

October 21, 2021

VIA ELECTRONIC MAIL

Luly E. Massaro, Division Clerk
Rhode Island Division of Public Utilities and Carriers
89 Jefferson Boulevard
Warwick, RI 02888

RE: Docket D-21-09 – Petition of PPL Corporation, PPL Rhode Island Holdings, LLC, National Grid USA, and The Narragansett Electric Company for Authority to Transfer Ownership of The Narragansett Electric Company to PPL Rhode Island Holdings, LLC and Related Approvals
Responses to Green Energy Consumers Alliance Data Requests – Set 1

Dear Ms. Massaro:

On behalf of National Grid USA and The Narragansett Electric Company (together, “National Grid”), enclosed are National Grid’s responses to the first set of data requests issued to National Grid by Green Energy Consumers Alliance in the above-referenced proceeding.¹

Thank you for your attention to this matter. If you have any questions, please contact me at 401-784-7288.

Very truly yours,



Jennifer Brooks Hutchinson

¹ Although this is a Division of Public Utilities and Carriers (“Division”) filing, consistent with Public Utilities Commission’s filing requirements during the COVID-19 emergency period, National Grid is submitting an electronic version of this filing. National Grid will provide the Division Clerk with five hard copies within 24 hours and, if needed, additional hard copies of the enclosures upon request.

Luly E. Massaro, Division Clerk

Docket D-21-09 – Responses to Green Energy Consumers Alliance Data Requests Set 1

October 21, 2021

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Enclosures

cc: Docket D-21-09 Service List (electronic only)
John Bell, Division
Leo Wold, Esq.
Christy Hetherington, Esq.
Scott H. Strauss, Esq. (electronic only)
Latif M. Nurani, Esq. (electronic only)
Amber L. Martin Stone, Esq. (electronic only)
Anree G. Little, Esq. (electronic only)

National Grid USA and The Narragansett Electric Company
GECA 1-1

Request:

Recently enacted RIGL §42-6.2 et seq. creates legally enforceable targets for greenhouse gas emissions reductions beginning in 2030 through 2050. Please share any studies conducted or reports published by National Grid regarding how it or any other utility could achieve mandatory greenhouse gas emissions reductions?

Response:

National Grid USA and The Narragansett Electric Company (“Narragansett”) have not conducted or published any studies or reports specific to the greenhouse gas (“GHG”) emission reduction targets set forth in R.I. Gen. Laws §42-6.2-1, *et seq.*, also known as the 2021 Act on Climate (the “2021 Act”). At this time, the 2021 Act does not require public utilities to comply with any specific rules or requirements. The GHG emission reduction targets established in the 2021 Act are economy-wide targets and specific targets for the utility sector are still to be ascertained. Therefore, it is unknown how future rules and regulations implementing the new targets under the 2021 Act will implicate the utility sector. Please also see National Grid USA and Narragansett’s response to Data Request AG 1-30 for additional information regarding the implications of the 2021 Act on Narragansett’s business plan.

Notwithstanding the above, National Grid USA is committed to helping its customers, state and federal agencies, and other stakeholders achieve their clean energy goals, and has conducted a number of studies and reports regarding how it could help achieve mandatory GHG emissions reductions. For example, the Resilient Rhode Island Act of 2014 (“2014 Act”), which the 2021 Act amended, was one of the drivers for Narragansett’s grid modernization strategy as outlined in its Grid Modernization Plan (“GMP”), which was filed with the Rhode Island Public Utilities Commission (“PUC”) in January 2021 in Docket No. 5114.¹ The GMP includes a “High Distributed Energy Resource” scenario that was developed based on meeting the GHG emissions reduction targets established by the 2014 Act (i.e., 45 percent below 1990 levels by 2035 and 80 percent below 1990 levels by 2050).² A complete copy of the GMP Business Case and Implementation Plan is available at the following link:

¹ The PUC stayed the GMP proceeding pending the outcome of the Rhode Island Division of Public Utilities and Carriers’ review in this proceeding. *See* Order No. 24089, PUC Docket No. 5114 (July 14, 2021).

² The grid modernization investments outlined in the GMP will help Rhode Island meet its clean energy goals by enabling greater customer energy savings and distributed energy resources (“DER”) adoption (i.e., renewable distributed generation, demand response, electric vehicles, electric heat pumps). Enabling DER adoption, in particular, is a key driver for meeting the State’s clean energy needs because it will enable customers to reduce their overall carbon footprint, including reducing transportation-related emissions that make up 40 percent of the State’s

PPL CORPORATION, PPL RHODE ISLAND HOLDINGS, LLC,
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Issued on September 30, 2021

<http://www.ripuc.ri.gov/eventsactions/docket/5114page.html>

In addition, National Grid USA has commissioned Narragansett-sponsored or Narragansett-affiliated studies in the U.S. and the U.K. related to the decarbonization of natural gas and/or the gas network to better understand how it or any other utilities could help achieve mandatory GHG emissions reductions. A description of these studies, together with redacted copies of the studies are included in Narragansett's response to Data Request PUC 1-1 in PUC Docket No. 5079,³ a copy of which is provided as Attachment NG-GECA 1-1.

carbon dioxide emissions. Grid modernization investments will help reduce the costs and other barriers to interconnect new DERs in Rhode Island, which will drive more DER adoption and investment in the State.

³ National Grid's Tariff Advice Filing to Amend RIPUC NG-GAS-No. 101; Response to PUC's First Set of Data Requests issued November 5, 2020.

Prepared by or under the supervision of: Stephen Lasher

The Narragansett Electric Company
d/b/a National Grid
RIPUC Docket No. 5079
In Re: National Grid's Tariff Advice Filing to
Amend RIPUC NG-GAS-No. 101
Response to Commission's First Set of Data Request
Issued November 5, 2020

PUC 1-1

Request:

Please provide a list of all studies that have been performed or are scheduled to be performed by the Company and any of its National Grid affiliates in the U.S. or the U.K. which relate directly to the decarbonization of natural gas with the goal of reduced greenhouse gas emissions. Please provide the following on the list: (a) name of study, (b) date of study commencement, (c) date of study completion, (d) name of National Grid entity that sponsored, funded, and/or performed the study, (e)^[1] a concise description of the study, (f) cost of the study (estimated or actual if known), and (g) a note indicating whether the study was directly funded by ratepayers or funded by the entity in the ordinary course of business (if funded by ratepayers, describe the mechanism).

Response:

Attachments PUC 1-1-1 through 1-1-3 contain the information requested on all Company-sponsored or Company-affiliated studies in the U.S. and the U.K. related to the decarbonization of natural gas and/or the gas network for the purpose of reducing greenhouse gas ("GHG") emissions with corresponding headers (a) through (g). These attachments reflect all of the studies known to the Company at this time. For several studies, certain information requested remains unknown or the Company has not been able to confirm certain information.

The Company has organized these studies into the following three categories:

- Attachment PUC 1-1-1: Pathways Studies
- Attachment PUC 1-1-2: Potential Studies
- Attachment PUC 1-1-3: Engineering Studies

National Grid's Pathways Studies consider possible future outcomes by analyzing several alternative pathways, each grounded by a different set of assumptions related to technical potential, economics, regulatory and legislative mandates, etc. National Grid's work evaluating the possible options for meeting regional or jurisdictional GHG reduction targets fall within this group of studies. The "Potential Studies" entail work aimed at determining the viability of a new service or product, the current and likely future availability of the service or product, along with the benefits imputed to customers and communities. For example, this category includes National

¹ The PUC's original data request had two items designated as subsection "(d)"—the Company believes this may have been a typographical error and has, therefore, replaced the consecutive "(d)" with an "(e)" and continued with the alphabetical designation of the subsections.

Grid's efforts to assess the technical and economic potential for renewable natural gas ("RNG") feedstocks and demand across jurisdictions, as well as determining the future capacity and ability of the gas distribution system to store and distribute hydrogen in a cost competitive manner to other options.

These first two types of studies often precede – and may even be necessary prerequisites for moving forward with – the final category: Engineering Studies. A Potential Study might even be used to identify a candidate site for an Engineering Study. Once a site is identified, a front-end engineering and design ("FEED") study will be conducted to determine the feasibility and viability of a specific project site, equipment specifications, preliminary design, and preliminary budget numbers. The Engineering Study, "Newtown Creek FEED Study," listed in Attachment PUC 1-1-3, is an example of this type of work, and it is similar in estimated scope and cost to the gas decarbonization FEED study the Company proposes to develop for Rhode Island, subject to the PUC's approval of the Company's proposed tariff changes. As indicated in the Company's Tariff Advice Filing, the Company is developing a FEED study suitable for a competitive bidding process or Request for Proposals from experienced engineering consultants. The Company intends to consult with the Rhode Island Division of Public Utilities and Carriers ("Division") regarding the proposed scope of the FEED study and will present the FEED study to the PUC and to the Division for the necessary approvals.

The majority of the studies referenced were or are funded via base distribution rates (or the equivalent in the U.K.) yet are cross-jurisdictional in scope. National Grid believes it is now at a juncture where it's imperative to begin rigorously studying each of its U.S. jurisdictions individually because no two gas networks are the same, nor are the needs of the customers within these territories. This is especially true in Rhode Island, where the governor launched the Heating Sector Transformation Initiative in 2019 with the goal of reducing emissions from the heating sector. And while state-level decarbonization targets across National Grid's territories have started to converge, their economies have not. National Grid recognizes the ever-present balancing act between decarbonization and affordability is even more challenging as a result of the COVID Pandemic. Consequently, the Company will continue to carefully endeavor to propose and engage in gas decarbonization studies that not only reduce GHG emissions to further propel the state to achieve its goals, but also lead to truly affordable products and services being available to all customers in Rhode Island.

The Narragansett Electric Company
 d/b/a National Grid
 RIPUC Docket No. 5079
 Attachment PUC 1-1-1

Pathways Studies

| Study Name [a] | Commencement Date [b] | Completion Date [c] | Entity that Sponsored, Funded and/or Performed the Study [d] | Study Description [e] | Actual/Estimated Study Cost [f] | Funding Mechanism? [g] | Reason for Incomplete Information | Co. | Confidential? Y/N |
|---|--------------------------|------------------------|--|---|---|--------------------------------------|---|-----|----------------------|
| Future of Gas: How Gas Can Support a Low Carbon Future | | March 2018 | <u>Sponsored:</u> National Grid UK <u>Funded:</u> National Grid UK <u>Performed:</u> National Grid UK | Report highlighted the committed actions the Company will take, and made recommendations to policy-makers to help UK transition to a low-carbon economy. | | RIIO-1 (Equivalent of US Base Rates) | Unable to confirm commencement date and study cost. | UK | N |
| National Grid 80x50 White Paper | | June 2019 | <u>Sponsored:</u> National Grid USA <u>Funded:</u> National Grid USA <u>Performed:</u> National Grid USA | Northeast 80x50 Pathway white paper examining and highlighting the actions and paths the Company can and will take to reduce GHG emissions and meet state's low-carbon goals. | | | Unable to confirm commencement date, study cost, and funding mechanism. | US | N |
| Pathways to Net-zero: Decarbonizing the Gas Networks in Great Britain | | October 2019 | <u>Sponsored:</u> UK Energy Networks Assoc. (National Grid UK is a member) <u>Funded:</u> National Grid UK & Assoc. Members <u>Performed:</u> Navigant | Navigant report commissioned by UK Energy Networks Association focused on identifying options for decarbonizing the gas networks in Great Britain. | | Base Rates | Unable to confirm commencement date and study cost. | UK | N |
| Aquidneck Island Long Term Gas Capacity Study | June 2020 | September 2020 | <u>Sponsored:</u> National Grid USA <u>Funded:</u> National Grid USA <u>Performed:</u> National Grid USA and Guidehouse | Examines potential solutions specific to Aquidneck Island to address the gas capacity constraint and vulnerability needs faced by the island. Aims to inform discussions and enable gathering of feedback from a variety of stakeholders, so National Grid can then provide a recommendation for the most prudent path forward and pursue a long-term solution for Aquidneck Island. Included an option to pursue hydrogen production and blending, with only a high-level preliminary cost estimate prepared by National Grid staff. | \$290K | Company | | US | N |
| Future Energy Scenarios | | July 2020 | <u>Sponsored:</u> National Grid ESO <u>Funded:</u> National Grid ESO <u>Performed:</u> National Grid ESO | Annual long-term scenario exercise by the UK electricity system operator (ESO) to outline a range of different, credible ways to decarbonize the UK energy system working toward the country's net zero target. Includes scenarios which decarbonize gas. | No specific cost associated as it is not done as a stand alone project or study. | RIIO-1 (Equivalent of US Base Rates) | Unable to confirm commencement date. | UK | N |
| New York City Pathways Study | April 2018 | February 2021 | <u>Sponsored:</u> New York City Mayor's Office, ConEd, National Grid USA <u>Funded:</u> New York City Mayor's Office, ConEd, National Grid USA <u>Performed:</u> ICF, Energy Futures Initiative, Drexel University | Integrated system analysis of deep decarbonization scenarios for New York City through 2050. Rigorous modeling of cost and feasibility by sector. Emphasis on decarbonizing buildings / heat, with deep dive into implications per typology for energy efficiency, electrification and low carbon fuels. | \$500K | Base Rates | | US | N |
| Enabling the Gas Markets Plan 2019/2020 | 2019 | Ongoing | <u>Sponsored:</u> National Grid UK <u>Funded:</u> National Grid UK <u>Performed:</u> National Grid UK | The UK Enabling the Gas Market Plan is a 2-10 year look ahead that follows on from the 2018 Future of Gas report. | There is no direct cost as it is a programme of work that includes 4 employees, and released annual publications. | RIIO-1 (Equivalent of US Base Rates) | | UK | N |

The Narragansett Electric Company

d/b/a National Grid

RIPUC Docket No. 5079

Attachment PUC 1-1-2

REDACTED

Potential Studies

| Study Name [a] | Commencement Date [b] | Completion Date [c] | Entity that Sponsored, Funded and/or Performed the Study [d] | Study Description [e] | Actual/Estimated Study Cost [f] | Funding Mechanism? [g] | Reason for Incomplete Information | Co. | Confidential? Y/N |
|---|--------------------------|------------------------|---|--|------------------------------------|---------------------------|---|-----|----------------------|
| Renewable Gas - Vision for a Sustainable Gas Network | Q3 2009 | July 2010 | <u>Sponsored:</u> National Grid USA <u>Funded:</u> National Grid USA <u>Performed:</u> National Grid USA | 2010 National Grid study that looked at regional potential of RNG. | \$150K | Base Rates | | US | N |
| | | | | | | | | | Y |
| Potential for Pipeline Quality Gas from Renewable Sources | March 2010 | September 2011 | <u>Sponsored:</u> National Grid USA <u>Funded:</u> National Grid USA <u>Performed:</u> GTI | A study of potential and practical RNG feedstocks in New England and NY. Study modeled scenarios for RNG production from various feed stocks and economics to develop and deliver RNG to market. | \$35K | Base Rates | | US | N |
| Hydrogen Addition to Natural Gas Feasibility Study (HyStart Report) | | August 2016 | <u>Sponsored:</u> National Grid Gas Transmission (UK), Northern Gas Networks <u>Funded:</u> National Grid Gas Transmission (UK), Northern Gas Networks <u>Performed:</u> DNV-GL | Hydrogen blending feasibility study. | | | Unable to confirm commencement date, study cost, and funding mechanism. | UK | N |
| Renewable Sources of Natural Gas: Supply & Emissions Reductions Assessment | April 2019 | December 2019 | <u>Sponsored:</u> American Gas Foundation (AGF) <u>Funded:</u> National Grid USA & AGF Members <u>Performed:</u> ICF | RNG market assessment study conducted by ICF on behalf of AGF. This is a was a national study for which Grid provided funding. | \$50K | Base Rates | | US | N |
| Policy Options to Facilitate Renewable Natural Gas Use & Development | Q1 2019 | July 2019 | <u>Sponsored:</u> Downstream Initiative (DSI) <u>Funded:</u> National Grid USA & DSI Members <u>Performed:</u> DSI | Document I of IV prepared by Downstream Initiative (DSI) in Summer of 2019. National Grid is a member of DSI. | Annual dues of \$45K | Base Rates | | US | N |
| Natural Gas Utility Business Models or Facilitating Renewable Natural Gas Development & Use | Q1 2019 | July 2019 | <u>Sponsored:</u> Downstream Initiative (DSI) <u>Funded:</u> National Grid USA & DSI Members <u>Performed:</u> DSI | Document II of IV prepared by Downstream Initiative (DSI) in Summer of 2019. National Grid is a member of DSI. | Annual dues of \$45K | Base Rates | | US | N |
| Renewable Natural Gas: Potential Supply & Benefits | Q1 2019 | July 2019 | <u>Sponsored:</u> Downstream Initiative (DSI) <u>Funded:</u> National Grid USA & DSI Members <u>Performed:</u> DSI | Document III of IV prepared by Downstream Initiative (DSI) in Summer of 2019. National Grid is a member of DSI. | Annual dues of \$45K | Base Rates | | US | N |
| Renewable Natural Gas Project Economics | Q1 2019 | July 2019 | <u>Sponsored:</u> Downstream Initiative (DSI) <u>Funded:</u> National Grid USA & DSI Members <u>Performed:</u> DSI | Document IV of IV prepared by Downstream Initiative (DSI) in Summer of 2019. National Grid is a member of DSI. | Annual dues of \$45K | Base Rates | | US | N |
| Heating our Homes in a Net-Zero Future: Understanding What Matters to Consumers | | September 2020 | <u>Sponsored:</u> National Grid UK <u>Funded:</u> National Grid UK <u>Performed:</u> ICS & Economics for the Environment Consultancy Ltd (eftec) | Study focuses on understanding what really matters to consumers when thinking about how they will heat their homes in a net zero future. | \$330K | | Unable to confirm commencement date and study cost. | UK | N |
| Hydrogen Blending Demonstration Project w/ NYSERDA and Stony Brook University | December 2019 | December 2021 | <u>Sponsored:</u> NYSERDA <u>Funded:</u> National Grid USA, NYSERDA <u>Performed:</u> Stony Brook/I-GIT | This project will determine the future capacity and ability gas distribution and related systems to store and distribute hydrogen in a cost competitive manner to other options. | \$445K | Base Rates | | US | N |

National Grid USA and The Narragansett Electric Company
GECA 1-2

Request:

What plans has National Grid developed to convert homes and businesses in Rhode Island from oil, propane, and natural gas to heat pumps, as would be required to meet the targets in §42-6.2-2(A)(2)?

Response:

National Grid USA will continue to offer customers with electric, oil, propane, and gas heated homes standard rebates for energy-efficient air-source heat pumps. Please refer to the following link for additional information: https://www.nationalgridus.com/media/pdfs/resi-ways-to-save/ri_electric_heating-cooling_form.pdf.

Section 5.4.2.d of the 2020-A Regional Greenhouse Gas Initiative (“RGGI”) Plan allocated approximately \$2.7 million to support enhanced incentives supporting electric savings and other energy and environmental benefits associated with installation and operation of air-source heat pumps for customers with oil and propane heated homes. These RGGI Plan funds are leveraged with standard rebates for energy-efficient air source heat pumps offered through the ratepayer-derived system benefit charge funds, where possible.

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National Grid USA and The Narragansett Electric Company
GECA 1-3

Request:

What plans has National Grid developed to support the electrification of cars, trucks, and buses?

Response:

National Grid USA is committed to supporting the electrification of cars, trucks, and buses by aligning with government goals and policies regarding electric vehicles ("EVs"), and spurring market growth with programs for both residential and business customers. By providing charging infrastructure make-ready support to its customers, National Grid USA supports the state's Zero Emission Vehicle goal to put 45,000 EVs on the road by 2025. National Grid USA's programs also provide rebates for charging station equipment, deliver advisory services to support fleet electrification pathways, and reward residential customers for charging their vehicles at off-peak hours.

National Grid USA and The Narragansett Electric Company
GECA 1-4

Request:

As part of Docket 4780, National Grid described the economies of scale available to it with respect to investment in electric transportation programs due to its position in Massachusetts, Rhode Island, and New York. Based on those studies, what additional costs are likely to be incurred by an entity implementing these programs in Rhode Island only?

Response:

National Grid USA and The Narragansett Electric Company ("Narragansett") have not studied the types of tasks or magnitude of costs that are likely to be incurred by an entity implementing electric transportation programs in Rhode Island only.

Much of Narragansett's testimony in Rhode Island Public Utilities Commission ("PUC") Docket No. 4780 pertaining to the availability of economies of scale due to its position in Massachusetts, Rhode Island, and New York related to Advanced Metering Functionality ("AMF"), such as the ability to conduct multi-jurisdiction request for proposals ("RFP") events in the procurement of meters; however, National Grid USA's electric transportation strategy does not include multi-jurisdiction RFP events at this time. For example, National Grid USA does not currently have plans to purchase large quantities of charging stations across all its jurisdictions. In addition, a transportation education and outreach campaign proposed in Narragansett's general rate case in PUC Docket Nos. 4770 and 4780 and in its Massachusetts affiliates' electric transportation filing was not approved in Rhode Island or Massachusetts, respectively; therefore, opportunities to launch a joint program to allow for regional communication channels to be used with unified messaging did not proceed.