Via email and U.S. mail

January 11, 2005

John N. Wachtler
Minnesota Environmental Quality Board
658 Cedar Street
St. Paul, MN 55155

Re: Docket MEQB No. 03-73-TR-Xcel
EQB Data Request Number 14

Dear Mr. Wachtler:

Here are Xcel Energy's responses to EQB staff's information request number fourteen (14) regarding the Split Rock to Lakefield 345 kV & Chanarambie to Nobles County 115 kV transmission line project. We are available to provide additional information or meet with you in person to discuss any questions in more detail. We are currently working on completing our responses to your other requests.

Request No. 14 – Advisability of Ordering Structures Capable of Double-Circuiting (345 kV Line):

Xcel Energy appreciates comments from organizations and individuals who are considering the future transmission needs for southwestern Minnesota. As the amount of wind generation grows, we also anticipate the need for additional high voltage transmission lines between the Buffalo Ridge and the major Twin Cities load center.

However, we believe that requiring poles capable of double circuit between Split Rock and Lakefield Junction would not be a prudent use of resources. It is unlikely a second circuit would ever be placed on the structures as a means to improve transmission capacity in the region. Current planning studies suggest that the next new east-west high voltage line development should occur several counties north of the Split Rock to Lakefield Junction corridor.

In particular, the MISO's Northwest MAPP Exploratory Study that is presently underway contemplates a high voltage line development in a corridor from the Watertown/ White, SD area to the Twin Cities metropolitan area (in addition to others farther north).

No planning studies currently anticipate a new high voltage line as far south as the Split Rock to Lakefield Junction corridor. This includes the MISO's Northwest MAPP Exploratory Study, the Northern Iowa Exploratory Study or the Minnesota Utilities CAPX 202 study. This primarily due to two considerations:

A White-Twin Cities 345 kV line (or equivalent) line would complete a 345 kV high voltage loop of the 'Ridge. This provides a redundant high voltage pathway to the Twin Cities load center. In contrast, a double-circuit line on Split Rock-Lakefield Jct. would not provide similar reliability, since both circuits would be subject to "common mode" failures (see Attachments 1 and 2).
Development of wind generation on the Buffalo Ridge is expected to occur both north and south of the existing developments, as suggested by the interconnection requests presently in the MISO and WAPA transmission interconnection queues. The existing 345 kV line is sufficient to support the developments on the south. However, adding a second 345 kV circuit on the Split Rock-Lakefield Jct. corridor (the southern portion of the Ridge) would be difficult to use in attempting to improve outlet capacity for generation additions on the northern section of the 'Ridge (White/Watertown vicinity).

In contrast to a second 345 kV circuit between Split Rock and Lakefield Junction, a new east-west 345 kV line further north (such as from White, SD to the Twin Cities) would be more beneficial to wind development along the entire Buffalo Ridge (from Worthington, MN to Watertown, SD) than the double circuit as suggested. Furthermore, a major line further north could provide important future load serving reliability benefits for the Marshall and Redwood Falls/New Ulm load centers; this is not the case with a second Split Rock to Lakefield Jct. 345 kV line.

Designing powerline structures to be capable of double circuiting constitutes a significant incremental investment, the benefit of which does not appear warranted, given the speculative nature of the need in this corridor. . Additional cost to build poles capable of double circuit 345 kV/345 kV is estimated at $125,0001 per mile of double circuit. This adds $9.5 million if the entire 77-mile Minnesota route is double circuited and adds $7.5 million if the Interstate route is selected (assuming 60 miles as double circuit 345 kV/345 kV and 17 miles as double circuit 345kV/161 kV).

Finally, a second circuit between Split Rock and Lakefield Junction stops short of the primary goal of bringing the wind generation to the principal energy market which is the Twin Cities metropolitan area. If it was determined that in order to achieve this goal,

[1] This represents the incremental cost to construct poles capable of double circuit. Additional costs of $125,000 per mile would be incurred in the future when the conductor and insulators are installed.

another 345 kV line from Split Rock to Lakefield Jct. should be built, an additional 120 miles of 345 kV line would need to be built from the Lakefield Junction substation to the Twin Cities.

Considering all of the above information, Xcel Energy opposes an order to build double circuit 345/345 structures between Split Rock and Lakefield Junction. Such a requirement is certain to add considerable cost, whereas the corresponding needs and benefits are speculative and not supported by planning studies currently underway.

Respondents:
Walter Grivna, Planning Manager
Grant Stevenson, Project Manager

Please contact me if you have any additional questions.

Sincerely,

Pamela Jo Rasmussen
Team Lead, Siting & Permitting