Celia B. O'Brien
Assistant General Counsel and Director

August 11, 2017

VIA ELECTRONIC MAIL

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

RE: Rhode Island Power Sector Transformation Initiative
Notice of Inquiry and Request for Stakeholder Comment Dated June 14, 2017
National Grid's Reply Comments Regarding a Utility's Role in Deploying Beneficial Electrification in Rhode Island

Dear Members:

On behalf of The Narragansett Electric Company d/b/a National Grid (National Grid or the Company), I enclose the Company's reply comments in response to the Notice of Inquiry and Request for Stakeholder Comment Regarding a Utility's Role in Deploying Beneficial Electrification in Rhode Island with a Focus on Plug-in Electric Vehicles.

The Company looks forward to future discussions on these important topics. 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

Enclosure

nationalgrid

Public Utilities Commission, Division of Public Utilities and Carriers, and Office of Energy Resources
Power Sector Transformation
Notice of Inquiry and Request for Responses to Stakeholder Comments Regarding a Utility's Role in Deploying Beneficial Electrification with Focus on Plug-in Electric Vehicles.

National Grid's Reply Comments - August 11, 2017

National Grid appreciates the opportunity to submit comments in reply to the stakeholder comments submitted in response to the *Notice of Inquiry and Request for Stakeholder Comment Regarding a Utility's Role in Deploying Beneficial Electrification with a Focus on Plug-in Electric Vehicles* (hereafter, Notice of Inquiry). In the responses that follow, the Company further elaborates on the positions articulated in its response to the Notice of Inquiry and responds to stakeholder comments in four areas: 1) utility roles in advancing transportation electrification; 2) metrics for evaluating utility electric vehicle (EV) programs; 3) cost-recovery and compensation; and 4) electrification of heat.

1. Utility roles in advancing transportation electrification

The Company agrees with commenters that utilities can play an important role in advancing electrification of transportation in Rhode Island. In general, the stakeholder comments suggest that utility programs should help to advance the buildout of charging infrastructure, encourage efficient use of the system, and advance EV adoption through customer education and outreach. As indicated in our original comments, the Company agrees that these areas are important priorities in any utility EV proposal.

Commenters vary in their degree of support for utility ownership of EV supply equipment (EVSE). Some commenters (e.g., Sierra Club, Greenlots) suggest that utility ownership of EVSE can help to expand EV ownership and stimulate the development of private markets, while others (e.g., People's Power and Light, NECEC, Acadia Center) suggest that utility ownership and operation of EVSE should be, with minimal exceptions, left to the private market.

National Grid appreciates that there are diverse perspectives on the appropriate ownership model for EVSE. At these early stages of transportation electrification, a single ownership model has yet to emerge as superior in terms of customer benefits or advancement of policy goals. Each model has its strengths and shortcomings[1], and the public interest is likely to benefit from the demonstration and evaluation of multiple ownership models.

The Company suggests that Rhode Island's aggressive goals for transportation electrification and greenhouse gas reductions may warrant an expanded utility role in EV charging investment and EV market development. Given Rhode Island's goals for growing EV adoption roughly 50-fold (i.e., from

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[1] See, for example, the summary of utility investment options in Jones, Brian. "Models for Utility Engagement" Beneficial Electrification Meeting I: Introduction and Focus on Electric Vehicles. May 31, 2017. Online: http://www.ripuc.org/utilityinfo/electric/PST_BE_5_31_P_MJBA.pdf.

about 800 to 43,000) by 2025[2], the Company suggested in its response to the Notice of Inquiry that its role in enabling EV adoption should also include continuing to serve as operator of EVSE in public and private locations through the installation, ownership, and maintenance of EVSE and associated electrical equipment on both the distribution system and behind customers' meters. As the Company noted in its response, the Company has already demonstrated successful provision of charging services in Rhode Island.

In the near term, the Company expects that allowing the Company to own and operate EVSE infrastructure in Rhode Island could provide the following benefits:

- Provide for an increase in charging station availability generally by filling gaps that currently existing in the private marketplace for EV charging services. In doing so, the Company would expect to stimulate EV demand, which will then improve the potential economics of investment for unregulated charging business operators. Through this effect, Company investment in EVSE can help to stimulate and support more private investment in EVs and EV charging in the state.

- Help to ensure widespread and sustained access to charging stations through development of EVSE in areas that are likely to remain underserved even as private investment in EV charging increases.

- Support large-scale private and public vehicle fleet adoption of plug-in EVs (PEVs).

- Evaluate and gain understanding of the potential for charging stations to contribute to load management.

As stated in its response to the Notice of Inquiry, the Company would expect that any investment in EVSE would occur in a measured, phased approach subject to periodic review by the Public Utilities Commission and the Division of Public Utilities and Carriers.

2. Metrics for evaluating utility EV programs

In its response to the Notice of Inquiry, National Grid suggested a number of potential metrics for evaluation of program effectiveness and, if deemed appropriate, development of potential performance incentives. Selection of metrics for either purpose should be informed by discussion with the state and stakeholders. Potential metrics should be evaluated for their ability to reflect measurable outcomes that are important to the State of Rhode Island and that provide value to customers, as well as for the ability of the Company to influence them.

[2] State of Rhode Island Zero Emission Vehicle Action Plan (2016).
http://www.energy.ri.gov/documents/Transportation/Rhode%20Island%20ZEV%20Action%20Plan%20Final%202016.pdf

Potential metrics suggested in our response to the Notice of Inquiry included:

- Station deployment.
- Station reliability and availability.
- Station utilization.
- EV rate or program enrollment.
- MWh of off-peak charging achieved as a result of rate or rebate program.
- Customer bill savings as a result of rate or rebate program.
- Impact on customer conversion to EVs.
- Number of registered EVs in service territory.
- Estimated emissions impact of the program.

The list of potential metrics above is generally aligned with those raised by other stakeholders. Although it was not on the list above, the Company could support a metric aimed at evaluating the equity implications of a Company's EV program, as suggested by People's Power and Light.

In response to other metrics suggested by stakeholders, the Company adds the following additional comments:

> First, metrics – and particularly those supporting a performance incentive – must be defined in such a way as to be capable of being accurately measured with minimal controversy. The Company suggests that the State avoid defining metrics in a manner that would require the development of a counterfactual[3] (i.e., defining the metric in a way that requires estimating what would have happened in the absence of Company activities) or the use of complex analytics. For example, although it is possible to measure and track over time the number of registered EVs in the Company's service territory, measuring the number of incremental EVs in the Company's territory as a result of Company programs would be difficult without estimating a counterfactual. Where precise metrics are too complex to develop, the goal should be to develop reasonable proxies. For example, although it is impossible to measure the exact impact of utility programs on customer conversion to EVs, a reasonable proxy might be developed through either a survey of customers or by tracking any Company-facilitated EV-related purchases.
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> Second, the Company suggests that any required reporting of metrics around EV programs focus on key outcomes associated with the policy goals defined by the State.

With the above two points in mind, the Company offers the following additional comments on some of the specific metrics suggested by commenters:

[3] An exception may be warranted if the counterfactual can be developed in a short timeframe using widely agreed-upon methods and assumptions. Such an exception might apply to assessment of CO_2 emissions impacts.

First, Chargepoint suggests that the State "measure the extent to which utility programs support the competitive EV charging market, in addition to tracking standard deployment and utilization indicators that would be used to evaluate utility programs."[4] Although the Company believes a utility EV program should play a role in stimulating private investment in both EV charging by site hosts and unregulated charging operators, as well as increasing business opportunities for EVSE vendors and service providers, it is not immediately obvious what an appropriate metric in this area might look like in practice. Noting the concern about use of counterfactuals described above, the Company suggests that any metric pertaining to facilitation of private investment should focus on measuring Company *actions* that might support this investment either directly or indirectly, rather than attempting to evaluate what might have happened in the market absent Company programs.

Also, the Company also notes that some of the metrics suggested by commenters around demand shifting or system efficiency impacts of new load from beneficial electrification will be difficult to measure directly at residences in the near term, absent dedicated meters. Although other proxies may be appropriately determined depending on Company offerings, it is likely to be most efficient to rely on broader system efficiency metrics being developed under the Utility Business Model workstream to create the appropriate incentives around these impacts, rather than focusing on EV program-specific system efficiency metrics.

Finally, the Company suggests that evaluation of an EV program's effectiveness in avoiding load-growth driven investment, proposed by Northeast Clean Energy Council (NECEC), is unlikely to be a viable performance metric in the near term because of the metering challenge described above, the likelihood of fairly limited load growth from EVs in the next few years, as well as the challenges inherent in estimating a counterfactual around infrastructure investments (i.e., what infrastructure investments would have occurred, and when, absent Company programs?).

3. Utility cost-recovery and compensation

As the Company noted in its response to the Notice of Inquiry, under revenue decoupling, the Company cannot retain any increase in revenue resulting from higher sales associated with further electrification of end-uses. Therefore, the regulatory framework around utility investments to support electrification will play an important role in aligning interests of the State, Company, customers, and stakeholders. Certainty about cost-recovery will be important in order to provide the Company with sufficient confidence to invest in an EV program.

As discussed in our response to the Notice of Inquiry, the Company believes that the costs of an EV program consisting of charging infrastructure, rates or rebates to encourage off-peak charging, and customer education and outreach would best be recovered primarily through a traditional cost of

[4] Notice of Inquiry and Request for Stakeholder Comment Regarding a Utility's Role in Deploying Beneficial Electrification with Focus on Plug-in Electric Vehicles. Comments of Chargepoint. June 30, 2017.

service approach, with a return on the capital portion of the total cost. Targeted performance incentives could complement this approach to reward the utility for strong performance in the delivery of key outcomes of importance to the State of Rhode Island, and may be an appropriate mechanism for recovering certain costs in some instances.

The Company also notes that the potential for increased throughput for beneficial electrification does not reduce the need for movement toward rate designs that are better aligned with cost-causation and encourage more efficient use of the distribution system.

4. Electrification of heat

National Grid concurs with various points raised by stakeholders regarding the electrification of heat. Growing usage of high-efficiency heat pumps will help the state meet its CO_2 emissions reductions goals. Additionally, high efficiency heat pumps can offer significant energy cost savings to customers using delivered fuels and can also reduce local particulate emissions. The Company concurs with the Sierra Club that there is a role for "utility involvement to stimulate the replacement of inefficient electric or oil heating systems with high efficiency heat pumps."[5]

[5] Notice of Inquiry and Request for Stakeholder Comment Regarding a Utility's Role in Deploying Beneficial Electrification with Focus on Plug-in Electric Vehicles. Comments of Sierra Club. June 30, 2017.