Information Request NEER-6-1

Request:

Refer to Natural Gas Infrastructure and Electric Generation: Proposed Solutions for New England (B&V Project No. 178511), Prepared for the New England States Committee on Electricity, 16 August 2013.

(a) Refer to Figure 13, LNG Imports at Canaport LNG Compared with Henry Hub Gas Price. Please provide the data used to construct the chart in native Excel format, including "Historical LNG Imports - Everett," "Projected LNG Imports — Everett", and the "Henry Hub" prices (with each series by the unit of time [x-axis] used to construct the chart). If the prices as charted on the figure are in real dollars, please identify the base year and provided the factor series that can be used to convert the real dollars to nominal dollars.

(b) Refer to Figure 17, Monthly Algonquin City-Gates Basis to Henry Hub: Base Case Forecast. Please provide the data used to construct the chart in native Excel format, including the "Historical" and "Projected" price series and the Henry Hub price series used construct the two aforementioned series of prices (with each series by the unit of time [x-axis] used to construct the chart). If the prices as charted on the figure are in real dollars, please identify the base year and provided the factor series that can be used to convert the real dollars to nominal dollars.

(c) Refer to Figure 19, Boston Electric Prices: Base Case Forecast. Please provide the data used to construct the chart in native Excel format, including the "Historical" and "Projected" price series (with each series by the unit of time [x-axis] used to construct the chart). If the prices as charted on the figure are in real dollars, please identify the base year and provided the factor series that can be used to convert the real dollars to nominal dollars.

(d) Refer to Figure 29, Monthly Algonquin City-Gates Basis to Henry Hub: Base Case vs. Short-Term Solutions. Please provide all data used to construct the chart in native Excel format, including the "Historical," "Base Case," "Dual-Fuel and Demand Response" and "Short-Term LNG Imports" price series (with each series by the unit of time [x-axis] used to construct the chart). If the prices as charted on the figure are in real dollars, please identify the base year and provided the factor series that can be used to convert the real dollars to nominal dollars.

(e) Refer to Figure 30, Boston Electric Prices: Base Case vs. Short-Term Solutions. Please provide all data used to construct the chart in native Excel format, including the "Historical," "Base Case," "Dual Fuel & Demand Response" and "Short-term LNG Imports" price series (with each series by the unit of time [x-axis] used to construct the chart). If the prices as charted on the

figure are in real dollars, please identify the base year and provided the factor series that can be used to convert the real dollars to nominal dollars

(f) Refer to Figure 33, Monthly Algonquin City-Gates Basis to Henry Hub: Base Case vs. High Demand Scenario. Please provide all data used to construct the chart in native Excel format, including the "Historical," "Base Case," and "High Demand Scenario" price series (with each series by the unit of time [x-axis] used to construct the chart). If the prices as charted on the figure are in real dollars, please identify the base year and provided the factor series that can be used to convert the real dollars to nominal dollars

(g) Refer to Figure 34, Boston Electric Prices: Base Case vs. High Demand Scenario. Please provide all data used to construct the chart in native Excel format, including the "Historical," "Base Case," and "High Demand Scenario" price series (with each series by the unit of time [x-axis] used to construct the chart). If the prices as charted on the figure are in real dollars, please identify the base year and provided the factor series that can be used to convert the real dollars to nominal dollars.

(h) Refer to Figure 35, Monthly Algonquin City-Gates Basis to Henry Hub: Base Case: High Demand Scenario. Please provide all data used to construct the chart in native Excel format, including the "Historical Basis," "Firm Contract-Based Canadian Electric Imports," "LNG Imports," "High Demand Scenario," and "Cross-Regional Pipeline" price series (with each series by the unit of time [x-axis] used to construct the chart). If the prices as charted on the figure are in real dollars, please identify the base year and provided the factor series that can be used to convert the real dollars to nominal dollars.

(i) Refer to Figure 36, Boston Electric Prices: Base Case vs. High Demand Scenario. Please provide all data used to construct the chart in native Excel format, including the "Historical Basis," "Firm Contract-Based Canadian Electric Imports," "LNG Imports," "High Demand Scenario," and "Cross-Regional Pipeline" price series (with each data series by the unit of time [x-axis] used to construct the chart). If the prices as charted on the figure are in real dollars, please identify the base year and provided the factor series that can be used to convert the real dollars to nominal dollars.

(j) Refer to Figure 37, Projected January Design-Day Demand. Please provide all data used to construct the chart in native Excel format, including the "Residential," "Power Generation," "Commercial," "Existing Pipeline Capacity," "Industrial" and "With AIM Capacity" data series (with each data series by the unit of time [x-axis] used to construct the chart).

Response:

(a)-(j) Please see the Attachment NEER-6-1(a) (Highly Sensitive Confidential Information) for all the requested data. Black & Veatch has identified the base year of all prices in the provided data., Black & Veatch is not aware of any assumptions developed as part of the NESCOE study regarding the conversion of real to nominal dollars.

Column	A	B	C	D
Line #		**Historical LNG Imports - Everett (MMcf/d)**	**Projected LNG Imports - Everett (MMcf/d)**	**Henry Hub (Nominal$/MMcf)**
1	[redacted]			
2				
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Column	A	B	C
		Algonquin, city-gates Basis to Henry Hub	
		Historical	**Projected**
Line #		**(Nominal$/MMBtu)**	**(2013$/MMBtu)**
1	[redacted]		
2			
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4			
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Column	A	B	C
		Algonquin, city-gates Basis to Henry Hub	
		Historical	Projected
Line #		(Nominal$/MMBtu)	(2013$/MMBtu)
26		[redacted]	
27			
28			
29			
30			
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Column	A	B	C
		Algonquin, city-gates Basis to Henry Hub	
		Historical	**Projected**
Line #		**(Nominal$/MMBtu)**	**(2013$/MMBtu)**
51	[redacted]		
52			
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54			
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Column	A	B	C
		Algonquin, city-gates Basis to Henry Hub	
		Historical	**Projected**
Line #		**(Nominal$/MMBtu)**	**(2013$/MMBtu)**
76			
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Column	A	B	C
		Algonquin, city-gates Basis to Henry Hub	
		Historical	**Projected**
Line #		**(Nominal$/MMBtu)**	**(2013$/MMBtu)**
101		[redacted]	
102			
103			
104			
105			
106			
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Column	A	B	C
		Algonquin, city-gates Basis to Henry Hub	
		Historical	**Projected**
Line #		**(Nominal$/MMBtu)**	**(2013$/MMBtu)**
126	[redacted]		
127			
128			
129			
130			
131			
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133			
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Column	A	B	C
		Algonquin, city-gates Basis to Henry Hub	
		Historical	**Projected**
Line #		**(Nominal$/MMBtu)**	**(2013$/MMBtu)**
151			
152			
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Column	A	B	C
		Algonquin, city-gates Basis to Henry Hub	
		Historical	**Projected**
Line #		**(Nominal$/MMBtu)**	**(2013$/MMBtu)**
176			
177			
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Column	A	B	C
		Algonquin, city-gates Basis to Henry Hub	
		Historical	**Projected**
Line #		**(Nominal$/MMBtu)**	**(2013$/MMBtu)**
201			
202			
203			
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Column	A	B	C
		Algonquin, city-gates Basis to Henry Hub	
		Historical	**Projected**
Line #		**(Nominal$/MMBtu)**	**(2013$/MMBtu)**
226	[redacted]		
227			
228			
229			
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Column	A	B	C
		Algonquin, city-gates Basis to Henry Hub	
		Historical	**Projected**
Line #		**(Nominal$/MMBtu)**	**(2013$/MMBtu)**
251	[redacted]		
252			

Column	A	B	C

Boston Electric Prices

Line #		Historical (Nominal$/MWh)	Projected Price (2013$/MWh)
1		[redacted]	
2			
3			
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6			
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Column	A	B	C
		Boston Electric Prices	
Line #		**Historical (Nominal$/MWh)**	**Projected Price (2013$/MWh)**
25	[redacted]		
26			
27			
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Column	A	B	C

Boston Electric Prices

Line #		Historical (Nominal$/MWh)	Projected Price (2013$/MWh)
49		[redacted]	
50			
51			
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53			
54			
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Column	A	B	C

Boston Electric Prices

Line #		Historical (Nominal$/MWh)	Projected Price (2013$/MWh)
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Column	A	B	C

Boston Electric Prices

Line #		Historical (Nominal$/MWh)	Projected Price (2013$/MWh)
97		[redacted]	
98			
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101			
102			
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120			

Column	A	B	C

Boston Electric Prices

Line #		Historical (Nominal$/MWh)	Projected Price (2013$/MWh)
121		[redacted]	
122			
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125			
126			
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Column	A	B	C

Boston Electric Prices

Line #		Historical (Nominal$/MWh)	Projected Price (2013$/MWh)
145			
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Column	A	B	C

Boston Electric Prices

Line #		Historical (Nominal$/MWh)	Projected Price (2013$/MWh)
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Column	A	B	C

Boston Electric Prices

Line #		Historical (Nominal$/MWh)	Projected Price (2013$/MWh)
193			
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Column	A	B	C

Boston Electric Prices

Line #		Historical (Nominal$/MWh)	Projected Price (2013$/MWh)
217	[redacted]		
218			
219			
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221			
222			
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Column	A	B	C

Boston Electric Prices

Line #		Historical (Nominal$/MWh)	Projected Price (2013$/MWh)
241			
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Column	A	B	C	D	E
		Algonquin, city-gates Basis to Henry Hub			
Line #		**Historical (Nominal$/MMBtu)**	**Projected (2013$/MMBtu)**	**Dual Fuel and Demand Response (2013$/MMBtu)**	**Short-term LNG Imports (2013$/MMBtu)**
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Column	A	B	C	D	E
		Algonquin, city-gates Basis to Henry Hub			
Line #		Historical (Nominal$/MMBtu)	Projected (2013$/MMBtu)	Dual Fuel and Demand Response (2013$/MMBtu)	Short-term LNG Imports (2013$/MMBtu)
28	[redacted]				
29					
30					
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Column	A	B	C	D	E
		Algonquin, city-gates Basis to Henry Hub			
Line #		**Historical (Nominal$/MMBtu)**	**Projected (2013$/MMBtu)**	**Dual Fuel and Demand Response (2013$/MMBtu)**	**Short-term LNG Imports (2013$/MMBtu)**
55	[redacted]				
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Column	A	B	C	D	E
		Algonquin, city-gates Basis to Henry Hub			
Line #		**Historical (Nominal$/MMBtu)**	**Projected (2013$/MMBtu)**	**Dual Fuel and Demand Response (2013$/MMBtu)**	**Short-term LNG Imports (2013$/MMBtu)**
82					
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Column	A	B	C	D	E
		Algonquin, city-gates Basis to Henry Hub			
Line #		Historical (Nominal$/MMBtu)	Projected (2013$/MMBtu)	Dual Fuel and Demand Response (2013$/MMBtu)	Short-term LNG Imports (2013$/MMBtu)
109	[redacted]				
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Column	A	B	C	D	E
		Algonquin, city-gates Basis to Henry Hub			
Line #		Historical (Nominal$/MMBtu)	Projected (2013$/MMBtu)	Dual Fuel and Demand Response (2013$/MMBtu)	Short-term LNG Imports (2013$/MMBtu)
136		[redacted]			
137					
138					
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Column	A	B	C	D	E
		Algonquin, city-gates Basis to Henry Hub			
Line #		**Historical (Nominal$/MMBtu)**	**Projected (2013$/MMBtu)**	**Dual Fuel and Demand Response (2013$/MMBtu)**	**Short-term LNG Imports (2013$/MMBtu)**
163		[redacted]			
164					
165					
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Column	A	B	C	D	E
		Algonquin, city-gates Basis to Henry Hub			
Line #		**Historical (Nominal$/MMBtu)**	**Projected (2013$/MMBtu)**	**Dual Fuel and Demand Response (2013$/MMBtu)**	**Short-term LNG Imports (2013$/MMBtu)**
190		[redacted]			
191					
192					
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Column	A	B	C	D	E
		Algonquin, city-gates Basis to Henry Hub			
Line #		**Historical (Nominal$/MMBtu)**	**Projected (2013$/MMBtu)**	**Dual Fuel and Demand Response (2013$/MMBtu)**	**Short-term LNG Imports (2013$/MMBtu)**
217	[redacted]				
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Column	A	B	C	D	E
		Algonquin, city-gates Basis to Henry Hub			
Line #		**Historical (Nominal$/MMBtu)**	**Projected (2013$/MMBtu)**	**Dual Fuel and Demand Response (2013$/MMBtu)**	**Short-term LNG Imports (2013$/MMBtu)**
244	[redacted]				
245					
246					
247					
248					
249					
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251					
252					

Column	A	B	C	D	E
			Boston Electric Prices		
Line #		**Historical (Nominal$/MWh)**	**Base Case (2013$/MWh)**	**Short-term LNG Imports (2013$/MWh)**	**Dual Fuel & Demand Response (2013$/MWh)**
1	[redacted]				
2					
3					
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Column	A	B	C	D	E
			Boston Electric Prices		
Line #		Historical (Nominal$/MWh)	Base Case (2013$/MWh)	Short-term LNG Imports (2013$/MWh)	Dual Fuel & Demand Response (2013$/MWh)
26	[redacted]				
27					
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Column	A	B	C	D	E
			Boston Electric Prices		
Line #		Historical (Nominal$/MWh)	Base Case (2013$/MWh)	Short-term LNG Imports (2013$/MWh)	Dual Fuel & Demand Response (2013$/MWh)
51	[redacted]				
52					
53					
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63					
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75					

Column	A	B	C	D	E
			Boston Electric Prices		
Line #		Historical (Nominal$/MWh)	Base Case (2013$/MWh)	Short-term LNG Imports (2013$/MWh)	Dual Fuel & Demand Response (2013$/MWh)
76	[redacted]				
77					
78					
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Column	A	B	C	D	E
			Boston Electric Prices		
Line #		**Historical (Nominal$/MWh)**	**Base Case (2013$/MWh)**	**Short-term LNG Imports (2013$/MWh)**	**Dual Fuel & Demand Response (2013$/MWh)**
101					
102					
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124					
125					

Column	A	B	C	D	E
			Boston Electric Prices		
Line #		**Historical (Nominal$/MWh)**	**Base Case (2013$/MWh)**	**Short-term LNG Imports (2013$/MWh)**	**Dual Fuel & Demand Response (2013$/MWh)**
126	[redacted]				
127					
128					
129					
130					
131					
132					
133					
134					
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139					
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148					
149					
150					

Column	A	B	C	D	E
			Boston Electric Prices		
Line #		**Historical (Nominal$/MWh)**	**Base Case (2013$/MWh)**	**Short-term LNG Imports (2013$/MWh)**	**Dual Fuel & Demand Response (2013$/MWh)**
151	[redacted]				
152					
153					
154					
155					
156					
157					
158					
159					
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161					
162					
163					
164					
165					
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167					
168					
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170					
171					
172					
173					
174					
175					

Column	A	B	C	D	E
			Boston Electric Prices		
Line #		Historical (Nominal$/MWh)	Base Case (2013$/MWh)	Short-term LNG Imports (2013$/MWh)	Dual Fuel & Demand Response (2013$/MWh)
176	[redacted]				
177					
178					
179					
180					
181					
182					
183					
184					
185					
186					
187					
188					
189					
190					
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Column	A	B	C	D	E
			Boston Electric Prices		
Line #		**Historical (Nominal$/MWh)**	**Base Case (2013$/MWh)**	**Short-term LNG Imports (2013$/MWh)**	**Dual Fuel & Demand Response (2013$/MWh)**
201	[redacted]				
202					
203					
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Column	A	B	C	D	E
			Boston Electric Prices		
Line #		**Historical (Nominal$/MWh)**	**Base Case (2013$/MWh)**	**Short-term LNG Imports (2013$/MWh)**	**Dual Fuel & Demand Response (2013$/MWh)**
226	[redacted]				
227					
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Column	A	B	C	D	E
			Boston Electric Prices		
Line #		**Historical ($/MWh)**	**Base Case ($/MWh)**	**Short-term LNG Imports ($/MWh)**	**Dual Fuel & Demand Response ($/MWh)**
251	[redacted]				
252					

Column	A	B	C	D
		Algonquin, city-gates Basis to Henry Hub		
		Historical	**Base Case**	**High Demand Scenario**
Line #		**(Nominal$/MMBtu)**	**(2013$/MMBtu)**	**(2013$/MMBtu)**
1	[redacted]			
2				
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Column	A	B	C	D
		Algonquin, city-gates Basis to Henry Hub		
		Historical	**Base Case**	**High Demand Scenario**
Line #		**(Nominal$/MMBtu)**	**(2013$/MMBtu)**	**(2013$/MMBtu)**
26				
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Column	A	B	C	D
		Algonquin, city-gates Basis to Henry Hub		
		Historical	**Base Case**	**High Demand Scenario**
Line #		**(Nominal$/MMBtu)**	**(2013$/MMBtu)**	**(2013$/MMBtu)**
51				
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Column	A	B	C	D
		Algonquin, city-gates Basis to Henry Hub		
		Historical	**Base Case**	**High Demand Scenario**
Line #		**(Nominal$/MMBtu)**	**(2013$/MMBtu)**	**(2013$/MMBtu)**
76				
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Column	A	B	C	D
		Algonquin, city-gates Basis to Henry Hub		
		Historical	**Base Case**	**High Demand Scenario**
Line #		**(Nominal$/MMBtu)**	**(2013$/MMBtu)**	**(2013$/MMBtu)**
101				
102				
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Column	A	B	C	D
		Algonquin, city-gates Basis to Henry Hub		
		Historical	Base Case	High Demand Scenario
Line #		(Nominal$/MMBtu)	(2013$/MMBtu)	(2013$/MMBtu)
126	[redacted]			
127				
128				
129				
130				
131				
132				
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Column	A	B	C	D
		Algonquin, city-gates Basis to Henry Hub		
		Historical	**Base Case**	**High Demand Scenario**
Line #		**(Nominal$/MMBtu)**	**(2013$/MMBtu)**	**(2013$/MMBtu)**
151	[redacted]			
152				
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Column	A	B	C	D
		Algonquin, city-gates Basis to Henry Hub		
		Historical	**Base Case**	**High Demand Scenario**
Line #		**(Nominal$/MMBtu)**	**(2013$/MMBtu)**	**(2013$/MMBtu)**
176	[redacted]			
177				
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Column	A	B	C	D
		Algonquin, city-gates Basis to Henry Hub		
Line #		**Historical (Nominal$/MMBtu)**	**Base Case (2013$/MMBtu)**	**High Demand Scenario (2013$/MMBtu)**
201		[redacted]		
202				
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206				
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Column	A	B	C	D
		Algonquin, city-gates Basis to Henry Hub		
		Historical	**Base Case**	**High Demand Scenario**
Line #		**(Nominal$/MMBtu)**	**(2013$/MMBtu)**	**(2013$/MMBtu)**
226				
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Column	A	B	C	D
		Algonquin, city-gates Basis to Henry Hub		
		Historical	**Base Case**	**High Demand Scenario**
Line #		**(Nominal$/MMBtu)**	**(2013$/MMBtu)**	**(2013$/MMBtu)**
251	[redacted]			
252				

Column	A	B	C	D
			Boston Electric Prices	
			Base Case	High Demand Scenario
Line #		Historical (Nominal$/MWh)	(2013$/MWh)	(2013$/MWh)
1		[redacted]		
2				
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6				
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Column	A	B	C	D
			Boston Electric Prices	
			Base Case	**High Demand Scenario**
Line #		**Historical (Nominal$/MWh)**	**(2013$/MWh)**	**(2013$/MWh)**
26	[redacted]			
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Column	A	B	C	D
			Boston Electric Prices	
			Base Case	**High Demand Scenario**
Line #		**Historical (Nominal$/MWh)**	**(2013$/MWh)**	**(2013$/MWh)**
51	[redacted]			
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Column	A	B	C	D
			Boston Electric Prices	
			Base Case	**High Demand Scenario**
Line #		**Historical (Nominal$/MWh)**	**(2013$/MWh)**	**(2013$/MWh)**
76	[redacted]			
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Column	A	B	C	D
			Boston Electric Prices	
			Base Case	**High Demand Scenario**
Line #		**Historical (Nominal$/MWh)**	**(2013$/MWh)**	**(2013$/MWh)**
101	[redacted]			
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Column	A	B	C	D
			Boston Electric Prices	
			Base Case	High Demand Scenario
Line #		Historical (Nominal$/MWh)	(2013$/MWh)	(2013$/MWh)
126	[redacted]			
127				
128				
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131				
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Column	A	B	C	D
			Boston Electric Prices	
			Base Case	**High Demand Scenario**
Line #		**Historical (Nominal$/MWh)**	**(2013$/MWh)**	**(2013$/MWh)**
151				
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Column	A	B	C	D
			Boston Electric Prices	
			Base Case	**High Demand Scenario**
Line #		**Historical (Nominal$/MWh)**	**(2013$/MWh)**	**(2013$/MWh)**
176	[redacted]			
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Column	A	B	C	D
			Boston Electric Prices	
			Base Case	**High Demand Scenario**
Line #		**Historical (Nominal$/MWh)**	**(2013$/MWh)**	**(2013$/MWh)**
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Column	A	B	C	D
			Boston Electric Prices	
			Base Case	**High Demand Scenario**
Line #		**Historical (Nominal$/MWh)**	**(2013$/MWh)**	**(2013$/MWh)**
226	[redacted]			
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Column	A	B	C	D
			Boston Electric Prices	
			Base Case	**High Demand Scenario**
Line #		**Historical (Nominal$/MWh)**	**(2013$/MWh)**	**(2013$/MWh)**
251	[redacted]			
252				

Column	A	B	C	D	E	F
				Algonquin, city-gates Basis to Henry Hub		
Line #		**Historical (Nominal$/MMBtu)**	**High Demand Scenario (2013$/MMBtu)**	**Firm Contract-Based Canadian Imports (2013$/MMBtu)**	**Cross-Regional Pipeline (2013$/MMBtu)**	**LNG Imports (2013$/MMBtu)**
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Column	A	B	C	D	E	F
				Algonquin, city-gates Basis to Henry Hub		
Line #		**Historical (Nominal$/MMBtu)**	**High Demand Scenario (2013$/MMBtu)**	**Firm Contract-Based Canadian Imports (2013$/MMBtu)**	**Cross-Regional Pipeline (2013$/MMBtu)**	**LNG Imports (2013$/MMBtu)**
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Column	A	B	C	D	E	F
				Algonquin, city-gates Basis to Henry Hub		
Line #		**Historical (Nominal$/MMBtu)**	**High Demand Scenario (2013$/MMBtu)**	**Firm Contract-Based Canadian Imports (2013$/MMBtu)**	**Cross-Regional Pipeline (2013$/MMBtu)**	**LNG Imports (2013$/MMBtu)**
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Column	A	B	C	D	E	F
				Algonquin, city-gates Basis to Henry Hub		
Line #		**Historical (Nominal$/MMBtu)**	**High Demand Scenario (2013$/MMBtu)**	**Firm Contract-Based Canadian Imports (2013$/MMBtu)**	**Cross-Regional Pipeline (2013$/MMBtu)**	**LNG Imports (2013$/MMBtu)**
103						
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Column	A	B	C	D	E	F
				Algonquin, city-gates Basis to Henry Hub		
Line #		**Historical (Nominal$/MMBtu)**	**High Demand Scenario (2013$/MMBtu)**	**Firm Contract-Based Canadian Imports (2013$/MMBtu)**	**Cross-Regional Pipeline (2013$/MMBtu)**	**LNG Imports (2013$/MMBtu)**
137		[redacted]				
138						
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Column	A	B	C	D	E	F
				Algonquin, city-gates Basis to Henry Hub		
Line #		**Historical (Nominal$/MMBtu)**	**High Demand Scenario (2013$/MMBtu)**	**Firm Contract-Based Canadian Imports (2013$/MMBtu)**	**Cross-Regional Pipeline (2013$/MMBtu)**	**LNG Imports (2013$/MMBtu)**
171		[redacted]				
172						
173						
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Column	A	B	C	D	E	F
				Algonquin, city-gates Basis to Henry Hub		
Line #		**Historical (Nominal$/MMBtu)**	**High Demand Scenario (2013$/MMBtu)**	**Firm Contract-Based Canadian Imports (2013$/MMBtu)**	**Cross-Regional Pipeline (2013$/MMBtu)**	**LNG Imports (2013$/MMBtu)**
205						
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Column	A	B	C	D	E	F
				Algonquin, city-gates Basis to Henry Hub		
Line #		**Historical (Nominal$/MMBtu)**	**High Demand Scenario (2013$/MMBtu)**	**Firm Contract-Based Canadian Imports (2013$/MMBtu)**	**Cross-Regional Pipeline (2013$/MMBtu)**	**LNG Imports (2013$/MMBtu)**
239						
240						
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251						
252						

Column	A	B	C	D	E	F
Line #		**Historical ($/MWh)**	**High Demand Scenario ($/MWh)**	**Boston Electric Prices Firm Contract-Based Canadian Electric Imports ($/MWh)**	**Cross-Regional Pipeline ($/MWh)**	**LNG Imports ($/MWh)**
1	[redacted]					
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25						
26						

Column	A	B	C	D	E	F
Line #		**Historical ($/MWh)**	**High Demand Scenario (2013$/MWh)**	**Boston Electric Prices Firm Contract-Based Canadian Electric Imports (2013$/MWh)**	**Cross-Regional Pipeline (2013$/MWh)**	**LNG Imports (2013$/MWh)**
27	[redacted]					
28						
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Column	A	B	C	D	E	F
Line #		**Historical ($/MWh)**	**High Demand Scenario (2013$/MWh)**	**Boston Electric Prices Firm Contract-Based Canadian Electric Imports (2013$/MWh)**	**Cross-Regional Pipeline (2013$/MWh)**	**LNG Imports (2013$/MWh)**
53	[redacted]					
54						
55						
56						
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Column	A	B	C	D	E	F
Line #		**Historical ($/MWh)**	**High Demand Scenario (2013$/MWh)**	**Boston Electric Prices Firm Contract-Based Canadian Electric Imports (2013$/MWh)**	**Cross-Regional Pipeline (2013$/MWh)**	**LNG Imports (2013$/MWh)**
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104						

REDACTED

Column	A	B	C	D	E	F
Line #		Historical (Nominal$/MWh)	High Demand Scenario (2013$/MWh)	Boston Electric Prices Firm Contract-Based Canadian Electric Imports (2013$/MWh)	Cross-Regional Pipeline (2013$/MWh)	LNG Imports (2013$/MWh)
105	[redacted]					
106						
107						
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110						
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126						
127						
128						
129						
130						

REDACTED

Column	A	B	C	D	E	F
Line #		Historical (Nominal$/MWh)	High Demand Scenario (2013$/MWh)	Boston Electric Prices Firm Contract-Based Canadian Electric Imports (2013$/MWh)	Cross-Regional Pipeline (2013$/MWh)	LNG Imports (2013$/MWh)
131	[redacted]					
132						
133						
134						
135						
136						
137						
138						
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142						
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155						
156						

Column	A	B	C	D	E	F
Line #		**Historical ($/MWh)**	**High Demand Scenario (2013$/MWh)**	**Boston Electric Prices Firm Contract-Based Canadian Electric Imports (2013$/MWh)**	**Cross-Regional Pipeline (2013$/MWh)**	**LNG Imports (2013$/MWh)**
157		[redacted]				
158						
159						
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181						
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Column	A	B	C	D	E	F
Line #		**Historical ($/MWh)**	**High Demand Scenario (2013$/MWh)**	**Boston Electric Prices Firm Contract-Based Canadian Electric Imports (2013$/MWh)**	**Cross-Regional Pipeline (2013$/MWh)**	**LNG Imports (2013$/MWh)**
183	[redacted]					
184						
185						
186						
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Column	A	B	C	D	E	F
Line #		**Historical ($/MWh)**	**High Demand Scenario (2013$/MWh)**	**Boston Electric Prices Firm Contract-Based Canadian Electric Imports (2013$/MWh)**	**Cross-Regional Pipeline (2013$/MWh)**	**LNG Imports (2013$/MWh)**
209	[redacted]					
210						
211						
212						
213						
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232						
233						
234						

REDACTED

Column	A	B	C	D	E	F
Line #		Historical (Nominal$/MWh)	High Demand Scenario (2013$/MWh)	Boston Electric Prices Firm Contract-Based Canadian Electric Imports (2013$/MWh)	Cross-Regional Pipeline (2013$/MWh)	LNG Imports (2013$/MWh)
235	[redacted]					
236						
237						
238						
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240						
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251						
252						

Column	A	B	C	D	E	F	G
		New England January Design Day Demand (MMcf/d)					
Line #		**Residential**	**Commercial**	**Industrial**	**Power Generation**	**Existing Pipeline Capacity**	**With AIM Capacity**
1							
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16							

Information Request NEER-6-2

Request:

Refer to the rebuttal testimony of J. Neil Copeland, Exh. NG-JNC-1. Please provide all analyses, inputs and workpapers, (e.g., analyses of underlying data that are used to create a figure or table) that support each and every figure, table and associated analysis presented or relied upon in the development of the testimony in native file format (fully functional Excel files where applicable).

Response:

Please see Attachment NEER-6-2(a) (Highly Sensitive Confidential Information) for the data used in the development of figures in the rebuttal testimony of Exhibit NG-JNC-Rebuttal-1.

REDACTED

Total Project Cost-Benefits Summary 2019-2038 ($ Billions)

Line #	Column	A	B	C	D	E	F	G	H
1			Levelized			Present Value			
2		Project	Annual Benefits	Annual Costs	Annual Net Benefits	Total Benefits	Total Costs	Net Benefits	Benefit to Cost Ratio
3		With ANE Only	[redacted]	[redacted]	$1.1	[redacted]	[redacted]	$10.2	[redacted]
4		Kalt and Cavicchi (Market Model Scenario)	[redacted]	[redacted]	$0.6	[redacted]	[redacted]	$5.6	[redacted]

Column	A	B	C	D
Line #	**Year**	**Annual Average Implied Heat Rate (Btu/Kwh)**	**Summer Average Implied Heat Rate (Btu/Kwh)**	**Winter Average Implied Heat Rate (Btu/Kwh)**
1	2010	9,468	10,609	8,224
2	2011	9,412	9,743	8,692
3	2012	9,624	10,372	8,975
4	2013	8,583	9,870	7,486
5	2014	9,662	10,664	8,531
6	2015	10,751	12,608	8,730

Column	A	B	C	D	E
Line #	**Year**	**Retail Sales (GWh)**	**Retail Sales Subject to RPS (GWh)**	**RPS Requirement (% of Retail Sales subject to RPS)**	**Gross RPS Requirement**
1	2025	56,447	48,544	20.0%	9,709
2	2026	56,451	48,548	21.0%	10,195
3	2027	56,440	48,538	22.0%	10,678
4	2028	56,418	48,519	23.0%	11,159
5	2029	56,417	48,519	24.0%	11,644
6	2030	56,401	48,505	25.0%	12,126
7	2031	56,388	48,494	26.0%	12,608
8	2032	56,380	48,487	27.0%	13,091
9	2033	56,365	48,474	28.0%	13,573
10	2034	56,355	48,465	29.0%	14,055
11	2035	56,344	48,456	30.0%	14,537
12	2036	56,331	48,445	31.0%	15,018
13	2037	56,320	48,435	32.0%	15,499
14	2038	56,308	48,425	33.0%	15,980
15	2039	56,297	48,415	34.0%	16,461
16	2040	56,285	48,405	35.0%	16,942

Column	A	B	C	D	E	F	G	
Line #			**2012-2013**			**2014-2015**		
1	**State**	**Gas Utility**	**Report Date**	**Total System Growth Rate**	**Time Frame**	**Report Date**	**Total System Growth Rate**	**Time Frame**
2	MA	Berkshire Gas Co	Aug-12	1.30%	2013-2017	Aug-14	2.31%	2015-2019
3	MA	Blackstone Gas Co	Oct-12	2.38%	2012-2017	Nov-14	3.24%	2015-2019
4	MA	Boston Gas Co & Colonial Gas Co	Feb-13	0.30%	2013-2017	Apr-15	1.71%	2015-2019
5	MA	Bay State Gas Co & Columbia Gas of MA	Sep-13	1.00%	2014-2018	Sep-15	1.80%	2016-2020
6	MA	New England Gas Co	May-12	0.07%	2012-2017	Jul-14	0.36%	2015-2019
7	MA	NSTAR Gas Co	Feb-12	-0.50%	2012-2016	Mar-14	1.44%	2015-2018
8	CT	Connecticut Natural Gas Corp	Oct-12	1.44%	2013-2017	Oct-14	3.85%	2015-2019
9	CT	Southern Connecticut Gas Co	Oct-12	0.91%	2013-2017	Oct-14	3.81%	2015-2019

Information Request NEER-6-3

Request:

Refer to Exh. NGRID-TJB/JEA-Rebuttal. Please provide all analyses, inputs and workpapers, (e.g., analyses of underlying data that are used to create a figure or table) that support each and every figure, table and associated analysis presented or relied upon in the development of the rebuttal testimony of Timothy J. Brennan and John E. Allocca in native file format (fully functional Excel files where applicable).

Response:

Please refer to Exhibit NEER-2-55.

Information Request NEER-6-4

Request:

Refer to Exh. ALGONQUIN-RJK-1. Please provide all analyses, inputs and workpapers, (e.g., analyses of underlying data that are used to create a figure or table) that support each and every figure, table and associated analysis presented or relied upon in the development of the rebuttal testimony of Richard J. Kruse in native file format (fully functional Excel files where applicable).

Response:

This request refers to testimony that was not filed by National Grid. National Grid does not have the requested information.

Prepared by or under the supervision of: Counsel

Information Request NEER-6-5

Request:

Refer to Exh. ALGONQUIN-KK-1. Please provide all analyses, inputs and workpapers, (e.g., analyses of underlying data that are used to create a figure or table) that support each and every figure, table and associated analysis presented or relied upon in the development of the rebuttal testimony of Kristine Kramer in native file format (fully functional Excel files where applicable).

Response:

This request refers to testimony that was not filed by National Grid. National Grid does not have the requested information.

Information Request NEER-6-6

Request:

Refer to Rhode Island Public Utilities Commission Docket No. 4627, *The Narragansett Electric Company d/b/a National Grid, Request for Approval of a Gas Capacity Contract and Cost Recovery,* Schedule GJW-3, "Evaluation of Long-term Economic Benefits from Proposed Incremental Energy Infrastructure into New England" ("Schedule GJW-3"). Please provide all analyses, inputs and workpapers (i.e., analyses of underlying data that are used to create a figure or table) that support Table 5 and associated analysis presented or relied upon in the development of the "7.0 Natural Gas and Electric Price Impacts — LNG Import Scenarios" in native file format as a fully functional Excel file, including but not limited to:

(a) The complete set of GPCM and Promod model input files and output files in native format that produce all the results presented in Schedule GJW-3 at Table 5.

(b) The underlying natural gas price series associated with the results shown in this table and for all other regions of the country that are available from the GPCM analysis.

(c) Please provide LNG price forecasts used in the gas market modeling analysis and all workpapers, calculations, and sources used to develop LNG price forecasts, including the prices of LNG used to model the results found in Table 5.

(d) Please provide the sendout levels by the smallest time step used by the modeling for the complete modeling time horizon as a fully functional Excel file. For example, if sendout levels are monthly, please provide the data on a monthly basis. In addition, please explain how the sendout is used in the gas market modeling.

(e) Please provide a breakdown of the Annual Benefits and Costs for each case modeled, providing separately costs and benefits on a monthly and monthly on- and off-peak basis for the entire modeling time horizon. Please provide any data included in your response as a fully functional Excel file.

Response:

(a) Please see Attachment NEER-6-6(a) for the data found in Table 5. All relevant input and output files are provided in NEER-2-55(a)-(e) (Highly Sensitive Confidential Information).

Prepared by or under the supervision of: Joseph Neil Copeland and Denny K. Yeung

(b) Please see Attachment NEER-2-55(d) (Highly Sensitive Confidential Information) for the relevant regional gas prices used in the analysis.

(c) Black & Veatch assumed that incremental LNG volumes in the With GDF Suez and With Repsol scenarios to be inframarginal, similar to the LNG prices in the Reference Case. Black & Veatch assumed that these LNG volumes are part of a long-term supply agreement, where these committed LNG supplies would be delivered and sold at the market price, irrespective of global LNG market prices.

(d) Please see Attachment NEER-6-6(b) (Highly Sensitive Confidential Information) for the LNG sendout for the With GDF Suez and With Repsol scenarios.

(e) Please see Attachment AG-1-46(a) (Highly Sensitive Confidential Information) for the annual benefits and costs for the With GDF Suez and With Repsol scenarios.

Column	A	B	C	D	E	
		Algonquin City Gates (2015$/MMBtu)				
Line #		2019 - 2028		2029-2038		
1	Scenario	Average Monthly Winter (Dec-Feb) Basis	Differential to Reference Case	Average Monthly Winter (Dec-Feb) Basis	Differential to Reference Case	
2	Reference Case	$4.07		$6.79		
3	With ANE Only	$1.57	($2.50)	$3.55	($3.24)	
4	With Repsol Canaport LNG	$2.95	($1.12)	$6.34	($0.45)	tin+A1
5	With GDF Suez Everett LNG	$2.55	($1.52)	$5.39	($1.40)	

REDACTED

Column	A	B	C
Line #	Date	With GDF Suez -Everett LNG Terminal Sendout (MMcf/d)	With Repsol - Canaport LNG Terminal Sendout (MMcf/d)
1	Jan-18	[redacted]	
2	Feb-18		
3	Mar-18		
4	Apr-18		
5	May-18		
6	Jun-18		
7	Jul-18		
8	Aug-18		
9	Sep-18		
10	Oct-18		
11	Nov-18		
12	Dec-18		
13	Jan-19		
14	Feb-19		
15	Mar-19		
16	Apr-19		
17	May-19		
18	Jun-19		
19	Jul-19		
20	Aug-19		
21	Sep-19		
22	Oct-19		
23	Nov-19		
24	Dec-19		
25	Jan-20		
26	Feb-20		
27	Mar-20		
28	Apr-20		
29	May-20		
30	Jun-20		
31	Jul-20		
32	Aug-20		
33	Sep-20		
34	Oct-20		
35	Nov-20		
36	Dec-20		

Column	A	B	C
Line #	Date	With GDF Suez -Everett LNG Terminal Sendout (MMcf/d)	With Repsol - Canaport LNG Terminal Sendout (MMcf/d)
37	Jan-21	[redacted]	
38	Feb-21		
39	Mar-21		
40	Apr-21		
41	May-21		
42	Jun-21		
43	Jul-21		
44	Aug-21		
45	Sep-21		
46	Oct-21		
47	Nov-21		
48	Dec-21		
49	Jan-22		
50	Feb-22		
51	Mar-22		
52	Apr-22		
53	May-22		
54	Jun-22		
55	Jul-22		
56	Aug-22		
57	Sep-22		
58	Oct-22		
59	Nov-22		
60	Dec-22		
61	Jan-23		
62	Feb-23		
63	Mar-23		
64	Apr-23		
65	May-23		
66	Jun-23		
67	Jul-23		
68	Aug-23		
69	Sep-23		
70	Oct-23		
71	Nov-23		
72	Dec-23		

Column	A	B	C
Line #	Date	With GDF Suez -Everett LNG Terminal Sendout (MMcf/d)	With Repsol - Canaport LNG Terminal Sendout (MMcf/d)
73	Jan-24	[redacted]	
74	Feb-24		
75	Mar-24		
76	Apr-24		
77	May-24		
78	Jun-24		
79	Jul-24		
80	Aug-24		
81	Sep-24		
82	Oct-24		
83	Nov-24		
84	Dec-24		
85	Jan-25		
86	Feb-25		
87	Mar-25		
88	Apr-25		
89	May-25		
90	Jun-25		
91	Jul-25		
92	Aug-25		
93	Sep-25		
94	Oct-25		
95	Nov-25		
96	Dec-25		
97	Jan-26		
98	Feb-26		
99	Mar-26		
100	Apr-26		
101	May-26		
102	Jun-26		
103	Jul-26		
104	Aug-26		
105	Sep-26		
106	Oct-26		
107	Nov-26		
108	Dec-26		

Column	A	B	C
Line #	Date	With GDF Suez -Everett LNG Terminal Sendout (MMcf/d)	With Repsol - Canaport LNG Terminal Sendout (MMcf/d)
109	Jan-27	[redacted]	
110	Feb-27		
111	Mar-27		
112	Apr-27		
113	May-27		
114	Jun-27		
115	Jul-27		
116	Aug-27		
117	Sep-27		
118	Oct-27		
119	Nov-27		
120	Dec-27		
121	Jan-28		
122	Feb-28		
123	Mar-28		
124	Apr-28		
125	May-28		
126	Jun-28		
127	Jul-28		
128	Aug-28		
129	Sep-28		
130	Oct-28		
131	Nov-28		
132	Dec-28		
133	Jan-29		
134	Feb-29		
135	Mar-29		
136	Apr-29		
137	May-29		
138	Jun-29		
139	Jul-29		
140	Aug-29		
141	Sep-29		
142	Oct-29		
143	Nov-29		
144	Dec-29		

Column	A	B	C
Line #	Date	With GDF Suez -Everett LNG Terminal Sendout (MMcf/d)	With Repsol - Canaport LNG Terminal Sendout (MMcf/d)
145	Jan-30	[redacted]	[redacted]
146	Feb-30		
147	Mar-30		
148	Apr-30		
149	May-30		
150	Jun-30		
151	Jul-30		
152	Aug-30		
153	Sep-30		
154	Oct-30		
155	Nov-30		
156	Dec-30		
157	Jan-31		
158	Feb-31		
159	Mar-31		
160	Apr-31		
161	May-31		
162	Jun-31		
163	Jul-31		
164	Aug-31		
165	Sep-31		
166	Oct-31		
167	Nov-31		
168	Dec-31		
169	Jan-32		
170	Feb-32		
171	Mar-32		
172	Apr-32		
173	May-32		
174	Jun-32		
175	Jul-32		
176	Aug-32		
177	Sep-32		
178	Oct-32		
179	Nov-32		
180	Dec-32		

Column	A	B	C
Line #	Date	With GDF Suez -Everett LNG Terminal Sendout (MMcf/d)	With Repsol - Canaport LNG Terminal Sendout (MMcf/d)
181	Jan-33	[redacted]	
182	Feb-33		
183	Mar-33		
184	Apr-33		
185	May-33		
186	Jun-33		
187	Jul-33		
188	Aug-33		
189	Sep-33		
190	Oct-33		
191	Nov-33		
192	Dec-33		
193	Jan-34		
194	Feb-34		
195	Mar-34		
196	Apr-34		
197	May-34		
198	Jun-34		
199	Jul-34		
200	Aug-34		
201	Sep-34		
202	Oct-34		
203	Nov-34		
204	Dec-34		
205	Jan-35		
206	Feb-35		
207	Mar-35		
208	Apr-35		
209	May-35		
210	Jun-35		
211	Jul-35		
212	Aug-35		
213	Sep-35		
214	Oct-35		
215	Nov-35		
216	Dec-35		

REDACTED

Column	A	B	C
Line #	Date	With GDF Suez -Everett LNG Terminal Sendout (MMcf/d)	With Repsol - Canaport LNG Terminal Sendout (MMcf/d)
217	Jan-36	[redacted]	
218	Feb-36		
219	Mar-36		
220	Apr-36		
221	May-36		
222	Jun-36		
223	Jul-36		
224	Aug-36		
225	Sep-36		
226	Oct-36		
227	Nov-36		
228	Dec-36		
229	Jan-37		
230	Feb-37		
231	Mar-37		
232	Apr-37		
233	May-37		
234	Jun-37		
235	Jul-37		
236	Aug-37		
237	Sep-37		
238	Oct-37		
239	Nov-37		
240	Dec-37		
241	Jan-38		
242	Feb-38		
243	Mar-38		
244	Apr-38		
245	May-38		
246	Jun-38		
247	Jul-38		
248	Aug-38		
249	Sep-38		
250	Oct-38		
251	Nov-38		
252	Dec-38		

Information Request NEER-6-7

Request:

Refer to Schedule GJW-3, "Evaluation of Long-term Economic Benefits from Proposed Incremental Energy Infrastructure into New England," at 14, which states, "Over the analysis period, our analysis assumed an average annual sendout at the terminal to be approximately 150 MMcf/d with peak winter sendout of approximately 250 MMCF/d, similar to the observed volumes during the 2014-2015 winter season."

(a) Please provide the sendout levels by the smallest time step used by the modeling for the complete modeling time horizon as a fully functional Excel file. For example, if sendout levels are monthly, please provide the data on a monthly basis. In addition, please explain how the sendout is used in the gas market modeling.

(b) If the gas market model solves for natural gas delivery or supply capability, was the model adjusted or altered to constrain Everett at the stated sendout levels? If so, describe in full how the model was adjusted or altered to constrain Everett at the stated sendout levels, and state the basis for that adjustment or alteration.

(c) Please provide LNG price forecasts used in the gas market modeling analysis and all workpapers, calculations, and sources used to develop LNG price forecasts.

Response:

(a)-(c) Please see Exhibit NEER-1-11 for the requested information.

Prepared by or under the supervision of: Joseph Neil Copeland and Denny K. Yeung

Information Request NEER-6-8

Request:

Refer to Schedule GJW-3, "Evaluation of Long-term Economic Benefits from Proposed Incremental Energy Infrastructure into New England," at 19-21. Please explain whether, when analyzing the LNG scenarios described in Table 2, Black & Veatch assumed import from only one LNG facility in each model, and, if so, explain why that choice was made.

Response:

The Company notes that Schedule GJW-3 was not filed in this proceeding but was filed by the Company's Rhode Island affiliate in Rhode Island Public Utilities Commission Docket No. 4627, but provides the following response regarding Schedule GJW-3. During its coordination and consultation with the Rhode Island Office of Energy Resources and the Rhode Island Division of Public Utilities and Carriers pursuant to the Affordable Clean Energy Security (ACES) Act, codified at Chapter 39-31 of the Rhode Island General Laws, National Grid was asked by these agencies to perform additional analysis on the LNG based alternative proposals submitted by Repsol and GDF SUEZ. Black & Veatch utilized the same LNG assumptions in the Reference Case, and added incremental LNG import volumes for the GDF Suez proposal in one scenario and the Repsol proposal in the other scenario. Black & Veatch did not model a scenario assuming additional LNG imports from both the GDF Suez and Repsol alternative proposals in place together, as that analysis was not requested.

Prepared by or under the supervision of: Joseph Neil Copeland and Denny K. Yeung

Information Request NEER-6-9

Request:

Refer to Schedule GJW-3. To the extent not already provided in your responses to NEER-6-6 through NEER-6-8, please provide all analyses, inputs and workpapers, (e.g., analyses of underlying data that are used to create a figure or table) that support each and every figure, table and associated analysis presented or relied upon in the development of the "Evaluation of Long-term Economic Benefits from Proposed Incremental Energy Infrastructure into New England" in native file format (fully functional Excel files where applicable).

Response:

Please see Attachment NEER-1-1(j) (Highly Sensitive Confidential Information), Attachment-AG-2-8(a) (revised Figure 6) and NEER-6-9(a) for all data supporting the figures and tables associated with the development of Schedule GJW-3. As noted by the Company in response to Information Request NEER 6-8, Schedule GJW-3 was not filed in this proceeding but was filed by the Company's Rhode Island affiliate in Rhode Island Public Utilities Commission Docket No. 4627.

Prepared by or under the supervision of: Joseph Neil Copeland and Denny K. Yeung

REDACTED

NG-GJW -3 Figure 9 and 12 Data
Units: $/MMBtu

Column	A	B	C	D	E	F	G	H
					Algonquin City-Gates Basis			
Line #	Month-Year	Historical (Nominal$/MMBtu)	Reference Case (2015$/MMBtu)	With ANE Only (2015$/MMBtu)	Sensitivity Reference Case A (2015$/MMBtu)	Sensitivity Reference Case A - With ANE (2015$/MMBtu)	Sensitivity Reference Case B (2015$/MMBtu)	Sensitivity Reference Case B - With ANE (2015$/MMBtu)
1	1/1/2008	$3.68						
2	2/1/2008	$1.96						
3	3/1/2008	$1.02						
4	4/1/2008	$0.90						
5	5/1/2008	$0.81						
6	6/1/2008	$0.96						
7	7/1/2008	$1.02						
8	8/1/2008	$0.54						
9	9/1/2008	$0.93						
10	10/1/2008	$0.56						
11	11/1/2008	$0.85						
12	12/1/2008	$1.90						
13	1/1/2009	$3.75						
14	2/1/2009	$1.36						
15	3/1/2009	$0.87						
16	4/1/2009	$0.55						
17	5/1/2009	$0.36						
18	6/1/2009	$0.32						
19	7/1/2009	$0.29						
20	8/1/2009	$0.33						
21	9/1/2009	$0.27						
22	10/1/2009	$0.47						
23	11/1/2009	$0.37						
24	12/1/2009	$1.62						
25	1/1/2010	$1.83						
26	2/1/2010	$1.19						
27	3/1/2010	$0.42						
28	4/1/2010	$0.38						
29	5/1/2010	$0.39						
30	6/1/2010	$0.40						
31	7/1/2010	$0.47						
32	8/1/2010	$0.39						
33	9/1/2010	$0.36						
34	10/1/2010	$0.34						
35	11/1/2010	$0.94						
36	12/1/2010	$3.85						
37	1/1/2011	$4.05						
38	2/1/2011	$2.19						
39	3/1/2011	$1.21						
40	4/1/2011	$0.47						
41	5/1/2011	$0.33						
42	6/1/2011	$0.37						
43	7/1/2011	$0.79						
44	8/1/2011	$0.32						
45	9/1/2011	$0.26						
46	10/1/2011	$0.38						
47	11/1/2011	$0.75						
48	12/1/2011	$0.97						
49	1/1/2012	$2.67						
50	2/1/2012	$1.12						
51	3/1/2012	$0.64						
52	4/1/2012	$0.44						
53	5/1/2012	$0.20						
54	6/1/2012	$0.99						
55	7/1/2012	$0.88						
56	8/1/2012	$0.56						
57	9/1/2012	$0.41						
58	10/1/2012	$0.44						
59	11/1/2012	$1.08						
60	12/1/2012	$6.39						
61	1/1/2013	$6.49						
62	2/1/2013	$5.93						
63	3/1/2013	$5.28						
64	4/1/2013	$1.28						
65	5/1/2013	$0.34						
66	6/1/2013	$0.36						

REDACTED

NG-GJW -3 Figure 9 and 12 Data
Units: $/MMBtu

Column	A	B	C	D	E	F	G	H
			Algonquin City-Gates Basis					
Line #	Month-Year	Historical (Nominal$/MMBtu)	Reference Case (2015$/MMBtu)	With ANE Only (2015$/MMBtu)	Sensitivity Reference Case A (2015$/MMBtu)	Sensitivity Reference Case A - With ANE (2015$/MMBtu)	Sensitivity Reference Case B (2015$/MMBtu)	Sensitivity Reference Case B - With ANE (2015$/MMBtu)
67	7/1/2013	$1.05						
68	8/1/2013	$0.14						
69	9/1/2013	$0.23						
70	10/1/2013	$0.22						
71	11/1/2013	$2.23						
72	12/1/2013	$9.67						
73	1/1/2014	$20.95						
74	2/1/2014	$16.56						
75	3/1/2014	$8.44						
76	4/1/2014	$0.28						
77	5/1/2014	-$0.63						
78	6/1/2014	-$0.20						
79	7/1/2014	-$0.87						
80	8/1/2014	-$1.08						
81	9/1/2014	-$0.63						
82	10/1/2014	-$0.60						
83	11/1/2014	$2.09						
84	12/1/2014	$2.63						
85	1/1/2015	$7.29						
86	2/1/2015	$14.38						
87	3/1/2015	$4.37						
88	4/1/2015	$1.22						
89	5/1/2015	$0.17						
90	6/1/2015	-$0.99						
91	7/1/2015	-$0.66						
92	8/1/2015	-$0.31						
93	9/1/2015	$0.08						
94	10/1/2015	$1.47						
95	11/1/2015	$0.95						
96	12/1/2015							
97	1/1/2016		$2.29	$2.29	$2.29	$2.29	$2.29	$2.29
98	2/1/2016		$2.65	$2.65	$2.65	$2.65	$2.65	$2.65
99	3/1/2016		$1.22	$1.22	$1.22	$1.22	$1.22	$1.22
100	4/1/2016		$0.14	$0.14	$0.14	$0.14	$0.14	$0.14
101	5/1/2016		-$0.01	-$0.01	-$0.01	-$0.01	-$0.01	-$0.01
102	6/1/2016		-$0.06	-$0.06	-$0.06	-$0.06	-$0.06	-$0.06
103	7/1/2016		-$0.06	-$0.06	-$0.06	-$0.06	-$0.06	-$0.06
104	8/1/2016		-$0.09	-$0.09	-$0.09	-$0.09	-$0.09	-$0.09
105	9/1/2016		-$0.04	-$0.04	-$0.04	-$0.04	-$0.04	-$0.04
106	10/1/2016		-$0.01	-$0.01	-$0.01	-$0.01	-$0.01	-$0.01
107	11/1/2016		$0.26	$0.26	$0.26	$0.26	$0.26	$0.26
108	12/1/2016		$0.85	$0.85	$0.85	$0.85	$0.85	$0.85
109	1/1/2017		$1.50	$1.50	$1.50	$1.50	$1.50	$1.50
110	2/1/2017		$1.72	$1.72	$1.72	$1.72	$1.72	$1.72
111	3/1/2017		$0.63	$0.63	$0.63	$0.63	$0.63	$0.63
112	4/1/2017		$0.16	$0.16	$0.16	$0.16	$0.16	$0.16
113	5/1/2017		$0.05	$0.05	$0.05	$0.05	$0.05	$0.05
114	6/1/2017		-$0.01	-$0.01	-$0.01	-$0.01	-$0.01	-$0.01
115	7/1/2017		$0.10	$0.10	$0.10	$0.10	$0.10	$0.10
116	8/1/2017		$0.08	$0.08	$0.08	$0.08	$0.08	$0.08
117	9/1/2017		$0.11	$0.11	$0.11	$0.11	$0.11	$0.11
118	10/1/2017		$0.15	$0.15	$0.15	$0.15	$0.15	$0.15
119	11/1/2017		$0.29	$0.29	$0.29	$0.29	$0.29	$0.29
120	12/1/2017		$1.00	$1.00	$0.71	$0.71	$0.71	$0.71
121	1/1/2018		$2.99	$2.99	$2.99	$2.99	$2.99	$2.99
122	2/1/2018		$2.75	$2.75	$2.75	$2.75	$2.75	$2.75
123	3/1/2018		$0.76	$0.76	$0.76	$0.76	$0.76	$0.76
124	4/1/2018		$0.24	$0.24	$0.24	$0.24	$0.24	$0.24
125	5/1/2018		$0.16	$0.16	$0.16	$0.16	$0.16	$0.16
126	6/1/2018		$0.14	$0.14	$0.14	$0.14	$0.14	$0.14
127	7/1/2018		$0.13	$0.13	$0.13	$0.13	$0.13	$0.13
128	8/1/2018		$0.12	$0.12	$0.12	$0.12	$0.12	$0.12
129	9/1/2018		$0.13	$0.13	$0.13	$0.13	$0.13	$0.13
130	10/1/2018		$0.16	$0.16	$0.16	$0.16	$0.16	$0.16
131	11/1/2018		$0.54	$0.35	$0.54	$0.54	$0.54	$0.54

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NG-GJW -3 Figure 9 and 12 Data
Units: $/MMBtu

Column	A	B	C	D	E	F	G	H
					Algonquin City-Gates Basis			
Line #	Month-Year	Historical (Nominal$/MMBtu)	Reference Case (2015$/MMBtu)	With ANE Only (2015$/MMBtu)	Sensitivity Reference Case A (2015$/MMBtu)	Sensitivity Reference Case A - With ANE (2015$/MMBtu)	Sensitivity Reference Case B (2015$/MMBtu)	Sensitivity Reference Case B - With ANE (2015$/MMBtu)
132	12/1/2018		$1.24	$1.23	$1.24	$1.24	$1.24	$1.24
133	1/1/2019		$3.04	$3.04	$2.31	$2.21	$2.31	$2.21
134	2/1/2019		$3.50	$3.50	$2.27	$2.26	$2.27	$2.26
135	3/1/2019		$0.89	$0.79	$0.61	$0.61	$0.61	$0.61
136	4/1/2019		$0.32	$0.32	$0.31	$0.31	$0.31	$0.31
137	5/1/2019		$0.19	$0.18	$0.16	$0.16	$0.16	$0.16
138	6/1/2019		$0.17	$0.16	$0.14	$0.13	$0.14	$0.13
139	7/1/2019		$0.15	$0.15	$0.12	$0.11	$0.12	$0.11
140	8/1/2019		$0.13	$0.13	$0.10	$0.09	$0.10	$0.09
141	9/1/2019		$0.15	$0.14	$0.11	$0.11	$0.11	$0.11
142	10/1/2019		$0.16	$0.16	$0.15	$0.14	$0.15	$0.14
143	11/1/2019		$0.52	$0.35	$0.33	$0.34	$0.33	$0.34
144	12/1/2019		$1.13	$0.72	$1.24	$0.70	$1.24	$0.70
145	1/1/2020		$3.44	$1.80	$2.52	$1.80	$2.34	$1.71
146	2/1/2020		$2.86	$1.43	$1.69	$1.25	$1.62	$1.18
147	3/1/2020		$0.76	$0.57	$0.76	$0.53	$0.74	$0.50
148	4/1/2020		$0.29	$0.29	$0.27	$0.27	$0.25	$0.24
149	5/1/2020		$0.14	$0.12	$0.12	$0.11	$0.12	$0.11
150	6/1/2020		$0.11	$0.08	$0.09	$0.07	$0.09	$0.07
151	7/1/2020		$0.12	$0.12	$0.10	$0.08	$0.10	$0.08
152	8/1/2020		$0.10	$0.10	$0.08	$0.06	$0.09	$0.06
153	9/1/2020		$0.13	$0.10	$0.08	$0.07	$0.08	$0.07
154	10/1/2020		$0.15	$0.13	$0.12	$0.12	$0.12	$0.12
155	11/1/2020		$0.53	$0.36	$0.33	$0.32	$0.30	$0.30
156	12/1/2020		$1.19	$0.80	$1.25	$0.74	$1.22	$0.71
157	1/1/2021		$3.94	$1.52	$2.36	$1.56	$2.27	$1.52
158	2/1/2021		$4.50	$1.52	$2.09	$1.34	$2.03	$1.27
159	3/1/2021		$0.88	$0.62	$0.95	$0.59	$0.95	$0.57
160	4/1/2021		$0.30	$0.28	$0.27	$0.24	$0.25	$0.22
161	5/1/2021		$0.15	$0.12	$0.13	$0.10	$0.11	$0.08
162	6/1/2021		$0.10	$0.07	$0.07	$0.05	$0.07	$0.05
163	7/1/2021		$0.09	$0.09	$0.09	$0.06	$0.08	$0.06
164	8/1/2021		$0.08	$0.07	$0.06	$0.04	$0.06	$0.04
165	9/1/2021		$0.11	$0.09	$0.08	$0.04	$0.08	$0.04
166	10/1/2021		$0.16	$0.12	$0.11	$0.10	$0.11	$0.10
167	11/1/2021		$0.44	$0.35	$0.35	$0.34	$0.33	$0.32
168	12/1/2021		$1.08	$0.75	$1.20	$0.73	$1.20	$0.73
169	1/1/2022		$4.56	$1.24	$2.57	$1.36	$2.47	$1.30
170	2/1/2022		$4.98	$1.25	$2.57	$1.28	$2.47	$1.18
171	3/1/2022		$0.90	$0.58	$0.90	$0.50	$0.88	$0.48
172	4/1/2022		$0.30	$0.26	$0.30	$0.23	$0.28	$0.21
173	5/1/2022		$0.14	$0.14	$0.14	$0.11	$0.12	$0.10
174	6/1/2022		$0.11	$0.10	$0.08	$0.04	$0.08	$0.04
175	7/1/2022		$0.10	$0.09	$0.06	$0.05	$0.05	$0.05
176	8/1/2022		$0.08	$0.07	$0.05	$0.03	$0.05	$0.03
177	9/1/2022		$0.12	$0.10	$0.08	$0.05	$0.08	$0.05
178	10/1/2022		$0.17	$0.12	$0.09	$0.07	$0.08	$0.07
179	11/1/2022		$0.48	$0.37	$0.33	$0.33	$0.30	$0.30
180	12/1/2022		$1.21	$0.74	$1.17	$0.72	$1.14	$0.69
181	1/1/2023		$5.06	$1.28	$2.59	$1.22	$2.50	$1.19
182	2/1/2023		$5.49	$1.45	$2.51	$1.24	$2.44	$1.17
183	3/1/2023		$1.03	$0.61	$0.92	$0.53	$0.87	$0.48
184	4/1/2023		$0.30	$0.27	$0.30	$0.22	$0.29	$0.21
185	5/1/2023		$0.14	$0.11	$0.11	$0.09	$0.10	$0.09
186	6/1/2023		$0.09	$0.07	$0.05	$0.04	$0.06	$0.04
187	7/1/2023		$0.10	$0.04	$0.03	$0.00	$0.03	$0.01
188	8/1/2023		$0.06	$0.01	$0.02	-$0.02	$0.02	-$0.02
189	9/1/2023		$0.09	$0.07	$0.05	$0.04	$0.06	$0.04
190	10/1/2023		$0.18	$0.13	$0.11	$0.06	$0.11	$0.06
191	11/1/2023		$0.47	$0.42	$0.33	$0.33	$0.30	$0.29
192	12/1/2023		$1.41	$0.65	$1.09	$0.61	$1.06	$0.59
193	1/1/2024		$5.27	$1.43	$3.12	$1.24	$3.08	$1.19
194	2/1/2024		$4.67	$1.28	$2.63	$1.15	$2.57	$1.09
195	3/1/2024		$1.07	$0.59	$0.91	$0.56	$0.89	$0.54
196	4/1/2024		$0.32	$0.28	$0.27	$0.22	$0.23	$0.18

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NG-GJW -3 Figure 9 and 12 Data
Units: $/MMBtu

Column	A	B	C	D	E	F	G	H
					Algonquin City-Gates Basis			
Line #	Month-Year	Historical (Nominal$/MMBtu)	Reference Case (2015$/MMBtu)	With ANE Only (2015$/MMBtu)	Sensitivity Reference Case A (2015$/MMBtu)	Sensitivity Reference Case A - With ANE (2015$/MMBtu)	Sensitivity Reference Case B (2015$/MMBtu)	Sensitivity Reference Case B - With ANE (2015$/MMBtu)
197	5/1/2024		$0.13	$0.08	$0.08	$0.06	$0.07	$0.04
198	6/1/2024		$0.07	$0.03	$0.01	-$0.03	$0.01	-$0.03
199	7/1/2024		$0.08	$0.04	$0.01	-$0.06	$0.01	-$0.06
200	8/1/2024		$0.05	$0.01	-$0.02	-$0.09	-$0.02	-$0.09
201	9/1/2024		$0.09	$0.04	$0.00	-$0.03	$0.00	-$0.02
202	10/1/2024		$0.16	$0.12	$0.12	$0.03	$0.10	$0.02
203	11/1/2024		$0.51	$0.36	$0.35	$0.32	$0.34	$0.31
204	12/1/2024		$1.68	$0.60	$1.10	$0.55	$1.08	$0.54
205	1/1/2025		$5.91	$1.51	$3.43	$1.31	$3.38	$1.26
206	2/1/2025		$6.17	$1.88	$3.43	$1.28	$3.37	$1.22
207	3/1/2025		$1.11	$0.57	$0.91	$0.56	$0.89	$0.54
208	4/1/2025		$0.33	$0.28	$0.32	$0.24	$0.27	$0.19
209	5/1/2025		$0.10	$0.05	$0.06	$0.02	$0.04	$0.00
210	6/1/2025		$0.04	$0.03	-$0.01	-$0.03	-$0.01	-$0.03
211	7/1/2025		$0.08	$0.08	$0.00	-$0.03	$0.00	-$0.03
212	8/1/2025		$0.06	$0.04	-$0.02	-$0.06	-$0.02	-$0.06
213	9/1/2025		$0.08	$0.06	$0.01	$0.00	$0.00	$0.00
214	10/1/2025		$0.16	$0.14	$0.10	$0.04	$0.10	$0.04
215	11/1/2025		$0.52	$0.38	$0.35	$0.32	$0.34	$0.32
216	12/1/2025		$1.93	$0.80	$1.38	$0.79	$1.37	$0.78
217	1/1/2026		$6.00	$1.84	$3.85	$1.64	$3.76	$1.58
218	2/1/2026		$6.25	$2.18	$3.89	$1.57	$3.80	$1.51
219	3/1/2026		$1.20	$0.59	$0.92	$0.59	$0.90	$0.57
220	4/1/2026		$0.36	$0.31	$0.33	$0.26	$0.28	$0.21
221	5/1/2026		$0.09	$0.07	$0.08	$0.04	$0.06	$0.03
222	6/1/2026		$0.03	$0.04	$0.01	$0.00	$0.01	-$0.02
223	7/1/2026		$0.05	$0.06	-$0.03	-$0.04	-$0.03	-$0.05
224	8/1/2026		$0.02	$0.02	-$0.06	-$0.07	-$0.06	-$0.08
225	9/1/2026		$0.05	$0.06	$0.00	$0.00	-$0.01	-$0.02
226	10/1/2026		$0.11	$0.14	$0.15	$0.09	$0.14	$0.09
227	11/1/2026		$0.58	$0.37	$0.42	$0.31	$0.42	$0.30
228	12/1/2026		$2.20	$0.77	$1.57	$0.73	$1.55	$0.72
229	1/1/2027		$6.07	$2.00	$3.94	$1.75	$3.88	$1.69
230	2/1/2027		$6.26	$2.35	$4.07	$1.72	$4.00	$1.66
231	3/1/2027		$1.26	$0.58	$0.86	$0.57	$0.84	$0.54
232	4/1/2027		$0.35	$0.28	$0.29	$0.22	$0.24	$0.17
233	5/1/2027		$0.06	$0.07	$0.00	-$0.03	-$0.01	-$0.05
234	6/1/2027		-$0.02	$0.00	-$0.07	-$0.10	-$0.07	-$0.10
235	7/1/2027		$0.13	$0.05	$0.05	-$0.02	$0.05	-$0.02
236	8/1/2027		$0.10	$0.04	$0.04	-$0.04	$0.02	-$0.05
237	9/1/2027		$0.15	$0.10	$0.11	$0.07	$0.11	$0.06
238	10/1/2027		$0.20	$0.14	$0.17	$0.08	$0.15	$0.07
239	11/1/2027		$0.70	$0.45	$0.57	$0.45	$0.56	$0.44
240	12/1/2027		$2.45	$0.89	$1.75	$0.84	$1.74	$0.83
241	1/1/2028		$6.21	$2.36	$4.32	$2.11	$4.27	$2.06
242	2/1/2028		$6.20	$2.13	$3.94	$1.66	$3.88	$1.59
243	3/1/2028		$1.37	$0.68	$1.02	$0.61	$1.00	$0.59
244	4/1/2028		$0.41	$0.28	$0.38	$0.23	$0.33	$0.19
245	5/1/2028		$0.13	$0.05	$0.08	$0.02	$0.07	$0.00
246	6/1/2028		$0.05	-$0.02	-$0.05	-$0.10	-$0.05	-$0.10
247	7/1/2028		$0.01	-$0.05	-$0.05	-$0.15	-$0.05	-$0.14
248	8/1/2028		-$0.02	-$0.07	-$0.08	-$0.17	-$0.08	-$0.18
249	9/1/2028		$0.06	$0.00	-$0.04	-$0.09	-$0.04	-$0.09
250	10/1/2028		$0.09	$0.05	$0.03	-$0.07	$0.02	-$0.08
251	11/1/2028		$0.77	$0.43	$0.58	$0.38	$0.57	$0.38
252	12/1/2028		$2.68	$0.92	$1.85	$0.76	$1.85	$0.75
253	1/1/2029		$6.35	$2.56	$4.55	$2.39	$4.50	$2.34
254	2/1/2029		$6.48	$2.99	$4.65	$2.24	$4.58	$2.18
255	3/1/2029		$1.63	$0.75	$1.01	$0.50	$0.98	$0.48
256	4/1/2029		$0.43	$0.24	$0.41	$0.21	$0.35	$0.15
257	5/1/2029		$0.05	-$0.01	$0.01	-$0.05	-$0.02	-$0.08
258	6/1/2029		-$0.06	-$0.10	-$0.16	-$0.28	-$0.17	-$0.27
259	7/1/2029		-$0.13	-$0.16	-$0.27	-$0.36	-$0.28	-$0.37
260	8/1/2029		-$0.18	-$0.20	-$0.29	-$0.40	-$0.31	-$0.40
261	9/1/2029		-$0.04	-$0.08	-$0.17	-$0.30	-$0.19	-$0.30

REDACTED

NG-GJW -3 Figure 9 and 12 Data
Units: $/MMBtu

Column	A	B	C	D	E	F	G	H
					Algonquin City-Gates Basis			
Line #	Month-Year	Historical (Nominal$/MMBtu)	Reference Case (2015$/MMBtu)	With ANE Only (2015$/MMBtu)	Sensitivity Reference Case A (2015$/MMBtu)	Sensitivity Reference Case A - With ANE (2015$/MMBtu)	Sensitivity Reference Case B (2015$/MMBtu)	Sensitivity Reference Case B - With ANE (2015$/MMBtu)
262	10/1/2029		-$0.01	-$0.04	-$0.14	-$0.20	-$0.16	-$0.21
263	11/1/2029		$0.80	$0.37	$0.60	$0.33	$0.59	$0.32
264	12/1/2029		$3.29	$1.11	$2.11	$0.57	$2.10	$0.57
265	1/1/2030		$6.31	$2.46	$4.47	$2.27	$4.42	$2.22
266	2/1/2030		$6.44	$3.09	$4.79	$2.14	$4.69	$2.08
267	3/1/2030		$1.71	$0.65	$0.92	$0.48	$0.90	$0.46
268	4/1/2030		$0.38	$0.19	$0.27	$0.11	$0.23	$0.07
269	5/1/2030		-$0.05	-$0.10	-$0.12	-$0.19	-$0.14	-$0.21
270	6/1/2030		-$0.26	-$0.33	-$0.40	-$0.49	-$0.41	-$0.50
271	7/1/2030		-$0.35	-$0.39	-$0.52	-$0.58	-$0.54	-$0.60
272	8/1/2030		-$0.39	-$0.44	-$0.54	-$0.60	-$0.56	-$0.62
273	9/1/2030		-$0.25	-$0.30	-$0.40	-$0.47	-$0.42	-$0.48
274	10/1/2030		-$0.20	-$0.26	-$0.38	-$0.42	-$0.40	-$0.44
275	11/1/2030		$0.74	$0.30	$0.63	$0.24	$0.62	$0.23
276	12/1/2030		$3.55	$0.86	$1.92	$0.41	$1.91	$0.40
277	1/1/2031		$6.53	$2.87	$4.87	$2.60	$4.82	$2.54
278	2/1/2031		$6.71	$3.59	$5.47	$2.44	$5.37	$2.36
279	3/1/2031		$1.99	$0.85	$1.14	$0.50	$1.12	$0.48
280	4/1/2031		$0.39	$0.12	$0.46	$0.08	$0.41	$0.04
281	5/1/2031		-$0.21	-$0.24	-$0.31	-$0.39	-$0.33	-$0.41
282	6/1/2031		-$0.58	-$0.64	-$0.76	-$0.88	-$0.76	-$0.88
283	7/1/2031		-$0.67	-$0.73	-$0.91	-$1.00	-$0.91	-$1.00
284	8/1/2031		-$0.72	-$0.76	-$0.93	-$1.02	-$0.93	-$1.02
285	9/1/2031		-$0.59	-$0.64	-$0.80	-$0.90	-$0.81	-$0.90
286	10/1/2031		-$0.54	-$0.60	-$0.77	-$0.86	-$0.78	-$0.86
287	11/1/2031		$0.79	$0.23	$0.59	$0.13	$0.58	$0.12
288	12/1/2031		$3.84	$1.15	$2.23	$0.36	$2.23	$0.35
289	1/1/2032		$6.72	$3.44	$5.64	$3.04	$5.55	$2.97
290	2/1/2032		$6.56	$2.70	$4.83	$1.57	$4.77	$1.42
291	3/1/2032		$2.38	$0.83	$1.23	$0.21	$1.20	$0.19
292	4/1/2032		$0.33	$0.08	$0.32	-$0.04	$0.25	-$0.08
293	5/1/2032		-$0.38	-$0.37	-$0.46	-$0.54	-$0.49	-$0.56
294	6/1/2032		-$0.79	-$0.83	-$0.96	-$1.09	-$0.97	-$1.09
295	7/1/2032		-$0.89	-$0.92	-$1.12	-$1.20	-$1.12	-$1.21
296	8/1/2032		-$0.93	-$0.96	-$1.14	-$1.23	-$1.15	-$1.23
297	9/1/2032		-$0.79	-$0.82	-$1.04	-$1.10	-$1.05	-$1.11
298	10/1/2032		-$0.74	-$0.77	-$0.97	-$1.05	-$0.98	-$1.06
299	11/1/2032		$0.83	$0.17	$0.41	$0.01	$0.36	$0.01
300	12/1/2032		$4.57	$1.31	$2.37	$0.19	$2.36	$0.18
301	1/1/2033		$6.99	$3.79	$6.21	$3.26	$6.16	$3.21
302	2/1/2033		$7.23	$4.69	$6.66	$3.42	$6.53	$3.33
303	3/1/2033		$2.57	$0.85	$1.44	$0.08	$1.41	$0.02
304	4/1/2033		$0.24	-$0.12	-$0.19	-$0.31	-$0.26	-$0.38
305	5/1/2033		-$0.72	-$0.72	-$0.86	-$0.89	-$0.89	-$0.93
306	6/1/2033		-$1.19	-$1.25	-$1.40	-$1.53	-$1.40	-$1.53
307	7/1/2033		-$1.28	-$1.35	-$1.56	-$1.65	-$1.56	-$1.66
308	8/1/2033		-$1.32	-$1.37	-$1.57	-$1.67	-$1.57	-$1.67
309	9/1/2033		-$1.18	-$1.21	-$1.44	-$1.53	-$1.46	-$1.53
310	10/1/2033		-$1.10	-$1.16	-$1.32	-$1.40	-$1.32	-$1.41
311	11/1/2033		$0.83	-$0.01	$0.30	-$0.13	$0.29	-$0.13
312	12/1/2033		$5.02	$1.18	$2.80	$0.09	$2.78	$0.06
313	1/1/2034		$7.25	$4.58	$7.18	$2.69	$7.10	$2.61
314	2/1/2034		$7.55	$4.74	$7.50	$2.29	$7.51	$2.17
315	3/1/2034		$2.73	$0.84	$1.65	$0.00	$1.62	-$0.02
316	4/1/2034		$0.01	-$0.40	-$0.52	-$0.64	-$0.56	-$0.68
317	5/1/2034		-$1.07	-$1.09	-$1.21	-$1.28	-$1.23	-$1.30
318	6/1/2034		-$1.53	-$1.55	-$1.78	-$1.88	-$1.78	-$1.89
319	7/1/2034		-$1.62	-$1.67	-$1.92	-$2.01	-$1.92	-$2.03
320	8/1/2034		-$1.67	-$1.69	-$1.94	-$2.04	-$1.94	-$2.05
321	9/1/2034		-$1.49	-$1.50	-$1.81	-$1.85	-$1.83	-$1.86
322	10/1/2034		-$1.38	-$1.43	-$1.67	-$1.75	-$1.67	-$1.77
323	11/1/2034		$0.80	-$0.11	-$0.09	-$0.33	-$0.10	-$0.33
324	12/1/2034		$5.46	$1.14	$2.53	-$0.14	$2.43	-$0.14
325	1/1/2035		$8.22	$5.30	$8.11	$2.46	$8.05	$2.37
326	2/1/2035		$8.67	$6.31	$8.51	$2.23	$8.47	$2.17

REDACTED

NG-GJW -3 Figure 9 and 12 Data
Units: $/MMBtu

Column	A	B	C	D	E	F	G	H
					Algonquin City-Gates Basis			
Line #	Month-Year	Historical (Nominal$/MMBtu)	Reference Case (2015$/MMBtu)	With ANE Only (2015$/MMBtu)	Sensitivity Reference Case A (2015$/MMBtu)	Sensitivity Reference Case A - With ANE (2015$/MMBtu)	Sensitivity Reference Case B (2015$/MMBtu)	Sensitivity Reference Case B - With ANE (2015$/MMBtu)
327	3/1/2035		$3.01	$1.03	$1.78	-$0.20	$1.76	-$0.23
328	4/1/2035		-$0.04	-$0.44	-$0.60	-$0.74	-$0.67	-$0.79
329	5/1/2035		-$1.23	-$1.26	-$1.41	-$1.47	-$1.43	-$1.50
330	6/1/2035		-$1.71	-$1.73	-$1.93	-$2.06	-$1.95	-$2.07
331	7/1/2035		-$1.79	-$1.83	-$2.12	-$2.21	-$2.13	-$2.22
332	8/1/2035		-$1.85	-$1.88	-$2.13	-$2.23	-$2.14	-$2.23
333	9/1/2035		-$1.66	-$1.67	-$1.91	-$2.03	-$1.91	-$2.03
334	10/1/2035		-$1.52	-$1.61	-$1.85	-$1.92	-$1.86	-$1.93
335	11/1/2035		$0.97	-$0.17	-$0.13	-$0.40	-$0.16	-$0.40
336	12/1/2035		$5.27	$1.44	$3.64	-$0.11	$3.61	-$0.17
337	1/1/2036		$9.75	$5.75	$8.02	$2.66	$7.99	$2.60
338	2/1/2036		$8.04	$5.97	$8.10	$2.22	$8.05	$2.15
339	3/1/2036		$3.48	$1.04	$2.20	-$0.27	$2.18	-$0.29
340	4/1/2036		-$0.19	-$0.64	-$0.73	-$0.94	-$0.78	-$0.99
341	5/1/2036		-$1.55	-$1.57	-$1.72	-$1.79	-$1.74	-$1.80
342	6/1/2036		-$2.04	-$2.08	-$2.31	-$2.42	-$2.32	-$2.43
343	7/1/2036		-$2.10	-$2.18	-$2.46	-$2.55	-$2.47	-$2.57
344	8/1/2036		-$2.16	-$2.22	-$2.50	-$2.59	-$2.52	-$2.61
345	9/1/2036		-$1.98	-$2.00	-$2.28	-$2.38	-$2.31	-$2.40
346	10/1/2036		-$1.82	-$1.94	-$2.20	-$2.30	-$2.22	-$2.32
347	11/1/2036		$0.94	-$0.34	-$0.24	-$0.59	-$0.27	-$0.61
348	12/1/2036		$5.26	$1.45	$3.98	-$0.24	$3.97	-$0.28
349	1/1/2037		$10.10	$6.05	$10.07	$3.21	$9.96	$3.16
350	2/1/2037		$9.92	$7.31	$9.32	$3.27	$9.26	$3.05
351	3/1/2037		$3.80	$1.11	$2.24	-$0.25	$2.22	-$0.28
352	4/1/2037		-$0.14	-$0.67	-$0.60	-$0.93	-$0.65	-$0.97
353	5/1/2037		-$1.70	-$1.67	-$1.89	-$1.95	-$1.91	-$1.97
354	6/1/2037		-$2.27	-$2.31	-$2.53	-$2.65	-$2.53	-$2.64
355	7/1/2037		-$2.29	-$2.39	-$2.64	-$2.75	-$2.64	-$2.76
356	8/1/2037		-$2.40	-$2.47	-$2.72	-$2.82	-$2.72	-$2.83
357	9/1/2037		-$2.19	-$2.20	-$2.51	-$2.63	-$2.52	-$2.63
358	10/1/2037		-$2.02	-$2.11	-$2.43	-$2.54	-$2.43	-$2.54
359	11/1/2037		$0.89	-$0.50	-$0.45	-$0.72	-$0.46	-$0.73
360	12/1/2037		$5.21	$1.71	$4.18	-$0.39	$4.18	-$0.42
361	1/1/2038		$10.23	$6.24	$10.12	$3.56	$10.07	$3.48
362	2/1/2038		$10.29	$7.58	$9.29	$2.72	$9.22	$2.64
363	3/1/2038		$4.04	$1.11	$2.42	-$0.38	$2.34	-$0.40
364	4/1/2038		-$0.30	-$0.90	-$1.08	-$1.32	-$1.17	-$1.37
365	5/1/2038		-$2.02	-$1.92	-$2.33	-$2.42	-$2.36	-$2.44
366	6/1/2038		-$2.60	-$2.62	-$2.90	-$3.03	-$2.91	-$3.03
367	7/1/2038		-$2.63	-$2.70	-$3.05	-$3.13	-$3.05	-$3.13
368	8/1/2038		-$2.72	-$2.77	-$3.09	-$3.17	-$3.09	-$3.17
369	9/1/2038		-$2.49	-$2.51	-$2.87	-$2.94	-$2.87	-$2.95
370	10/1/2038		-$2.32	-$2.42	-$2.77	-$2.84	-$2.78	-$2.85
371	11/1/2038		$0.78	-$0.75	-$0.71	-$0.97	-$0.71	-$0.98
372	12/1/2038		$5.16	$1.51	$4.27	-$0.65	$4.26	-$0.66

REDACTED

NG-GJW-3 Figure 10, 11, 13 Data
Units: Nominal $/MWh

Column	A	B	C	D	E	F
		Price Differential to Reference Case			**Price Differential to Sensitivity Reference Case A**	**Price Differential to Sensitivity Reference Case B**
Line #	Year	With ANE Only	With GDF Suez	With Respol	Sensitivity Reference Case A - With ANE	Sensitivity Reference Case B - With ANE
1	2019	-$0.55	-$2.45	-$1.85	-$0.44	-$0.44
2	2020	-$2.36	-$2.24	-$1.72	-$1.17	-$0.94
3	2021	-$4.85	-$4.03	-$3.05	-$1.42	-$1.63
4	2022	-$8.13	-$5.95	-$5.59	-$2.15	-$2.05
5	2023	-$9.01	-$6.35	-$5.90	-$2.16	-$2.11
6	2024	-$9.27	-$6.86	-$6.08	-$2.76	-$2.71
7	2025	-$10.97	-$8.12	-$7.57	-$3.16	-$3.11
8	2026	-$11.10	-$8.53	-$7.72	-$3.46	-$3.39
9	2027	-$12.75	-$9.43	-$8.61	-$4.06	-$3.89
10	2028	-$12.02	-$8.73	-$7.66	-$4.24	-$4.00
11	2029	-$12.45	-$9.11	-$7.60	-$4.53	-$4.49
12	2030	-$13.51	-$9.53	-$7.86	-$4.85	-$4.77
13	2031	-$12.51	-$9.09	-$7.78	-$5.60	-$5.68
14	2032	-$14.23	-$10.06	-$8.84	-$6.67	-$6.82
15	2033	-$13.52	-$9.76	-$8.19	-$7.63	-$7.82
16	2034	-$14.24	-$9.51	-$7.43	-$10.15	-$10.32
17	2035	-$13.07	-$9.99	-$7.59	-$12.97	-$13.19
18	2036	-$12.97	-$8.69	-$6.80	-$14.05	-$14.27
19	2037	-$14.16	-$9.20	-$7.51	-$15.35	-$15.79
20	2038	-$15.25	-$9.39	-$7.38	-$17.02	-$17.23

REDACTED

Massachusetts Electric Company
Nantucket Electric Company
d/b/a National Grid
D.P.U. 16-05
Attachment NEER-6-9(a)

NG-GJW -3 Page 29 Table 7, 8 and 9 Data

Column	A	B	C	D	E	F	G	H
	Total Project Cost-Benefits Summary 2019-2038 ($ Billions) - 7.06% Discount Rate							
Line #			Levelized		Present Value			
	Project	Annual Benefits	Annual Costs	Annual Net Benefits	Total Benefits	Total Costs	Net Benefits	Benefit to Cost Ratio
1	Reference Case - With ANE Only	[redacted]	[redacted]	1.1	[redacted]	[redacted]	10.2	[redacted]
2	Sensitivity Reference Case A - With ANE	[redacted]	[redacted]	0.4	[redacted]	[redacted]	3.5	[redacted]
3	Sensitivity Reference Case B - With ANE	[redacted]	[redacted]	0.4	[redacted]	[redacted]	3.5	[redacted]
4	Reference Case - With GDF Suez	[redacted]	[redacted]	0.6	[redacted]	[redacted]	4.9	[redacted]
5	Reference Case - With Repsol	[redacted]	[redacted]	0.2	[redacted]	[redacted]	2.1	[redacted]
6								
9	Rhode Island Cost-Benefits Summary 2019-2038 ($ Billions) Based on LMP Prices - 7.06% Discount Rate							
10			Levelized		Present Value			
11	Project	Annual Benefits	Annual Costs	Annual Net Benefits	Total Benefits	Total Costs	Net Benefits	Benefit to Cost Ratio
12	Reference Case - With ANE Only	[redacted]	[redacted]	0.11	[redacted]	[redacted]	0.97	[redacted]
13	Sensitivity Reference Case A - With ANE	[redacted]	[redacted]	0.04	[redacted]	[redacted]	0.35	[redacted]
14	Sensitivity Reference Case B - With ANE	[redacted]	[redacted]	0.04	[redacted]	[redacted]	0.36	[redacted]
15	Reference Case - With GDF Suez	[redacted]	[redacted]	0.05	[redacted]	[redacted]	0.46	[redacted]
16	Reference Case - With Repsol	[redacted]	[redacted]	0.02	[redacted]	[redacted]	0.21	[redacted]
17								
18	Rhode Island Cost-Benefits Summary 2019-2038 ($ Billions) Based on Electric Load Allocation - 7.06% Discount Rate							
19			Levelized		Present Value			
20	Project	Annual Benefits	Annual Costs	Annual Net Benefits	Total Benefits	Total Costs	Net Benefits	Benefit to Cost Ratio
21	Reference Case - With ANE Only	[redacted]	[redacted]	0.07	[redacted]	[redacted]	0.63	[redacted]
22	Sensitivity Reference Case A - With ANE	[redacted]	[redacted]	0.02	[redacted]	[redacted]	0.20	[redacted]
23	Sensitivity Reference Case B - With ANE	[redacted]	[redacted]	0.02	[redacted]	[redacted]	0.20	[redacted]
24	Reference Case - With GDF Suez	[redacted]	[redacted]	0.03	[redacted]	[redacted]	0.29	[redacted]
25	Reference Case - With Repsol	[redacted]	[redacted]	0.01	[redacted]	[redacted]	0.12	[redacted]

Information Request NEER-6-10

Request:

Refer to your response to NEER-3-3, which states, "The basis for potentially including compensation based on the costs of construction of the Project is that such costs may not have been fully recovered."

(a) Is there any scenario other than a cost overrun above the negotiated cap which, after twenty years, the "costs of construction of the Project" "may not have been fully recovered"?

(b) If the costs of construction exceed the negotiated cap, please explain why ratepayers should be responsible to pay such excess upon renewal of the proposed agreement after twenty years.

Response:

(a) Yes. Even if there is not a cost overrun, the cost of construction will not have been depreciated over the twenty year primary term of the agreement.
(b) The Company has not asserted that ratepayers should be responsible to pay such excess upon renewal of the proposed agreement after twenty years regardless of whether the costs of construction exceed the negotiated cap.

Prepared by or under the supervision of: John E. Allocca

Information Request NEER-6-11

Request:

Refer to your response to DPU-ANE-3-1. Please explain how the specific amounts of the cap and the lower bound for adjustment of the negotiated rate under the contract were derived, and provide all supporting analyses, memoranda, and work papers.

Response:

The cap and the lower bound for adjustment of the negotiated rate were the result of negotiations between the parties.

Information Request NEER-6-12

Request:

For the laterals off of the Algonquin Gas Transmission Pipeline, please:

(a) Identify which laterals will be expanded by the ANE project, describing the nature of the expansion (e.g., looping or replacement of pipe to increase volume capacity and amounts thereof);
(b) Identify which laterals will not be expanded by the ANE project;
(c) Identify which generators are served by the laterals that will be expanded;
(d) Identify which generators are served by the laterals that will not be expanded; and
(e) Explain why the laterals that will be expanded were chosen for expansion and why the laterals that will not be expanded were not chosen for expansion.

Response:

(a) The Q-1 system will be expanded by 313,000 Dth/day through the use of 21.2 miles of 30-inch loop line. The G-1 System will be expanded by 64,000 Dth/day through the use of compression at the proposed Rehoboth Compressor Station. The I-10 system will be expanded by 180,000 Dth/d through the use of compression at the proposed Weymouth Compressor Station.

(b) Access Northeast will not be expanding the following laterals: B, C, D, E, F, H, I, J, K, L, M, N, P, R, S, T, U, V, W, Y, Z, AA, BB, CC and DD

(c) The Q-1 and I-10 expansions will serve Braintree Electric (BELD), MA, Fall River, MA and Salem Power, MA on AGT. The Q-1 and I-10 expansions can also be used to serve Newington Power, NH, and PSNH-Newington, NH, Casco Bay Power, ME, Bucksport Energy, ME and Westbrook Energy Center, ME via the M&N pipeline system. The G-1 System serves PG&E Manchester, RI, Dighton Power, MA, NRG Canal Electric, MA, Dartmouth Power, MA, Tiverton Power, MA, Brayton Point, MA and Taunton Municipal Lighting, MA.

(d) C Lateral – Pierce Power, CT, Wallingford Energy I and II, CT
W Lateral - NRG Middletown, CT, Kleen Energy, CT and GenConn Power, CT
T Lateral - Milford Power, MA
Y Lateral - ANP Bellingham, MA

Prepared by or under the supervision of: Prescott Hartshorne

(e) The proposed expansion of the Q-1, I-10 and G-1 systems was made necessary by the proposed increases in volume which is beyond the capabilities of the existing systems. The laterals which were not expanded have enough capacity to carry their respective volumes such that no modifications are necessary.

Information Request NEER-6-12

Request:

For the laterals off of the Algonquin Gas Transmission Pipeline, please:

(a) Identify which laterals will be expanded by the ANE project, describing the nature of the expansion (e.g., looping or replacement of pipe to increase volume capacity and amounts thereof);
(b) Identify which laterals will not be expanded by the ANE project;
(c) Identify which generators are served by the laterals that will be expanded;
(d) Identify which generators are served by the laterals that will not be expanded; and
(e) Explain why the laterals that will be expanded were chosen for expansion and why the laterals that will not be expanded were not chosen for expansion.

Corrected Response:

(c) The Q-1 and I-10 expansions will serve Braintree Electric (BELD), MA, Fore River, MA and Salem Power, MA on AGT. The Q-1 and I-10 expansions can also be used to serve Newington Power, NH, and PSNH-Newington, NH, Casco Bay Power, ME, Bucksport Energy, ME and Westbrook Energy Center, ME via the M&N pipeline system. The G-1 System serves PG&E Manchester, RI, Dighton Power, MA, NRG Canal Electric, MA, Dartmouth Power, MA, Tiverton Power, MA, Brayton Point, MA and Taunton Municipal Lighting, MA.

Original Response:

(a) The Q-1 system will be expanded by 313,000 Dth/day through the use of 21.2 miles of 30-inch loop line. The G-1 System will be expanded by 64,000 Dth/day through the use of compression at the proposed Rehoboth Compressor Station. The I-10 system will be expanded by 180,000 Dth/d through the use of compression at the proposed Weymouth Compressor Station.

(b) Access Northeast will not be expanding the following laterals: B, C, D, E, F, H, I, J, K, L, M, N, P, R, S, T, U, V, W, Y, Z, AA, BB, CC and DD

(c) The Q-1 and I-10 expansions will serve Braintree Electric (BELD), MA, Fall River, MA and Salem Power, MA on AGT. The Q-1 and I-10 expansions can also be used

to serve Newington Power, NH, and PSNH-Newington, NH, Casco Bay Power, ME, Bucksport Energy, ME and Westbrook Energy Center, ME via the M&N pipeline system. The G-1 System serves PG&E Manchester, RI, Dighton Power, MA, NRG Canal Electric, MA, Dartmouth Power, MA, Tiverton Power, MA, Brayton Point, MA and Taunton Municipal Lighting, MA.

(d) C Lateral – Pierce Power, CT, Wallingford Energy I and II, CT
W Lateral - NRG Middletown, CT, Kleen Energy, CT and GenConn Power, CT
T Lateral - Milford Power, MA
Y Lateral - ANP Bellingham, MA

(e) The proposed expansion of the Q-1, I-10 and G-1 systems was made necessary by the proposed increases in volume which is beyond the capabilities of the existing systems. The laterals which were not expanded have enough capacity to carry their respective volumes such that no modifications are necessary.

Information Request NEER-6-13

Request:

Refer to your responses to NEER 2-86 and NEER 3-1. In view of National Grid's position that it may renew the proposed agreement with the pipeline venture (of which its affiliate is a part owner) after twenty years without review or approval by the Department of Public Utilities, please explain why the companies' analysis of the costs to ratepayers of the proposed agreement do not include any costs after renewal to which the ratepayers would become committed upon approval of the present petition?

Response:

As stated in the Company's response to Information Request NEER-2-86, the extension terms are expressly delineated in the Precedent Agreements and Service Agreements. Once the Precedent Agreement and Service Agreements are approved by the Department, actions to extend the contracts, if taken, would follow the contract terms which were expressly approved by the Department and would not require further review or approval. However, National Grid understands that the Department may require a process that requires notification of extensions or renewals and therefore the Company could notify the Department if required to do so. If and when the Department requires notification of any such extension, the Company would be prepared to include information of not only the costs of the proposed agreement, but also any net benefits that would likely accrue to customers during the extension period.

Prepared by or under the supervision of: John E. Alloca