MEMORANDUM

To: Chairperson Curran, Commissioners
From: Todd Bianco and Cynthia Wilson-Frias
Date: April 21, 2017
Re: Docket 4600 Report – Summary and Staff Recommendations

I. Background

The Renewable Energy Growth Program Act (Act)[1] created a tariff-based financing program for renewable distributed energy generation systems. The purpose of the program is to facilitate and encourage the installation and development of renewable distributed generation systems, reduce environmental impacts and carbon emissions, diversify generation sources, stimulate economic development, improve distribution system resilience and reliability, and reduce distribution system costs.[2] In light of the changes this and other programs may cause to the distribution system, the Act specifically considered necessary changes to rate design and allocation of distribution system costs, energy efficiency costs, and other renewable energy program costs recovered in rates.[3]

The PUC has interpreted the rate design section of the Act[4] to mean that, in setting future distribution rates for applicable electric distribution companies,[5] the PUC will be required to take into account and balance specific factors that include traditional ratemaking principles, but that also include principles more specific to the legislative intent of distributed energy resource programs.[6] In essence, the Act requires a modernization of rates that appropriately accounts for modernization of the electric system.

In order to inform the PUC and any interested parties of how such factors may be applied to future filings by National Grid (or its successor) the PUC opened Docket No. 4600 Investigation into the Changing Electric Distribution System. The specific purpose of the docket was to "develop a report that will guide the PUC's review of [National Grid's] rate structure in future proceedings."[7] The PUC focused the investigation on major points of controversy in a previous rate design proposal filed by National Grid that was the first filing subject to the principles enumerated in the

[1] R.I. Gen. Laws § 39-26.6-1 to 27
[2] R.I. Gen. Laws § 39-26.6-1
[3] R.I. Gen. Laws § 39-26.6-24(a)
[4] Specifically, the language of R.I. Gen. Laws § 39-26.6-24(c)
[5] Currently, the statute only applies to The Narragansett Electric Company d/b/a National Grid
[6] The factors are (1) The benefits of distributed-energy resources; (2) The distribution services being provided to net-metered customers when the distributed generation is not producing electricity; (3) Simplicity, understandability, and transparency of rates to all customers, including non-net metered and net-metered customers; (4) Equitable ratemaking principles regarding the allocation of the costs of the distribution system; (5) Cost causation principles; (6) The General Assembly's legislative purposes in creating the distributed-generation growth program; and (7) Any other factors the PUC deems relevant and appropriate in establishing a fair rate structure. The statute is also clear on the breadth of options before the PUC in considering and balancing these factors, and that the PUC "may consider any reasonable rate design options, including without limitation, fixed charges, minimum-monthly charges, demand charges, volumetric charges, or any combination thereof, with the purpose of assuring recovery of costs fairly across all rate classes." R.I. Gen. Laws § 39-26.6-24(b)
[7] PUC Notice of Commencement of Docket and Invitation for Stakeholder Participation, March 18, 2016. http://www.ripuc.org/eventsactions/docket/4600-Notice_InviteStakeholders.pdf.

Act.[8] Staff then summarized the major point of controversy as a disagreement regarding distributed energy resources' use of and contribution to the distribution system, or more succinctly, the costs and benefits of distributed energy resources. Subsequently, the PUC determined that it was imperative to develop an improved understanding and consistent accounting of the costs and benefits caused by various activities on the system.

More specifically, the PUC sought answers to the following overarching question: **What attributes are possible to measure on the electric system and why should they be measured?** The PUC indicated that this overarching question can be further broken down into three broad questions:

1. What are the costs and benefits that can be applied across any and/or all programs, identifying each and whether each is aligned with state policy?;
2. At what level should these costs and benefits be quantified—where physically on the system and where in cost-allocation and rates?; and
3. How can we best measure these costs and benefits at these levels–what level of visibility is required on the system and how is that visibility accomplished?

Docket 4600 was designed as a stakeholder process to build consensus (or define where consensus could not be reached) on answers to the above-referenced questions. Twelve stakeholders representing the utility, competitive suppliers, developers of distributed energy resources, low income advocates, environmental advocates, large commercial and industrial users of electricity, and two state agencies participated in the year-long process. The PUC hired a facilitator/consultant (Raab Associates) to assist in the review and consensus building, and PUC staff participated as *ex officio* stakeholder group members. The process resulted in a stakeholder report filed on April 5, 2017, representing unanimous consensus on goals for a new electric system; costs and benefits to account for on the system and refinement of cost-effectiveness testing; and a set of rate design and cost recovery strategies and principles. Consensus was not reached on one issue raised regarding implementation strategies for future rates. The report also provided recommendations for future action.

II. Staff Recommendation

To finalize this process, staff recommends the PUC formally accept the Report. The PUC should also issue a Guidance Document that adopts sections of the report and explains how, to the extent possible, these sections would apply to National Grid's electric utility proposals to recover distribution system costs and energy efficiency and renewable energy program costs. This will allow appropriate notice to National Grid on the standard of review for upcoming rate cases. The PUC should also make specific determinations on the near-term implementation and development of certain elements of the report. Finally, the PUC should determine and explain the next phases of its investigation into the changing distribution system.

II.A. Recommendations for a Guidance Document

A guidance document is an agency statement of general applicability and future effect that sets forth a policy on a statutory, regulatory or technical issue. In the context of Docket No. 4600 the

[8] Docket No. 4568 Review of The Narragansett Electric Company d/b/a National Grid Rate Design Pursuant to R.I. Gen. Laws § 39-26.6-24 http://www.ripuc.org/eventsactions/docket/4568page.html.

PUC would be providing direction to the utility and other potential parties of the expectations for meeting the utility's burden of proof in an upcoming rate case in light of R.I. Gen. Laws § 39-26.6-24 and the PUC's general statutory obligation to ensure that rates are just and reasonable and align with state policy goals (i.e., public interest).

The Guidance Document should adopt the Goals for a new electric system enumerated in Section 1.3. In future rate cases, National Grid should explain how their proposals, including rate design proposals, help achieve these goals on balance.

The Guidance Document should also adopt the Rate Design Principles enumerated in Section 3.1. These principles are a fuller articulation of the factors enumerated in the Act that the PUC has determined must be considered in future rate cases. In future rate cases, National Grid should explain how their rate design proposals "take into account and balance"[9] these principles.

The Guidance Document should also adopt the Rhode Island Benefit-Cost Framework (Benefit-cost Framework; Section 2.1 and Appendix B) as currently developed. The Benefit-Cost Framework is incomplete at this time because some of the principles are new and we do not have a methodology to quantify those costs and benefits at this time. However, the Benefit-Cost Framework can still be used as a valuable tool in the future rate cases. At a minimum, National Grid should provide a qualitative analysis of how new rate designs and/or cost recovery proposals will have an effect on the costs and benefit categories (and the drivers of costs and benefits) identified in the Benefit-Cost Framework. National Grid should also provide the same qualitative analysis for new spending proposals. To the extent possible, National Grid should also provide a quantitative analysis of the affects rate design, cost recovery, and spending proposals would have on cost and benefit categories.[10]

II.B. Recommendations for Near-Term Implementation and Development

II.B.1 Low Income/Customer Protections and Opportunities

Staff recommends the PUC specifically require National Grid to submit, within the upcoming electric rate case, a proposal for an appropriate design of the low income rate in consideration of the goals and principles within the Guidance Document. While staff does not recommend adopting this Section 3.4 in the Guidance Document at this time, staff recognizes that the low income and customer protection recommendations in this section include appropriate design options that may satisfy a requirement for a rate design that reflects the goals and principles in the Guidance Document. Although the stakeholder group was focused solely on National Grid's electric utility business, staff recommends that the requirement also be applied to low-income rates in its gas rate case filing, not necessarily to set identical discount rates, but to determine the continued just and reasonableness of the existing rate structure, and to determine whether there is a more equitable rate structure for each of the three classes of low income customers (A-60, Residential Non-Heating Low Income, and Residential Heating Low Income) as balanced with all other rate classes.

[9] Reference is made to the language of R.I. Gen. Laws § 39-26.6-24(b)

[10] Staff considers the qualitative and quantitative cost and benefit information that National Grid's Electric Infrastructure, Safety, and Reliability Plan FY 2018 Proposal (filed in Docket No. 4682) includes is a fair starting point for how this requirement would be applied to new spending proposals.

Additionally, Section 3.4 of the report identifies opportunities and rate design options for the PUC to investigate. The PUC is currently reviewing low income programs in order to report on these programs to the General Assembly by November 2018.[11] In order to support future investigation into more dynamic low income rate design, or to allow the General Assembly to evaluate future legislative proposals related to low income programs, staff recommends the report currently in development should include the collection and reporting of data relative the points identified in Section 3.4.

II.B.2 Development and Refinement of the Rhode Island Benefit-Cost Framework

In the pending review of the Least Cost Procurement Standards, the PUC is already considering use of a "Rhode Island Test" as its standard for cost-effectiveness screening.[12] As described above, however, the consensus Benefit-Cost Framework is incomplete, and thus not possible to be fully incorporated into the Rhode Island Test. The PUC should request that the Rhode Island Division of Public Utilities and Carriers (Division) develop the methodologies needed to populate the missing information in the Benefit-Cost Framework, and submit these proposed methodologies to the PUC. This first step should be based on currently deployed technologies. The Division's proposal will allow the PUC to consider a set of quantitative costs and benefits when reviewing program and rate design proposals.

Further, the Benefit-Cost Framework includes a column of options for visibility requirements that are necessary to sufficiently account for costs and benefits on the system, and that may also be useful to achieve other goals of the electric system. The PUC should request that the Division file a report on a set of functionalities that are desirable on the electric system to achieve a better accounting and allocation of costs and benefits and that would support the consensus goals in the Guidance Document (Section 1.3 of Report). Where possible, the study should also identify candidate technologies needed to achieve these functionalities. This would allow the PUC to consider a set of viable pathways for grid modernization, described below in recommendation II.C.

The PUC should also investigate, or request the Division investigate, the level of benefits that have been achieved through various programs and the cost of these programs. The investigation should identify how National Grid recovers costs and is incentivized (where applicable) to execute these programs. The review of the incentives should consider not just direct payments to National Grid from the program, but how one program may make it easier for National Grid to earn money in other activities.[13] The initial review will provide the PUC with a reference point to compare the current performance in achieving state goals and would support the PUC's consideration of viable pathways for grid modernization described below in recommendation II.C.

II.C. Recommendation for a Grid Modernization Docket

Staff recommends that the PUC open a grid modernization docket to investigate viable pathways and efficient levels of investment, specific to the Rhode Island system, to meet the goals outlined

[11] R.I. Gen. Laws § 39-2-1(e)

[12] In re: Proposed Energy Efficiency Savings Targets, 2018-2020 (Docket No. 4684).

[13] At a minimum, the review should quantify the amount of megawatts (MW) of renewable power developed or system power avoided, megawatt-hours (MWh) of renewable energy produced or system energy avoided, tons of carbon-dioxide equivalent emissions avoided, and job-years and/or economic growth created. When a methodology for reliability and resiliency have been developed, the study should be expanded to include these benefits as well.

in Section 1.3 of the report and other statutory goals that apply to the PUC's regulatory responsibilities, such as consideration of rate impacts over the short and long term and of rate stability.[14] The scope should include consideration of the most appropriate allocation of costs and benefits, better rate design and cost recovery, and incentives for investment. In particular, the investigation should consider the use of Time Varying Rates (Section 3.2), Location-Based Strategies (Section 3.3), Long-Term Distribution Rate Design (Section 3.6), and the appropriate Value of Distributed Energy Resources (Section 4.2 – page 20 of stakeholder report).

To execute this work, the grid modernization docket will include a review of the Division's report on desired functionalities; a review options for candidate technologies; and development of a set of grid modernization scenarios that would describe a reasonable range of options to achieve state policy goals on the Rhode Island system. In that docket, the PUC should then seek to examine the scenarios as different business cases for grid modernization, including an examination of the scenarios using the most up-to-date and vetted version of the Rhode Island Benefit-Cost Framework.

The scope of this grid modernization docket should also be informed by other work done as part of the Power Sector Transformation project. The Division's review of different utility business models would be an important point of view to consider in developing viable pathways for grid modernization. Of particular importance is the Division's discussion of what services the utility should provide, what utility functions would provide greatest value to customers, and how those functions should be compensated. Similarly, the Office of Energy Resources' work on distribution system planning and aligning utility and third-party investment decisions should contribute important information to a PUC docket on grid modernization, as that work aims to explore the goals of a least-cost and reliable utility system that achieves public policy objectives.

III. Execution

The PUC may direct staff to prepare a Guidance Document (to include all of the matters the PUC wishes to adopt) for consideration at an Open Meeting followed by a brief comment period. At the same Open Meeting the PUC may issue any additional and necessary orders to National Grid. The PUC would then hold another Open Meeting to review comments and finalize the Guidance Document. The PUC should also leave Docket 4600 open and/or initiate a grid modernization docket into which the Division's work product (such as a formal proposal for cost and benefit quantification methodologies, a study of existing programs' achievement of state policy, and a report on desirable functionalities) could be filed with the PUC. After the work of the Power Sector Transformation project is complete, those completed proposals can be filed in the new docket that will consider pathways for grid modernization as described in recommendation II.C.

Possible Schedule:
April 28, 2017 – Docket No. 4600 Technical Session
May 4, 2017 – PUC to discuss report and identify the portions of the report to adopt for purposes of creating a guidance document and order National Grid to include other items in the upcoming rate case (i.e., design of low income rate)
May 18, 2017 (approx. 2 weeks) – Issue Guidance Document for comments
June 8, 2017 – Comments due

[14] R. I. Gen. Laws § 39-1-1(e).

June 22, 2017 – OM to formalize Guidance Document (make decision to leave 4600 open and/or open new Grid Modernization Docket – more formal name to be assigned).