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Xcel Energy
Docket No.: E002, ET2/CN-06-1115
Response To: Paula Maccabee Information Request No. 15
Citizens Energy Task Force
Date Received: May 2, 2008

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Question:

A. Please explain for the Alexandria Area, what assumptions were used to determine the 2020 winter peak load forecast on which the Applicants' analysis of community service reliability was based): 1) what percentage of annual growth was assumed; 2) from where was it derived; 3) in which integrated resource plan, if any, has this forecast been accepted or adopted; 4) what is the justification for and impact of the load adjustment factor in the analysis and 5) what the term "MW at Risk" signifies in Figure 4-16.

B. Have the Applicants determined at what level of forecasted growth in winter peak demand in the Alexandria Area the proposed Twin Cities - Fargo 345 kV power line would not be needed for community service reliability? If so, please state the level calculated.

C. What load management, energy conservation, efficiency and/or smart grid alternatives did Applicants evaluate as means to provide for demand or community service reliability in the Alexandria Area either alone or in combination with transmission or local generation alternatives?

D. Please provide in Microsoft Excel spreadsheet form an analysis of the costs and savings from all alternatives evaluated in Part C as compared to the costs of the CapX project selected to provide community service reliability in the Alexandria Area.

Response:

A.1 - A.2. The load forecasts included in the Application were developed by each utility that serves load in the Alexandria area. As such, the assumptions reflected in the 2020 winter peak load forecast are reflective of those used by the individual utilities. Detailed descriptions of each utility's load forecasting methodology can be found in Applicants' response (and subsequent supplemental response) to

Department of Commerce Office of Energy Security Information Request No. 47 ("OES IR No. 47").

A.3. The combined substation demand forecast provided in the Application has not been accepted directly into any integrated resource plan. However, the substation demand forecasts provided by the individual utilities are based, in part, on resource planning data. See Applicants' Response to OES IR No. 47

A.4. Unlike the southern Red River Valley area, a load adjustment factor was not used for the Alexandria area. This is because the Alexandria area is a very small geographic area. Generally speaking, smaller areas tend to peak more uniformly than larger, more diverse areas (such as the southern Red River Valley area).

A.5. The term "MW at Risk" approximates the number of megawatts of customer load that would need to be interrupted in order to return the system within operating limits assuming no new transmission facilities were constructed and the critical contingency in the area occurred during the year in question.

B. The maximum load level at which the Alexandria area transmission system can reliably operate has been determined to be 171 MW. If the Poleyard generator is run during peak load times, then the system can support 178.5 MW. More detail regarding this number can be found in the Application, beginning on page 4.27.

C. In the Alexandria area, the electrical system can reliably support 171 MW. At this level, the loss of the Grant County – Elbow Lake 115 kV line results in low voltages in the areas served by Elbow Lake and Brandon Substations when load reaches 171 MW. The Alexandria area's peak load in 2006 was 157 MW. If the Alexandria area transmission system is not upgraded, the low voltage area will continue to grow, encompassing increasingly larger portions of the Alexandria area. The substation forecast analysis, provided in Appendix C-4 of the Application, indicates that the 171 MW demand level will be exceeded in approximately 2011.

Appendix C-4 was compiled by using substation forecasts provided by Xcel Energy, Great River Energy, Missouri River Energy Services and Otter Tail Power Company. The utilities' substation forecasts took into account load management programs and conservation efforts used by the utilities to reduce peak demand.

D. Applicants do not have this information.

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