Celia B. O'Brien
Assistant General Counsel and Director

September 1, 2017

VIA ELECTRONIC MAIL

Rhode Island Power Sector Transformation Initiative
c/o Rhode Island Division of Public Utilities and Carriers and Office of Energy Resources
DPUC.powertransformation@dpuc.ri.gov

RE: Rhode Island Power Sector Transformation Initiative
Request for Stakeholder Comments on the Initial Proposals for Distribution System Planning Improvements
National Grid's Comments

Dear Members:

On behalf of National Grid,[1] I enclose the Company's comments in response to the initial proposals and additional questions outlined in the Division of Public Utilities and Carriers and the Office of Energy Resources request dated August 15, 2017 to inform the ingoing inquiry into distribution system planning.

The Company looks forward to future discussions on this important topic. If you have any questions, please contact Kayte O'Neill at 781-907-1790, Tim Roughan at 781-907-1628, or me at 781-907-2153.

Very truly yours,

Celia B. O'Brien

Celia B. O'Brien

Enclosure

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

40 Sylvan Road, Waltham, MA 02451
T: 781-907-2153 ■ celia.obrien@nationalgrid.com ■ www.nationalgrid.com

Division of Public Utilities and Carriers and Office of Energy Resources
Power Sector Transformation
Initial Proposals for Distribution System Planning Improvements and Request for Stakeholder Comment

National Grid's Comments in Response to the August 15, 2017 Proposals and Stakeholder Questions

---

National Grid appreciates the opportunity to submit comments in response to the initial proposals and additional questions set forth in the *Initial Proposals for Distribution System Planning Improvements and Request for Stakeholder Comment* dated August 15, 2017 and to further elaborate upon the Company's previously articulated positions on the topic of distribution system planning.

1. Rhode Island System Data Portal

Initial Proposals:

- Through its upcoming rate case, the utility should provide a plan to develop a RI System Data Portal, using the New York System Data Portal as a starting point. Peak/load forecasts, capital plans, distribution system planning process descriptions, heat maps, hosting capacity maps, and other key data should be made available through the portal. For data not yet developed, such as hosting capacity maps, the utility, regulators, and stakeholders should work together on reasonable timelines and specificity.
- The Power Sector Transformation team should provide guidance relative to design criteria and an ongoing process for review, input, and update of the portal.

Questions:

1) What key information, data, or tools would stakeholders like to see on a RI System Data Portal?

As noted in the Initial Proposals above and subject to an appropriate cost recovery mechanism approved by the Public Utilities Commission, National Grid plans to develop the Rhode Island System Data Portal leveraging lessons learned from similar efforts in New York. The Company plans to include the following elements in the initial version of the portal:

- Reports/Information – This would include Company filings, criteria, and guidelines, such as the latest Infrastructure, Safety, and Reliability (ISR) Plan quarterly report, latest System Reliability Procurement (SRP) report, latest Company forecast, and current Distribution Planning Guide.
- Heat Map – This would be presented as an interactive distribution system map indicating locations where the system is approaching a planning constraint. The results of distribution power flow analysis will be color coded to simplify the communication of the information. The content of the heat map is expected to

evolve with time, and the initial version will include normal configuration (all lines in service) capacity analysis. Future versions could also include voltage and reactive compensation information. The map is intended to be used to target distributed energy resources (DER) where they have the potential to provide the most system benefit.

- Hosting Capacity Map – This would be presented as an interactive distribution system map indicating where DER may be interconnected without requiring significant system upgrades. National Grid plans to obtain the hosting capacity module to its CYME distribution analysis software when available and continue to work with outside stakeholders to develop the needs for the map. Upon completion of this work, the module would be expected to be released within 6-12 months thereafter.

2) The Power Sector Transformation team current vision is a modular portal that could be developed in an iterative fashion over time. What initial content or features should be prioritized for a portal?

As described above, National Grid proposes an initial data portal that leverages lessons learned in New York. In addition, the Company has carefully considered currently available data and currently available or pending analysis capability. Therefore, National Grid respectfully requests that the initial data portal be limited to the three categories described above. Of course, the Company would welcome a discussion regarding a scheduled evolution of content and features coupled with consideration of the equipment and software necessary to enable those features. New content and features should be proposed and prioritized with carefully considered use cases.

2. <u>Data Access and Governance Policy</u>

<u>Initial Proposals</u>:

- The utility should include a "Data Access and Governance Policy" as part of its upcoming rate case that contains the following elements:
  - Customers should have the right to access their own usage and billing data in an easily-organized and standard format (e.g. display of consumption during peak-time events, display of consumption data used for billing on the monthly statement).
  - Customers should be able to authorize third party access to their data
  - The utility should make certain system data and aggregated/anonymized customer data available to the public
  - The utility should be able to charge market rates in exchange for developing and providing "value-added" data
- The policy should propose a standard process by which users can make data requests to the utility, request the provision of additional datasets over time, and establish procedures for how to settle disputes

- The utility should propose adequate security protections for data sharing that should be reviewed by stakeholders and regulators.

Questions:

1) In its Supplemental DSIP Filing in New York, National Grid provides a list of datasets in publicly-available filings.[1] Should any additional datasets be provided initially by the utility?

Proposals for additional datasets should be considered closely with the equipment and software needed to develop those datasets. For example, the Initial Proposal above includes an element that: "Customers should have the right to access their own usage and billing data in an easily-organized and standard format (e.g. display of consumption during peak-time events, display of consumption data used for billing on the monthly statement)". Currently, any customer can have on-line access to, at a minimum, their monthly consumption, and for large commercial and industrial customers, their hourly consumption. However, except for the access to hourly information the large commercial and industrial customers currently have, there is no current ability to display consumption during peak-time events. Furthermore, use cases for proposed datasets should be determined with outside stakeholders and then clearly presented.

2) How should a dataset be determined to be "value-added" and subject to payment by a user to access the data. Is this determined by the utility? By regulators? Other?

National Grid considers value-added data to be that data that goes beyond what is regularly maintained and used for utility operations and therefore requires the application of additional labor or system processing to present this data to a third party for their independent use. Referring to the same Supplemental Distributed System Implementation Plan (DSIP) filing in New York, National Grid and the other Joint Utilities describe that:
"Value added data goes beyond basic data by having one or more of the following characteristics:

- Is not routinely developed or shared;
- Has been transformed or analyzed in a customized way (i.e., aggregated customer data);
- Is delivered more frequently than basic data;
- Is requested and provided on a more ad hoc basis; and/or
- Is more granular than basic data.

Examples of value-added system data may include granular forecasted load data, voltage profiles, and power quality data." [2] The Joint Utilities propose that "value-added data will be

[1] http://jointutilitiesofny.org/wp-content/uploads/2016/10/3A80BFC9-CBD4-4DFD-AE62-831271013816.pdf;

[2] Joint Utilities of New York. Supplemental Distributed System Implementation Plan. Case 16-M-0411, In the Matter of Supplemental Distributed System Implementation Plans. Page 121.

available for a fee determined through utility-specific fee structures. These fees may vary by each utility tariff based on its value to the consumers and market."[3]

3) Aggregation standards can be used to preserve customer privacy. Aggregated data is data that has been summed or combined across a group of multiple accounts in order to preserve individual customer privacy. In New York, the utilities proposed a 15/15 privacy standard for aggregated data, which would require data to be drawn from a minimum of 15 accounts and limits the load of any single account to 15% of the total load for the dataset. What is appropriate for Rhode Island?

Although the Joint Utilities in New York have proposed the 15/15 privacy standard, it was proposed as a starting point with the idea that the regulators would ultimately define aggregation standards to which utilities will comply. The 15/15 standard was presented as conservative criteria that the utilities would utilize until a statewide standard is developed/ordered.

3. Hosting Capacity and Heat Maps

Initial Proposals:

- Based on input from stakeholders, the utility should propose an implementation roadmap within ISR/SRP for developing and updating hosting capacity maps that meet the needs of the utility and stakeholders
- Based on input from stakeholders, the utility should propose an implementation roadmap within ISR/SRP for developing and updating heat maps, as well as consistent integration of heat map implementation across all DER and infrastructure planning processes

Questions:

1) What are the uses and objectives for hosting capacity analyses that are most important to Rhode Island stakeholders (e.g., indicative information for feeder capacity for DER, fast-track interconnection approvals, annual distribution system studies)? What are the granularity, frequency, and accuracy requirements for each use and appropriate industry method?

Hosting capacity is defined as the amount of DER that can be accommodated without adversely impacting power quality or reliability under existing control configurations and without requiring infrastructure upgrades to the primary distribution line voltage and/or secondary distribution network system. National Grid believes that hosting capacity analysis (HCA) maps provide insights for smaller (< 3 MW) DER developers that may help determine potential constraints for projects of various sizes and locations. However, National Grid does not believe this HCA information is sufficient to avoid any of the existing interconnection evaluation requirements that consider project-specific variables associated with the actual DER equipment, expected modes of operation, and the specific location of interconnection. For larger projects that will likely require

[3] *Ibid.*

new infrastructure to be constructed (projects or aggregation of projects > 5 MW), the HCA will not be useful as these projects cannot be served from the existing distribution infrastructure. A significantly more complex assessment tool would be necessary for fast track approval analysis or detailed interconnection analysis, and would require further work to develop.

2) How should the utility ensure consistent integration of heat map implementation across all DER and infrastructure planning processes?

The Company intends to present a roadmap for the evolution of the heat map in the pending SRP Plan. The roadmap will start with a small-scale testing plan. Once the heat map is tested, collectively determined suitable for wide scale deployment, and a cost recovery method established, it will be applied consistently for all DER as planning processes, policies, or guidelines evolve.

3) How often can/should heat and hosting capacity maps be updated now and in the future?

The Company suggests the heat map be refreshed annually as proposed in the pending SRP Plan until the testing and evaluation is complete. Once the concept is suitable for state wide deployment, faster refresh concepts coupled with the equipment and software to enable the faster refresh can be discussed and funding secured.

4. Forecasts

Initial Proposals:

- Detailed information on National Grid's forecasts that are used for distribution system planning should be made public through a centralized RI System Data Portal and through relevant dockets, namely the ISR and SRP
- Stakeholders – including policymakers and third parties – should have the opportunity to review and provide input into National Grid's forecasting assumptions and methodology
- The utility should describe its process for reassessing forecasting as technologies and data-gathering improves

Questions:

1) Would making forecasting assumptions and methodologies available through ISR/SRP filings meet the needs of stakeholders to provide meaningful input into forecasting while balancing the Company's internal needs to meet their timelines and general obligations for distribution planning?

National Grid will communicate its assumptions and methodologies within the yearly forecast report to be presented in the proposed data portal. Feedback through the ISR filing, SRP filing, or any other agreed upon venue would be considered in future forecasts. It is important to note the forecast is developed over a number of months. Feedback should be gathered and

implemented into future forecasts. The Company is not recommending any revision to a current forecast in-use as it would create significant disturbance and rework within the Company's planning efforts.

5. Alignment of DSP, Capital Project, and Non-Wires Alternative (NWA) Planning

Initial Proposals:

- The Power Sector Transformation team should work with the utility and other stakeholders to ensure that the utility's internal protocol for DSP fully integrates evaluation of partial NWA into the NWA screening process, provides further opportunities to engage DER providers earlier in and throughout the distribution planning process, and that all DSP regulatory processes are informed by the Company's increasing analytic capabilities.

Questions:

1) How can DSP fully integrate partial NWA opportunities in a way that allows DER providers to provide incremental value to the system where opportunities exist?

The Company has already integrated a partial NWA evaluation into its Distribution Planning process. The Company is committed to working with the stakeholder community on ways to improve visibility and transparency of the planning process while maintaining the safety and reliability of the system for all of its customers in Rhode Island.

2) How and when should DER providers and/or other stakeholders be engaged through the distribution planning process?

National Grid is working with stakeholders to identify the appropriate processes for engagement. As one example, National Grid has started looking at ways to engage DER providers earlier in its Distribution Planning Study process for its Northwest Rhode Island study. Prior to developing infrastructure plans as part of the study, the Company has started developing a heat map to gain feedback from stakeholders on DER opportunities. In this way, both the heat map concepts and the integrated planning processes can be explored.