

March 13, 2017

**VIA HAND DELIVERY & ELECTRONIC MAIL**

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

**RE: Docket 4678 - Proposed FY 2018 Gas Infrastructure, Safety, and Reliability Plan Responses to Record Requests**

Dear Ms. Massaro:

Enclosed please find 10 copies of National Grid's<sup>1</sup> responses to the Record Requests that were issued at the PUC's evidentiary hearing on February 17, 2017, in the above-referenced docket.

Please be advised that the Company's responses to Record Requests 7 and 8 will be forthcoming.

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

Very truly yours,



Jennifer Brooks Hutchinson

Enclosure

cc: Docket 4678 Service List  
Leo Wold, Esq.  
Steve Scialabba  
Don Ledversis

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<sup>1</sup> 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 are being hand delivered to the Rhode Island Public Utilities Commission and to the Rhode Island Division of Public Utilities and Carriers.

\_\_\_\_\_  
Joanne M. Scanlon

March 13, 2017  
Date

**Docket No. 4678 - National Grid's FY 2018 Gas Infrastructure, Safety and Reliability (ISR) Plan - Service List 1/11/17**

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Record Request 1

Request:

Provide a breakdown of the dollar amounts for each assumption included in the \$3.6m estimate for Phase 3 of the Cumberland LNG tank decommissioning, including contingency, construction oversight and capital overhead allocations.

Response:

Please refer to the table below for the breakdown of costs included in the Phase 3 fiscal year 2018 Cumberland LNG estimate.

Description	Amount
Contractor Costs	1,736,000
National Grid Labor	238,350
Overheads	212,300
Permits and Consultants	191,000
<b>Subtotal</b>	<b>2,377,650</b>
Contingency	1,188,825
AFUDC	22,100
<b>Total Estimate</b>	<b>3,588,575</b>

Record Request 2

Request:

Provide the name and number of the primary contact person at the Company responsible for oversight of the forensic analysis for the Cumberland LNG tank.

Response:

The primary contact for Cumberland LNG is Kathy Sullivan. Her contact information is (401) 429-1291, and her e-mail address is: [kathleen.sullivan@nationalgrid.com](mailto:kathleen.sullivan@nationalgrid.com).

The Narragansett Electric Company  
d/b/a National Grid  
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Record Request 3

Request:

How was the \$24.22m for projected growth and allocated spending for FY 2018 calculated, and why did the figure change from \$16.8m in FY 2014?

Response:

The Company's total growth budget for FY 2018 is \$23.9 million. In the FY 2014 Gas ISR Plan, the Company forecasted FY 2018 spending at \$16.9 million. The \$7.0 million increase is largely attributed to a \$6.8 million increase in Gas System Reinforcement. A \$2.0 million increase related to the Kenyon Industries project is partially offset by a \$1.8 million reduction in Base Growth. Please refer to table below for additional details.

Description	FY18 Per FY14 Plan	Current FY18 Plan
Base Growth - Install Main	4,057.4	6,193.0
Base Growth - Install Services	11,914.5	7,063.0
Base Growth - Customer Contributions	(2,147.1)	(788.0)
Base Growth - Install Meter/Regulator		754.0
Base Growth - Fitting	1,298.1	702.0
Base Growth - Meter Purchases	993.6	668.0
Base Growth - Marketing and Sales	300.0	
<b>Sub-total Base Growth</b>	<b>16,416.5</b>	<b>14,592.0</b>
Kenyon Industries - Net of CIAC		1,982.0
Gas System Reinforcement	475.0	7,295.0
<b>Total Growth</b>	<b>16,891.5</b>	<b>23,869.0</b>

Record Request 4

Request:

Provide estimates of the long term financial savings that the Company's leak repair program may have achieved by eliminating the environmental effects of leakage and waste.

Response:

Please refer to the response to Record Request 5. At this time the Company does not have a methodology for estimating financial savings associated with the environmental effects of leakage and waste.

Record Request 5

Request:

Provide an estimate of the impact of the Company's leak prone pipe replacement program on natural gas supplies and greenhouse gas emissions.

Response:

A principal component of natural gas is methane. Methane emissions can occur on the distribution system as a result of aging infrastructure causing leaks. The chemical characteristics and interactions of methane in the atmosphere contribute to its impact as a greenhouse gas. According to the United States Environmental Protection Agency (EPA), methane accounts for a smaller percent of overall global emissions than carbon dioxide, but is more capable of trapping heat in the atmosphere than carbon dioxide.<sup>1</sup> For this reason, methane emissions are considered an environmental concern and a target for reduction by National Grid.

Methane released from a distribution system occurs primarily as a result of leaking cast iron and unprotected steel mains. The EPA estimates the impact of methane emission rates from these types of mains and calculates an annual equivalent emission in tons of CO<sub>2</sub>. Five years of estimated historic methane (CH<sub>4</sub>) and carbon dioxide equivalent (CO<sub>2</sub>e) emission reductions resulting from the abandonment of leak prone pipe are provided in the table below. The miles listed in the table are calendar year based and are not limited to ISR abandonments. Methane reduction rates reported in this table represent the difference between emission rates associated with cast iron and unprotected bare steel vs. emission rates associated with plastic.

The Company has not quantified the impact of the leak prone pipe replacement program, specifically, on natural gas supplies.

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<sup>1</sup> U.S. Env'tl Prot. Agency, Overview of Greenhouse Gases (July 2, 2014), available at: <http://epa.gov/climatechange/ghgemissions/gases/ch4.html>.



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<b>Year</b>	<b>Pipe Material</b>	<b>Miles</b>	<b>mt CO2e reduction</b>	<b>mt CH4 reduction</b>
2012	Cast/Wrought/Ductile Iron	14	1,535.14	61.4
	Bare/Unprotected Coated Steel	34	1,613.93	64.6
2013	Cast/Wrought/Ductile Iron	30	3,272.71	130.9
	Bare/Unprotected Coated Steel	27	1,298.57	51.9
2014	Cast/Wrought/Ductile Iron	30	3,300.21	132.0
	Bare/Unprotected Coated Steel	26	1,243.74	49.7
2015	Cast/Wrought/Ductile Iron	33	3,607.81	144.3
	Bare/Unprotected Coated Steel	31	1,485.20	59.4
2016	Cast/Wrought/Ductile Iron	15	1,614.14	64.6
	Bare/Unprotected Coated Steel	30	1,460.84	58.4

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Record Request 6

Request:

Provide the number of miles replaced for proactive main replacement for each of FY 2014-2017.

Response:

Please refer to the table below for the proactive main replacement abandonment miles by fiscal year.

Fiscal Year	Type	Miles
2014	Actuals	48.2
2015	Actuals	48.7
2016	Actuals	50.1
2017	Forecast	55.0
<b>Total Abandonment</b>		202.0