

November 21, 2018

BY HAND DELIVERY AND ELECTRONIC MAIL

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

**RE: Docket 4889 - The Narragansett Electric Company, d/b/a National Grid
2019 System Reliability Procurement Report
Responses to PUC Data Requests – Set 1**

Dear Ms. Massaro:

I have enclosed eleven copies of National Grid's¹ responses to the Public Utilities Commission's First Set of Data Requests in the above-referenced matter.

Please note that Company's responses to the following data requests are pending:
PUC 1-21, PUC 1-22, and PUC 1-27.

Thank you for your attention to this filing. If you have any questions, please contact me at 781-907-2121.

Very truly yours,



Raquel Webster

Enclosures

cc: Dockets 4888/4889 Service Lists
Jon Hagopian, Esq.
John Bell, Division

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

Certificate of Service

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

The paper copies of this filing are being hand delivered to the Rhode Island Public Utilities Commission and to the Rhode Island Division of Public Utilities and Carriers.



Raquel J. Webster, Esq.

November 21, 2018

Date

Docket No. 4888 - National Grid – 2019 Energy Efficiency Plan (EEP)
Docket No. 4889 - National Grid – 2019 System Reliability Procurement Report (SRP)
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PUC 1-1

Request:

Referencing R.I. Gen. Laws § 39-1-27.7, referenced on Bates pages 1-2, for each proposal in the instant SRP Plan, please identify the subsection(s) into which it falls.

Response:

A breakdown for each proposal that corresponds with the appropriate subsection is as follows:

Text Section and Proposal	R.I. Gen. Laws § 39-1-27.7 Subsection
Section 6.1: Rhode Island System Data Portal	(a)(1)(i), (a)(1)(ii), (a)(1)(iii), (a)(2)
Section 6.2: Market Engagement with NWAs	(a)(1)(i), (a)(1)(ii), (a)(1)(iii), (a)(2)
Section 8: Tiverton NWA Pilot	(a)(1)(iii)
Section 9: Tiverton-Little Compton NWA Project	(a)(1)(i), (a)(1)(ii), (a)(1)(iii), (a)(2)
Section 10: South County East NWA Projects	(a)(1)(i), (a)(1)(ii), (a)(1)(iii), (a)(2)
Section 11: Customer-Facing Program Enhancement Study	(a)(1)(i), (a)(1)(iii), (a)(2)
Section 12: Rhode Island Locational Incentives	(a)(1), (a)(2)
Section 13: SRP Incentive Mechanism Proposal	(a)(1), (a)(2)

The Rhode Island System Data Portal addresses the subsections of R.I. Gen. Laws § 39-1-27.7 listed in the table above because it supports efforts and access to data for distributed generation and demand response. The Portal also supports activities for procurement of energy supply from diverse sources (namely, through third-party solution providers) and for least-cost procurement.

The Marketing and Engagement Plan encompasses marketing efforts that promote awareness of the Rhode Island System Data Portal and, therefore, effectively addresses the same subsections as the Portal.

The Tiverton NWA Pilot was a demand response effort to curtail load in the towns of Tiverton and Little Compton.

The Tiverton-Little Compton NWA (TLC NWA) Project is the successor NWA to the Tiverton NWA Pilot for the towns of Tiverton and Little Compton. The TLC NWA Project is currently in

PUC 1-1, page 2

the Request for Proposal (RFP) stage. Therefore, the best-fit solution that emerges following the RFP process may be distributed generation, demand response, or another NWA solution type.

The South County East NWA Projects are potential NWA opportunities for the towns of Exeter, Narragansett, and South Kingstown. These projects are also currently in the RFP stage and, similar to the TLC NWA Project, may have a best-fit solution of distributed generation, demand response, or another NWA solution type depending on the results of the RFP bid evaluation process.

The Customer-Facing Program Enhancement Study is an effort to gather market research and practices on how to best engage with the customer. A study pilot is currently planned as one of the phases of the Enhancement Study and is planned to entail a demand response program with the overall goal of increasing system reliability.

Rhode Island Locational Incentives is a mechanism to provide financial incentives based on location to the solution provider of the winning project bid of an NWA RFP. Such incentives promote vendor engagement and directly enable system reliability procurement and least-cost procurement.

The SRP Incentive Mechanism Proposal is a mechanism to provide incentive to the Company for completion of action-based and savings-based metrics on work completed through SRP. Such work includes, in part, NWA and NWA-related projects and programs, which coincide with system reliability procurement and least-cost procurement.

PUC 1-2

Request:

For each element in Sections 6-13 of the SRP Plan, please explain the process by which each was included in the SRP Plan.

Response:

Section 6:

The Rhode Island System Data Portal and Market Engagement with NWAs were initially proposed in the 2018 SRP Report and were included in the joint recommendation and agreement between the Parties (the Division of Public Utilities and Carriers, the Energy Efficiency and Resource Management Council (EERMC), Acadia Center, Green Energy Consumers Alliance (formerly People's Power & Light), TEC-RI, the OER, and National Grid). The 2019 SRP Report includes the Rhode Island System Data Portal to continue efforts to provide data regarding the electric distribution system in a transparent and appropriate manner to third-party solution providers and the public. The 2019 SRP Report includes Market Engagement with NWAs and the corresponding marketing plan for the Portal to continue efforts to raise awareness with appropriate parties, including solution providers, regarding the Portal and new upgrades to the tool as they are implemented. The continued inclusion of these elements is again in the joint recommendation and agreement between the Parties.

Section 7:

The purpose of the Forecasted Load Growth for NWA Opportunities section is to provide information proactively on electric load growth forecasts in areas where potential NWA opportunities have been identified. This section was previously a subsection in the Tiverton NWA Pilot section of the 2018 SRP Report. This information section is included as a standalone section in the 2019 SRP Report in an effort to continue providing relevant forecasting information for areas with potential NWA opportunities. The Company proactively includes this information in the SRP Report.

Section 8:

The Tiverton NWA Pilot historically has been included in the SRP Report since it was initially and, subsequently, approved in the 2012 SRP Report. The following years and corresponding 2013 through 2018 SRP Reports maintained a section for the Tiverton NWA Pilot for appropriate reporting on the implementation and evaluation of the NWA pilot, as requested by the Parties. The 2019 SRP Report proactively includes the Tiverton NWA Pilot to provide information on the final year of implementation, evaluation, and closeout of the NWA pilot, as requested by the Parties.

PUC 1-2, page 2

Section 9:

The Tiverton-Little Compton NWA Project is the successor NWA project to the Tiverton NWA Pilot. The purpose of the project is to provide continued load relief to the towns of Tiverton and Little Compton, as needed. The Tiverton-Little Compton NWA Project replaces the former Little Compton Battery Storage Project (the NWA project proposed in the 2018 SRP Report), because the Company plans to reissue the RFP for the potential NWA opportunity in Tiverton and Little Compton for the reasons outlined in Section 9 of the 2019 SRP Report. The Tiverton-Little Compton NWA Project proposal is included in the 2019 SRP Report because the need for deferring the Tiverton Substation upgrade and for load curtailment is still apparent. The Company included the Tiverton-Little Compton NWA Project by proposal to, and agreement by, the Parties.

Section 10:

The South County East NWA Projects are potential NWA opportunities to address electrical distribution system need in the towns of Exeter, Narragansett, and South Kingstown. The Company proactively included the South County East NWA Projects in the 2019 SRP Report.

Section 11:

The Customer-Facing Program Enhancement Study was developed by the Company to evaluate and test novel approaches to engage with customers and then proposed to the Parties in July 2018. The item was then included in the 2019 SRP Report by joint refinement and agreement by the Parties in the lead up to the filing.

Section 12:

Information on the Rhode Island Locational Incentives is included in the 2019 SRP Report by the Company in part proactively and in part by request from the Parties. The inclusion of the proposal in the Rhode Island Locational Incentives section was specifically arrived at by joint refinement and agreement by the Parties.

Section 13:

The SRP Incentive Mechanism Proposal was proposed initially in the 2018 SRP Report and was included in joint recommendation and agreement between the Parties. The 2019 SRP Report includes the SRP Incentive Mechanism Proposal to continue efforts to implement this mechanism and complete the outlined actions successfully. The inclusion of the proposal in the Rhode Island Locational Incentives section was specifically arrived at by joint recommendation and agreement by the Parties.

The Narragansett Electric Company
d/b/a National Grid
RIPUC Docket No. 4889
In Re: 2019 System Reliability Procurement Report
Responses to Commission's First Set of Data Requests
Issued on November 13, 2018

PUC 1-3

Request:

Please provide a detailed budget for each element of the SRP Plan. For each item, please indicate whether it is being funded through this plan or through some other recovery mechanism.

Response:

Please see the table below for a breakdown of the budget for calendar year 2019 of each proposal in the 2019 SRP Report:

Text Section and Proposal	Recovery Mechanism	2019 Budget Detail: Program Planning & Administration	2019 Budget Detail: Materials & Vendors	2019 Budget Detail: Total
<u>Section 6.1:</u> Rhode Island System Data Portal	SRP	\$0	\$0	\$0
<u>Section 6.2:</u> Market Engagement with NWAs	SRP	\$44,800	\$80,000	\$124,800
<u>Section 8:</u> Tiverton NWA Pilot	SRP	\$0	\$0	\$0
<u>Section 9:</u> Tiverton-Little Compton NWA Project	SRP	\$22,000	\$87,500	\$109,500
<u>Section 10:</u> South County East NWA Projects	SRP	\$30,000	\$0	\$30,000

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Responses to Commission's First Set of Data Requests
Issued on November 13, 2018

PUC 1-3, page 2

<u>Section 11:</u> Customer-Facing Program Enhancement Study	SRP	\$75,000	\$100,000	\$175,000
<u>Section 12:</u> Rhode Island Locational Incentives	SRP	\$0	\$0	\$0
<u>Section 13:</u> SRP Incentive Mechanism Proposal	SRP	\$0	\$0	\$0

Please note that the Rhode Island System Data Portal and the South County East NWA Projects also have an incentive mechanism, as detailed in the 2019 SRP Report.

Please note that the SRP charge is rolled into the Energy Efficiency Program Plan charge.

PUC 1-4

Request:

Referencing Bates pages 15-16, please explain how and when the projects in Tables 2 and 3 were identified for NWA analysis or re-evaluation.

Response:

The projects in Tables 2 and 3 were identified originally as potential Non-Wires Alternatives (NWAs) during the area study process, which encompassed the proposed circuits. The projects in Table 2 were identified during the South County East area study in the Spring of 2018. The projects in Table 3 were identified during the East Bay (August 2015) and Providence (Revision 1, September 2017) area studies, respectively.

To determine how an NWA solution is identified for evaluation or re-evaluation, the Company first screens traditional wire solution transmission and distribution projects against the criteria listed in Section 2.1(D) of the SRP Standards, which are aligned with the Company's internal planning document. Once an NWA is considered as feasible, it is compared economically against the wires solution. In the past, National Grid would conduct the economic evaluation using readily available NWA industry information. Now, National Grid collects project-specific industry information through a Request for Proposal (RFP) process, which would then be included in a benefit-cost analysis (BCA). Table 2 represents potential NWAs in this new process in an ongoing area study. Table 3 shows potential NWAs that were conducted in a study under the old economic evaluation method and are considered for re-evaluation. The Table 3 wires and non-wires alternatives were held by National Grid in consideration of the relatively long lead time for the wires solution and in anticipation of industry wide cost reductions. In other words, National Grid determines the opportunity for re-evaluation if circumstances present the ability to do so. Table 3 projects will be transitioned to the new RFP and BCA method as they are re-evaluated.

The Narragansett Electric Company
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Issued on November 13, 2018

PUC 1-5

Request:

Is there a difference in the evaluation process for projects identified within an Area Study or separately? If so, please explain.

Response:

No. There is no difference in terms of the Non-Wires Alternative (NWA) evaluation process between projects identified during an area study and those identified outside of that study process. All projects are screened against the NWA criteria listed in Section 2.1(D) of the SRP standards.

PUC 1-6

Request:

Referencing Bates page 16, the SRP Plan states, “[t]he decision on where to locate the NWAs will be based on the information provided in the Portal, as well as on distribution area studies.”

- a. Who will be using this information?
- b. Who will be making the decision on where to locate NWAs?
- c. What is the source of the information provided in the Portal?
- d. Is the Company populating or using the Portal as part of its planning processes?

Response:

- a. The Company anticipates that NWA developers will be using the information provided in the Portal and in Request for Proposals associated with distribution area studies.
- b. The Company will make the decision on the general area to locate NWAs so that NWAs can satisfy system needs. For instance, the color coding in the Portal is intended to indicate the general location. Specific locations in the general area will be made by the developer.
- c. The source of information for the Portal is the Company's Geographic Information System (GIS), planning modeling and analysis, Company records, and forecast information.
- d. The Company is not using the Portal for its planning processes. The Portal is intended for use by external parties to access portions of the Company's data for their own use. The Company does use the same sources of information for its planning process.

PUC 1-7

Request:

Please explain why the Public Utilities Commission (PUC) would approve contracts to procure Non-Wires Alternatives (NWAs) when it does not approve procurement contracts for capital projects.

Response:

The Company assumed that the PUC may have wanted to review contracts for NWA projects but, as noted below, the Company agrees that PUC approval of such contracts is not required. Procurement of NWAs is still in the pilot phase as alternatives to capital investments because no NWA has yet been installed that has deferred a capital investment need.

The contracts technically do not have to be approved by the PUC because NWA projects and procurement typically have their cost recovered through the System Reliability Procurement (SRP) filing recovery mechanism. These costs are factored into the additional SRP funding needed by kWh, which is reflected as item (5) in Table S-1 of the 2019 SRP Report and which is also known as the "SRP charge". Ultimately, this SRP charge is rolled up into the Energy Efficiency Program Plan charge, as detailed in Table S-1, and is, therefore, considered part of the tariff structure. Therefore, the current understanding is that the PUC would not have to approve procurement contracts for NWAs.

The Narragansett Electric Company
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Responses to Commission's First Set of Data Requests
Issued on November 13, 2018

PUC 1-8

Request:

If the procurement of NWAs is in an alternative to capital investment in the planning process, why are they so different as to require different regulatory treatment?

Response:

Procurement of NWAs is still in the pilot phase as alternatives to capital investments because no NWA has been installed that has deferred a capital investment need. Because NWAs are still unproven, the Company proposed a different approach to regulatory approval to provide the PUC with additional transparency to the process.

The Narragansett Electric Company
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RIPUC Docket No. 4889
In Re: 2019 System Reliability Procurement Report
Responses to Commission's First Set of Data Requests
Issued on November 13, 2018

PUC 1-9

Request:

Please define “public transportation fleet.”

Response:

As used in the 2019 SRP Report, the term “public transportation fleet” refers to a group of vehicles used for providing transit services to the public that are owned by a single entity.

The Narragansett Electric Company
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RIPUC Docket No. 4889
In Re: 2019 System Reliability Procurement Report
Responses to Commission's First Set of Data Requests
Issued on November 13, 2018

PUC 1-10

Request:

Is there funding related to the instant SRP proposal related to the System Data Portal? If so, please identify the relevant schedule(s) and explain why this is appropriate given the three-year funding request already approved in Docket No. 4770. (for purposes of "related to," this should include work on the data portal, administration, marketing, incentives, etc.)

Response:

No, the 2019 SRP proposal does not include any funding for the System Data Portal (Portal). The 2019 SRP proposal does include a proposed incentive that the Company discussed with the Rhode Island Division of Public Utilities and Carriers (Division) and Office of Energy Resources (OER) that involves using the Portal to determine the extent of existing distribution system infrastructure that could support large DCFC (Direct Current Fast Charging) stations in locations where current fleets (for state agencies or private companies) are garaged. If the Company is successful with the metric, the 2020 SRP Plan filing would calculate and request any incentive earned during the period of time covered by the 2019 SRP Plan; however, the Company is not requesting any funding in the 2019 SRP Plan for work on the Portal.

PUC 1-11

Request:

Are the first two bulleted activities on Bates page 19 related to the Fleet Advisory Services program in Docket No. 4770 and/or to the Electric Transportation Initiative Evaluation in Docket No. 4770? If so how? If not, why not?

Response:

No. The first two bulleted activities on Bates page 19 are not related to either the Fleet Advisory Services program or the Electric Transportation Initiative Evaluation in Docket No. 4770; however, any information gleaned through the System Reliability Procurement (SRP) Plan would be socialized for all related and pertinent programs. The activities included in the SRP Report are a result of consultation and collaboration with external stakeholders and are considered the first step towards providing visibility of vehicle electrification within a data portal format. As described in the first two bulleted activities on Bates page 19, these first steps are largely a mapping exercise to begin aligning fleet locations with electric infrastructure.

Additionally, per the Amended Settlement Agreement in Docket No. 4770, the Electric Transportation Initiative Evaluation is only meant to report progress made from Power Sector Transformation programs approved under Docket No. 4770.

The Narragansett Electric Company
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In Re: 2019 System Reliability Procurement Report
Responses to Commission's First Set of Data Requests
Issued on November 13, 2018

PUC 1-12

Request:

Prior to developing the SRP Plan, did National Grid or any party to the Settlement seek non-EV public transportation fleets from any State Agency or private entity that may already have it? If so, please identify all entities with whom any signatory consulted. If not, why not?

Response:

The Company did not request non-EV public transportation fleet information from any State agency or private entity. The Company plans to gather that information as part of the 2019 SRP Plan. The Company will strive not to duplicate any work already completed or currently proposed by any such agency to locate possible opportunities for fleet electrification.

The Narragansett Electric Company
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In Re: 2019 System Reliability Procurement Report
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Issued on November 13, 2018

PUC 1-13

Request:

Please define "Open RFP situation."

Response:

An Open RFP situation occurs when the Company issues an NWA RFP and does not receive any suitable bids in response to the RFP. In this case, the Company would post the NWA RFP on the Rhode Island System Data Portal for an agreed-upon period of time in an effort to attempt to gather additional and suitable responses.

Please note that the exact configuration and deployment of the Open RFP situation is in progress and dependent on discussion, as noted in the 2019 SRP Report.

The Narragansett Electric Company
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RIPUC Docket No. 4889
In Re: 2019 System Reliability Procurement Report
Responses to Commission's First Set of Data Requests
Issued on November 13, 2018

PUC 1-14

Request:

Will the Open RFP situation be only discussed or also implemented as part of the proposed SRP Plan? What is the budget?

Response:

The Company will discuss the Open RFP with the Parties to brainstorm the implementation process, and deployment of the setup for an Open RFP. If the Parties agree on configuration and deployment for an Open RFP, then the Company will take action in that same calendar year to implement the agreed-upon configuration for an Open RFP.

The Company currently sees the Open RFP effort as falling within the "Engagement" piece of the Market Engagement with NWAs part of the 2019 SRP Report, and would, therefore, fall within the program planning and administration part of the Market Engagement Funding Plan.

The Narragansett Electric Company
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RIPUC Docket No. 4889
In Re: 2019 System Reliability Procurement Report
Responses to Commission's First Set of Data Requests
Issued on November 13, 2018

PUC 1-15

Request:

For each bulleted item listed on Bates page 19, related to enhancement of the Portal, please indicate whether the Company is advising the PUC or seeking approval of the activities.

Response:

For each bulleted item listed on Bates page 19 related to enhancement of the Portal, the Company was seeking to advise the Public Utilities Commission of the activities. The Company is not requesting PUC approval of any additional funding to enhance the Portal with the listed activities as part of its 2019 System Reliability Procurement Plan filing.

PUC 1-16

Request:

Referencing the Marketing and Engagement with NWAs, please explain why funding from SRP should be used to market existing Company programs, particularly Renewable Energy Growth and Connected Solutions Demand Response program?

Response:

The Company proposes to use funding from SRP to market the incentives of existing Company and State programs to provide a more holistic and comprehensive approach to NWA solutions for the electric distribution system. By promoting such existing program incentives, the Company expects that customers and solution providers will more fully engage with NWA initiatives and opportunities. The incentives provided by existing Company programs would only be promoted additionally through SRP Market Engagement efforts if they intersect with the Rhode Island System Data Portal and Portal-related activities, as part of engagement with third-party solution providers.

The Narragansett Electric Company
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Responses to Commission's First Set of Data Requests
Issued on November 13, 2018

PUC 1-17

Request:

Is the Market Engagement budget designed to help the Company meet the System Efficiency PIM? If so, why was it not included in the cost of meeting the System Efficiency PIM in Docket No. 4770?

Response:

No, the Market Engagement budget was not designed to support the System Efficiency performance incentive mechanism. Instead, it was designed to ensure that the value proposition of the System Data Portal to developers and other potential users is realized. The Company expects the System Data Portal to support a variety of potential distribution system needs. These needs may or may not overlap with the objective of the System Efficiency performance incentive mechanism, which is intended to capture ISO-NE coincident peak reductions.

PUC 1-18

Request:

Please provide evidence that the Marketing and Engagement plan is net beneficial.

Response:

The Company classifies the Marketing & Engagement Plan as net beneficial based on the reach, visibility, and interest of the RI System Data Portal (Portal). The Company believes that the quantitative and qualitative benefits and results, as described below, outweigh the budgeted cost.

Monthly reporting from the Google AdSense advertising and the ranking improvement work illustrate above-average impressions¹ to the Portal. The reporting also reflects that the Portal is easier for customers and solution providers to find in a Google web search. The Google AdSense Campaign is a six-month placement running September through February that is reviewed and optimized monthly. Further, the Company is tracking monthly visits to the portal, and, so far, the interest in the portal remains high.

During the month of October, the Google AdSense campaign has delivered even more impressions and clicks to the Portal. Moreover, it has had a profound effect on search rankings, catapulting the site to the first page (near the top) within Google search results.

- **Impressions:** 772,393
- **Clicks:** 33,458
- **Click Rate:** 0.48%

Additionally, to date, two informational webinars and two in-person demonstration sessions were held to showcase the features and benefits of the Portal with developers. Nearly 200 individuals have attended these sessions. The webinars and sessions have confirmed that third-party solution providers are very interested in the Portal.

PUC 1-19

Request:

Referencing the Docket 4770 Settlement Agreement, page 67, please identify all activities funded in SRP, Energy Efficiency, or other programs that will count toward the System Efficiency performance incentive mechanism (PIM). Considering the costs now known, does the Company still expect 55% of quantified net benefits to go to ratepayers? Why or why not?

Response:

The Company expects that the primary driver of peak load reductions supporting the System Efficiency (MW Capacity Savings) performance incentive mechanism will come from the Commercial Connected Solutions program that will be implemented under the Annual Energy Efficiency Plan for 2019 Settlement of the Parties, filed in Docket No. 4888 (2019 EE Plan). Additional modest contributions to the System Efficiency performance incentive mechanism under the 2019 EE Plan would be expected from the Residential Connected Solutions Program.

The 2019 EE Plan includes the cost-effectiveness results for these two demand response programs (see Table E-5A). The Company projects that the Commercial Connected Solutions Program target enrollment in 2019 will result in approximately \$16.8 million in benefits and costs of approximately \$2 million. This results in approximately \$14.8 million in net benefits and a BCA ratio of 8.32. The Residential Connected Solutions program 2019 targets are projected to result in \$0.9 million in benefits and \$0.3 million in costs, therefore resulting in approximately \$0.6 million in net benefit and a BCA ratio of 3.24. Both of these are much larger than the BCA ratio assumed in setting the performance incentive mechanism, which is shown in Compliance Attachment 28 to the Company's Compliance Filing for Docket No. 4770, was 1.43. It is, therefore, reasonable to assume that, under a scenario where the majority of contributions to the peak reduction target derive from the Company's demand response programs, customers will receive well over 55% of the quantified net benefits.

The Energy Storage Initiative approved in Docket No. 4770 could also contribute to the performance incentive mechanism, provided it contributes to ISO-NE coincident peak reductions. The expected contribution of this initiative is expected to be small and will depend upon design and implementation decisions. The Company would not expect this measure to meaningfully impact the share of net benefits retained by customers under the performance incentive mechanism.

Under the System Reliability Procurement (SRP) Plan, it is possible that there would be incremental coincident peak load reductions that result from the Enhancement Study in years following 2019. As the Company's BCA for this program indicates, additional peak reductions

PUC 1-19, page 2

are not expected in 2019. Any reductions in 2020 or 2021 are projected to be modest in nature and would not be expected to have a material impact on the share of benefits returned to customers under the incentive.

Any non-wires alternatives implemented through the SRP that would be eligible for a savings-based incentive would not also be eligible to contribute to the System Efficiency performance incentive mechanism.

Finally, as noted in the Docket No. 4770 Amended Settlement Agreement, incremental net-metered behind-the-meter photovoltaic distributed generation in excess of Company forecast levels can also contribute to the System Efficiency performance incentive mechanism. The contribution of this resource, however, is expected to be modest, particularly given that installations must exceed forecast levels. The Company would not expect contributions from this resource to have a material impact on the net benefits shared between the Company and customers under the incentive.

PUC 1-20

Request:

Please explain the difference between the Energy Storage Demonstration project in Docket No. 4770 and the storage project included in the instant SRP proposal for Tiverton-Little Compton area?

Response:

Two energy storage demonstration projects were approved in Docket No. 4770: (1) a behind-the-meter energy storage system co-located with a DC fast charging site; and (2) a front-of-the-meter energy storage system for the primary purpose of demonstrating distribution system value.

The storage project formerly proposed for the Little Compton Battery Storage Project is from a vendor in response to an RFP to provide up to four hours of 250 kW of load relief during peak load conditions at the Tiverton substation. RFP responses were not required to include energy storage. The fact that the vendor proposed a storage solution was the vendor's choice, and the solution was to be operated by the vendor to meet the described need.

As explained in Section 9 of the 2019 SRP Report, the RFP for the potential NWA opportunity for the Tiverton-Little Compton area will be reissued. The RFP will be for a third-party owned solution. Please note that the project for that area has been reframed as the "Tiverton-Little Compton NWA Project," replacing the Little Compton Battery Storage Project. Therefore, the type of technology to be selected for the Tiverton-Little Compton area currently is undetermined and will depend on bid evaluation after the new RFP is issued.

The Narragansett Electric Company
d/b/a National Grid
RIPUC Docket No. 4889
In Re: 2019 System Reliability Procurement Report
Responses to Commission's First Set of Data Requests
Issued on November 13, 2018

PUC 1-23

Request:

Please confirm that the only NWA being considered for the Tiverton-Little Compton area is a battery storage project.

Response:

As explained in Section 9 of the 2019 SRP Report, the RFP for the potential NWA opportunity for the Tiverton-Little Compton area will be reissued. The RFP will be for a third-party owned solution. Please note that the project for that area has been reframed as the "Tiverton-Little Compton NWA Project," replacing the Little Compton Battery Storage Project. Therefore, the type of technology to be selected for the Tiverton-Little Compton area currently is undetermined and will depend on bid evaluation after the new RFP is issued.

The Narragansett Electric Company
d/b/a National Grid
RIPUC Docket No. 4889
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PUC 1-24

Request:

Will the storage project for the Tiverton-Little Compton area be Company-owned or third-party owned?

Response:

Please see the Company's response to PUC 1-23 for the requested information.

PUC 1-25

Request:

Referencing Table 5 on Bates page 25 of the SRP Report and paragraph three of Bates page 32 of the SRP Report, please explain how twenty days is the average number of days that demand response events were called in the Tiverton Pilot each year for 2015 through 2017.

Response:

The actual number of events called in calendar year 2017 was 23; however, only 15 events were counted toward the pilot evaluation because 8 of the events did not have the same parameters (i.e., some were called during the weekend, and some had a different degree setback) as the other 15 events. Therefore, for evaluation purposes, the event count was 15; for National Grid distribution planning purposes, the event count was 23.

The calculation that arrived at 20 days for calling events is:

$$\text{Projected Number of Events for Planning} = \frac{\sum \text{Number of Events per Year}}{\text{Number of Years}}$$

Therefore, with the dataset being the events called during the years of 2015, 2016, and 2017, and, with numbers applied, the calculation is:

$$\text{Projected Number of Events for Planning} = \frac{(15 + 18 + 23) \text{ events/year}}{3 \text{ years}}$$

$$\text{Projected Number of Events for Planning} = 18.667 \approx 19 \text{ events}$$

The number of events totals approximately 19. The 19 number of events was then rounded up to 20 events to be conservative and add a buffer as part of project planning for the Tiverton-Little Compton NWA Project.

Please note that the number of 20 events developed from project planning for the Tiverton-Little Compton NWA Project, which is derived from the historical data of the Tiverton NWA Pilot in addition to supplementary planning configuration.

The Narragansett Electric Company
d/b/a National Grid
RIPUC Docket No. 4889
In Re: 2019 System Reliability Procurement Report
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Issued on November 13, 2018

PUC 1-26

Request:

Please provide the calculation that arrived at twenty days per year referenced on Bates page 32 of the SRP Report.

Response:

Please see the Company's response to PUC 1-25 for the requested information.

PUC 1-28

Request:

Referencing Bates page 35, please provide evidence of the rapid increase in adoption of the connected devices and home automation in National Grid's Rhode Island service territory.

Response:

The Company is not currently aware of market research on smart home technologies at the state level; however, the Company asked E Source to evaluate data from the E Source Residential Customer Insights Center¹—an online analysis tool that compiles data from the Claritas Energy Behavior Track annual online survey of approximately 32,000 residential customers in the U.S. (conducted in partnership with E Source). The Company also asked E Source to evaluate a range of other sources to gauge regional and national trends for smart home and home energy management (HEM) systems, smart thermostats, smart LEDs, and smart speakers. E Source's evaluation is summarized below.

Smart homes

According to 2018 data from Internet of Things market research and consulting firm Parks Research, 32% of U.S. broadband households own at least one connected device, and 50% of households intend to purchase a smart home device in the next year.²

In the Northeast, data from the E Source Residential Customer Insights Center suggests that 32.5% of customers already own—or are considering purchasing—some type of home energy management system as of 2017, up from 19.5% in 2015 (representing a 67% increase in interest in two years). Similarly, the number of customers across the entire U.S. that already own, or are considering purchasing, a home energy management system rose from 26.9% in 2015 to 32.7% in 2017.

Smart thermostats

Market penetration of smart thermostats in the Northeast has nearly doubled in the past few years—from 3.6% in 2014 to 6.6% in 2017—according to the E Source Residential Customer Insights Center. That is consistent with the national trend as well (3.3% in 2014 and 6.8% in 2017).

¹ <https://www.esource.com/about-RCIC>.

² J. Homier, M.S. Sternblitz-Rubenstein, "[Nearly 75% of consumers planning to buy smart home devices value interoperability with other products in their home](#)," Parks Associates (June 2018).

Smart LEDs

In both the Northeast and the U.S. as a whole, the E Source Residential Customer Insights Center suggests that, as of 2017, just over 7% of residential customers have replaced regular lights with smart LED lamps that can be controlled remotely.

Smart speakers

Since their release in late 2014, our research suggests that smart speakers have become one of the most quickly-adopted consumer electronic devices ever. The E Source report “Which Customers Are Interested in Smart Speakers, and How Do You Reach Them?,” based on data from the E Source Residential Utility Customer Survey, highlights how much of the market has already adopted smart speakers and identifies opportunities for utilities. Of particular interest, 27% of US respondents said they currently own a smart speaker,³ and 60% of smart speaker owners said they are “probably” or “definitely” interested in a utility application that makes use of voice-activated skills.⁴

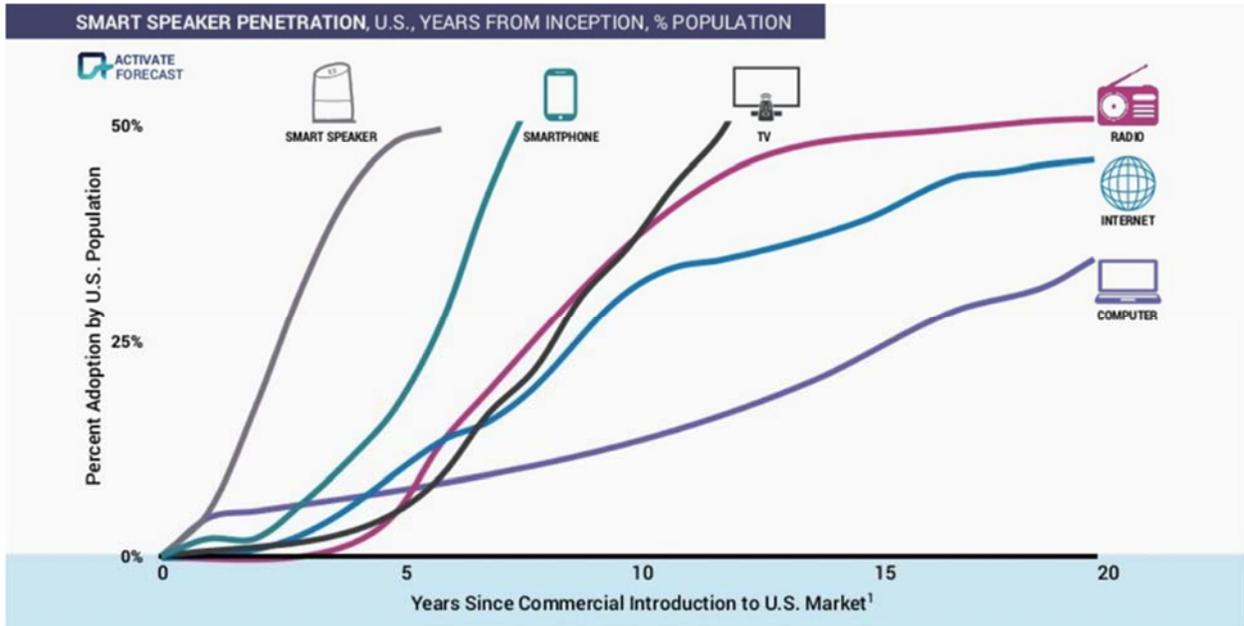
Looking forward, Parks Associates predicts that 55% of U.S. broadband households will likely have a smart speaker with a voice-based personal assistant by 2021,⁵ and this chart from XAPPmedia shows the expected adoption of smart speakers compared to devices like smartphones, TVs, radio, the Internet, and personal computers.⁶

³ C. Framularo, A. Madad, “[Which Customers Are Interested in Smart Speakers, and How Do You Reach Them?](#),” E Source (July 2018).

⁴ C. Framularo, A. Madad, “[Residential Utility Customer Survey 2017](#),” E Source (July 2018).

⁵ Julia Homier (July 2018), Marketing Manager, Parks Associates.

⁶ “[Smart Speakers Are Showing the Fastest Technology Adoption in History](#),” XAPPmedia (accessed November 2018).



According to the market study “Smart Audio Report, Spring 2018” from National Public Radio (NPR) and Edison Research, ownership of smart speakers is fairly evenly distributed across genders and age groups (suggesting a wide potential audience).⁷ The researchers found that 32% of smart speaker owners have controlled household devices with a smart speaker in the past week (primarily lighting, thermostats, or appliances) and that 59% have encouraged a friend to get a smart speaker. Moreover, 44% of the survey respondents indicated that time spent with smart speakers replaced time previously spent with radio, and 35% reported offsetting time spent with their smartphones—two major channels utilities rely on for communications and marketing. Finally, it is worth mentioning that Alexa and the Google Assistant can each control more than 5,000 smart home devices from thousands of brands, and the number of supported languages and features offered is continually expanding.

⁷ "[Smart Audio Report, Spring 2018](#),” National Public Radio and Edison Research (July 2018).