

**SYSTEM RELIABILITY PROCUREMENT**  
**2021-2023 THREE-YEAR PLAN**

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## 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 Resource
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

The Narragansett Electric Company  
d/b/a National Grid  
RIPUC Docket No. \_\_\_\_\_  
System Reliability Procurement 2021-2023 Three-Year Plan

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<b>Term</b>	<b>Definition</b>
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

## SYSTEM RELIABILITY PROCUREMENT 2021-2023 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<sup>1</sup> 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 Commission (PUC)<sup>2</sup> 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.

<sup>1</sup> The Narragansett Electric Company d/b/a National Grid (National Grid or Company).

<sup>2</sup> "RIPUC." *State of Rhode Island Public Utilities Commission and Division of Public Utilities and Carriers*, State of Rhode Island, [www.ripuc.ri.gov/](http://www.ripuc.ri.gov/).

SRP Section	SRP Initiative/Proposal	Requested Ruling
8	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 2023 in the table below. These anticipated costs may change over time, given changes in system load demand, need for market engagement, or other activity.

Table 2: Summary of Anticipated 2021-2023 SRP Funding Requests

SRP Section	SRP Initiative/Proposal	CRM	CY 2021	CY 2022	CY 2023
6.1	SRP Incentive Mechanism, Savings-Based Incentive	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
<b>Total</b>			<b>\$0</b>	<b>\$0</b>	<b>\$0</b>

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 2021-2023 SRP Plan, are summarized in the following table.

Table 3: Summary of 2021-2023 SRP 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.
8	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.
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.

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

<sup>3</sup> “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](http://www.ripuc.ri.gov/utilityinfo/electric/PST_home.html).

<sup>4</sup> “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](http://www.ripuc.ri.gov/eventsactions/docket/4600page.html).

## 2. Introduction

The Company is pleased to submit this System Reliability Procurement 2021-2023 Three-Year Plan (Plan) to the PUC. This Plan has been developed by National Grid through an iterative process with the SRP Technical Working Group (the SRP TWG).<sup>56</sup>

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, 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 for calendar years 2021 through 2023.

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

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

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

### 3. Regulatory Basis for System Reliability Procurement

This SRP Plan is submitted in accordance with the Least-Cost Procurement law, R.I. Gen. Laws § 39-1-27.7,<sup>7</sup> the basis for which is the Comprehensive Energy Conservation, Efficiency, and Affordability Act of 2006<sup>8</sup> (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 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 Plan is also submitted in accordance with the Rhode Island PUC's revised "Least Cost Procurement Standards," which the PUC approved in Docket No. 5015 (LCP Standards).<sup>9</sup> The LCP law, R.I. Gen. Laws § 39-1-27.7, requires standards and guidelines for system reliability. On July 23, 2020 in Docket 5015, 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.

*§ 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.<sup>10</sup>*

The 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;*

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<sup>7</sup> "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>.

<sup>8</sup> "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>.

<sup>9</sup> "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>.

- (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 investments. Section 4.4.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.

Sections 4.4 and 4.6 of the LCP Standards further require the Company to submit, by November 21, 2020 and triennially thereafter, an SRP Three-Year Plan that includes, among other information, the proposed Performance Incentive Mechanism (PIM) for SRP, proposed screening criteria for SRP investments, strategies that enhance procurement of SRP investments, the general procurement process for SRP, the evaluation process and criteria for SRP investments, and a proposed annual reporting plan for implementation updates of SRP investments. 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 2 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 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 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.<sup>11</sup> 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 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.

### **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.

### **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. 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.

### **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

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<sup>11</sup> Synapse Energy Economics, *Avoided Energy Supply Components in New England: 2018 Report*, Amended October 24, 2018.

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.

### **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 the aesthetic, economic, acoustic, and general environmental impacts an SRP solution may have.

### **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 the Total Resource Cost Test.<sup>12</sup>

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<sup>12</sup> “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](http://www.ripuc.ri.gov/eventsactions/docket/4443page.html).

## 4. SRP Program Design and Planning Principles

The SRP program is designed to achieve optimal cost-effectiveness for the electric and gas systems and for Rhode Island customers, while 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*<sup>13</sup>, 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.<sup>14</sup>

Rhode Island state goals and initiatives include Executive Order 20-01<sup>15</sup> that mandates "to meet one hundred percent (100%) of the state's electricity demand with renewable energy resources by

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<sup>13</sup> "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](http://www.nationalgridus.com/news/Assets/80x50-White-Paper-FINAL.pdf).

<sup>14</sup> "Environmental Policy & Programs: National Grid." *Environmental Policy & Programs | National Grid*, National Grid USA, Inc., 2020, [www.nationalgridus.com/Our-Company/Environmental-Policy-and-Programs](http://www.nationalgridus.com/Our-Company/Environmental-Policy-and-Programs).

<sup>15</sup> 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<sup>16</sup> that mandates the path forward for Heating Sector Transformation, the integral components of Power Sector Transformation, and the integral components of the Resilient Rhode Island Act of 2014<sup>17</sup>.

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<sup>16</sup> R.I. Executive Order No. 19-06 (July 8, 2019), <https://governor.ri.gov/documents/orders/Executive%20Order%2019-06.pdf>.

<sup>17</sup> “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>.

## 5. SRP Funding Mechanism

The Company proposes to fund the projects and initiatives included in SRP Investment Proposals through the applicable cost recovery mechanism.

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, on customers' bills. 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.

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 SRP Investment Proposals 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 through 2023 to implement the projects and initiatives detailed in this Plan. Please note that the costs stated for calendar years following 2021 are informative to detail potential future costs. These potential future costs could change in subsequent SRP Investment Proposals, 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.

## 5.1 Planned Funding Requests for 2021-2023

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

SRP Section	SRP Initiative/Proposal	CRM	CY 2021	CY 2022	CY 2023
6.1	SRP Incentive Mechanism, Savings-Based Incentive	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
<b>Total</b>			<b>\$0</b>	<b>\$0</b>	<b>\$0</b>

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.

## 6. SRP Performance Incentive Mechanism

This section details the SRP Performance Incentive Mechanism and savings-based 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 2021 through 2023.

### 6.1 SRP Savings-Based Incentives

The Company will be able to earn savings-based incentives for DERs that are installed as a result of SRP RFPs. The Company will be obligated to demonstrate that DERs were installed as a result of SRP 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, 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 SRP project. The Company earns its apportioned annual share for each year the installed DER meets the three demonstration requirements listed above.

$$\text{Company Share} = \text{Net Benefits} \times 20\%$$

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

$$\text{Customer Share} = \text{Net Benefits} \times 80\%$$

The savings-based incentive mechanism would be applied to the net benefits of the SRP project(s) proposed in SRP Investment Proposals, as well as any projects installed and marketed as a result of the other SRP initiatives proposed in the SRP Investment Proposals, to the extent they meet the criteria outlined in this section and the projects or initiatives result from RFPs.

## **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.

## 7. NWAs in System Planning

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

### 7.1 Definition of NWA

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 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, 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

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	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

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 Figure 1 and Figure 2, 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.

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Figure 1: Electric Distribution Planning Study Process Flowchart

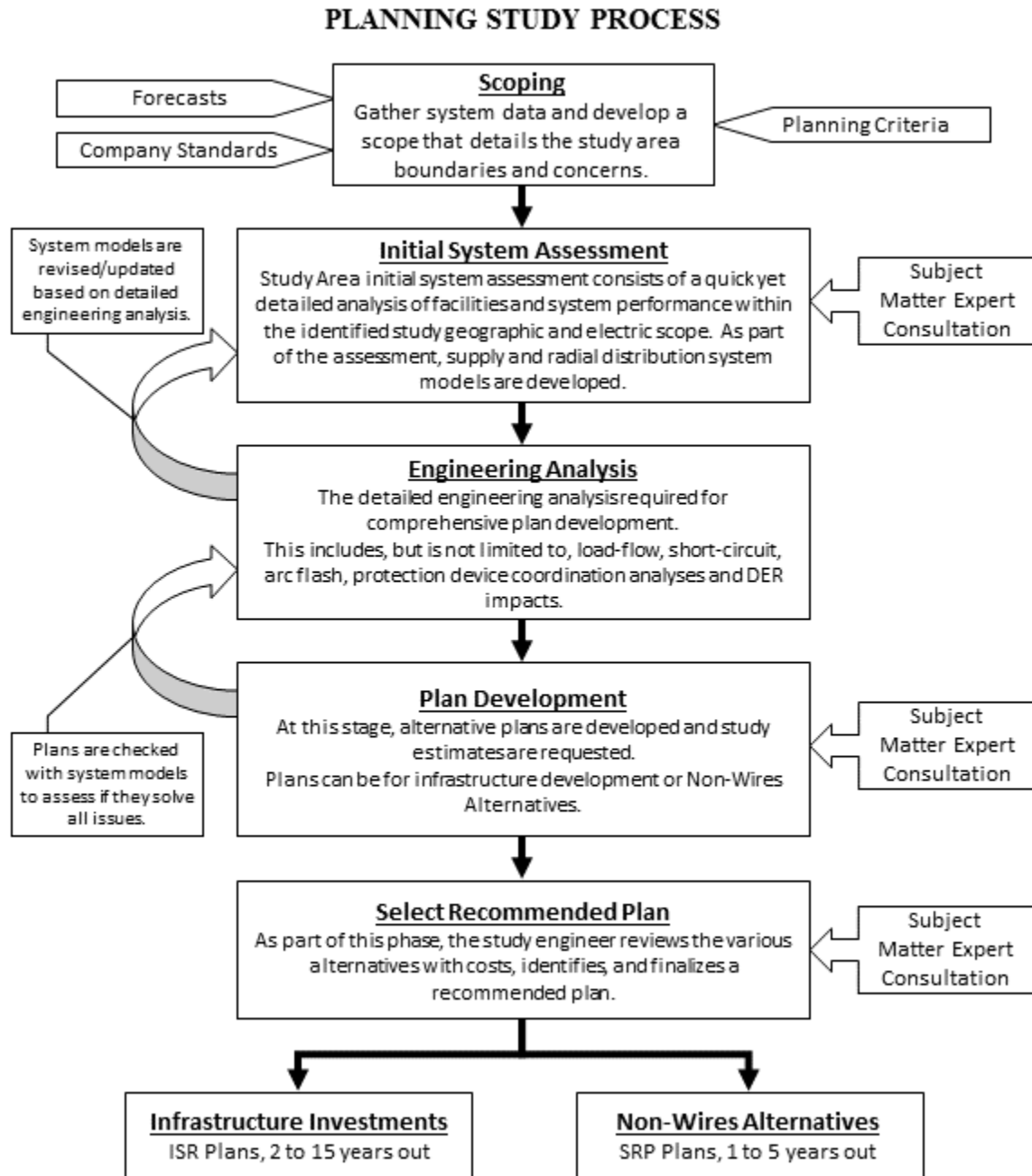
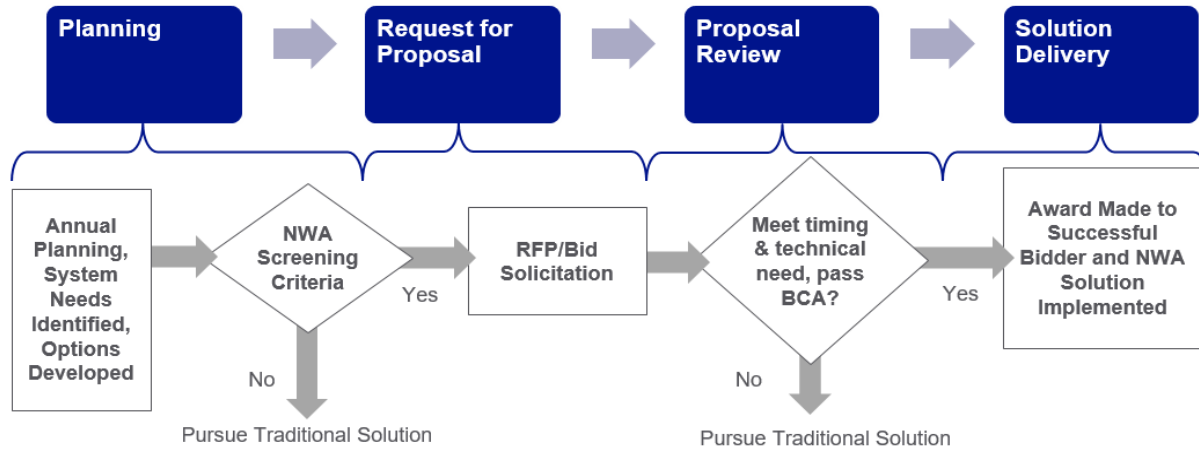


Figure 2: Overview of National Grid’s NWA Procurement Process



#### 7.4 NWA Evaluation Process

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.

Factors that will influence the solutions that are chosen will include availability and reliability, viability and functionality, existing market conditions for the proposed technologies, societal and environmental impact, cost-effectiveness, safety and risk, flexibility, ability to meet the specific identified system need, bidder’s experience, and the ability for a solution proposal 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 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.

<b>Category</b>	<b>Description</b>
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.

## 8. Proposal for NPAs in System Planning

This section details the Company’s plan for developing the Non-Pipeline Alternatives (NPA) program in Rhode Island.

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 activity that is intended to defer, reduce, or remove the need to construct or upgrade components of a natural gas distribution system, or “pipeline 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 potential solution types in consideration of NPA solutions, proposals, and investment decisions.

Some technologies and methodologies that can be applicable as an NPA investment include demand response, electrification, combined heat and power (CHP), and conservation or energy efficiency measures, and renewable natural gas (RNG). 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 pipeline investments.

Table 8: Screening Criteria for NPA Opportunities

Criteria Type	Criteria Requirement
Project Type Suitability	

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Timeline Suitability	
Cost Suitability	

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 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

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

## 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 SRP Investment 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.<sup>18</sup>

### 9.1 Portal to Date

To date, the Portal includes tabs that detail select Company reports, a distribution assets overview map, a heat map, 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

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<sup>18</sup> See Rhode Island System Data Portal. *National Grid US*, National Grid USA Service Company, Inc., 2018, [www.nationalgridus.com/Business-Partners/RI-System-Portal](http://www.nationalgridus.com/Business-Partners/RI-System-Portal).

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<sup>19</sup>, which contains information on the Company’s NWA process and NWA RFP opportunities.

## **9.2 Portal Funding Plan**

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

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<sup>19</sup> “Non-Wires Alternatives.” *National Grid Business Partners*, National Grid USA, Inc., 13 Nov. 2019, [www.nationalgridus.com/Business-Partners/Non-Wires-Alternatives/](http://www.nationalgridus.com/Business-Partners/Non-Wires-Alternatives/).

## **10. SRP Market Engagement**

This section provides information regarding the Company's 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.

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. SRP Market Engagement 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**

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.

### **10.2 Market Engagement Channels**

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.<sup>20</sup>
- 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.
- 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.
- 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 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.

### **10.3 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.

### **10.4 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.

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<sup>20</sup> “National Grid Ariba.” *SAP Ariba*, Ariba Inc., 2020, <http://nationalgrid.sourcing.ariba.com/>.

## 11. Coordination between SRP and other Programs

The Company recognizes that improved synchronization between SRP and 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.

### 11.1 Coordination with Power Sector Transformation

This section describes how SRP coordinates with the Power Sector Transformation Phase One Report<sup>21</sup> 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 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 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.

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<sup>21</sup> "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](http://www.ripuc.org/utilityinfo/electric/PST%20Report_Nov_8.pdf).

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 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 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 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 **Error! Reference source not found.** 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 currently includes information on forecasted electric load growth, as seen in Appendix 1, for the main purpose of identifying and coordinating with potential NWA opportunities. This SRP Plan also includes the Rhode Island Electric Peak (MW) Forecast in Appendix 1 for additional, holistic information. The Company intends to implement robust stakeholder engagement and discussion on the electric forecasting process. Specifically, the Company 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 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 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.

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.

## 11.2 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 and its NWA proposals are separate and unique from the Energy Efficiency Program (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.

### **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 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 Plan and ISR Plan with regard to NWA opportunity planning and development in parallel consideration to a wires solution investment.

### **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 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.

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## 12. SRP Timeline

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.
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 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.

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Respectfully submitted,

THE NARRAGANSETT ELECTRIC COMPANY  
D/B/A NATIONAL GRID

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By its Attorney,  
Andrew S. Marcaccio

Date

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## **Appendices**

**Appendix 1 Rhode Island and Company Electric Service Projected Load Growth Rates**

**Appendix 2 RI NWA BCA Model**

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

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## **Forecasted Load Growth for NWA Opportunities**

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% for the next 10 years. This rate is less than the statewide average annual growth rate of -0.7%.

### **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% for the next 10 years. This rate is less than the statewide average annual growth rate of -0.7%.

### **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% for the next 10 years. This rate is less than the statewide average annual growth rate of -0.7%.

### **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% for the next 10 years. This rate is less than the statewide average annual growth rate of -0.7%.

### **Forecasted Load Growth in Washington County**

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

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**Rhode Island Projected Load Growth Rates**

County	----- Annual Growth Rate (%) -----										5-Year Average (%) 2020 to 2024	10-Year Average (%) 2020 to 2029
	2020	2021	2022	2023	2024	2025	2026	2027	2028	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)
<b>RHODE ISLAND</b>	<b>(1.1)</b>	<b>(1.4)</b>	<b>(0.6)</b>	<b>(0.7)</b>	<b>(0.6)</b>	<b>0.0</b>	<b>(0.7)</b>	<b>(0.8)</b>	<b>(0.8)</b>	<b>(0.8)</b>	<b>(0.9)</b>	<b>(0.7)</b>

**Appendix 2 – RI NWA BCA Model**

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