Docket No. 4770
Thirtieth Set of Data Requests of the
Division of Public Utilities and Carriers to National Grid
March 2, 2018

AMI

30-1. Referring to the response to DIV 23-5, please explain why and how the Company calculated the AMI Study for Rhode Island to be $2 million, when the cost of the study for Niagara Mohawk alone is estimated to be $2.988 million and adding Rhode Island to the project results only in an incremental cost of approximately $1.057 million. Why wouldn't the estimated cost of the AMI Study to Rhode Island for its share of the study be $1.057?

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

30-2. Referring to the response to DIV 23-5, why wouldn't the estimated cost of the combined AMI study not be allocated using the same allocator as identified in the response to DIV 23-3 (for the combined AMI project with New York), which would result in Rhode Island being allocated only 25.12% of the combined cost of $4.045?

Response can be found on Bates page(s) 2-5.

30-3. Referring to the response to DIV 23-5, does the Joint Proposal in the Niagara Mohawk rate case provide for Niagara Mohawk recovering all or any portion of the estimated cost of $2.988 for the proposed AMI Study? If so, please explain how the cost recovery will be implemented. If not, please indicate whether Niagara Mohawk will perform the study without cost recovery.

Response can be found on Bates page(s) 6.

Division 30-1

Request:

Referring to the response to DIV 23-5, please explain why and how the Company calculated the AMI Study for Rhode Island to be $2 million, when the cost of the study for Niagara Mohawk alone is estimated to be $2.988 million and adding Rhode Island to the project results only in an incremental cost of approximately $1.057 million. Why wouldn't the estimated cost of the AMI Study to Rhode Island for its share of the study be $1.057?

Response:

The cost of the Niagara Mohawk Power Corporation- (Niagara Mohawk) only AMI study was estimated at $2.988 million. As part of Joint Proposal[1] in the Niagara Mohawk rate case (Cases 17-E-0238 and 17-G-0239), which was approved by the New York Public Service Commission in its *Order Adopting Terms of Joint Proposal and Establishing Electric and Gas Rate Plans* (issued and effective March 15, 2018), Niagara Mohawk received $2 million in base distribution rates to conduct the study. 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 $2 million request is to fund Rhode Island-specific study activities and, when combined with the Niagara Mohawk funding level, covers the estimated cost of a joint Rhode Island and Niagara Mohawk study effort.

[1] On January 19, 2018, Niagara Mohawk, the New York Department of Public Service Staff, and the other parties in the case entered into a Joint Proposal that memorializes the settlement agreement among the parties.

Division 30-2

Request:

Referring to the response to DIV 23-5, why wouldn't the estimated cost of the combined AMI study not be allocated using the same allocator as identified in the response to DIV 23-3 (for the combined AMI project with New York), which would result in Rhode Island being allocated only 25.12% of the combined cost of $4.045?

Response:

The cost allocator identified in the Company's response to Division 23-3[1] was used to allocate common costs for the multi-jurisdictional scenario, such as information systems, between Niagara Mohawk Power Corporation and the Company that are driven by the relative number of customers for each company. In contrast, the AMI study costs are based on the activities that will be undertaken that are specific to each jurisdiction (*e.g.*, meter deployment plan). Therefore, it is appropriate to charge the AMI study costs by company.

[1] For ease of reference, the Company has provided as Attachment DIV 30-2 a copy of the public version of its response to Division 23-3, which contains a redacted version of Attachment DIV 23-3.

Division 23-3

Request:

Please identify the allocator used to allocate the estimated costs of AMI in the multi-jurisdictional scenarios (including the description and SAP Allocation Code from Attachment DIV 12-13).

Response:

The allocator used to allocate the common costs of the multi-jurisdictional, Rhode Island, and New York Niagara Mohawk Power Corporation deployment scenario to Rhode Island is 25.12 percent. This allocator was developed using National Grid USA Service Company, Inc. figures included on Page 1 of 162 of Attachment DIV 12-13. These figures have been reproduced in the table below:

SAP Allocation Code	SAP Co./Seg	Company Description	FY 2018 Number of Installed Meters
5210	5210E	Niagara Mohawk Power Corp. – Electric Distr.	1,718,053
5210	5210G	Niagara Mohawk Power Corp. – Gas	639,493
5360	5360E	Narragansett Electric	512,318
5360	5360G	Narragansett Gas	278,403

Allocator Calculation:

Step 1: 1,718,053 + 639,493 = 2,357,546
Step 2: 512,318 + 278,403 = 790,721
Step 3: 790,721 / (2,357,546 + 790,721) = 25.12 percent

The allocator is applied to the information systems and cyber security costs estimates of the multi-jurisdictional scenario. The information systems and cyber security costs are identified as elements 501 through 536, and 600 through 604, respectively, in Workpaper 4.1 – AMF costs (PST Book 3, Bates Pages 37 through 38).

(This response is identical to the Company's response to Division 7-3 in Docket No. 4780.)

Prepared by or under the supervision of: John Leana

AMF Costs and Benefits
(in millions)

#	Description	Category	Group	NPV	FY 20	FY 21	FY 22	FY 23 - FY 39
COSTS (COMBINED)								
100	AMF electric meter equipment cost	Capex	AMF Electric Meter Equipment and Installation	$50.50	$ -	$ 20.03	$ 41.21	$ -
102	AMF electric meter installation cost - Capex portion	Capex	AMF Electric Meter Equipment and Installation	$23.35	$ -	$ 9.25	$ 19.08	$ -
104	AMF failed meter equipment replacement cost	Capex	Equipment and Installation Refresh Cost	$0.89	$ -	$ 0.03	$ 0.09	$ 1.86
105	AMF demonstration period cost	Opex	AMF Electric Meter Equipment and Installation	$1.43	$ 1.54	$ -	$ -	$ -
110	AMF network engineering, design, contracting cost	Capex	Network Equipment and Installation	$0.10	$ 0.10	$ -	$ -	$ -
111	Network communications equipment cost, Electric Meters	Capex	Network Equipment and Installation	$1.29	$ -	$ 0.51	$ 1.05	$ -
112	Network communications equipment cost, Gas Meters	Capex	Network Equipment and Installation	$0.18	$ -	$ 0.07	$ 0.15	$ -
113	Network communications installation cost, Electric Meters	Capex	Network Equipment and Installation	$0.10	$ -	$ 0.04	$ 0.09	$ -
114	Network communications installation cost, Gas Meters	Capex	Network Equipment and Installation	$0.01	$ -	$ 0.01	$ 0.01	$ -
115	Network communications LTE backhaul cost, Electric Meters	Opex	Backhaul	$0.95	$ -	$ 0.03	$ 0.09	$ 2.00
116	Network communications LTE backhaul cost, Gas Meters	Opex	Backhaul	$0.11	$ -	$ 0.00	$ 0.00	$ 0.25
117	AMF meter cellular service cost, Electric Meters	Opex	Equipment and Installation Refresh Cost	$1.55	$ -	$ 0.05	$ 0.15	$ 3.25
118	Network communications equipment cost upgrade	Capex	Network Equipment and Installation	$1.14	$ -	$ -	$ -	$ 2.35
119	AMF communications failed equipment replacement cost	Capex	Equipment and Installation Refresh Cost	$0.19	$ -	$ -	$ 0.01	$ 0.42
120	AMF communications equipment O&M cost (outside warranty)	Opex	Equipment and Installation Refresh Cost	$0.36	$ -	$ -	$ -	$ 0.85
121	AMF External Project Management labor cost - Capex portion	Capex	Project Management	$1.75	$ -	$ 2.02	$ -	$ -
123	Cost from call center and AMO, implementation	Opex	Project Management	$4.87	$ -	$ 2.15	$ 3.74	$ -
124	AMF Internal Project Management Leadership Staff - Capex portion	Capex	Project Management	$0.72	$ -	$ 0.42	$ 0.44	$ -
125	AMF Internal Project Management Business Support - Capex portion	Capex	Project Management	$2.42	$ 1.28	$ 1.42	$ -	$ -
126	AMF electric meter installation cost - COR portion	COR	AMF Electric Meter Equipment and Installation	$0.72	$ -	$ 0.29	$ 0.59	$ -
128	AMF External Project Management labor cost - Opex portion	Opex	Project Management	$1.83	$ 1.97	$ -	$ -	$ -
129	AMF Internal Project Management Leadership Staff - Opex portion	Opex	Project Management	$0.38	$ 0.41	$ -	$ -	$ -
130	AMF Internal Project Management Business Support- Opex portion	Opex	Project Management	$1.28	$ 1.38	$ -	$ -	$ -
134	AMF inventory equipment cost	Capex	AMF Inventory	$1.26	$ -	$ 0.50	$ 1.03	$ -
135	Professional Services - Field Deployment Support Workstream cost	Capex	Communication Network Installation Management	$3.21	$ -	$ 0.42	$ 2.00	$ 1.65
136	Professional Services - Field Deployment Support Workstream Travel Expenses cost	Opex	Communication Network Installation Management	$0.48	$ -	$ 0.06	$ 0.30	$ 0.25
201	Back-Office Revenue Assurance Analyst cost	Opex	Ongoing Business Management	$0.00	$ -	$ -	$ -	$ -
202	Cost of theft investigations	Opex	Ongoing Business Management	$0.00	$ -	$ -	$ -	$ -
203	CMS Deployment Center, Facility cost	Capex	Support Infrastructure	$1.35	$ -	$ 1.06	$ 0.54	$ -
204	CMS Back Office & Clerical cost	Capex	Support Infrastructure	$1.86	$ -	$ 1.46	$ 0.75	$ -
205	Service Representative Tools / Uniform cost	Capex	Support Infrastructure	$0.19	$ -	$ 0.16	$ 0.06	$ -
206	Installed meter Quality Assurance / Quality Check cost	Capex	Support Infrastructure	$0.61	$ -	$ 0.48	$ 0.25	$ -
207	CMS Deployment Coordination Labor cost	Capex	Support Infrastructure	$0.82	$ -	$ 0.64	$ 0.33	$ -
208	CMS Field Installer Initial Training	Capex	Support Infrastructure	$0.78	$ 0.43	$ 0.44	$ -	$ -
209	CMS Cellular Communication cost	Capex	Support Infrastructure	$0.06	$ -	$ 0.04	$ 0.02	$ -
210	Handheld Devices cost	Capex	Support Infrastructure	$0.05	$ -	$ 0.06	$ -	$ -
300	AMF Additional Meter Data Services labor cost	Opex	Ongoing Business Management	$4.18	$ -	$ 0.34	$ 0.70	$ 7.84
301	Billing System Development Testing	Opex	Ongoing Business Management	$2.09	$ -	$ 0.17	$ 0.35	$ 3.92
302	MDS System Development Testing	Capex	Support Infrastructure	$0.61	$ 0.49	$ 0.17	$ -	$ -
400	Customer Engagement Plan Cost	Opex	Customer Engagement Cost	$8.30	$ 0.93	$ 3.39	$ 2.00	$ 4.62
501	CSS Enhancements Capex Cost	Capex	Customer Service System	[redacted]				
502	Professional Services - Head End/MDM Solution Program Management cost	Opex	AMF Head-end and Meter Data Management Systems*					
503	Energy Monitoring Portal Opex Cost	Opex	Customer Engagement Products and Services					
504	Green Button Connect Capex Cost	Capex	Customer Engagement Products and Services					
513	Telecom Capex cost	Capex	IS Infrastructure					
514	ESB Capex cost	Capex	IS Infrastructure					
516	Information Management Capex cost	Capex	IS Infrastructure					
517	Data Lake Capex cost	Capex	IS Infrastructure					
518	Professional Services - Head End/MDM Systems Implementation Workstream cost	Opex	AMF Head-end and Meter Data Management Systems*					
519	SaaS Setup Fees - One Time Setup (Version upgrade and scale-up existing system) cost	Opex	AMF Head-end and Meter Data Management Systems*					

AMF Costs and Benefits
(in millions)

#	Description	Category	Group	NPV	FY 20	FY 21	FY 22	FY 23 - FY 39
COSTS (COMBINED)								
520	SaaS Fees - Headend Software (OWOCCM, OWOC PM, IEE MDM, IoT FND, FDM) cost	Opex	AMF Head-end and Meter Data Management Systems*	[redacted]				
521	Professional Services - System and Meter Firmware Upgrade cost	Opex	AMF Head-end and Meter Data Management Systems*					
522	Telecom Opex cost	Opex	IS Infrastructure					
523	Telecom RTB Cost	Opex	IS Infrastructure					
524	ESB Opex cost	Opex	IS Infrastructure					
525	ESB RTB Cost	Opex	IS Infrastructure					
526	Data Lake Opex cost	Opex	IS Infrastructure					
527	Professional Services - Head End/MDM Solution Program Management Travel Expenses cc	Opex	AMF Head-end and Meter Data Management Systems*					
528	Professional Services - Head End/MDM Systems Implementation Workstream Travel Expen	Opex	AMF Head-end and Meter Data Management Systems*					
529	Green Button Connect Opex Cost	Opex	Customer Engagement Products and Services					
530	Information Management Opex cost	Opex	IS Infrastructure					
531	Information Management RTB Cost	Opex	IS Infrastructure					
532	Energy Monitoring Portal RTB Cost	Opex	Customer Engagement Products and Services					
533	CSS Enhancements Opex Cost	Opex	Customer Service System					
534	CSS Enhancements RTB Cost	Opex	Customer Service System					
535	Green Button Connect RTB Cost	Opex	Customer Engagement Products and Services					
536	Data Lake RTB cost	Opex	IS Infrastructure					
600	Cyber Security Project Capex Initial	Capex	Cyber Security	$7.31	$ 4.29	$ 2.52	$ 1.41	$ -
601	Cyber Security Project Opex Initial	Opex	Cyber Security	$3.26	$ 2.01	$ 1.04	$ 0.60	$ -
602	Cyber Security Project RTB O&M	Opex	Cyber Security	$5.25	$ 0.03	$ 0.16	$ 0.37	$ 11.63
603	Cyber Security Refresh / Removal Capital	Capex	Cyber Security	$7.91	$ -	$ -	$ -	$ 18.94
604	Cyber Security Capital Refresh / Removal Opex	Opex	Cyber Security	$3.94	$ -	$ -	$ 0.00	$ 8.85
	Total Cost			**$ 259.75**	**$ 32.55**	**$ 62.32**	**$ 85.70**	**$ 246.74**
			100-400's					
			Capex	**$ 93.43**	**$ 2.30**	**$ 39.23**	**$ 67.10**	**$ 6.28**
			Opex	**$ 27.81**	**$ 6.22**	**$ 6.20**	**$ 7.33**	**$ 22.97**
			Total	**$ 121.24**	**$ 8.53**	**$ 45.43**	**$ 74.44**	**$ 29.25**
			500's					
			Capex	**$ 20.47**	**$ 10.58**	**$ 7.60**	**$ 1.17**	**$ 6.35**
			Opex	**$ 89.65**	**$ 7.12**	**$ 5.29**	**$ 7.12**	**$ 171.71**
			Total	**$ 110.12**	**$ 17.69**	**$ 12.89**	**$ 8.29**	**$ 178.07**
			600's					
			Capex	**$ 15.22**	**$ 4.29**	**$ 2.52**	**$ 1.41**	**$ 18.94**
			Opex	**$ 12.45**	**$ 2.04**	**$ 1.20**	**$ 0.97**	**$ 20.49**
			Total	**$ 27.67**	**$ 6.33**	**$ 3.72**	**$ 2.39**	**$ 39.42**
			Total Capex	**$ 129.11**	**$ 17.17**	**$ 49.35**	**$ 69.68**	**$ 31.57**
			Total Open	**$ 129.91**	**$ 15.38**	**$ 12.68**	**$ 15.43**	**$ 215.17**

Division 30-3

Request:

Referring to the response to DIV 23-5, does the Joint Proposal in the Niagara Mohawk rate case provide for Niagara Mohawk recovering all or any portion of the estimated cost of $2.988 for the proposed AMI Study? If so, please explain how the cost recovery will be implemented. If not, please indicate whether Niagara Mohawk will perform the study without cost recovery.

Response:

As noted in the Company's response to Division 30-1, the Joint Proposal[1] in the Niagara Mohawk rate case (Cases 17-E-0238 and 17-G-0239), which was approved by the New York Public Service Commission in its *Order Adopting Terms of Joint Proposal and Establishing Electric and Gas Rate Plans* (issued and effective March 15, 2018, provides Niagara Mohawk $2 million of the estimated $2.998 million AMI 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 gives and takes agreed to during confidential settlement discussions. Niagara Mohawk has committed to undertake the study as part of the approved Joint Proposal.

[1] On January 19, 2018, Niagara Mohawk Power Corporation (Niagara Mohawk), the New York Department of Public Service Staff (Staff), and the other parties in the case entered into a Joint Proposal that memorializes the settlement agreement among the parties.