solutions as a result of NWA opportunities.~~

~~The Company identifies and screens potential NWA opportunities through the following high-level sequential process:~~

1. ~~Scoping~~

   ~~The Distribution Planning and Asset Management (DPAM) team develops a scope for a system need or a scope that details the boundaries and concerns of the area study. Planning criteria, Company standards, and forecasts are inputs to the Scoping stage.~~

2. ~~Initial System Assessment~~

   ~~The DPAM team performs an initial system assessment, either as part of an area study or when other targeted asset management and planning projects are initiated.~~

   ~~To determine whether a potential NWA opportunity is feasible for an electric grid need, the DPAM team screens distribution projects with the criteria listed in Section 2.3.A of the LCP Standards, which are aligned with the Company's internal planning document. Feasibility is based on the screening criteria, which cover technical, economic, and timing factors.~~

These NWA screening criteria are applied to an identified electric grid need and resulting potential NWA opportunities are investigated. Partial NWA opportunities are also assessed as an option. Partial NWAs are solutions that address part of a specified system need with the rest of the system need addressed by the wires alternative. A partial NWA effectively reduces the scope of infrastructure projects.

3. Engineering Analysis

An engineering analysis is performed to gather detailed information for comprehensive plan development to solve the system need. This information is also included as part of development of an NWA opportunity and an NWA RFP as required.

Additionally, targeted EE and targeted DR sourced from internal Company programs are assessed at this stage, if timing for the system need allows, to determine whether they are viable components to include as part of an NWA solution.

Grid opportunities that are sufficiently out in the future are periodically re-analyzed to determine whether the system need has changed so that an NWA option is potentially feasible. Timing of re-evaluation is established within the specific area study.

4. Plan Development

Plan development is the stage when wires options and non-wires options are developed. The NWA team develops the NWA RFP, sends the RFP to market, and receives and evaluates NWA bid responses during this stage.

If the DPAM team determines that an NWA opportunity is technically and economically feasible according to the NWA screening criteria, the NWA team then gathers relevant engineering information from the DPAM team and develops an NWA RFP. This engineering information is derived from the engineering analysis. This NWA RFP is then published to the market for third-party solution providers to bid on. The NWA team then evaluates any bids received and selects the most suitable bid for the NWA opportunity. The NWA team proposes the winning NWA solution to the DPAM team as the NWA option for the specified electric grid need.

5. Select Recommended Plan

The DPAM and NWA teams then collaboratively review and compare the wires and non-wires options with respect to project cost and the cost-effectiveness of the options, system reliability, safety, and other factors and finalize the recommended plan. Please refer to Section 3 for explanation on cost-effectiveness and BCA breakdown.

If an NWA option is selected as the solution for the electric grid need, then the NWA solution is proposed through the next SRP Investment ProposalReport.

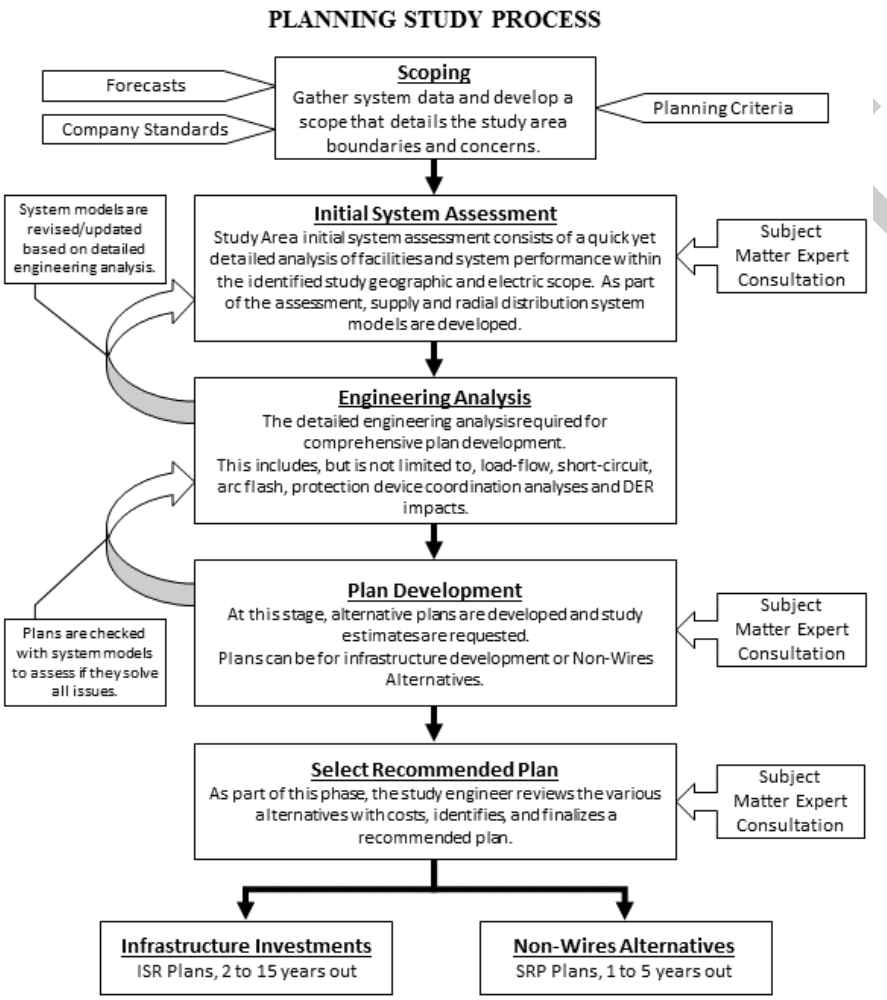
If a wires solution is the best option, and if actual load growth continues at a rate where the wires investment is still needed, then that wires investment is fully developed and incorporated into a future Electric Infrastructure, Safety and Reliability Plan (ISR Plan).

There are projects that have been screened for NWAs that are not included in a given Electric ISR Plan. This is due to a variety of constraints such as need date, coordination with other projects, budget constraints, etc. Instead, these projects may be proposed in a future Electric ISR Plan, if the need still exists, as budgets allow. Therefore, it is possible that there may be projects and budgets related to load growth in the Electric ISR Plan that are not included in the screening conducted for SRP investmentsthis Report.

Once a wires solution is chosen for a distribution project and is included in an annual Electric ISR Plan filing, it is not screened for NWA feasibility again.

For reference on timing of the NWA review process and possible inclusion in a specific year's Electric ISR Plan please see the figure on the following page, which illustrates the Distribution Planning Study Process. The Distribution Planning Study Process outlines the major steps and study-based inputs in the overall area study process. Please note that capital infrastructure projects that have passed screening for potential NWA opportunities will not be advanced in the Electric ISR Plan unless they have been fully evaluated for NWA. The Company plans to continue analyzing its current NWA screening and development processes to determine how NWAs might be best considered as both complete and partial solutions.

~~Figure 1: Distribution Planning Study Process Flowchart~~



7.1 Definition of NWA

Commented [CM15]: Aligns with LCP 4.2.C

The definition and requirements of NWAs are as follows:

NWA Definition:	Non-Wires Alternatives is the inclusive term for any targeted investment or activity that is intended to defer, reduce, or remove the need to construct or upgrade components of an electric ~~distribution and/or transmission~~ system, or "wires investment".
NWA Requirements:	These NWA investments are required to be cost-effective and are required to meet the specified electrical grid need.

An NWA can include any action, strategy, program, or technology that meets this definition and these requirements. The Company is currently engaged in ongoing discussions with stakeholders about non-clean energy and how it is considered in NWA solutions, proposals, and investment decisions.

Some technologies and methodologies that can be applicable as an NWA investment include demand response, solar, energy storage, combined heat and power (CHP), microgrid, conservation or energy efficiency measure, and other distributed energy resources (DERs) and distributed generation (DG). NWA projects can include these and other investments individually or in combination to meet the specified need in a cost-effective manner.

Additionally, ~~T~~the terms "potential NWA opportunity" or "NWA opportunity" refer to a non-wires investment option that has been identified for a specific electric grid need but which has not yet been confirmed as an NWA project for implementation in place of the wires investment option.

The maximum amount payable for NWA resources will be an annualized amount of the Approximate Value for the NWA opportunity. This Approximate Value is a net present value (NPV) calculated from 100% of the deferral value of the otherwise-needed localized wires investment option, which by default are location-based avoided costs. The 100% rate is the application of the Rhode Island Locational Incentive to provide greater value to Rhode Island customers. The rate was previously pegged at 60% of the deferral value, as described in the 2019 SRP Report; however, the Company has experienced reduced market engagement following this derated incentive. The Approximate Value is stated in NWA requests for proposals (RFPs) to help inform third-party solution providers whether their NWA solution bid is cost-effective for the need. Any contracts to procure NWAs would have to be approved by the PUC, as required for all non-tariff contracts.

7.2 Screening Criteria for NWA

Commented [CM16]: Aligns with LCP 4.2.B, 4.4.A.i

The screening criteria for potential NWA opportunities are as follows:

Table 5: Screening Criteria for NWA Opportunities

Criteria Type	Criteria Requirement
Project Type Suitability	Project types include Load Relief and Reliability. The need is not based on Asset Condition. If load reduction is necessary, then it will be less than 20% of the total load in the area of the defined need.
Timeline Suitability	Start of construction is at least 30 months in the future.
Cost Suitability~~6.1~~	Greater than $1M.

Additionally, by the Company's discretion, National Grid may propose to pursue a project that does not pass one or more of these criteria if there is reason to believe that a viable NWA solution exists, assuming the benefits of doing so justify the costs.

These screening criteria are applied to all grid needs that arise through planning analysis and system assessment. From this, the types of distribution system needs that may be addressed with SRP resources are load relief and reliability-type grid needs; other system needs may also be addressed through SRP so long as the need is not based on Asset Condition, as detailed by the Project Type Suitability criterion.

Such screening criteria is utilized during Initial System Assessment, as detailed in Section 7.3.

7.3 NWA Planning Process and Integration with Electric System Planning

Commented [CM17]: Aligns with LCP 4.3.B, 4.3.C

This section illustrates the NWA planning process for distribution system planning.

The terms "potential NWA opportunity" or "NWA opportunity" refer to a non-wires investment option that has been identified for a specific electric grid need but which has not yet been confirmed as an NWA project for implementation in place of the wires investment option.

An area study is an analysis for a specific, bounded area, typically with respect to a substation and its feeders or a geographical demarcation, that assesses the electric grid characteristics and the health of its equipment.

The initial system assessment consists of a detailed analysis of facilities and system performance within the identified study geographic and electric scope. Initial system assessments are the first step to gather information for area studies and other system evaluations.

Potential NWA opportunity screening and analysis are included as a standard part of the electric distribution system planning process. The Company can potentially own non-wires assets and acquire Company-owned solutions as a result of NWA opportunities.

The Company identifies and screens potential NWA opportunities through the following high-level sequential process:

1. Scoping

   The Distribution Planning and Asset Management (DPAM) team develops a scope for a system need or a scope that details the boundaries and concerns of the area study. Planning criteria, Company standards, and forecasts are inputs to the Scoping stage.

2. Initial System Assessment

   The DPAM team performs an initial system assessment, either as part of an area study or when other targeted asset management and planning projects are initiated.

   To determine whether a potential NWA opportunity is feasible for an electric grid need, the DPAM team screens distribution projects with the criteria listed in Section 7.2 of this Plan, which are aligned with the Company's internal planning document. Feasibility is based on the screening criteria, which cover technical, economic, and timing factors.

   These NWA screening criteria are applied to an identified electric grid need and resulting potential NWA opportunities are investigated. Partial NWA opportunities are also assessed as an option. Partial NWAs are solutions that address part of a specified system need with the rest of the system need addressed by the wires alternative. A partial NWA effectively reduces the scope of infrastructure projects.

3. Engineering Analysis

   An engineering analysis is performed to gather detailed information for comprehensive plan development to solve the system need. This information is also included as part of development of an NWA opportunity and an NWA RFP as required.

   Additionally, targeted EE and targeted demand response (DR) sourced from internal Company programs are assessed at this stage, if timing for the system need allows, to determine whether they are viable components to include as part of an NWA solution.

   Grid opportunities that are sufficiently out in the future are periodically re-analyzed to determine whether the system need has changed so that an NWA option is potentially feasible. Timing of re-evaluation is established within the specific area study.

4. Plan Development

Plan development is the stage when wires options and non-wires options are developed. The NWA team develops the NWA RFP, sends the RFP to market, and receives and evaluates NWA bid responses during this stage.

If the DPAM team determines that an NWA opportunity is technically and economically feasible according to the NWA screening criteria, the NWA team then gathers relevant engineering information from the DPAM team and develops an NWA RFP. This engineering information is derived from the engineering analysis. This NWA RFP is then published to the market for third-party solution providers to bid on. The NWA team then evaluates any bids received and selects the most suitable bid for the NWA opportunity, as detailed in Section 7.4. The NWA team proposes the winning NWA solution to the DPAM team as the NWA option for the specified electric grid need.

5. Select Recommended Plan

The DPAM and NWA teams then collaboratively review and compare the wires and non-wires options with respect to project cost and the cost-effectiveness of the options, system reliability, safety, and other factors and finalize the recommended plan. Please refer to Section 3 for explanation on cost-effectiveness and BCA breakdown.

If an NWA option is selected as the solution for the electric grid need, then the NWA solution is proposed through the next SRP Investment Proposal.

If a wires solution is the best option, and if actual load growth continues at a rate where the wires investment is still needed, then that wires investment is fully developed and incorporated into a future Electric Infrastructure, Safety and Reliability Plan (Electric ISR Plan).

There are projects that have been screened for NWAs that are not included in a given Electric ISR Plan. This is due to a variety of constraints such as need date, coordination with other projects, budget constraints, etc. Instead, these projects may be proposed in a future Electric ISR Plan, if the need still exists, as budgets allow. Therefore, it is possible that there may be projects and budgets related to load growth in the Electric ISR Plan that are not included in the screening conducted for SRP investments.

Once a wires solution is chosen for a distribution project and is included in an annual Electric ISR Plan filing, it is not screened for NWA feasibility again.

For reference on timing of the NWA review process and possible inclusion in a specific year's Electric ISR Plan please see ~~the figure~~Figure 1 and Figure 2~~ on the following page~~, which illustrate the Distribution Planning Study Process. The Distribution Planning Study Process outlines the major steps and study-based inputs in the overall area study process. Please note that capital infrastructure projects that have passed screening for potential NWA opportunities will not be advanced in the Electric ISR Plan unless they have been fully evaluated for NWA. The Company plans to continue analyzing its current NWA screening and development processes to determine how NWAs might be best considered as both complete and partial solutions.

Figure 1: Electric Distribution Planning Study Process Flowchart

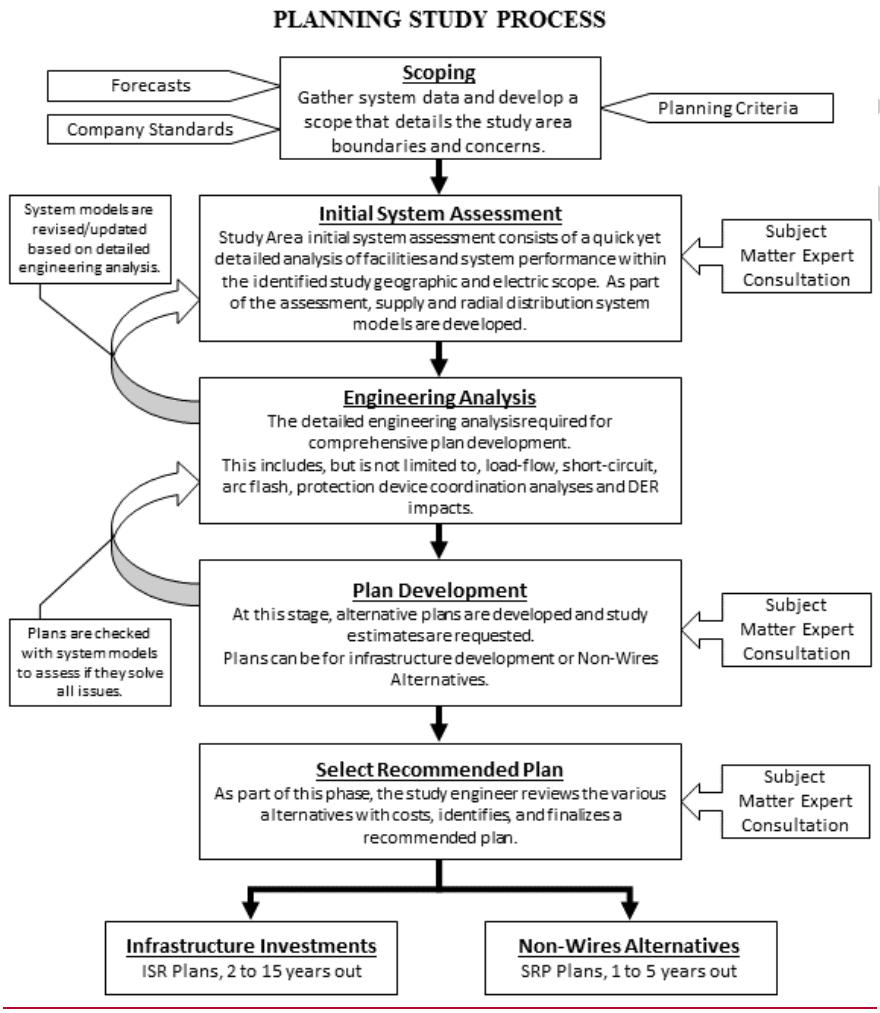
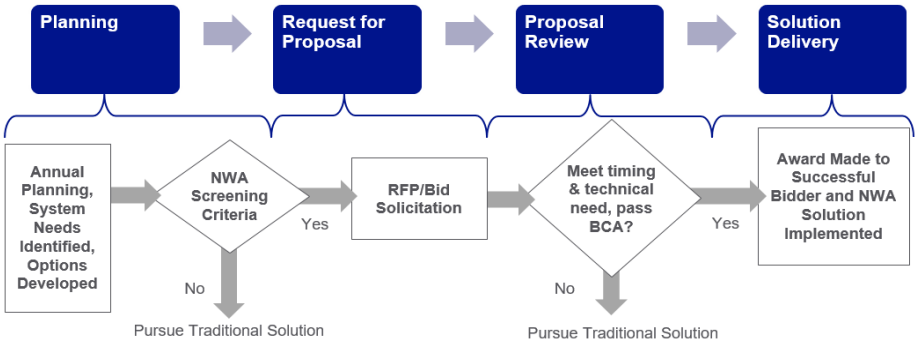


Figure 2: Overview of National Grid's NWA Procurement Process



7.4 NWA Evaluation Process ~~of NWAs~~

Commented [CM18]: Aligns with LCP 4.4.A.v

Following receipt of all bid proposals for an NWA opportunity, National Grid proceeds directly into the evaluation stage of the NWA process. This evaluation and review of submitted bid proposals is comprised of four rounds of evaluation, with each round based on a high-level screening, detailed technical review, detailed economic review, and final round selections, as detailed in the table and figure below.

Figure 3: National Grid NWA Evaluation Rounds

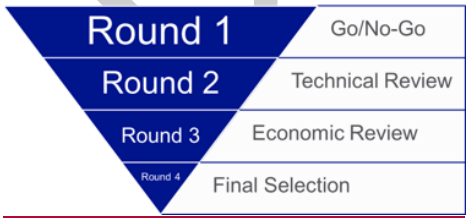


Table 6: National Grid NWA Evaluation Rounds Description

Round	Evaluation Focus
Round 1	Go/No-Go: preliminary BCA, bidder qualifications, technology type and maturity, schedule, engineering

Round	Evaluation Focus
Round 2	Detailed technical review: engineering, controls, communications and operations, permitting, schedule and milestones~~,~~
Round 3	Detailed economic review: full BCA, credit rating assessment, financing structure, payment structure, additional included costs and incentives
Round 4	Final review of shortlisted bidders, winning bidder selection as applicable, contract negotiation

National Grid has developed and refined over several years rigorous NWA evaluation criteria to comprehensively assess NWA bid proposals. These evaluation criteria are applied to every single NWA bid proposal that National Grid receives. The criteria are equivalently applied for any solution approach or technology type. The criteria are also equivalently applied for any proposal source, whether from a third-party solution provider or from an internal National Grid team, such as an internally-sourced Company bid proposal for a targeted energy efficiency solution from National Grid's Customer Energy Management (CEM) team.

~~As National Grid maintains a technology-agnostic approach to potential solution types for NWA opportunities, the Company's NWA evaluation criteria is sufficiently detailed to account for The Company will analyze a mix of resources that can meet the need in the needed area and develop an appropriate solution.~~ Factors that will influence the solutions that are chosen will include ~~the solutions' duration of~~ availability and reliability, ~~solution's~~ viability and functionality, existing market conditions for the proposed technologies, societal and environmental impact, cost-effectiveness, safety and~~,~~ risk, ~~maturity,~~ flexibility, ability to meet the specific identified ~~load relief needs that are identified~~system need, ~~developer's~~bidder's experience, and the ability for ~~the~~a ~~chosen~~solution proposal ~~solution(s)~~ to pass the BCA. The NWA evaluation categories are detailed and described in Table 7 below.

Table 7: National Grid USA Evaluation Categories for NWA Solution Proposals

Category	Description
Proposal Content & Presentation	Information requested has been provided by the bidder and is sufficiently comprehensive and well presented to allow for evaluation.
Developer Experience	The experience of the Bidder, any Engineering, Procurement and Construction (EPC) contractor, prime subcontractors and, if applicable, O&M operator or other

Category	Description
	entity responsible for the development, construction, or operation of the proposed solution.
Environmental	The Bidder's Proposal shall address Impacts including but not limited to acoustic, aesthetic, air, water, and soil impacts, and permitting and zoning considerations.
Project Viability	The probability that the solution(s) associated with a Proposal can be financed and completed as required by the relevant agreement.
Functionality	The extent to which the proposed solution would meet the defined functional requirements and the ability to provide demand reduction during peak times and within the geographic area of need.
Technical Reliability	The extent to which the proposed type of technology and the equipment would meet the reliability need and can be integrated with utility operations including the ability to monitor and dispatch.
Safety	National Grid requires that the Bidders recognize safety is of paramount importance. Bidders will be required to provide safety information related to the proposed technology and information regarding safety history.
Customer and Socio-economic Impacts	The Bidder's Proposal shall address how the proposed technology impacts the customer in addition to temporary and permanent jobs to be created, economic development impacts, and property tax payments.
Scheduling	The Bidder's Proposal shall include proposed timelines outlining milestones and providing sufficient details for each deliverable, including meeting the in-service need date.
Offer Price	The Bidder's Proposal shall be based on project-specific values and financing requirements.
Adherence to Terms	The extent to which the Bidder accepts National Grid's proposed Term Sheet will be taken into consideration. The RFP evaluation may impute an additional amount to Bidder's Proposal to reflect any proposed modifications to the non-price terms and conditions by the Bidder that result in National Grid incurring additional costs or risks. Redlines to the Term Sheet shall be provided by the Bidder as part of its Proposal for review by National Grid during the evaluation period.
Credit	Bidder's capability and willingness to perform all of its financial and other obligations under the relevant agreement will be considered by National Grid in addition to Bidder's financial strength, as determined by National Grid, and any credit assurances acceptable to National Grid that Bidder may submit with its Proposal.

This section details area studies and distribution projects relevant to NWA opportunities and analysis.

There were 15 discretionary distribution projects initiated between April 1, 2018 and March 31, 2019, and 15 of 15 were determined to be ineligible for NWA consideration. A table detailing the projects reviewed and the reasons for their NWA ineligibility is provided in Appendix 4.

The Company continues NWA screening in its distribution area studies. The following screenings are ongoing:

Northwest Rhode Island
Problem identification and solution development: Area study has identified a megawatt hour (MWh) contingency issue for the loss of the Nasonville transformer. Wires and non-wires alternatives are currently being reviewed.

Central Rhode Island West
Problem identification and solution development: No opportunities have been identified at this stage of the System Area Study.

South County West
Problem identification and solution development: No opportunities have been identified at this stage of the System Area Study.

Additionally, the Company completed a reevaluation of NWA opportunities that were identified in past area studies.

Table 8: Reevaluated NWA Areas

Study Area	Load Relief	Traditional Standard Wires Option
Providence	3.9 MW	Substation expansion, Feeder installation - Geneva
Providence	2.3 MW	Substation expansion, Feeder installation - Geneva

As part of the Company's reevaluation process, it was determined that the Company should pursue third-party solutions for these previously identified NWA opportunities from the East Bay Study. The Company will commit to developing an NWA RFP for the East Bay opportunity.

Additionally, the Company has confirmed that the NWA opportunities previously identified in the Providence Area Study are still required. However, the Company will engage the market for potential third-party solutions in later years closer to the in-service need date because the system need is sufficiently in the future. The Company recognizes that NWA technology costs change

over time, and projects that might not have been viable at the time of study might become viable if technology costs decrease over time.

Additionally, the Company has confirmed that the NWA opportunities previously identified in the Providence Area Study are still required. However, the Company will engage the market for potential third-party solutions in later years closer to the in-service need date because the system need is sufficiently in the future. The Company recognizes that NWA technology costs change over time, and projects that might not have been viable at the time of study might become viable if technology costs decrease over time.

8. Proposal for NPAs in System Planning

9. Proposal for NPAs in System PlanningSouth County East NWA Projects

This section details the Company's plan for developing the Non-Pipeline Alternatives (NPA) program in Rhode Island.potential NWA opportunities: the Narragansett 42F1 NWA, the Narragansett 17F2 NWA, and the South Kingstown NWA.

The Company is currently pursuing these three potential NWA opportunities that were identified in the South County East Area Study. These NWA opportunities are in Narragansett and South Kingstown.The Company commits to performing further background research on NPAs, to exploring how NPAs align with Company policy and the Least Cost Procurement Standards (LCP Standards), and to build out the NPA program over calendar years 2021 through 2023. The Company commits to engaging with stakeholders to discuss and understand opportunities and challenges regarding NPAs.

8.1 Definition of NPA

The Company proposes the following definition for NPAs.

NPA Definition:	Non-Pipeline Alternatives is the inclusive term for any targeted investment, or incremental activity gas pipeline investment that is intended to defer, reduce, or remove the need to construct or upgrade components of a natural gas distribution and/or transmission system, or "pipesline investment.":
NPA Requirements:	These NPA investments are required to be cost-effective and are required to meet the specified gas pipeline need.

An NPA can include any action, strategy, program, or technology that meets this definition and these requirements. The Company is currently engaged in ongoing discussions with stakeholders about non-clean energypotential solution types in consideration of and how it is considered in NPA solutions, proposals, and investment decisions.

Some technologies and methodologies that can be applicable as an NPA investment include demand response, solar, energy storageelectrification, combined heat and power (CHP), microgrid, and conservation or energy efficiency measures, and renewable natural gas (RNG), and other distributed energy resources (DERs) and distributed generation (DG). NPA projects can include these and other investments individually or in combination to meet the specified need in a cost-effective manner.

8.2 Screening Criteria for NPAs

The Company proposes the following screening criteria to use for assessing potential viability of NPA opportunities from pipe~~s~~line investments.

Table 8: Screening Criteria for NPA Opportunities

Criteria Type	Criteria Requirement
Project Type Suitability	
Timeline Suitability	
Cost Suitability~~6.1~~	

These screening criteria will be applied to all pipeline needs that arise through planning analysis and system assessment. From this, the types of system needs that may be addressed with SRP resources are load relief and reliability-type grid needs; other system needs may also be addressed through SRP so long as the need is not based on Asset Condition, as detailed by the Project Type Suitability criterion.

Such screening criteria will be integrated into gas system planning process as the NPA program is developed, as proposed in Section 8.3.

8.3 NPA Planning Process and Integration with Gas ~~Distribution~~System Planning

The Company proposes to develop the NPA program, process, and its integration with gas system planning over calendar years 2021 through 2023.

8.4 NPA Evaluation Process ~~of NPAs~~

The Company proposes to develop the NPA evaluation process over calendar years 2021 through 2023.

~~9.1 Recommendation from the South County East Area Study~~

~~The recommendation from the South County East Area Study for the opportunities in Narragansett and South Kingstown is to further develop the NWA option and to estimate potential implementation costs for each area.~~

~~The wires option has been assessed and estimated for the South County East area need. The wires option can now be compared to the NWA option the Company will source from the market to determine which option is the most prudent investment to implement.~~

9.2 Narragansett 42F1 NWA

This section details the Narragansett 42F1 NWA opportunity.

9.2.1 Background

This potential NWA opportunity, the Narragansett 42F1 NWA, intends to provide load relief in the Town of Narragansett by deferring or removing the need for feeder line work and reconfiguration on the Bonnet 42F1 feeder.

The Town of Narragansett is mostly supplied by (4) 12.47 kV distribution feeders. Feeder 42F1 is projected to be loaded above summer normal ratings by 2024 and lacks useful feeder ties to reduce loading below their ratings. Either more capacity must be added or load must be reduced in the town.

9.2.2 Timeframe

The Company expects that the Narragansett 42F1 NWA timeframe will span seven years from 2024 to 2030, which is the maximum amount of time based on the current peak load forecast that the substation and feeder upgrade can be deferred with this solution. There is the potential for a partial or continued NWA solution following 2030 with the Narragansett 42F1 NWA; however, this option has not been assessed at this time.

9.2.3 Result of NWA RFP

The Company issued an RFP for the Narragansett 42F1 NWA opportunity in calendar year 2018 and evaluated the submitted bid proposals from third-party solution providers in calendar year 2019. Please see Appendix 8 for the Narragansett 42F1 NWA RFP document, which also details the technical and area information for the Narragansett 42F1 NWA opportunity.

All NWA solution bid proposals submitted to National Grid for this opportunity did not pass evaluation for a feasible solution.

9.2.4 Next Steps

As the timing for the NWA need is not until 2024, the window of opportunity for sourcing a potential NWA solution is still open.

The Company will proceed with investigating alternate solution pathways, which may include: refining the parameters of the need, re-engineering the RFP, a Company sourced proposal, a Company-owned solution, or a partial NWA. The Company is still actively seeking potential NWA solutions for this opportunity.

9.3 Narragansett 17F2 NWA

This section details the Narragansett 17F2 NWA opportunity.

9.3.1 Background

This NWA opportunity, the Narragansett 17F2 NWA, intended to provide load relief in the Town of Narragansett by deferring or removing the need for feeder line work and reconfiguration on the Wakefield 17F2 feeder.

9.3.2 Result of NWA RFP

The Company issued an RFP for the Narragansett 17F2 NWA opportunity in calendar year 2018 and evaluated the submitted bid proposals from third-party solution providers in calendar year 2019. Please see Appendix 9 for the Narragansett 17F2 NWA RFP document, which also details the technical and area information for the Narragansett 17F2 NWA opportunity.

All NWA solution bid proposals submitted to National Grid for this opportunity did not pass evaluation for a feasible solution.

9.3.3 Next Steps

The need timing for this NWA opportunity is 2021. Therefore, the window of opportunity for sourcing a potential NWA solution is closed. The 2020 SRP Report would be the last chance to propose an NWA project for this opportunity. Third-party solution providers, on average, require twelve to eighteen months lead time from the in-service date.

The Company will proceed with the wires option for the Narragansett 17F2 system need.

9.4 South Kingstown NWA

This section details the South Kingstown NWA opportunity.

9.4.1 Background

This potential NWA opportunity, the South Kingstown NWA, intends to provide load relief in the Town of South Kingstown by deferring or removing the need for feeder line work and reconfiguration on the Peace Dale 59F3 and Kenyon 68F2 feeders.

The western section of the Town of South Kingstown is supplied mostly by (3) 12.47 kV distribution feeders. Feeders 59F3 and 68F2 are projected to be loaded above summer normal ratings and lack useful feeder ties to reduce loading below their ratings. Either new feeder ties must be created or load must be reduced in the western half of the town.

9.4.2 Timeframe

The Company expects that the South Kingstown NWA timeframe will span nine years from 2022 to 2030, which is the maximum amount of time based on the current peak load forecast that the substation and feeder upgrade can be deferred with this solution. There is the potential for a partial or continued NWA solution following 2030 with the South Kingstown NWA; however, this option has not been assessed at this time.

9.4.3 Result of NWA RFP

The Company issued an RFP for the South Kingstown NWA opportunity in calendar year 2019 and evaluated the submitted bid proposals from third-party solution providers in calendar year 2019. Please see Appendix 10 for the South Kingstown NWA RFP document, which also details the technical and area information for the South Kingstown NWA opportunity.

All NWA solution bid proposals submitted to National Grid for this opportunity did not pass evaluation for a feasible solution.

9.4.4 Next Steps

As the timing for the NWA need is not until 2022, the window of opportunity for sourcing a potential NWA solution is still open.

The Company will proceed with investigating alternate solution pathways, which may include: refining the parameters of the need, re-engineering the RFP, a Company sourced proposal, a Company-owned solution, or a partial NWA. The Company is still actively seeking potential NWA solutions for this opportunity.

9.5 Path Forward with South County East NWA

The Company is committed to sourcing viable solutions for potential NWA opportunities. The Narragansett 17F2 NWA opportunity is no longer feasible based on timing constraints for sourcing an NWA solution. However, the windows of opportunity for the Narragansett 42F1 NWA and South Kingstown NWA are still open based on their need timing.

The Company recognizes a need for improvements to the NWA RFP and evaluation process to promote more opportunities for successful NWAs. The Company commits to the following actions with the intent of increasing the viability of the South County East NWA Projects:

1. Analyze whether there are additional benefit streams available that can be combined with NWAs to create more cost-effective solutions.
2. Refine the parameters of the need to capture additional benefits, if applicable.
3. Assess the option of a Company-sourced proposal, where the Company formulates a proposal with specific parameters to be fulfilled by the market, which would be used to compare against third party solutions.

The Company commits to investigating viable alternate solution pathways for the Narragansett 42F1 and South Kingstown NWA opportunities.

10.9. Rhode Island System Data Portal

This section details the Rhode Island System Data Portal and associated resources.

The Portal is an interactive online mapping tool developed by the Company. The Portal provides specific information for select electric distribution feeders and associated substations within the Company's electric service area in Rhode Island. This information includes feeder characteristics such as geographic locations, voltage, feeder ID, planning area, substation source, approximate loading, and available distribution generation hosting capacity.

The Portal provides this information to stakeholders, customers, and third-party solution providers. The main target audience is third-party solution providers and the main goal of the Portal is to provide information in order to engage the market for cost-effective grid solutions to reduce costs for Rhode Island customers.

The Portal is part of SRP because SRP resources can include efforts that adhere to the Least-Cost Procurement goals and that these resources be complementary but distinct activities that have a common purpose of meeting electrical energy needs in Rhode Island. As the main goal of the Portal is to provide information in order to engage the market for cost-effective grid solutions to reduce costs for Rhode Island customers, the Portal is considered a complementary activity to meet electrical energy needs and therefore falls under LCP standards and goals.

Costs related to Portal maintenance and routine operation of existing Portal aspects and work by FTEs are included in the current rate case under Docket 4770. Only new enhancements to the Portal are covered in the annual SRP ReportInvestment Proposals. New enhancements are expected to originate from collaborative consultation between National Grid and external stakeholders.

A public landing page for the Portal is located on the customer-facing National Grid website.[26]

The 2018 SRP Report included a proposal for the initial work on the Portal. The initial version of the Portal went live on June 30, 2018. The initial version of the Hosting Capacity Map resource of the Portal went live on September 28, 2018.

The 2019 SRP Report included a proposal for additional enhancement work on the Portal. Initial posting of redacted area studies to the Company Reports tab started in January 2019. The initial version of the NWA tab resource of the Portal went live on June 11, 2019.

[26] See Rhode Island System Data Portal. *National Grid US*, National Grid USA Service Company, Inc., 2018, www.nationalgridus.com/Business-Partners/RI-System-Portal.

~~10.1~~9.1 Portal to Date

To date, the Portal includes tabs that detail select Company reports, a distribution assets overview map, a heat map, ~~and~~ a hosting capacity map, sea level rise, and National Grid's NWA program.

The Distribution Assets Overview tab contains a map that displays specific electric distribution feeder and substation information, summer normal ratings, and up-to-date recorded loading and forecasted loading.

The Heat Map tab contains an interactive color-coded map of distribution feeders based on forecasted load compared to summer normal rating. The heat map provides information on circuits that would benefit from DER interconnection for load relief, and on circuits that have existing capacity for electric vehicle (EV) charging stations, heat pumps, and other beneficial electrification opportunities.

The Hosting Capacity tab contains an interactive map of distribution feeders based on interconnected distributed generation (DG) and in-progress DG projects. The hosting capacity map also contains information on substation ground fault overvoltage protection (3V0) status. The Portal details if 3V0 is installed at a substation or if 3V0 is in construction or slated for construction and the proposed in-service date. Installation of 3V0 makes a substation transformer "DG-ready".

The Sea Level Rise tab that displays sea level rise data from the National Oceanic and Atmospheric Administration (NOAA) in a map layer.

The NWA tab that contains a link to National Grid's NWA Website[27], which contains information on the Company's NWA process and NWA RFP opportunities.

~~10.2 Portal Enhancements~~Enhancing the Portal

~~The Company does not currently foresee any further new enhancements to the Portal for calendar years 2021 through 2023.commits to further enhancement of the Portal by completing the following action:~~

- ~~Begin coordination work with the Company's proposed Grid Modernization Plan regarding inclusion of hourly (8,760 hours) data in addition to peak load data if the Grid Modernization Plan with this update is approved for funding.~~

~~Coordination work regarding inclusion of hourly data is a step toward providing more effective information to the market.~~

[27] "Non-Wires Alternatives." *National Grid Business Partners*, National Grid USA, Inc., 13 Nov. 2019, www.nationalgridus.com/Business-Partners/Non-Wires-Alternatives/.

~~10.3~~9.2 Portal Funding Plan~~Funding Request for the Portal~~

The Company estimates that no additional SRP funding will be required for currently planned Portal enhancements for calendar years 2021 through 2023.~~the commitment stated above for calendar year 2020.~~

~~11.~~10. SRP Market Engagement

This section provides information regarding the Company's ~~outreach and~~ market engagement efforts with respect to SRP.

SRP Market Engagement aims to raise awareness and perform outreach and engagement for the Rhode Island System Data Portal as needed, for NWA-related activities not covered by FTE work, and with third-party solution providers.

Outreach and engagement for activities specific to NWA, such as NWA RFPs, are already included in the work by FTEs dedicated to the development and pursuit of NWA opportunities and solutions. These FTEs are covered by the rate case.

~~The purpose of the SRP Outreach and Engagement Plan is to raise awareness of and drive engagement with the Rhode Island System Data Portal and associated map resources to all appropriate Rhode Island parties, with the primary target audience being third-party solution providers. These third-party solution providers include potential DER solution providers. The Outreach and Engagement Plan is in the SRP because it supports an SRP initiative, the Rhode Island System Data Portal. The SRP Outreach and Engagement Plan is not included in any other Company program or plan because SRP Outreach and Engagement drives directly at engagement with DER providers to seek solutions for NWA projects.~~

~~There may be additional opportunities for installations of alternative solutions and technologies that reduce peak load outside of National Grid's consideration and proposal of cost-effective NWA projects. This SRP Outreach and Engagement Plan will nurture these inherent opportunities with the work the Company is doing on the Portal, and to encourage and engage DER solution providers to support the strategic deployment of these solutions to benefit constrained areas.~~

Such market engagement will enable third-party solution providers and vendors to more easily access available information about National Grid's electric distribution system and SRP opportunities in Rhode Island and therefore further enable these solution providers to create, submit and develop innovative energy solutions for Rhode Island customers. ~~The~~ SRP Market Engagement ~~Outreach and Engagement Plan~~ upholds the commitment of National Grid and the State of Rhode Island to advance a more reliable, safe, and cost-effective energy landscape for residents and businesses of Rhode Island.

10.1 SRP Procurement

Commented [CM19]: Aligns with LCP 4.4.A.iv

SRP procurement is a comprehensive process that encompasses, for the electric side, NWA planning and evaluation and is planned to encompass the in-progress NPA program process. Procurement of SRP resources involve the following general process:

- Identification of a system need or opportunity

- Development of an RFP for the SRP opportunity
- Issue RFP to market
- Receive bid proposals
- Evaluation of submitted bid proposals
- Selection of bid proposal
- Filing of SRP proposal

The Company will utilize National Grid's existing strategic sourcing process for procurement of SRP and standard option investments.

~~11.1~~10.2 Market Engagement Channels

Commented [CM20]: Aligns with LCP 4.4.A.iii

With respect to SRP and NWA activities, the Company further engages with the market, vendors, and third-party solution providers through the following communication channels:

- Procurement and Contracting Platform: National Grid posts RFPs, receives vendor bids, and sends formal vendor communications in an official forum via its procurement and contracting digital platform for vendors. This is National Grid's Ariba platform.[28]
- Rhode Island System Data Portal: National Grid posts information regarding Company reports, feeder loading, hosting capacity, sea level rise, and links to National Grid's NWA Website.~~NWAs and NWA RFPs to the Portal.~~
- NWA Website: National Grid maintains a central public-facing website for its NWA program that details the Company's planning process, opportunities, and other NWA-related information.
- ~~Rhode Island System Data Portal Outreach: National Grid promotes awareness and drives engagement to the Portal via the SRP Outreach and Engagement Plan initiative and additionally detailed in Section 0.~~
- NWA Vendor Stakeholder Monthly Calls: National Grid directly interacts with vendor stakeholders in monthly calls to raise awareness on the NWA development and bid submission process and to inform vendor stakeholders on upcoming and current NWA opportunities. National Grid also hosts Q&A during these calls and receives feedback relevant to NWA.
- NWA Vendor One-on-One Meetings: National Grid directly interacts with vendor stakeholders on an individual basis as requested by vendor companies in order to learn

[28] "National Grid Ariba." *SAP Ariba*, Ariba Inc., 2020, http://nationalgrid.sourcing.ariba.com/.

about the vendor's background and technology and for the vendor to learn about National Grid's NWA program and purpose.

The Company is additionally exploring outreach via social media with regard to NWA and how different industry or professional social media platforms can be best utilized for enhanced SRP and NWA outreach and engagement.

SRP Procurement

SRP procurement is a comprehensive process that encompasses, for the electric side, NWA planning and evaluation and is planned to encompass the in-progress NPA program process. Procurement of SRP resources involve the following high-level process:

- Identification of a system need or opportunity
- Development of an RFP for the SRP opportunity
- Evaluation of submitted bid proposals
- Selection of bid proposal
- Filing of SRP proposal

Specifically, the Company proposes

11.2 Market Engagement Activities to Date

To date, the Company has focused SRP market engagement activities on the Rhode Island System Data Portal.

Please see Appendix 5 for the 2019 SRP Marketing and Engagement Plan.

The Company has developed and implemented an SRP Monthly Marketing Report that it circulates with the SRP TWG stakeholders. This is included in Appendix 6 – 2019 SRP Marketing and Engagement Year-to-Date Results. These year-to-date results demonstrate the impact of the SRP Outreach and Engagement Plan.

Market engagement activities to date, organized by the business-to-business (B2B) outreach and engagement channels, are as follows:

- Webinars
  The Company has launched educational webinars for third-party solution providers in Rhode Island. The Company utilizes email marketing and online registration to raise awareness for those webinars. Four webinars have been hosted in calendar year 2019.

- In-Person Demonstrations

The Company hosts in-depth technical in-person demonstrations for third-party solution providers in Rhode Island. In-person demos are similar to webinars in purpose, with the added benefit that hands-on guidance can be provided to the vendor during the demonstration. The Company hosted two in-person demonstrations in calendar year 2019.

- Email

  Email marketing helps to maintain and raise awareness for current and new vendors, notify vendors of any major changes or updates to the Portal, and informs vendors that the Portal is a useful tool to use as part of project and proposal development.

  The Company has performed four email campaigns in calendar year 2019, with one campaign performed per quarter, to maintain awareness of the Portal among the current vendor base. The Company has also leveraged additional available promotional opportunities through the RI Solar Stakeholders mailing list, via outreach to the RI OER, and through in-person meetings.

- Digital Advertisements

  The Company has developed a digital advertising campaign to raise awareness of the RI System Data Portal to increase Google search ranking and to serve up Portal ads to developers in the State. This campaign started in September 2018. A customer-facing webpage was developed on the National Grid website to serve as a front door to the Portal and to make it easier for vendors to find.

- Paid Search Terms

  Paid search terms enable the Portal to be populated much higher in a web search results list. This search result improvement allows vendors to more easily receive search results relevant to the Portal. A web search is another venue where new vendors can learn about the Portal through the use of related terminology.

  The Company has seen all four of the paid search terms rise to 2nd position in a Google search results list in calendar year 2019.

- Social Media Engagement

  Posting important updates on a business-oriented social media platform helps to maintain awareness of the Portal and to concisely call out important changes to the Portal for vendors.

  National Grid has posted two messages regarding the Rhode Island System Data Portal to the Company pages of LinkedIn to enable another venue of outreach to new and existing vendors in calendar year 2019.

- Vendor Contact List

Procuring vendor contact lists enables National Grid to directly contact vendors, especially new vendors, who are not currently being reached via email marketing or web advertisements. These vendor contact lists are used to communicate to vendors about Portal webinars, in-person demonstrations, or major updates to the Portal.
National Grid has procured three vendor contact lists in calendar year 2019, with two of three being free and one being a paid national vendor list.

- Contact Channels
  National Grid has created a dedicated email distribution list in calendar year 2019 for all appropriate inquiries related to the Portal.

Please see Appendix 6 for the 2019 SRP Marketing and Engagement Plan Year-to-Date Results for further detail and which contains the results and metrics from market engagement activities for the current year to date.

11.310.3 Market Engagement Proposal

The Company has entered a maintenance phase with the Rhode Island System Data Portal. Therefore, the only planned SRP Market Engagement activities for the Portal are to maintain web traffic analytics to the Portal landing page. These web traffic analytics have no cost to operate or acquire.

The Company will continue to engage the market in the other channels in addition to the Portal, as detailed in Section 10.2. These other channels are already included in the work by FTEs and are therefore covered by the rate cases of all National Grid jurisdictions.
requests approval to continue the proposed SRP Outreach and Engagement Plan through calendar year 2020. Please see Appendix 7 for the proposed 2020 SRP Outreach and Engagement Plan text.

The Company requests approval for the proposed budget of $69,370 to support SRP Market Engagement and the SRP Outreach and Engagement Plan initiative in 2020.

The Company strives to nurture the inherent opportunities with the work the Company is doing on the Portal and to encourage DER solution providers to support the strategic deployment of these solutions to benefit constrained areas. The Company notes that there is still a significant proportion of vendors attendees in the in-person demonstrations and webinars, 50% as of August 2019, who report that the demo or webinar was the first time hearing of or seeing the Portal. The Company interprets this figure as being far from market saturation for awareness and therefore considers the continuation of the SRP Outreach and Engagement Plan as necessary.

The proposed SRP Outreach and Engagement Plan will continue to promote the Portal. The 2020 SRP Outreach and Engagement Plan will build on the results of the 2019 SRP Marketing and Engagement Plan.

11.410.4 Market Engagement Funding Plan

The Company estimates that no additional SRP funding will be required for currently planned SRP Market Engagement for calendar years 2021 through 2023.

The Company estimates that a total of $69,370 will be needed to support SRP Market Engagement and the SRP Outreach and Engagement Plan initiative in 2020.

The Company will need funding to support the creation and dissemination of marketing materials and tracking mechanisms and for marketing vendor payment. This is captured in the Materials and Vendors category in the table below.

The Company will need funding to support program planning and administration, which is associated with the management of materials development within the Company and with vendors and of the tracking and evaluation processes to determine the initiative's effectiveness. This is captured in the Program Planning and Administration category in the table below.

Table 5: SRP Market Engagement Funding Plan

Category	Cost
Materials and Vendors	$41,370
Program Planning and Administration	$28,000
Total	**$69,370**

~~12.~~11. Coordination between SRP and other Programs

The Company recognizes that improved synchronization between SRP and ~~Power Sector Transformation (~~PST~~)~~, the Energy Efficiency Program Plan (EE Plan), the Infrastructure, Safety and Reliability (ISR) Plan, the Grid Modernization Plan (GMP), and the Advanced Metering Functionality (AMF) Business Case is necessary and intends to maintain and improve coordination between these filings.

Therefore, the Company commits to continued stakeholder engagement and continued participation in enhanced discussions regarding SRP, NWA, and related policy and programs with stakeholders. These enhanced discussions are held in the SRP TWG meetings and related sessions which include in-depth topical deep dives, process reviews, and plan development negotiation.

~~The Company also commits to continue its efforts to actively avoid double-counting shareholder incentives in SRP programs and projects. Coordination with other Company programs helps to prevent double-counting such incentives.~~

~~12.1~~11.1 Coordination with Power Sector Transformation

This section describes how SRP coordinates with the Power Sector Transformation Phase One Report[29] goals and recommendations. Please refer to the PST Phase One Report for the full details on the goals and recommendations.

The PST Phase One Report details the following goals:

1. **Control the long-term costs of the electric system.** The regulatory framework should promote a broad range of resources to help right-size the electric system and control costs for Rhode Islanders. Today's electric system is built for peak usage. New technology provides us with more ways to meet peak demand and lower costs.

SRP has the potential to control the long-term costs of the electric system by proactively searching for potential NWA opportunities to be implemented on the electric distribution grid instead of the ~~traditional~~ standard wires option if they are at a lower cost to customers. Such NWA opportunities may include technologies and methodologies such as demand response, solar, energy storage, combined heat and power, microgrid, conservation or energy efficiency measure, and other DERs. These technologies can help increase electric grid reliability through implementation as cost-effective and safe solutions in place of the ~~traditional~~ standard wires option, all aspects of which readily align with controlling the long-term costs of the electric system.

2. **Give customers more energy choices and information.** The regulatory framework should allow customers to use commercial products and services to reduce energy expenses, increase renewable energy, and increase resilience in the face of storm outages. Clean energy technologies are becoming more affordable. Our utility rules should allow customers to access solutions to manage their energy production and use.

SRP provides customers with more energy choices and information through programs such as NWA participation opportunities. NWAs have the potential to reduce energy expenses by providing a cost-effective solution in place of a ~~traditional~~ standard wires option. NWA resources include and depend on renewable energy opportunities to provide unique benefits than a wires option. Properly configured NWA resources could provide resilience from outages as compared to the ~~traditional~~ standard wires option.

3. **Build a flexible grid to integrate more clean energy generation.** The regulatory framework should promote the flexibility needed to incorporate more clean energy resources into the electric grid. These resources would help Rhode Island meet the greenhouse gas emission reduction goals specified in the Resilient Rhode Island Act of

[29] "Rhode Island Power Sector Transformation: Phase One Report to Governor Gina M. Raimondo." *State of Rhode Island Public Utilities Commission and Division of Public Utilities and Carriers*, Division of Public Utilities and Carriers, Office of Energy Resources, and the Public Utilities Commission, Nov. 2017, www.ripuc.org/utilityinfo/electric/PST%20Report_Nov_8.pdf.

2014 and consistent with Governor Raimondo's goal of 1,000 megawatts of clean energy, equal to roughly half of Rhode Island's peak demand, by 2020.

SRP is designed to build a flexible grid to integrate more clean energy generation through NWA opportunities, initiation of the Rhode Island System Data Portal, and engagement with third-party solution providers. The 2018 SRP Report commenced work on the Portal, an interactive tool that provides information to stakeholders, customers, and third parties regarding the status of the Company's distribution grid. This tool enables third-party solution providers to proactively identify areas on the electric distribution grid in Rhode Island where NWA or other opportunities may be implemented. Application of such NWA technologies, as described previously, can enhance the flexibility of the electric grid, such as with battery storage technology, or directly contribute to more clean energy generation, such as with wind or solar technologies.

The PST Phase One Report also details the following recommendations:

1. **Synchronize filings related to Distribution System Planning.** National Grid should begin filing the ISR and SRP as two linked, synchronized, and cross-referenced Distribution System Planning (DSP) filings each year. Linking these two filings and including key DSP-related content will: (1) provide increased transparency and a codified mechanism for stakeholder and regulatory input into the improvement of DSP analytics and tools over time, and (2) enable the Commission and stakeholders to consider investments proposed in the ISR and SRP in a comprehensive and holistic manner. Coordinating these filings should account for the sequencing necessary by National Grid to develop the plans, including considerations related to the differing planning horizons associated with infrastructure projects versus NWA. ISR/SRP filings should include the following elements:
    - Methodologies, assumptions, and results of the annual forecasting process;
    - Any amendments to customer and third-party data access plans and procedures;
    - Proposed updates to the Rhode Island DSP Data Portal based on stakeholder input; and
    - Description of updates and improvements to publicly-provided datasets such as heat and hosting capacity maps.

SRP has synchronized with Distribution System Planning and the ISR filing to a certain extent, in that potential NWA opportunities are screened for as a standard part of DSP and that SRP takes into account the annual electric peak load forecasting, as seen in Sections 1 and 7. The Company recognizes that improved synchronization between SRP and Distribution System Planning and the ISR filing is necessary. The Company is improving coordination between the SRP, ISR, and EE filings in internal calls, discussions, cross-department review requests, and other active coordination efforts. The Company has also improved stakeholder engagement and participates in enhanced discussions on SRP, NWA, and related policy and programs in the SRP TWG monthly meetings, which include the SRP TWG members, and NWA Quarterly meetings, which include

the Division, OER, and National Grid. The work the Company has completed on the Portal to date and proposals for enhancement, which developed from stakeholder discussion and input, are described in Section 9.

2. **Improve forecasting.** National Grid should include detailed information on its forecasts used for DSP in annual SRP/ISR filings. Inclusion of forecasts within the SRP/ISR filings will provide regulators and stakeholders with the opportunity to provide ongoing review and feedback. In addition, National Grid should implement a robust stakeholder engagement plan during forecast development to provide policymakers and third parties the opportunity to review and provide input on forecasting assumptions and methodology.

This SRP Plan~~Report~~ currently includes information on forecasted electric load growth, as seen in Appendix 1~~2Section 1~~, for the main purpose of identifying and coordinating with potential NWA opportunities. This SRP ~~Report~~ Plan also includes the Rhode Island Electric Peak (MW) Forecast in Appendix 1~~2~~ for additional, holistic information. The Company intends to implement robust stakeholder engagement and discussion on the electric forecasting process. Specifically, the Company ~~will~~ hosted a meeting in November 2019 to review the electric forecasting process and engage and discuss the forecasting process with stakeholders. The Company is open to hosting follow-up meetings to further engagement with stakeholders on electric forecasting through ~~2020~~ 2021 as well.

3. **Establish customer and third-party data access plans.** National Grid should include and seek approval of a plan for establishing and improving customer and third-party data access in the upcoming rate case. Updated data access plans should be included in future annual SRP/ISR filings. Inclusion of data access plans within the SRP/ISR filings will provide regulators and stakeholders with the opportunity to provide ongoing review and feedback.

SRP establishes customer and third-party data access through the Rhode Island System Data Portal. The 2019 SRP Report proposed further work on the Portal to improve data access for external parties. The 2019 SRP Report also proposed commitment to discussion on posting NWA RFPs and to inclusion of redacted area studies in the Portal. The Company further improved data access by setting up an NWA Website[30] in order to post information and RFPs on the Company's NWA process and opportunities. SRP does not currently maintain a specific data access plan, as a document or otherwise. The Company will commit to development and implementation of a data governance plan in coordination with the work on the AMF and GMP filings and will continue stakeholder engagement and discussion.

[30] "Non-Wires Alternatives." *National Grid Business Partners*, National Grid USA, Inc., 13 Nov. 2019, www.nationalgridus.com/Business-Partners/Non-Wires-Alternatives/.

4. **Compensate locational value.** State policymakers and regulators should develop an implementation strategy for locational incentives/value of DERs in Rhode Island, in consultation with National Grid and stakeholders.

The 2019 SRP Report presented the Company's research and findings on locational incentive analysis for Rhode Island. The stakeholder review process regarding Rhode Island Locational Incentives and location-based avoided costs is ongoing. The Company commits to stakeholder engagement and discussion regarding locational incentives through in Rhode Island by July 31, 2020 through the SRP TWG meetings and other relevant sessions, and to determine whether the current methodology should be modified.

12.211.2 Coordination with Energy Efficiency

The Company continues coordination between SRP and customer offerings in the Energy Efficiency Program Plan to ensure that efforts, projects, and programs are optimal and not duplicated. The Company coordinates SRP and EE planning efforts so that opportunities for targeted EE are considered in NWA opportunity development.

The SRP Plan Report and its NWA proposals are separate and unique from the Energy Efficiency Program Plan (EEP) customer measures because NWA projects are targeted solutions for electric grid reliability as compared to energy efficiency's goal of bulk energy savings from customers for the regional electric grid. These two main differences are illustrated by a difference in scope of area, feeder- or substation-level for SRP and state or regional for energy efficiency, and in scope of intent, electric grid reliability for SRP via NWA projects and energy savings for EEP via energy efficiency measures and programs.

As is the practice now and going forward, energy efficiency and demand response are examined during National Grid's distribution planning process as part of the development of NWA opportunities. This assessment of energy efficiency and demand response for NWAs occurs before the Company goes out to market with RFPs for solution bids from third-party solution providers. Energy efficiency and demand response may be deployed as part of an NWA solution so long as the targeted energy efficiency or demand response programs are least-cost, cost-effective, reliable, and technically feasible for the electric system need. The Company ensures cost-competitive utilization of targeted DR by evaluating market prices and comparing third-party demand response proposals to the incremental costs of targeted DR which would build upon National Grid's existing ConnectedSolutions program.

As energy efficiency is the least-cost resource, the Company will look for opportunities where it can target energy efficiency to create multifaceted benefits for customers. For example, the Company can utilize the increased visibility from the Rhode Island System Data Portal to target energy efficiency and demand response in areas that would benefit from load reduction. Other examples may include enhanced or targeted community initiatives or enhanced marketing for ConnectedSolutions, the Company's demand response program.

The Company also maintains synchronization and clear communications between the SRP TWG and the EE TWG: The National Grid program leads for the EE Plan and for SRP attend each other's TWG meetings and~~,~~ coordinate via email~~, and SRP additionally provides an update in a dedicated time slot in the EE TWG meeting~~.

~~12.3~~11.3 Coordination with Infrastructure, Safety and Reliability

The Company prepares area studies to identify reliability and safety needs and associated solution options and recommendations for the Electric Distribution business in Rhode Island. The solutions identified in area studies can include both wires and non-wires alternatives. After an analysis of all wires and non-wires options identified, the Company recommends the solution that is the least-cost option that will meet the needs identified in the area studies. If the recommended solution is a non-wires alternative, progression of the bidding, approval and implementation processes will progress through the SRP ~~Report~~program. If the recommended solution is a wires alternative, it may be progressed through the Electric ISR Plan at some point in the future.

Please see Section 7 for further detail regarding the planning process and coordination.

The Company is therefore coordinated between the SRP ~~Report~~ Plan and ISR Plan with regard to NWA opportunity planning and development in parallel consideration to a wires solution investment.

~~12.4~~11.4 Coordination with Grid Modernization and AMF

The SRP team is tracking the development and implementation of the Grid Modernization Plan and Advanced Metering Functionality Business Case filings to ensure future coordination is maintained with the outcome of these plans. The Company will coordinate the SRP ~~Report~~ Plan with the GMP and AMF filings to ensure that efforts, projects, and programs are not being duplicated and to ensure cohesive and comprehensive plan framework and implementation.

The SRP team is aware that AMF proposal includes data availability and access. Such data can further improve planning and development of potential NWA opportunities. Additionally, the SRP team understands that third-party data access to AMF may be required for the implementation of certain NWA projects. For example, the addition of smart meter data realized from the AMF investment can provide planners with more granular data and thusly provide the ability to aide in forecasting and strategic planning. The SRP and NWA teams are therefore coordinating with the development and implementation of the AMF filing with these specific data access themes in mind, in addition to following the AMF Business Case in general.

The SRP team is aware that Grid Modernization discusses functional topics such as EV, DG, energy storage, demand response, and other technologies and methodologies through its development and implementation. The SRP and NWA teams are therefore synchronized with the development and implementation of the GMP to ensure coordination is maintained.

The Company has internal, regular check-in meetings and additional one-on-one meetings to stay synchronized and coordinated across Company programs and filings, such as between SRP, GMP, and AMF. The Company maintains overall coordination between SRP and the GMP and AMF filings.

~~Conclusion and Requested Rulings~~

12. SRP Timeline

Commented [CM21]: Aligns with LCP 4.4.B, 4.6

Sections 4.6, 5.5, and 4.4.B of the Standards, respectively, outline the following timeline for the development of the program implementation plans and detailed budgets. National Grid will work with the EERMC and the SRP TWG to meet these deadlines:

1. SRP Three-Year Plans
   a. By November 12, 2020 and triennially thereafter: The EERMC will vote whether to endorse the Energy Efficiency Procurement Plan.
   b. November 21, 2020 and triennially thereafter: Submit the System Reliability Procurement Plan for three years of implementation beginning January 1 of the following year.

Commented [CM22]: To Becca Trietch (OER):
TBD
Need coordination on acceptable date from Becca with EERMC scheduling.

2. SRP Investment Proposals
   a. The Company will file SRP Investment Proposals as needed, and will aim to file SRP Investment Proposals alongside, and separately from, annual Infrastructure, Safety, and Reliability (ISR) Plans when possible.

3. SRP Year-End Reports
   a. National Grid will submit a Year-End Report to the EERMC and the SRP TWG for their review and comment annually at least one week before the EERMC's scheduled meeting prior to the filing date that year.
   b. The EERMC shall vote whether to endorse the Annual Plan prior to the prescribed filing date, annually.
   c. April 1, 2021 and annually thereafter: Submit the Year-End Report detailing plan implementation for the preceding calendar year.

~~The Company requests~~
The Company proposes the annual reporting plan for SRP Year-End Reports as detailed above for calendar years 2021 through 2023.

13. Miscellaneous Provisions

A. Other than as expressly stated herein, this Settlement 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.

B. This Settlement is the product of settlement negotiations. The content of those negotiations is privileged, and all offers of settlement shall be without prejudice to the position of any party.

C. Other than as expressly stated herein, the approval of this Settlement by the PUC shall not in any way constitute a determination as to the merits of any issue in any other PUC proceeding.

The Parties respectfully request the PUC approve this Stipulation and Settlement as a final resolution of all issues in this proceeding.

Respectfully submitted,

THE NARRAGANSETT ELECTRIC COMPANY
D/B/A NATIONAL GRID

By its Attorney, Date
Andrew S. Marcaccio~~Raquel J. Webster~~

Appendices

~~Appendix 1~~

~~Least Cost Procurement Standards with 2018 Revisions Approved in Docket No. 4684~~

~~Appendix 2~~
~~Rhode Island and Company Electric Service Projected Load Growth Rates~~

~~Appendix 3~~
~~Distribution Planning Guide~~

~~Appendix 4~~
~~Projects Screened for NWA~~

~~Appendix 5~~
~~2019 SRP Marketing and Engagement Plan~~

~~Appendix 6~~
~~2019 SRP Marketing and Engagement Plan Year-to-Date Results~~

~~Appendix 7~~
~~2020 SRP Outreach and Engagement Plan~~

~~Appendix 8~~
~~Narragansett 42F1 NWA RFP~~

~~Appendix 9~~
~~Narragansett 17F2 NWA RFP~~

~~**Appendix 10**~~
~~**South Kingstown NWA RFP**~~

~~Appendix 1 – Least Cost Procurement Standards with 2018~~ 2020 ~~Revisions Approved in Docket No.~~ ~~4684~~

Appendix ~~2~~ 1 – Rhode Island Company Electric Service Projected Load Growth Rates

Forecasted Load Growth for NWA Opportunities

Commented [CM23]: TBD pending update when the forecast report comes out in September

This appendix provides an overview and update on the Rhode Island electric service projected load growth rates as well as the forecasted load growth for locations in Rhode Island that have the potential for NWA opportunities.

The Company's electric distribution system serves close to 500,000 customers in 38 cities and towns in Rhode Island. The residential class accounts for approximately 41% of the Company's total Rhode Island load, the commercial class accounts for approximately 49%, and the industrial class accounts for approximately 10%.

The forecasted load growth rates for cities and towns in Rhode Island are shown in the Rhode Island Projected Load Growth Rates table below. Additionally, as seen in the sections below for Bristol, Kent, Newport, and Providence counties, the average annual growth rates are projected to be negative over the next 10 years.

The Bristol 51 NWA opportunity intends to address the forecasted load growth and system need in Bristol County. The Bonnet 42F1 and South Kingstown NWA opportunities intend to address the forecasted load growth and system need in Washington County.

The Company has not presently identified other NWA opportunities through the distribution system planning (DSP) process, which is detailed in Section 7.

The Company accounts for DG, DR, EE, DV, and solar photovoltaic (PV) impacts in the Company's electric peak load forecasting.

Forecasted Load Growth in Bristol County

The Bristol County area annual weather-adjusted summer peak is expected to decrease at an average annual growth rate of -0.8~~2~~% for the next 10 years. This rate is less than the statewide average annual growth rate of -0.7~~0~~%.

Forecasted Load Growth in Kent County

The Kent County area annual weather-adjusted summer peak is expected to decrease at an average annual growth rate of -0.7~~2~~% for the next 10 years. This rate is less than the statewide average annual growth rate of -0.7~~0~~%.

Forecasted Load Growth in Newport County

The Newport County area annual weather-adjusted summer peak is expected to decrease at an average annual growth rate of -0.7~~2~~% for the next 10 years. This rate is less than the statewide average annual growth rate of -0.7~~0~~%.

Forecasted Load Growth in Providence County

The Providence County area annual weather-adjusted summer peak is expected to decrease at an average annual growth rate of -0.9~~3~~% for the next 10 years. This rate is less than the statewide average annual growth rate of -0.7~~0~~%.

Forecasted Load Growth in Washington County

The Washington County area annual weather-adjusted summer peak is expected to ~~increase a~~flat at~~t~~be an average annual growth rate of 0.0~~7~~% for the next 10 years. This rate is greater than the statewide average annual growth rate of -0.7~~0~~%.

Rhode Island Projected Load Growth Rates

County	Annual Growth Rate (%) 2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	5-Year Average (%) 2020 to 2024	10-Year Average (%) 2020 to 2029
BRISTOL	(1.1)	(1.4)	(0.6)	(0.7)	(0.7)	(0.0)	(0.7)	(0.8)	(0.8)	(0.9)	(0.9)	(0.8)
KENT	(1.1)	(1.4)	(0.6)	(0.7)	(0.6)	0.0	(0.7)	(0.8)	(0.8)	(0.8)	(0.9)	(0.7)
NEWPORT	(0.9)	(1.3)	(0.5)	(0.6)	(0.6)	0.1	(0.6)	(0.7)	(0.8)	(0.8)	(0.8)	(0.7)
PROVIDENCE	(1.4)	(1.7)	(0.8)	(0.9)	(0.8)	(0.2)	(0.8)	(0.9)	(0.9)	(0.9)	(1.1)	(0.9)
WASHINGTON	0.0	(0.4)	0.3	0.2	0.1	0.7	(0.1)	(0.2)	(0.3)	(0.4)	0.0	(0.0)
RHODE ISLAND	(1.1)	(1.4)	(0.6)	(0.7)	(0.6)	0.0	(0.7)	(0.8)	(0.8)	(0.8)	(0.9)	(0.7)

Rhode Island Projected Load Growth Rates

State	County	Town	Annual Growth Rates (%) 2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	5-year Average (%) 2019 to 2023	10-year Average (%) 2019 to 2028
RI			-0.1	-0.2	-0.2	-0.1	-0.1	0.1	0.1	0.1	0.0	-0.1	-0.1	0.0
	BRISTOL		-0.4	-0.4	-0.5	-0.3	-0.3	-0.1	0.0	0.0	-0.1	-0.2	-0.4	-0.2
	KENT		-0.3	-0.3	-0.4	-0.2	-0.2	0.0	0.0	0.1	-0.1	-0.2	-0.3	-0.2
	NEWPORT		-0.3	-0.4	-0.4	-0.2	-0.2	-0.1	0.0	0.0	-0.1	-0.2	-0.3	-0.2
	PROVIDENCE		-0.6	-0.6	-0.6	-0.4	-0.3	-0.2	-0.1	-0.1	-0.2	-0.3	-0.5	-0.3
	WASHINGTON		1.0	0.8	0.7	0.8	0.7	0.7	0.7	0.7	0.5	0.3	0.8	0.7
	WASHINGTON	Kenyon	-2.3	-2.2	-2.0	-1.7	-1.5	-1.3	-1.1	-0.9	-1.0	-1.0	-1.9	-1.5
	WASHINGTON	Narragansett	0.3	0.2	0.1	0.2	0.2	0.3	0.3	0.3	0.2	0.0	0.2	0.2
	WASHINGTON	Peace Dale	1.6	1.4	1.2	1.2	1.1	1.1	1.0	1.0	0.7	0.5	1.3	1.1

Commented [CM24]: Update with new in September 2020.

~~Appendix 3 – Distribution Planning Guide~~

Appendix ~~3~~24 – RI NWA BCA Model~~Projects Screened for NWA~~