

March 28, 2018

VIA HAND DELIVERY & ELECTRONIC MAIL

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

**RE: Docket 4781 - Proposed Fiscal Year 2019 Gas Infrastructure, Safety, and Reliability Plan
Responses to Record Requests**

Dear Ms. Massaro:

Enclosed please find 10 copies of National Grid's¹ responses to the record requests issued by the Public Utilities Commission during the March 7, 2018 evidentiary hearing in the above-referenced docket.

Thank you for your attention to this matter. If you have any questions, please contact me at 401-784-7415.

Very truly yours,



Robert J. Humm

Enclosures

cc: Docket 4781 Service List
Leo Wold, Esq.
Al Mancini, Division
John Bell, Division

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

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 will be hand delivered to the Rhode Island Public Utilities Commission and to the Rhode Island Division of Public Utilities and Carriers.



Joanne M. Scanlon

March 28, 2018
Date

Docket No. 4781 - National Grid's FY 2019 Gas Infrastructure, Safety and Reliability (ISR) Plan - Service List 1/12/18

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The Narragansett Electric Company
d/b/a National Grid
RIPUC Docket No. 4781
In Re: Gas Infrastructure, Safety, and Reliability Plan FY2019
Responses to the Record Requests
Issued at the Evidentiary Hearing on March 7, 2018

Record Request No. 1

Request:

Please provide details regarding the community outreach services that were included under Gas Expansion for both Southern Rhode Island and Northern Rhode Island.

Response:

The details regarding the Southern Rhode Island community outreach services are provided in the table below. For planning purposes, the Company assumed that comparable services will be required for Northern Rhode Island. Actual requirements will be dependent on the implementation of the permanent solution to address the capacity needs in Northern Rhode Island.

Deliverable	Description of Deliverable	Commencement and Completion Dates
Project Branding	Includes development of up to five project names and associated logos and final branding preparation; does not include use of focus groups to test concepts.	2 March 2018 – 31 March 2018
Project Microsite	Includes design and build of site, monthly hosting for 50 months and content updates over the duration of the project.	2 March 2018 – 16 April 2018
Door-to-Door Outreach	Includes cost of crew of 10 to deliver materials for 3 door-to-door rounds.	May 2018 through Fall 2021
Project Collateral	Includes copy and design <u>only</u> for up to three door-hangers, six flyers, two fact sheets, and two brochures. Does <u>not</u> include printing costs, which cannot be estimated until exact quantities are known.	Episodically as directed by National Grid throughout life of project.

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Record Request No. 1, page 2

Deliverable	Description of Deliverable	Commencement and Completion Dates
Open Houses	Includes coordination and management of up to four open house events.	To be determined by stakeholder relations team based on need, permitting schedule, and public reaction to project phasing.
Social Media	Includes establishment of Twitter feed, as well as daily posting, listening, and monitoring services; responding to tweets; and community management for 50 months.	Duration of project.
Toll-Free Hotline	Monthly service to enable customers to contact stakeholder relations team.	Launch to completion of project.
Advertising	Includes design for up to 20 small space construction update ads. This also includes a rough estimate for media cost over the duration of the project.	Episodically as recommended by stakeholder relations team and directed by National Grid throughout life of project.
Abutter Mailings	Includes the assumption of 7 mailings over the 50 months of the project, including estimated postage.	Episodically as recommended by stakeholder relations team and directed by National Grid throughout life of project.

Record Request No. 2

Request:

Please confirm the timing for the final recommendation regarding the permanent solution to address lost capacity in Northern Rhode Island resulting from the decommissioning of the Cumberland LNG facility.

Response:

The Company has considered multiple options for a permanent solution to address the capacity needs in Northern Rhode Island. This solution will focus on securing additional supplies delivered to the Northern Rhode Island region.

The Company has held discussions with Algonquin Gas Transmission Company and Tennessee Gas Pipeline Company to review available options for expanding pipeline laterals serving the Rhode Island distribution system. These options include addressing the increased delivery needs entirely by pipeline company investment or a combination of pipeline company investment combined with Company infrastructure enhancements. In the coming weeks, the Company will advance negotiations around its chosen solution, so as to be able to solidify cost estimates with an objective of entering into an agreement by September 2018. At this point the Company does not expect to incur costs associated with pipeline company investment prior to the heating season that begins in November 2019.

Record Request No. 3

Request:

Provide an estimate of the impact of the Company's leak-prone pipe replacement program on natural gas supplies and greenhouse gas emissions. As part of this response, discuss how leak prone pipe replacement fits into the Company's overall efforts around emissions reductions. Provide specifics on other areas that contribute to this program.

Response:

In 2009, National Grid set a target to reduce its greenhouse gas (GHG) emissions by 80% by 2050, measured against the Company's 1990 baseline, with an interim target of a 45% reduction by 2020. In September 2017, the Company added a new interim target of 70% reduction by 2030. At that time, the Company also agreed to the inclusion of the GHG emissions associated with electricity line losses into the Company's emissions reduction targets.

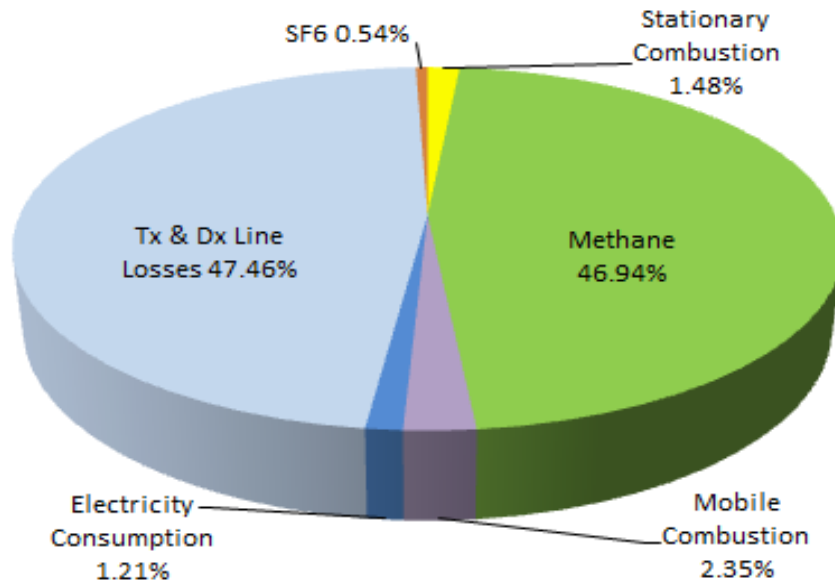
Progress is reported out on a fiscal year basis and, therefore, the most recent results the Company has are from what was reported in May 2017 in the Company's Annual Report and Accounts, when the Company had achieved a 63% reduction from a 1990 baseline. For 2016-17, the Company's total (US and UK) GHG emissions were 7.1 million tonnes of carbon dioxide equivalent (CO₂e) (does not include line loss).

The Company's Rhode Island emissions are comprised of CO₂ from the Company's vehicle fleet (Mobile Combustion) as well as emissions associated with the energy the Company uses in its buildings (Electricity Consumption). The Company's other greenhouse gas emissions include sulfur hexafluoride (SF₆) (found in certain electrical equipment) and methane (originating from the gas distribution system). The illustration below is for National Grid's Rhode Island emissions in Calendar Year 2016. Stationary Combustion refers to equipment such as compressors.

Line loss emissions are now part of the Company's GHG emissions reduction target. These emissions are most significantly influenced by the source of electricity transmitted over the lines. The lower the carbon intensity of the electricity, the lower the emissions. Technical advances can help as well.

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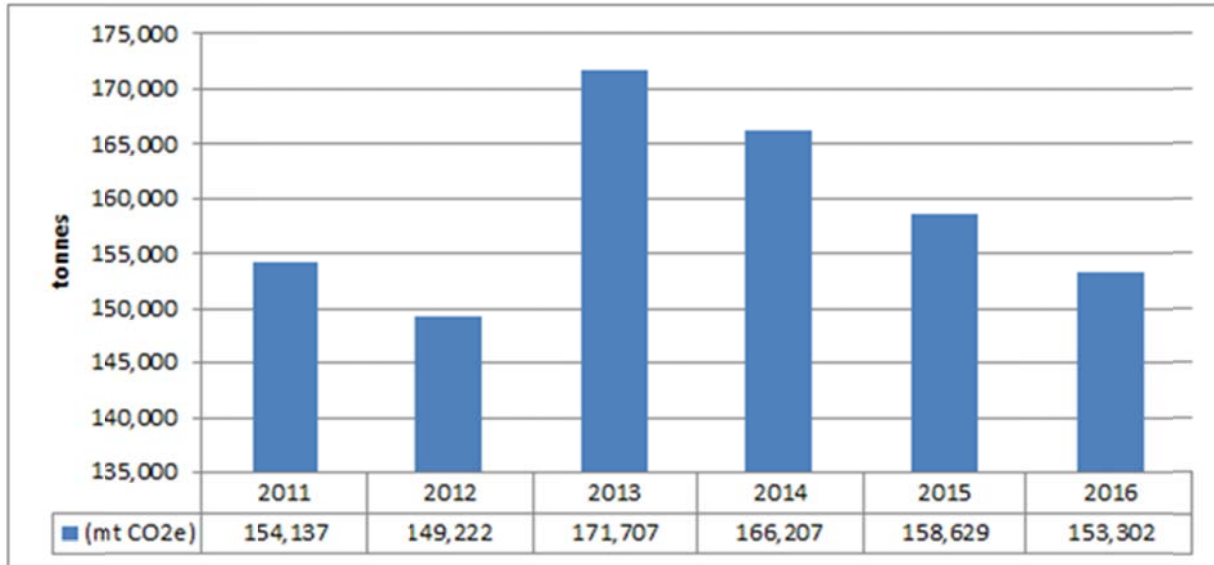
CY 2016 National Grid Rhode Island Greenhouse Emissions



Methane emissions are the largest emissions that National Grid actually has significant control over. The Company has a very active program to replace natural gas leak-prone pipe (LPP) in Rhode Island. Replacing LPP is the most cost effective way to address methane emission reductions. The illustration below illustrates those efforts since 2011, with significant progress evident.

Record Request No. 3, page 3

Annual Rhode Island Methane Emissions



Note: EPA updated GWP beginning RY2013: **GWP_{CH4}** increased from 21 to 25 (+19%) resulting in higher CO2e reported even though CH4 tonnes decreased

The table below illustrates the LPP abandonment emission reduction impact for the six years ending December 31, 2017, as well as projections for future emission reductions that are aligned with the Company’s planned LPP abandonment miles that were included in the FY 2019 Gas Infrastructure, Safety, and Reliability Plan.

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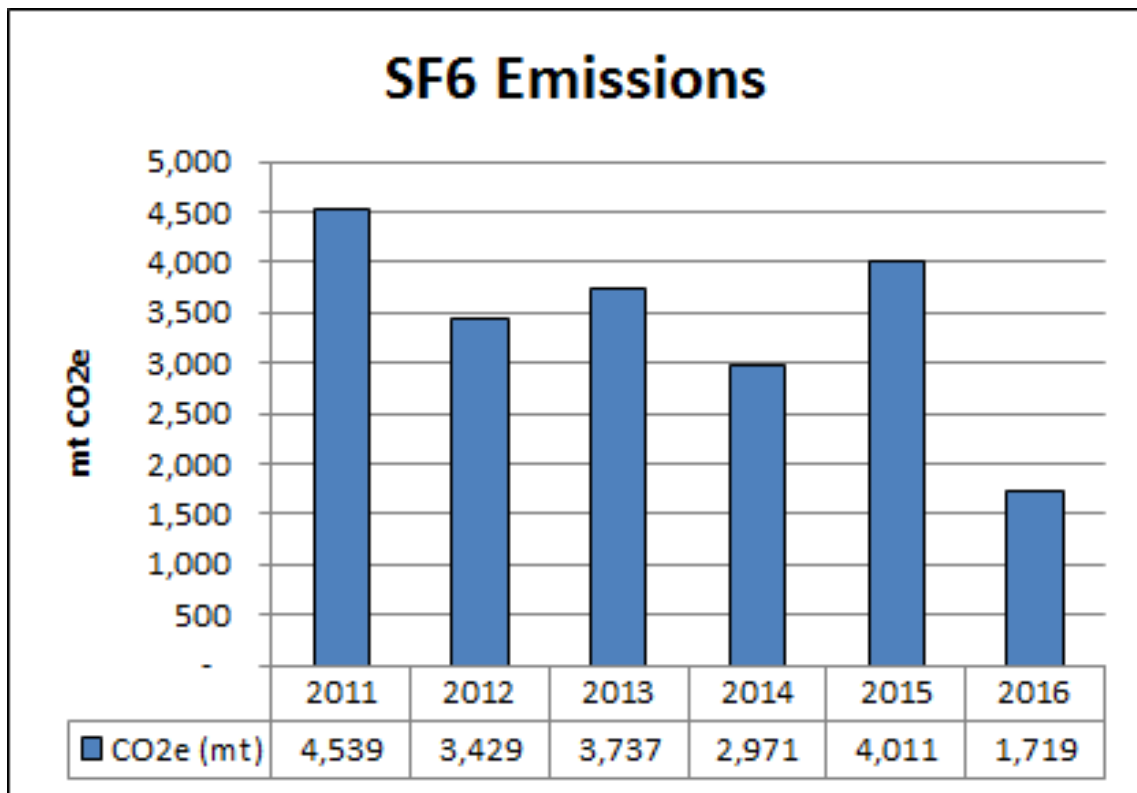
Record Request No. 3, page 4

Calculation of Estimated Methane and Carbon Dioxide Emissions for RI				
Year	Pipe Material	Miles Abandoned	mt CO2e reduction	mt CH4 reduction
CY 2012 to 2017	Cast Iron	161.00	17,703.84	707.30
	Bare Steel	221.00	10,652.86	425.60
2019	Cast Iron	34.24	3,764.54	150.40
	Bare Steel	25.67	1,237.13	49.43
2020	Cast Iron	36.95	4,063.09	162.33
	Bare Steel	26.25	1,265.33	50.55
2021	Cast Iron	36.95	4,063.09	162.33
	Bare Steel	26.25	1,265.33	50.55
2022	Cast Iron	36.95	4,063.09	162.33
	Bare Steel	26.25	1,265.33	50.55
2023	Cast Iron	36.95	4,063.09	162.33
	Bare Steel	26.25	1,265.33	50.55
Total	Cast Iron	343.04	37,720.73	1,507.01
	Bare Steel	351.67	16,951.31	677.24

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SF₆ emissions make up a very small percent of the Company's GHG emissions. The Company reduces these emissions with the routine upgrade in new equipment, which today is built to much more stringent standards to minimize leakage. Emissions for the last few years are illustrated in the table below.

Annual National Grid SF6 Emissions



Emissions associated with mobile sources and building energy consumption round out the remainder of the Company's emissions. These two are small, but the Company is actively pursuing reductions in these two areas.