

**Docket No. 4770**  
**Thirty Seventh Set of Data Requests of the**  
**Division of Public Utilities and Carriers to National Grid**  
**March 23, 2018**

**AMI Study Cost Estimates**

- 37-1. Referring to PST-2, Appendix 10.1, showing both “AMI shared and Rhode Island stand alone” revenue requirements for AMI and Grid Mod:
- a. Please identify the date when the Company finalized the estimate on line 2 of Appendix 10.1 in PST-2, Bates pages 130-131, that provides a revenue requirement estimate for “AMI - Electric” of \$2 million for the period six months ending March 31, 2019.
  - b. Please confirm whether the \$2 million revenue requirement on line 2 was intended to represent the cost of the AMI study. If not, please explain what the \$2 million revenue requirement is designed to cover and provide a breakdown and itemization of the costs underlying the \$2 million revenue requirement.

**Response can be found on Bates page(s) 1-7.**

- 37-2. Referring to the responses to DIV 30-1, 30-2, and 30-3 (Docket 4770), the Company states in the response to DIV 30-1:

“The Company used the \$2 million Niagara Mohawk rate allowance as the basis for the \$2 million Rhode Island AMI study funding request. The Company’s request is to fund Rhode Island-specific study activities and, when combined with the Niagara Mohawk funding level, covers the estimated costs of a joint Rhode Island and Niagara Mohawk effort.”

The response to DIV 30-3 also states that the settlement in New York (referred to as the “Joint Proposal”):

“provides Niagara Mohawk \$2 million of the estimated \$2.998 million study costs in base distribution rates to conduct the study. The recovery level was established as part of a comprehensive settlement among Niagara Mohawk, Staff, and the other parties in the case with many give and takes agreed during the confidential settlement discussions.”

Footnote 1 to DIV 30-3 indicates that the Joint Proposal was “entered into” on January 19, 2018.

- a. Please explain how the Company used the \$2 million rate allowance from the New York settlement that was filed on January 19, 2018 as the basis for estimating the \$2 million AMI study request reflected in Appendix 10.1 of PST-2, when PST-2 was

filed with the Rhode Island Commission on November 27, 2017, almost two months before the Joint Proposal was apparently finalized.

- b. When the Company's affiliate agreed to accept only \$2 million out of the \$2.998 million study cost and not recover the difference from New York customers, did National Grid base its decision in whole or in part on an assumption that Rhode Island customers would cover the balance of the cost of the AMI study, (the estimate of which is reflected in Attachment DIV 23-5) such that National Grid shareholders would be made completely whole by Rhode Island's contribution, despite the fact that the New York Joint Proposal was not covering approximately \$1 million of the estimated study cost?

**Response can be found on Bates page(s) 8-12.**

- 37-3. Referring to Attachment DIV 23-5 (Docket 4770), the study estimate identifies thirteen "Required Functions" and estimates the cost for each based on equivalent FTEs and consultancy costs for both the Niagara Mohawk study (page 1) and the combined study (page 2). For each of the "Required Functions:"
  - a. Provide an explanation of the activities that would be performed.
  - b. Please identify each Required Function that relates to systems or processes that will ultimately be shared between New York and Rhode Island after AMI implementation.
  - c. In each instance where there was no change in the FTE estimate between the Niagara Mohawk study and the combined study, please explain why there was no change.
  - d. In each instance where there was a change the FTE estimate between the Niagara Mohawk study and the combined study, please explain why there was no change.
  - e. Please explain the basis and assumptions for the two consultancy cost estimates.

**Response can be found on Bates page(s) 13-15.**

- 37-4. Referring to the response to DIV 30-2 (Docket 4770), the response contains a statement: "[T]he AMI study costs are based on the activities that will be undertaken that are specific to each jurisdiction (*e.g.*, meter deployment plan)."
  - a. Please explain how each of the Required Functions on page 1 of Attachment 23-5 relate only to activities specific to Niagara Mohawk.
  - b. Please explain how each of the Required Functions on page 2 of Attachment 23-5 relate only to activities specific to each jurisdiction.

**Response can be found on Bates page(s) 16.**

- 37-5. Referring to Attachment DIV 23-5 (Docket 4770), please explain why it is appropriate to include legal costs as a part of the AMI study cost. Please explain why the legal costs would be incremental to other legal costs that already would be included in base

distribution rates for the typical management of legal matters for a regulated distribution company.

**Response can be found on Bates page(s) 17.**

- 37-6. Referring to Attachment DIV 23-5 (Docket 4770), please explain why it is appropriate to include “Pricing/Regulatory” costs as a part of the AMI study cost. Please explain why the “Pricing/Regulatory” costs would be incremental to other “Pricing/Regulatory” costs that already would be included in base distribution rates for the typical management of regulatory matters for a regulated distribution company.

**Response can be found on Bates page(s) 18.**

**Gas Transportation Customer IP Wireless Device Installations**

- 37-7. Referring to the proposed changes to Section 2.02.0 of the Transportation Terms and Conditions, Book 17, Bates page 244 and Section 12.0 of the General Rules and Regulations, Section 12.0, Bates page 160, relating to the new fee proposed for and the details of the initiative pertaining to the IP wireless device installations at the premises of FT-1 customers:
- a. Please explain the initiative and its purposes.
  - b. Indicate how many FT-1 customer accounts will be affected.
  - c. Provide copies of any sanctioning documents or presentations to management regarding the initiative.
  - d. Explain how the initiative might relate or not relate to Advanced Metering Infrastructure initiatives being considered by the Company in the future.
  - e. Indicate whether the equipment being installed would be compatible with any systems that may be installed for Advanced Metering Infrastructure or whether the equipment would become obsolete.

**Response can be found on Bates page(s) 19-20.**

Division 37-1

Request:

Referring to PST-2, Appendix 10.1, showing both "AMI shared and Rhode Island stand alone" revenue requirements for AMI and Grid Mod:

- a. Please identify the date when the Company finalized the estimate on line 2 of Appendix 10.1 in PST-2, Bates pages 130-131, that provides a revenue requirement estimate for "AMI - Electric" of \$2 million for the period six months ending March 31, 2019.
- b. Please confirm whether the \$2 million revenue requirement on line 2 was intended to represent the cost of the AMI study. If not, please explain what the \$2 million revenue requirement is designed to cover and provide a breakdown and itemization of the costs underlying the \$2 million revenue requirement.

Response:

- a. The \$2 million estimate for the work activities to advance the Rhode Island AMI business case was developed between September and mid-November 2017, and finalized prior to the Power Sector Transformation Plan filing on November 27, 2017. Please see the Company's response to Division 37-2 for additional details.
- b. Yes, the \$2 million revenue requirement on Line 2 represents the cost of the AMI study. Please refer to the Company's response to Division 32-20, a copy of which is provided as Attachment DIV 37-1 for ease of reference.

(This response is identical to the Company's response to Division 13-1 in Docket No. 4780.)

Division 32-20

Request:

**NOTE: The references to responses to division data requests refer to docket 4770.**

Refer to Appendix 10.4 – AMI Stand Alone, Page 1 of 31 and Appendix 10.5 – AMI Shared, Page 1 of 31. Please provide columns similar to those included in the Annual Revenue Requirement General Summary tables documenting the cost elements for the \$2 million for the Six Months Ended March 31, 2019. Please do this for both the AMI Stand Alone and AMI Shared expenses and costs.

Response:

Please refer to Attachment DIV 32-20-1 for the revenue requirement general summary which includes a column for the \$2 million for the six months ending March 31, 2019 for the AMI study by cost element.

An itemization of the AMI study costs was presented in the Company’s response to Division 23-5, a copy of which is provided as Attachment DIV 32-20-2. The combined AMI study for New York and Rhode Island is \$4,045,050, of which \$2 million was approved for recovery in the Niagara Mohawk Power Corporation (NMPC) rate case, Case No. 17-E-0238. Please see the summary below for the calculation of the Rhode Island revenue requirement for the AMI study.

<u>Cost Element</u>	Combined		
	<u>AMI Study Costs</u>	<u>NMPC</u>	<u>RI</u>
Consultants	\$1,800,000	\$900,000	\$900,000
Labor and associated benefits	\$2,245,050	\$1,122,525	\$1,122,525
Total AMI Study Costs	\$4,045,050	\$2,022,525	\$2,022,525
Rounded Down	\$4,000,000	\$2,000,000	\$2,000,000

(This response is identical to the Company’s response to Division 10-20 in Docket No. 4780.)

THE NARRAGANSETT ELECTRIC COMPANY  
d/b/a NATIONAL GRID  
Power Sector Transformation (PST)  
AMI  
Annual Revenue Requirement General Summary

Line No.		Six Months Ending March 31, 2019	Fiscal Year Ending March 31, 2020 (a)	Fiscal Year Ending March 31, 2021 (b)	Fiscal Year Ending March 31, 2022 (c)
	Electric Operation and Maintenance (O&M) Expenses:				
1	AMI Costs	\$0	\$3,975,282	\$2,294,486	\$4,277,539
2	CMS Costs	\$0	\$0	\$0	\$0
3	Meter Data Service Costs	\$0	\$0	\$389,698	\$802,778
4	Customer Engagement Plans Costs	\$0	\$925,740	\$3,394,245	\$2,004,136
5	IS Costs - Electric	\$0	\$4,364,767	\$3,156,360	\$4,695,673
6	AMI Study (Consultants)	\$583,110	\$0	\$0	\$0
7	AMI Study (Labor and associated benefits)	\$712,690	\$0	\$0	\$0
8	<b>Total Electric O&amp;M costs</b>		<b>\$9,265,789</b>	<b>\$9,234,790</b>	<b>\$11,780,126</b>
	Sum of Lines 1 through 7				
	Gas Operation and Maintenance (O&M) Expenses:				
9	AMI Costs	\$0	\$1,323,178	\$1,999	\$3,080
10	CMS Costs	\$0	\$0	\$0	\$0
11	Meter Data Service Costs	\$0	\$0	\$119,534	\$246,239
12	Customer Engagement Plans Costs	\$0	\$0	\$0	\$0
13	IS Costs - Gas	\$0	\$2,372,024	\$1,368,169	\$949,645
14	AMI Study (Consultants)	\$316,890	\$0	\$0	\$0
15	AMI Study (Labor and associated benefits)	\$387,310	\$0	\$0	\$0
16	<b>Total Gas O&amp;M costs</b>		<b>\$3,695,202</b>	<b>\$1,489,702</b>	<b>\$1,198,965</b>
	Sum of Lines 9 through 15				
	<b>Total O&amp;M costs</b>	<b>\$2,000,000</b>	<b>\$12,960,991</b>	<b>\$10,724,492</b>	<b>\$12,979,091</b>
17	Electric Capital Investment:				
18	Estimated Revenue Requirement on Fiscal Year Ending March 31, 2020 Capital Investment	\$0	\$121,193	\$289,875	\$280,621
19	Estimated Revenue Requirement on Fiscal Year Ending March 31, 2021 Capital Investment			\$3,602,929	\$8,242,211
20	Estimated Revenue Requirement on Fiscal Year Ending March 31, 2022 Capital Investment				\$4,952,349
21	<b>Total Electric Capital Investment Component of Revenue Requirement</b>		<b>\$121,193</b>	<b>\$3,892,804</b>	<b>\$13,475,181</b>
	Sum of Lines 17 through 20				
22	Gas Capital Investment:				
23	Estimated Revenue Requirement on Fiscal Year Ending March 31, 2020 Capital Investment	\$0	\$49,502	\$118,051	\$114,228
24	Estimated Revenue Requirement on Fiscal Year Ending March 31, 2021 Capital Investment			\$551,224	\$1,110,783
25	Estimated Revenue Requirement on Fiscal Year Ending March 31, 2022 Capital Investment				\$23,802
26	<b>Total Gas Capital Investment Component of Revenue Requirement</b>		<b>\$49,502</b>	<b>\$669,275</b>	<b>\$1,248,814</b>
	Sum of Lines 22 through 25				
27	<b>Total Electric Revenue Requirement</b>		<b>\$9,386,982</b>	<b>\$13,127,594</b>	<b>\$25,255,307</b>
	Line 8 + Line 21				
28	<b>Total Gas Revenue Requirement</b>		<b>\$3,744,704</b>	<b>\$2,158,977</b>	<b>\$2,447,779</b>
	Line 16 + Line 26				
29	<b>Total Electric &amp; Gas Revenue Requirement</b>		<b>\$13,131,686</b>	<b>\$15,286,571</b>	<b>\$27,703,086</b>
	Line 27 + Line 28				

THE NARRAGANSETT ELECTRIC COMPANY  
d/b/a NATIONAL GRID  
Power Sector Transformation (PST)  
AMI  
Annual Revenue Requirement General Summary

Line No.		Fiscal Year Ending March 31, 2019	Fiscal Year Ending March 31, 2020 (a)	Fiscal Year Ending March 31, 2021 (b)	Fiscal Year Ending March 31, 2022 (c)
Electric Operation and Maintenance (O&M) Expenses:					
1	AMI Costs	\$0	\$3,180,226	\$2,285,684	\$4,235,568
2	CMS Costs	\$0	\$0	\$0	\$0
3	Meter Data Service Costs	\$0	\$0	\$389,698	\$802,778
4	Customer Engagement Plans Costs	\$0	\$925,740	\$3,394,245	\$2,004,136
5	IS Costs - Electric	\$0	\$1,114,327	\$1,452,916	\$3,117,347
6	AMI Study (Consultants)	\$583,110	\$0	\$0	\$0
7	AMI Study (Labor and associated benefits)	\$712,690	\$0	\$0	\$0
8	<b>Total Electric O&amp;M costs</b>		Sum of Lines 1 through 7		
		<b>\$1,295,800</b>	<b>\$5,220,293</b>	<b>\$7,522,544</b>	<b>\$10,159,829</b>
Gas Operation and Maintenance (O&M) Expenses:					
9	AMI Costs	\$0	\$1,058,542	\$1,999	\$3,080
10	CMS Costs	\$0	\$0	\$0	\$0
11	Meter Data Service Costs	\$0	\$0	\$119,534	\$246,239
12	Customer Engagement Plans Costs	\$0	\$0	\$0	\$0
13	IS Costs - Gas	\$0	\$605,579	\$524,139	\$496,453
14	AMI Study (Consultants)	\$316,890	\$0	\$0	\$0
15	AMI Study (Labor and associated benefits)	\$387,310	\$0	\$0	\$0
16	<b>Total Gas O&amp;M costs</b>		Sum of Lines 9 through 15		
		<b>\$704,200</b>	<b>\$1,664,121</b>	<b>\$645,672</b>	<b>\$745,772</b>
	<b>Total O&amp;M costs</b>	<b>\$2,000,000</b>	<b>\$6,884,414</b>	<b>\$8,168,216</b>	<b>\$10,905,601</b>
Electric Capital Investment:					
17	Estimated Revenue Requirement on Fiscal Year Ending March 31, 2020 Capital Investment	\$0	\$108,971	\$260,642	\$252,321
19	Estimated Revenue Requirement on Fiscal Year Ending March 31, 2021 Capital Investment			\$2,938,614	\$6,938,558
20	Estimated Revenue Requirement on Fiscal Year Ending March 31, 2022 Capital Investment				\$4,889,954
21	<b>Total Electric Capital Investment Component of Revenue Requirement</b>		Sum of Lines 17 through 20		
		<b>\$0</b>	<b>\$108,971</b>	<b>\$3,199,256</b>	<b>\$12,080,833</b>
Gas Capital Investment:					
22	Estimated Revenue Requirement on Fiscal Year Ending March 31, 2020 Capital Investment	\$0	\$42,756	\$101,963	\$98,661
24	Estimated Revenue Requirement on Fiscal Year Ending March 31, 2021 Capital Investment			\$202,067	\$430,838
25	Estimated Revenue Requirement on Fiscal Year Ending March 31, 2022 Capital Investment				\$21,494
26	<b>Total Gas Capital Investment Component of Revenue Requirement</b>		Sum of Lines 22 through 25		
		<b>\$0</b>	<b>\$42,756</b>	<b>\$304,030</b>	<b>\$550,993</b>
27	<b>Total Electric Revenue Requirement</b>		Line 8 + Line 21		
		<b>\$1,295,800</b>	<b>\$5,329,264</b>	<b>\$10,721,800</b>	<b>\$22,240,662</b>
28	<b>Total Gas Revenue Requirement</b>		Line 16 + Line 26		
		<b>\$704,200</b>	<b>\$1,706,877</b>	<b>\$949,702</b>	<b>\$1,296,765</b>
29	<b>Total Electric &amp; Gas Revenue Requirement</b>		Line 27 + Line 28		
		<b>\$2,000,000</b>	<b>\$7,036,141</b>	<b>\$11,671,502</b>	<b>\$23,537,427</b>

The Narragansett Electric Company  
d/b/a National Grid  
RIPUC Docket No. 4770  
Responses to Division's Twenty-Third Set of Data Requests  
Issued February 12, 2018

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Division 23-5

Request:

Please provide an itemization of the estimated costs used to develop the estimate for the cost of the AMI study. Please also provide an itemization of the estimated costs used to develop the estimates for the AMI study proposed for New York. If the Company expects the parts of the studies for both jurisdictions will have overlap, please also show the itemization on a combined basis.

Response:

The Company developed the \$2 million estimate of Rhode Island AMI study costs by taking into consideration the estimate for the Niagara Mohawk Power Corporation (Niagara Mohawk) AMI study. Attachment DIV 23-5, Page 1, provides the itemization of the estimated costs of the AMI work activities that Niagara Mohawk plans to undertake in 2018 to continue the development of its AMI plan. Those costs are estimated at \$2.988 million, as shown in the attachment. The Company expects to undertake similar activities and incur a similar level of costs in Rhode Island to advance the Rhode Island AMI plan. The itemization of estimated costs on a combined Rhode Island and Niagara Mohawk basis is included on Page 2 of Attachment DIV 23-5. The estimate for the combined study is \$4.045 million.

(This response is identical to the Company's response to Division 7-5 in Docket No. 4780.)

The Narragansett Electric Company  
d/b/a National Grid  
RIPUC Docket No. 4770  
Attachment DIV 37-1  
Page 1 of 2

Activities	Scope	Required Functions											Total		
		Project Lead/Staff	Procurement	IS	Cyber/Digital Security	Meter Eng.	MDS	NES/Customer	Pricing/Regulatory	CMS	Telecom	Meter Asset Mgmt.		Legal	Consultants
Stakeholder Collaboration	Meeting preparation - documentation, follow-up, reporting Input to detailed plan elements Options development & analysis	X	AN	X	AN	X	X	X	X	X	AN	X	X	X	
Customer Engagement Plan	Customer education Data sharing - GBC/Portal Rate design pilots Collaboration/revenue report. AMI opt-out Data privacy/Cyber	X		X	X		X	X					X	X	
Metrics	Measure/frequency Customer surveys	X					X	X							
Meter deployment plan	Geographic plan/logistics	X				X	X	X	X	X					
Organization and Process Change Assessment (Day-1 Readiness study)	Identify organization and process impacts	X			X	X	X	X	X	X			X	X	
Procurement	RFP	X	X	X	X	X	X	X	X	X	X	X	X	X	
Business Case/BCA Mfg	SOA vs. ops. Multi-comp Revised business case	X													
FTEs	Annual estimate	3	1	0.25	0.5	0.5	1	1	1	0.5	0.5	1	0.5	10.75	
<b>Costs</b>		<b>\$ 498,000.00</b>	<b>\$ 166,300.00</b>	<b>\$ 166,300.00</b>	<b>\$ 41,575.00</b>	<b>\$ 83,150.00</b>	<b>\$ 83,150.00</b>	<b>\$ 166,300.00</b>	<b>\$ 166,300.00</b>	<b>\$ 83,150.00</b>	<b>\$ 83,150.00</b>	<b>\$ 166,300.00</b>	<b>\$ 83,150.00</b>	<b>\$ 1,200,000</b>	<b>\$ 2,867,725.00</b>

AN - Function Support As Needed  
X - Function Support Required

The Narragansett Electric Company  
d/b/a National Grid  
RIPUC Docket No. 4770  
Attachment DIV 23-5  
Page 2 of 2

Rhode Island and Niagara Mohawk 2018 AMI Work Plan Activities and Estimated Costs

Activities	Scope	Required Functions											Total	
		Project Lead/Staff	Procurement	IS	Cyber/ Digital Security	Meter Eng.	MDS	NES/ Customer	Pricing/Regulatory	CMS	Telecom	Meter Asset Mgmt.		Legal
Stakeholder Collaboration	Meeting preparation, documentation, follow-up Input to detailed plan elements Options development & analysis Customer education	X	AN	X	AN	X	X	X	X	AN	X	X	X	X
Customer Engagement Plan	Data sharing : GEC/Portal Rate design pilots Collaboration/revenue opport. AMI opt-out Data privacy/Cyber	X		X	X								X	X
Metrics	Measured frequency Customer surveys	X					X	X	X					
Meter deployment plan	Geographic prioritization	X				X	X	X	X	X	X			
Organization and Process Change Assessment (Day-1 Readiness relied)	Identify organization and process impacts	X			X	X	X	X	X	X	X		X	
Procurement	RFP	X	X	X	X	X	X	X	X	X	X	X	X	X
Business Case/BCA filing	See S vs own, Multi-comp Revised business case Annual estimate	X	1	1	0.5	0.5	1.5	1	0.5	1	1	1	1	0.5
<b>Costs</b>		\$ -49,930.00	\$ -166,300.00	\$ -166,300.00	\$ -83,150.00	\$ -83,150.00	\$ -249,450.00	\$ -249,450.00	\$ -166,300.00	\$ -166,300.00	\$ -166,300.00	\$ -166,300.00	\$ -1,800,000.00	\$ -4,845,050.00

AN - Function Support As Needed  
X - Function Support Required

Division 37-2

Request:

Referring to the responses to DIV 30-1, 30-2, and 30-3 (Docket 4770), the Company states in the response to DIV 30-1:

“The Company used the \$2 million Niagara Mohawk rate allowance as the basis for the \$2 million Rhode Island AMI study funding request. The Company’s request is to fund Rhode Island-specific study activities and, when combined with the Niagara Mohawk funding level, covers the estimated costs of a joint Rhode Island and Niagara Mohawk effort.”

The response to DIV 30-3 also states that the settlement in New York (referred to as the “Joint Proposal”):

“provides Niagara Mohawk \$2 million of the estimated \$2.998 million study costs in base distribution rates to conduct the study. The recovery level was established as part of a comprehensive settlement among Niagara Mohawk, Staff, and the other parties in the case with many give and takes agreed during the confidential settlement discussions.”

Footnote 1 to DIV 30-3 indicates that the Joint Proposal was “entered into” on January 19, 2018.

- a. Please explain how the Company used the \$2 million rate allowance from the New York settlement that was filed on January 19, 2018 as the basis for estimating the \$2 million AMI study request reflected in Appendix 10.1 of PST-2, when PST-2 was filed with the Rhode Island Commission on November 27, 2017, almost two months before the Joint Proposal was apparently finalized.
- b. When the Company’s affiliate agreed to accept only \$2 million out of the \$2.998 million study cost and not recover the difference from New York customers, did National Grid base its decision in whole or in part on an assumption that Rhode Island customers would cover the balance of the cost of the AMI study, (the estimate of which is reflected in Attachment DIV 23-5) such that National Grid shareholders would be made completely whole by Rhode Island’s contribution, despite the fact that the New York Joint Proposal was not covering approximately \$1 million of the estimated study cost?

Response:

- a. Niagara Mohawk Power Corporation (Niagara Mohawk) filed a "Notice of Impending Settlement Negotiations" with the New York State Public Service Commission on September 11, 2017 in Cases 17-E-0238 and 17-G-0239 to begin formal settlement discussions. The specifics of settlement discussions are confidential; however, certain items were agreed to prior to the filing of the Joint Proposal in January 2018. During the course of those discussions, which happened concurrently with the development of the Rhode Island Power Sector Transformation (PST) Plan filing, Narragansett Electric developed the \$2 million cost estimate to conduct the Rhode Island AMI study. As detailed in the Company's response to Division 23-5, included here as Attachment DIV 37-2 for ease of reference, Narragansett Electric expected it would undertake a similar level of activities and incur a similar level of cost as Niagara Mohawk (estimated at \$2.988 million) if it undertook a standalone Rhode Island AMI study. With the understanding, however, that Niagara Mohawk was proceeding to undertake an AMI study in New York, the Company believed that synergies could be achieved, resulting in the \$2 million estimate for Rhode Island.
- b. No. Niagara Mohawk committed to undertake the AMI study in the Joint Proposal irrespective of whether or not additional funding would be provided through the Rhode Island PST Plan filing. The Niagara Mohawk AMI study recovery level was established as part of a comprehensive settlement among Niagara Mohawk, New York Department of Public Service Staff, and the other parties in the case with many gives and takes agreed to during confidential settlement discussions.

(This response is identical to the Company's response to Division 13-2 in Docket No. 4780.)

The Narragansett Electric Company  
d/b/a National Grid  
RIPUC Docket No. 4770  
Responses to Division's Twenty-Third Set of Data Requests  
Issued February 12, 2018

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Division 23-5

Request:

Please provide an itemization of the estimated costs used to develop the estimate for the cost of the AMI study. Please also provide an itemization of the estimated costs used to develop the estimates for the AMI study proposed for New York. If the Company expects the parts of the studies for both jurisdictions will have overlap, please also show the itemization on a combined basis.

Response:

The Company developed the \$2 million estimate of Rhode Island AMI study costs by taking into consideration the estimate for the Niagara Mohawk Power Corporation (Niagara Mohawk) AMI study. Attachment DIV 23-5, Page 1, provides the itemization of the estimated costs of the AMI work activities that Niagara Mohawk plans to undertake in 2018 to continue the development of its AMI plan. Those costs are estimated at \$2.988 million, as shown in the attachment. The Company expects to undertake similar activities and incur a similar level of costs in Rhode Island to advance the Rhode Island AMI plan. The itemization of estimated costs on a combined Rhode Island and Niagara Mohawk basis is included on Page 2 of Attachment DIV 23-5. The estimate for the combined study is \$4.045 million.

(This response is identical to the Company's response to Division 7-5 in Docket No. 4780.)

Niagara Mohawk 2018 AMI Work Plan Activities and Estimated Costs

Activities	Scope	Required Functions													Total
		Project Lead/Staff	Procurement	IS	Cyber/Digital Security	Meter Eng.	MDS	NES/Customer	Pricing/Regulatory	CMS	Telecom	Meter Asset Mgmt.	Legal	Consultants	
Stakeholder Collaboration	Meeting preparation , documentation, follow-up Input to detailed plan elements Options development & analysis	X	AN	X	AN	X	X	X	X	X	AN	X	X	X	
Customer Engagement Plan	Customer education Data sharing : GBC/Portal Rate design pilots Collaboration/revenue opport. AMI opt-out Data privacy/Cyber	X		X	X		X	X	X				X	X	
Metrics	Measures/frequency Customer surveys	X					X	X	X	X					
Meter deployment plan	Geographic plan/logistics	X				X	X	X	X	X	X	X			
Organization and Process Change Assessment (Day-1 Readiness related)	Identify organization and process impacts	X			X	X	X	X		X	X	X		X	
Procurement	RFP SaaS vs own, Multi-comp	X	X	X	X	X	X	X	X	X	X	X		X	
Business Case/BCA filing	Revised business case	X						X	X			X	X		
FTEs	Annual estimate	3	1	1	0.25	0.5	0.5	1	1	0.5	0.5	1	0.5		10.75
<b>Costs</b>		<b>\$ 498,900.00</b>	<b>\$ 166,300.00</b>	<b>\$ 166,300.00</b>	<b>\$ 41,575.00</b>	<b>\$ 83,150.00</b>	<b>\$ 83,150.00</b>	<b>\$ 166,300.00</b>	<b>\$ 166,300.00</b>	<b>\$ 83,150.00</b>	<b>\$ 83,150.00</b>	<b>\$ 166,300.00</b>	<b>\$ 83,150.00</b>	<b>\$ 1,200,000</b>	<b>\$ 2,987,725.00</b>

AN - Function Support As Needed  
X - Function Support Required

Rhode Island and Niagara Mohawk 2018 AMI Work Plan Activities and Estimated Costs

Activities	Scope	Required Functions													Total
		Project Lead/Staff	Procurement	IS	Cyber/ Digital Security	Meter Eng.	MDS	NES/Customer	Pricing/Regulatory	CMS	Telecom	Meter Asset Mgmt.	Legal	Consultants	
Stakeholder Collaboration	<ul style="list-style-type: none"> <li>Meeting preparation , documentation, follow-up</li> <li>Input to detailed plan elements</li> <li>Options development &amp; analysis</li> </ul>	X	AN	X	AN	X	X	X	X	X	AN	X	X	X	
Customer Engagement Plan	<ul style="list-style-type: none"> <li>Customer education</li> <li>Data sharing : GBC/Portal</li> <li>Rate design pilots</li> <li>Collaboration/revenue opport.</li> <li>AMI opt-out</li> <li>Data privacy/Cyber</li> </ul>	X		X	X		X	X	X				X	X	
Metrics	<ul style="list-style-type: none"> <li>Measures/frequency</li> <li>Customer surveys</li> </ul>	X					X	X	X	X					
Meter deployment plan	<ul style="list-style-type: none"> <li>Geographic plan/logistics</li> </ul>	X				X	X	X	X	X	X	X			
Organization and Process Change Assessment (Day-1 Readiness related)	<ul style="list-style-type: none"> <li>Identify organization and process impacts</li> </ul>	X			X	X	X	X		X	X	X		X	
Procurement	<ul style="list-style-type: none"> <li>RFP</li> <li>SaaS vs own, Multi-comp</li> </ul>	X	X	X	X	X	X	X	X	X	X	X		X	
Business Case/BCA filing	<ul style="list-style-type: none"> <li>Revised business case</li> </ul>	X						X	X			X	X		
FTEs	<ul style="list-style-type: none"> <li>Annual estimate</li> </ul>	3	1	1	0.5	0.5	1.5	1.5	1	0.5	1	1	1		13.5
<b>Costs</b>		\$ 498,900.00	\$ 166,300.00	\$ 166,300.00	\$ 83,150.00	\$ 83,150.00	\$ 249,450.00	\$ 249,450.00	\$ 166,300.00	\$ 83,150.00	\$ 166,300.00	\$ 166,300.00	\$ 166,300.00	\$ 1,800,000.00	\$ 4,045,050.00

AN - Function Support As Needed  
X - Function Support Required

Division 37-3

Request:

Referring to Attachment DIV 23-5 (Docket 4770), the study estimate identifies thirteen "Required Functions" and estimates the cost for each based on equivalent FTEs and consultancy costs for both the Niagara Mohawk study (page 1) and the combined study (page 2). For each of the "Required Functions:"

- a. Provide an explanation of the activities that would be performed.
- b. Please identify each Required Function that relates to systems or processes that will ultimately be shared between New York and Rhode Island after AMI implementation.
- c. In each instance where there was no change in the FTE estimate between the Niagara Mohawk study and the combined study, please explain why there was no change.
- d. In each instance where there was a change the FTE estimate between the Niagara Mohawk study and the combined study, please explain why there was no change.
- e. Please explain the basis and assumptions for the two consultancy cost estimates.

Response:

- a. Please see the brief explanation of the roles that each of the functions will provide below:
  - Project Lead/Staff – This function will manage the overall study effort across all project activity areas. Management roles will include maintaining the study plan and schedule, internal and contractor resourcing, progress management and reporting, work activity facilitation and review, and internal and external communications.
  - Procurement – This function will support the procurement activities including hiring and management of consultant support, and manage the requests for information (RFIs) and requests for proposals (RFPs) process to advance the detailed AMF solution design and provide enhanced cost estimates to be included in the revised business plan and benefit-cost analysis.
  - IS, Cyber and Digital Security, Meter Engineering, Meter Data Service (MDS), Telecom, Meter Asset Management – These functions will support the RFIs and RFPs to advance the detailed AMF solution design and provide enhanced cost estimates to be included in the revised business plan and benefit-cost analysis. RFI and RFP activities include requirements development, vendor question and information support, and vendor response evaluation. These functions will also

support stakeholder engagement, the customer engagement plan, metrics development, meter deployment plan development, organization and process change assessment, business case, and filing activities for their respective areas as necessary. A projection of what specific activity areas each function will support is provided in Attachment DIV 23-5 included in this set as Attachment DIV 37-2.

- New Energy Solutions (NES)/Customer – The primary role of this function is to lead the development of the customer engagement plan, including related stakeholder engagement, to be included in the revised AMF business plans. This function will also support other project activities as required.
  - Pricing/Regulatory – The primary role of this function is to lead the time-varying rate and revenue requirements analysis components of the business case and benefit-cost analysis components of the study. This function will also play a significant role in the stakeholder collaboration, metric, and regulatory filing areas.
  - Customer Metering Services (CMS) – This function represents the metering workforce and will primarily support the development of the meter deployment plan, meter workforce business case costs and benefit elements, and metrics activity areas. This function will also support other project activities as required.
  - Legal – The primary role of this function is to support collaboration and regulatory filing activities.
  - Consultants - Consulting resources will support the stakeholder collaboration, customer engagement, procurement, and regulatory filing activities. The consultants will provide analysis, research, facilitation, and document development support in each of these areas.
- b. The procurement, customer engagement plan, and organization and process change assessment study activities will support the development of systems and processes during the implementation phase of the project that may be shared between New York and Rhode Island assuming both jurisdictions move forward with AMF. All of the functions in part support at least one of these three activities as illustrated in Attachment DIV 37-2.
- c. The study work activities will be carried out by a combination of internal and external resources. As a result, a comparison of FTEs between the two studies is not indicative of the change in resource scope for the function areas. The functions that did not include additional internal FTEs (Project Lead/Staff, Procurement, IS Meter Engineering, Pricing/Regulatory, CMS, Meter Asset Management) for the combined study assume that the increased scope of work for the combined study is supported by additional consulting resources.
- d. The study work activities will be carried out by a combination of internal and external resources. As a result, a comparison of FTEs between the two studies is not indicative of

the change in resource scope for the function areas. The functions that included additional internal FTEs (Cyber/Digital Security, MDS, NES/Customer, Telecom, Legal) for the combined study assume additional Company representation is required to manage the increased scope of work that cannot met by consultant resources.

- e. Please see the responses to part c. and part d., above.

(This response is identical to the Company's response to Division 13-3 in Docket No. 4780.)

Division 37-4

Request:

Referring to the response to DIV 30-2 (Docket 4770), the response contains a statement: “[T]he AMI study costs are based on the activities that will be undertaken that are specific to each jurisdiction (e.g., meter deployment plan).”

- a. Please explain how each of the Required Functions on page 1 of Attachment 23-5 relate only to activities specific to Niagara Mohawk.
- b. Please explain how each of the Required Functions on page 2 of Attachment 23-5 relate only to activities specific to each jurisdiction.

Response:

- a. The functions in the table on page 1 of Attachment DIV 23-5, a copy of which is included in this set as Attachment DIV 37-2, support the activities listed in the first column of the table and described in additional detail in the Company's response to Division 37-3-a. Under a Niagara Mohawk Power Corporation (Niagara Mohawk) only study scenario for which the table was developed, the activities would be carried-out by the functions to support a Niagara Mohawk AMI implementation.
- b. The functions in the table on page 2 of Attachment DIV 23-5, a copy of which is included in this set as Attachment DIV 37-2, support the activities listed in the first column of the table and described in additional detail in the Company's response to Division 37-3-a. Under a joint Niagara Mohawk and Rhode Island AMI/AMF study scenario, the activities must be undertaken for each company but can be combined in part or whole to achieve cost synergies. The Company has not prepared a detailed plan or related FTE/cost estimate that breaks out the functions between common and company-specific activities.

(This response is identical to the Company's response to Division 13-4 in Docket No. 4780.)

Division 37-5

Request:

Referring to Attachment DIV 23-5 (Docket 4770), please explain why it is appropriate to include legal costs as a part of the AMI study cost. Please explain why the legal costs would be incremental to other legal costs that already would be included in base distribution rates for the typical management of legal matters for a regulated distribution company.

Response:

National Grid's legal department will support the following aspects of the AMI study: (a) stakeholder engagement, (b) the customer engagement plan, and (c) the business case/benefit-cost analysis filing activities. These activities, associated with a potential investment that is not currently recovered through base distribution rates, are incremental to the responsibilities of the legal department supported through base distribution rate funding.

(This response is identical to the Company's response to Division 13-5 in Docket No. 4780.)

Division 37-6

Request:

Referring to Attachment DIV 23-5 (Docket 4770), please explain why it is appropriate to include "Pricing/Regulatory" costs as a part of the AMI study cost. Please explain why the "Pricing/Regulatory" costs would be incremental to other "Pricing/Regulatory" costs that already would be included in base distribution rates for the typical management of regulatory matters for a regulated distribution company.

Response:

National Grid's Pricing and Regulatory departments will support the following aspects of the AMI study: (a) stakeholder engagement, (b) the customer engagement plan, (c) development and analysis of evaluation metrics, (d) meter deployment, (e) procurement, and (f) the business case/benefit-cost analysis filing activities. These activities, associated with a potential investment that is not currently recovered through base distribution rates, are incremental to the responsibilities of the Pricing and Regulatory department supported through base distribution rate funding.

(This response is identical to the Company's response to Division 13-6 in Docket No. 4780.)

Division 37-7

Request:

Referring to the proposed changes to Section 2.02.0 of the Transportation Terms and Conditions, Book 17, Bates page 244 and Section 12.0 of the General Rules and Regulations, Section 12.0, Bates page 160, relating to the new fee proposed for and the details of the initiative pertaining to the IP wireless device installations at the premises of FT-1 customers:

- a. Please explain the initiative and its purposes.
- b. Indicate how many FT-1 customer accounts will be affected.
- c. Provide copies of any sanctioning documents or presentations to management regarding the initiative.
- d. Explain how the initiative might relate or not relate to Advanced Metering Infrastructure initiatives being considered by the Company in the future.
- e. Indicate whether the equipment being installed would be compatible with any systems that may be installed for Advanced Metering Infrastructure or whether the equipment would become obsolete.

Response:

- a. The Telecommunication providers have announced that they will be eliminating Analog Landlines over the next five plus years. Currently, the devices utilized leverage Analog Signal to send remote reading to the Meter Data Collection System. Since the announcement, customers are starting to transition to digital internal landlines, which need special provision to convert the signal to analog. When customers convert to digital landlines, this introduces additional communication challenges for National Grid to obtain meter data. In its filing, the Company has revised its tariff to adapt to this technology change for future installation to utilize IP wireless communication devices for FT-1 customers.
- b. As of March 2018, the Company had 640 FT-1 customers.
- c. The Company does not have sanctioning documents related to the transition to the use of IP Wireless devices for telemetering the daily usage of FT-1 customers. The application of the sanctioning process pertains to projects in excess of \$1 million. The Company fully expects the cost of implementing this technology to be than \$1 million and therefore not requiring sanctioning.

- d. This IP wireless technology proposed to be implemented is not related to the Company's Advanced Metering Infrastructure (AMI) proposal that is currently under consideration in RIPUC Docket No. 4780. The IP Wireless technology is needed to address near-term changes in available customer telecommunications technology as described in the response to part a. above for FT-1 customers who today require daily metering for purposes of retrieving daily use for gas. The AMI proposal includes the deployment of an entirely new solution to collect and provide gas usage information to gas residential and commercial customers and third parties. The solution includes information system infrastructure, software systems, a field area communication network, and gas communication modules to be installed on existing gas meters. The earliest deployment of AMI is projected for mid-Fiscal Year 2021.
- e. Although the IP Wireless technology proposed to be installed for FT-1 customers will likely not be the same as that chosen for AMI, the need for IP Wireless devices to improve the process by which the Company retrieves daily metering data is a requirement of today's operation of gas settlement for these customers, and the installation of an IP Wireless device and the assessment of proposed fees would be applicable to new FT-1 customers. The new AMI system may be able to communicate with the IP Devices being installed. The Communication Protocol and Security Encryption Standard will determine if these devices can be utilized in the new system.