

March 9, 2005

TO: EQB Board Members

FROM: Larry B. Hartman
EQB Staff (Tel: 651-296-5089)

SUBJECT: **Route Permit to Xcel Energy for Construction of the Buffalo to White 115 kV High Voltage Transmission Line and Associated Facilities and the Yankee Substation in Lincoln County, Minnesota (EQB Docket No. 03-84-TR-XCEL)**

Action

The Board is asked to issue a Route Permit to Xcel Energy authorizing construction of a new 115 kilovolt (kV) high voltage transmission line (HVTL) and associated facilities extending from the Buffalo Ridge Substation located south and east of the city of Lake Benton in Lincoln County on the east to the White Substation in Brookings County, South Dakota, on the west and a new Yankee Substation. The Minnesota portion of the project is approximately 18.6 miles in length, while the total project is approximately 28 miles in length.

Background

In March 2003 the Public Utilities Commission issued a certificate of need to Xcel Energy for four new transmission lines in the Buffalo Ridge area. This 115 kV transmission line is the second one to come before the EQB for designation of a route.

Because of the voltage of the proposed line (under 200 kilovolts), the alternative permitting process was applicable in this case. That process requires the EQB to prepare an Environmental Assessment and to hold a public hearing. The EA was completed in January 2005, and a public hearing was held on February 3, 2005.

Project Description

1. The proposed project consists of the following components, which collectively are referred to as the "Project".

(a) A 115 kV transmission line and associated facilities connecting the Buffalo Ridge Substation in Lincoln County, Minnesota, to a new Brookings County Substation in Brookings County, South Dakota;

(b) An expansion of the Buffalo Ridge Substation, including two new 115 kV circuit breakers, one new 115 kV line termination and an upgrade to a three-position 115 kV ring bus;

(c) A new Brookings County Substation, in Brookings County, South Dakota which will be connected into the existing White Substation;

(d) A new 115 kV Yankee Substation midway along the new Buffalo Ridge to Brookings County transmission line to be located either in Verdi or Drammen township on one of five sites designated as Sites 1, 2, 3, 4, 5;

(e) A 1.9 mile reroute of the existing Lake Yankton-Pipestone 115 kV transmission line which will make it possible to remove a 1.4 mile segment of the line from the Hole-in-the Mountain Wildlife Management Area (HMWMA) and the Nature Conservancy's Hole-in-the Mountain Prairie (HMP).

2. Xcel Energy will design and install single circuit 115 kV transmission line structures for a significant portion of the route. For some segments, Xcel Energy will install structures that are designed for a double circuit 115 kV configuration to support the reroute of the Lake Yankton-Pipestone 115 kV transmission line. Near the Yankee Substation site – one mile to the east and up to two miles to the north of the substation – Xcel Energy proposes to design the structures to be capable of handling multiple circuits to avoid transmission line congestion with any new or existing wind feeder lines or additional 115 kV or higher voltage transmission lines that may tie into the Yankee Substation in the future. Along other segments of the line, Xcel Energy may also elect to design and install structures that are capable of handling a single-circuit or double-circuit 34.5 kV wind feeder lines or other distribution lines.

3. The structures will vary in height from 80 to 95 feet depending on whether they will be capable of handling additional circuits.

The project will require a new right-of-way of 45 feet when paralleling existing roadways or other existing rights-of-way and 75 feet when entirely new right-of-way is required. The structures will be single pole, galvanized steel structures between 80 and 95 feet tall and spaced approximately 400 to 600 feet apart.

Route Options

Xcel proposed a route that runs basically along local roads and is comprised of Route Segments A, B, C, D, E and F. See Figure 1 attached to this memorandum. Only one alternative route segment was evaluated in the Environmental Assessment, called Route Segment J, which is an alternative to Route Segment E. See Figure 1. Both are approximately 8 miles long. The route preferred by Xcel passes by fewer homes, requires less clearing and requires less crossing of wetlands than a route using Route Segment J.

Substation Options

Five possible Yankee Substation sites were also examined. See Figure 1. The Yankee Substation will be designed to accommodate the Buffalo Ridge to Brookings County 115 kV line, up to four future high voltage transmission lines, and up to twelve 34.5 wind feeder lines.

Sites 3, 4, and 5 are preferable to sites 1 and 2, because they are further away from homes. Sites 3, 4, and 5 are comparable. Site 3 is less acceptable than sites 4 and 5 because the landowner has sold the wind rights to another area resident who intends to construct wind turbines on that property. Sites 4 and 5 are across County State Aid Highway 1 from each other. However, because site 5 is on the east side of the road, this site will provide better transmission access and egress, for the Buffalo to Brookings 115 kV line and other transmission lines that will tie into the Yankee Substation.

Xcel Energy has requested that it be authorized to continue to negotiate the sale of the land with the landowners at sites, 3, 4, and 5, but that the EQB designate one site for the substation in the event negotiations are not successful. Proposed finding number 29 finds that site number 5 is preferable.

Procedural Background

On August 10, 2004, Xcel Energy applied to the MEQB for a Route Permit for the proposed project. On August 19, 2004, the MEQB Chair accepted the application and began the review process. A public information meeting was held in Hendricks, Minnesota, on September 22, 2004, and the MEQB accepted public comments on the scope of the Environmental Assessment (EA) until October 25, 2005. On November 1, 2004, the MEQB Chair issued a Scoping Decision and on November 8, 2004, notice of the Scoping decision was provided to persons on the project service list.

On January 12, 2005, notice of the public hearing and availability of the EA was sent to persons on the service list. On January 16, 2005, the EA was available.

A public hearing was held on February 3, 2005, in Hendricks, Minnesota and Alan Mitchell of the MEQB was the presiding hearing examiner. The comment period closed on February 18, 2005.

Issues

The only issue that arose during the course of this proceeding has now been resolved. However, it is important to discuss this issue to some extent so the Board is aware of the issue and the resolution.

Interstate Telecommunications Cooperative, Inc (ITC), which maintains telecommunication lines in the Lake Benton area, expressed concerns about harmonic interference ITC has experienced on its telecommunication lines in the Lake Benton Area. ITC believes that the interference is being caused by the wind turbines or by the 34.5 KV feeder lines. ITC indicated that they have worked with Xcel Energy for several years to resolve this issue, but have not been successful.

ITC representatives are concerned that the new 115 kV transmission line might cause additional interference with the ITC system and indicated that Xcel Energy has not contacted ITC in an effort to address the problem or evaluate the proposal for the new transmission line. ITC requested that the EQB deny the route permit until these issues could be addressed and resolved. However, ITC requested that certain language be included in any permit that was issued, requiring Xcel Energy to consult with ITC and estimate the level of interference and to comply with certain industry standards.

EQB staff has included language in the route permit (See III.J.3) to address the concerns raised by ITC, and Xcel Energy has pledged to work with ITC in selecting the location for the actual structures within the route approved by the EQB and to comply with any applicable standards. ITC and Xcel Energy have reviewed part III.J.3 of the Draft Site Permit and no concerns were conveyed to EQB staff.

Staff Recommendation:

The staff recommends that the Board issue a Route Permit to Xcel Energy for a 115 kilovolt transmission line and associated facilities. The route recommended is comprised of Route Segments A, B, C, D, E, and F that generally follow local roadways, as Xcel requested. The width of the route is 300 feet or 150 feet from the road centerline, unless specified otherwise in the permit. The attached draft permit contains a map identifying the specific route and substation sites authorized.

The draft permit recommended by the staff contains language identifying the roadways that Xcel Energy intends to follow but allows Xcel Energy to use either side of the road.

2. Xcel Energy proposed five different sites for the new Yankee Substation – three in Drammen Township (sites 1, 2, and 3) and two in Verdi Township (sites 4 and 5). Sites 3, 4 and 5 are all located at the intersection of 160th Street and County Road 1. Sites 1 and 2 are about a mile or two to the north of the other sites. Each proposed site is approximately 40 acres in size. The five substation sites are shown in Attachment 1 of this memorandum. The Yankee Substation will be designed to accommodate the Buffalo Ridge to Brookings County 115 kV line, up to four future high voltage transmission lines, and up to twelve 34.5 kV wind collector lines.

Xcel Energy has a preference for sites 3, 4, and 5 because these sites are further away from homes than sites 1 and 2 and because sites 3, 4, and 5 require less preparation for construction due to terrain. Xcel Energy has requested that it be authorized to continue to negotiate the sale of the land with the landowners at sites 3, 4, and 5, but that the EQB designate one site for the substation in the event negotiations are not successful.

Site 3 is less acceptable than sites 4 and 5 because the landowner has sold the wind rights to another area resident who intends to construct wind turbines on that property. Unless the landowner and developer agreed to sell the land to Xcel Energy, this site should be avoided.

Sites 4 and 5 are across Highway 1 from each other. The sites are essentially identical. Site 5 may result in slightly less congestion at the Lincoln County State Aid Highway 1/160th Street intersection since site 5 is on the east side of the highway closest to the new 115 kV route. In the interest of selecting one site, the EQB staff believes that site 5 is slightly better than site 4, although any of sites 3, 4, and 5 would be acceptable if the landowner agreed.