



Environmental Quality Board

658 CEDAR STREET
ST. PAUL, MN 55155
PHONE: 651-297-1257
FAX: 651-296-3698
TTY: 800-627-3529
WWW.EQB.STATE.MN.US

By e-mail and U.S. Mail

December 21, 2004

Pamela Jo Rasmussen
Permitting Analyst
Xcel Energy
PO Box 8
1414 W. Hamilton Ave
Eau Claire, WI 54702-0008

Dear Ms. Rasmussen:

Here are information requests numbers 11 through 14. Please note that some of these requests involve issues that Xcel Energy already summarized in its permit application or in answers to previous information requests. However, in part due to recent information submitted by Alliant Energy and Great River Energy, I am requesting more specific information.

You may respond by e-mail, but please also respond in writing by January 7, 2005. As you know, it may not be possible for you to reply in time for the EQB to include all your answers in the draft EIS. In that case, the information may be introduced separately into the hearing record. Please indicate the above cited docket number, the corresponding request number and the respondent's name and title in your response. If your response contains Trade Secret data, please include a public copy. If you have any questions or problems providing the requested information, please contact me at 651-296-2096.

Request No. 11

Construction Period Reliability: In light of Alliant Energy's e-mail (dated 11/23/04) and Great River Energy's related memorandum, please provide a more detailed constructability analysis of the 345/161-kV double-circuit "Alliant" route between the Split Rock and Lakefield Junction substations. Please include an analysis of the feasibility, including the costs and schedule implications, of the following potential techniques to construct the double-circuit 345/161-kV sections while maintaining adequate reliability:

- Constructing the 345/161-kV double-circuit while the 161-kV line is operating ("hot") using a specialized contractor, for the entire route or for critical sections;

- Using temporary looped service to maintain two sources to critical substations (the approach Alliant Energy indicated may be the best potential solution);
- Using truck mounted mobile natural-gas combustion turbines or diesel generators to meet short-term reliability needs during construction, including an evaluation of the capacities and start-up times such mobile generators are capable of. As part of this analysis please indicate the megawatt capacities and voltage requirements for critical loads along the existing 161-kV line, such as the soybean plant at Brewster so that it is possible to evaluate the feasibility of using mobile back-up generators to meet this load quickly;
- Temporarily transferring distribution loads to alternative distribution sources during construction;
- Using a combination of these approaches or any others I have not listed here that would allow multiple contractor crews to construct the “Alliant” route on a similar schedule as that available for the “I-90” route. For example, please assess the feasibility of using mobile generators at the Elk and Magnolia substations while the double-circuit section between these two substations is constructed;

In addition, please evaluate the possibility of constructing the new 161/345-kV line parallel to existing structures, and then removing the existing structures when the new line was ready in areas where there would be minimal landowner conflicts due to the slightly different route—such as in pasture land.

Finally, please evaluate the potential for reducing construction time by digging and pouring structure foundations for the 345/161 double-circuit before taking the existing 161-kV line out of service, and thereby reducing outage time. For example, is there equipment with height clearance that could be used to dig foundation footings and pour concrete under this scenario?

Request No. 12

Post-Construction Reliability: Please provide a more detailed analysis of the reliability impacts of a tower failure on a double-circuit 345/161-kV transmission line on the “Alliant” route after construction. My understanding is that a tower failure on such a double circuit would constitute a NERC Category C outage, and the primary reliability question is whether such an outage would cause cascading of the transmission system and a resulting loss of local electrical service. Please provide an analysis of this issue and any related issues that impact reliability of a 345/115-kV double circuit after construction.

Request No. 13

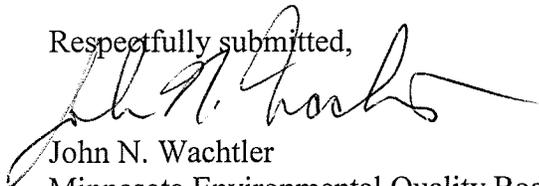
Advisability of Ordering Structures Capable of Double-Circuiting (115-kV Line): The EQB has the authority to order transmission structures that are “capable of expansion in transmission capacity through multiple circuiting or design modifications.” Minn. Stat. 116C.57, Subd.8(b). I understand that the ongoing study of the next increment of wind outlet capacity additions indicates that a second 115-kV circuit between the future Nobles County and Fenton substations is under serious consideration. However, I also understand that installing this second 115-kV line as a double-circuit with the proposed line would not result in an appreciable increase in outlet capacity due to reliability constraints in that area. Please provide a more detailed explanation of the advisability of installing structures capable of double circuiting for the 115-kV transmission line, including an analysis of whether future transmission additions in the surrounding area over the next decade might change the reliability constraints on a such a double-circuit 115-kV line, or whether these constraints are likely to be short-term only.

Request No. 14

Advisability of Ordering Structures Capable of Double-Circuiting (345-kV Line): Please provide an analysis of the advisability of constructing the new 345-kV structures to be capable of double-circuiting in the future. My current understanding is that unlike the 115-kV situation, a second 345-kV circuit on the same structures, while probably not doubling the transmission outlet capacity immediately, could result in a significant increase when needed in the future. However, as far as I know, no one has analyzed this question in any detail.

I understand from your response to a previous information request that planning for future transmission needs in the area remains speculative. For example, I understand that other 345-kV transmission line corridors in Southwest Minnesota may have advantages over this one for long-term outlet capacity increases. Nevertheless, in the interests of minimizing the need for transmission corridors in the area in the future, please provide an estimate of the incremental cost of installing structures and insulators capable of double circuiting on the 345-kV line on this route as well as the likely increase in outlet capacity should the second 345-kV circuit be added, now and in the future. Also, please provide any new information regarding the long-term (beyond 2010) need for new high-voltage transmission in the area.

Respectfully submitted,



John N. Wachtler
Minnesota Environmental Quality Board
658 Cedar Street, Saint Paul, MN 55155
651-296-2096