

Information Request NEER-5-1

Request:

Refer to Attachment NEER-2-44. Please indicate if the reference case without the ANE project associated with this DPU proceeding 16-05 is the same as the reference case without ANE project used in Attachment NEER-2-44.

Response:

Yes.

Information Request NEER-5-2

Request:

Refer to Attachment NEER-2-44. Please provide the following data associated with the Reference Case and Sensitivity Reference Cases A and B, with and without the proposed ANE Project, in native file format as a fully functional Excel file with formulas intact:

- (a) For each chart and table shown in Attachment NEER-2-44 all the data that support these figures including all calculations that are required to create the reported results. For example, for the table shown on page 4, please provide the monthly modeling results that are used to make these calculations. In addition, for each chart provide the actual data used to create the charts. For example, where a chart depicts the projected change in Algonquin gas price basis, please provide the monthly gas prices that are used to derive the reported gas price basis.
- (b) For ISO-New England, the New York Independent System Operator and the PJM Interconnection, complete modeling time horizon (including 2016 and thereafter as available (pre-pipeline expansion period)) monthly electricity price forecasts. Please provide these price forecasts for all geographic regions for which they are available. For example, if they are available for ISO zones, such as southeastern and northeastern Massachusetts, please provide the zonal prices.
- (c) For ISO-New England, the New York Independent System Operator and the PJM Interconnection, complete modeling time horizon monthly and annual non-gas fired generation unit production quantities, variable operating costs (where applicable), pollutant emissions (including CO₂ where applicable), and fuel usage;
- (d) Complete modeling time horizon monthly import and export volumes by transmission interface for the Hydro-Quebec and New York Independent System Operator interconnections with ISO-New England. Please also indicate whether imports and exports between Hydro-Quebec and New York Independent System Operator and ISO New England are determined dynamically or if they are scheduled based on historically observed imports and exports;
- (e) For all geographic regions modeled, complete modeling time horizon fuel price forecasts for all generating units that consume fuel to produce electric energy;
- (f) For ISO-New England, the New York Independent System Operator and the PJM Interconnection, complete modeling time horizon hourly, monthly and annual demand quantities by zone; and
- (g) Complete modeling time horizon price differentials or hurdle rates (in \$/MWh) used to evaluate the economics of power transfers across transmission interfaces between ISOs and/or BAAs, as applicable.

Response:

- a) Please see Attachment NEER-5-2(a) (Highly Sensitive Confidential Information) for the charts and tables in Attachment NEER-2-44. Please see Attachment NEER-2-55(d) (Highly Sensitive Confidential Information) for the relevant gas priced use in the analysis.
- b) Please see Attachment NEER-2-55(c) (Highly Sensitive Confidential Information) for the relevant regional electric prices for these scenarios.
- c) Please see Attachment NEER-2-55(a) (Highly Sensitive Confidential Information) and Attachment NEER-2-55(b) (Highly Sensitive Confidential Information), contains the relevant unit generation, fuel consumption, and emissions for the relevant regional generation units.
- d) Please see Attachment NEER-2-55(e) (Highly Sensitive Confidential Information) contains the relevant regional electric imports and exports.
- e) Please see Attachment NEER-1-1(i) (Highly Sensitive Confidential Information) for the relevant fuel price forecasts used in the analysis.
- f) Please see Attachment NEER-1-1(f) (Supplemental) for the relevant electric load forecasts used in the analysis.
- g) Please see the Company's response to Exhibit NEER-1-1, part "m" regarding hurdle rates used in the analysis.

		Average Annual Reduction in ISO-NE Gas Consumption (MMcf/d)	
Column	A	B	C
		Sensitivity Reference Case A -	Sensitivity Reference Case B - With
Line #	Year	With Northern Pass	Northern Pass and MREI
1	2019		
2	2020		
3	2021		
4	2022		
5	2023		
6	2024		
7	2025		
8	2026		
9	2027		
10	2028		
11	2029		
12	2030		
13	2031		
14	2032		
15	2033		
16	2034		
17	2035		
18	2036		
19	2037		
20	2038		

Column Line #	A	B	C	D	E	F	G	H	
1	Project Cost-Benefits Summary 2019-2038 (\$ Billions)								
2		Levelized				Present Value			
3	Project	Annual Benefits	Annual Costs	Annual Net Benefits	Total Benefits	Total Costs	Net Benefits	Benefit to Cost Ratio	
4	Reference Case - With ANE Only			1.14			10.16		
5	Sensitivity Reference Case A - With ANE			0.39			3.49		
6	Sensitivity Reference Case B - With ANE			0.39			3.48		