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**VIA ELECTRONIC FILING**

Matthew Langan  
State Permit Manager  
Minnesota Office of Energy Security  
85 7th Place East, Suite 500  
St. Paul, MN 55101-2198

**Re: Comments Regarding the Draft Environmental Impact Statement**

***In the Matter of the Application for a Route Permit for the Hampton – Rochester – La Crosse 345 kV Transmission Line Project***  
**MPUC Docket No.: E002/TL-09-1448**

Dear Mr. Langan:

Northern States Power Company, a Minnesota corporation ("Xcel Energy" or "Company"), submits the following comments regarding the Draft Environmental Impact Statement ("DEIS") issued by the Department of Commerce, Division of Energy Resources ("Department"), on March 21, 2011 for the Hampton – Rochester – La Crosse 345 kV Project ("Project").

The Company believes the DEIS thoroughly addresses the potential human and environmental impacts associated with the routes under consideration. The Company offers the following suggested additions and clarifications for incorporation into the Final EIS ("FEIS").

**Recommended Additions**

**North Rochester – Chester 161 kV Transmission Line**

The Minnesota Public Utilities Commission granted a certificate of need for the Project as well as a 161 kV transmission line from the North Rochester Substation to the Chester Substation. In the Certificate of Need proceeding, the Company stated that the North Rochester – Chester 161 kV transmission line could be co-located with a portion of the 345 kV transmission line. Certificate of Need Application at p. 2.2, *In the Matter of the Application of Great River Energy, Northern States Power Company (d/b/a Xcel Energy) and others for Certificates of Need for the Capx 345 kV Transmission Projects*, Docket No. ET-2, E-002, et al./CN-06-1115. The Company will be applying for a route permit and will propose that the 161

kV line be co-located with the 345 kV line from North Rochester to a point just east of the Zumbro River crossing, regardless of what 345 kV route is selected in this proceeding. As a result, the Company believes it may be appropriate for the FEIS to include a discussion regarding the North Rochester – Chester 161 kV line.

#### Segment 3B-003/Highway 42 Route

The DEIS provides data regarding a route alternative designated as 3B-003 in the DEIS. This route alternative was proposed to avoid impacts to the McCarthy Lake WMA by following State Highway 42 to a point south of Kellogg, Minnesota. The DEIS route width appears to be 1,000 feet. The Company has reviewed this alternative and determined that due to the terrain, an alignment south of the road in one area would be most appropriate. Additional route width would be required to accommodate this alignment. Consequently, the Company requests that the FEIS analyze a wider route width for Segment 3B-003 as shown on the enclosed map which was submitted into the record as Schedule 4 to the Direct Testimony of Tom Hillstrom.

#### Transmission Line Construction

In the discussion of transmission line construction, Section 5, the Company requests that additional information regarding helicopter construction and implosive devices be added. Xcel Energy may use helicopters for conductor installation and some hardware installation to reduce the time of construction and minimize ground disturbing impacts. Implosive connectors may be used to join conductors and deadend hardware rather than hydraulic splices. Implosive connectors use a specific controlled detonation to fuse the conductors and hardware together. The process creates noise equivalent to a clap of thunder or commercial fireworks, which lasts only an instant. The implosive process provides for a specific engineered connection, which improves the strength and quality of the connections that can be a potential failure point in the transmission system. In addition, it takes less time than installing hydraulically-compressed connectors and reduces the number of set up areas required on the ground. This further reduces ground-disturbing activities.

Both of these construction techniques are currently being used to construct the CapX2020 Monticello to St. Cloud 345 kV Transmission Line Project.

### **Recommended Clarifications**

#### Right-of-Way Requirements

The DEIS states in a callout box on page 7 that “about 60 feet” would be needed for right-of-way if the facilities share right-of-way with existing infrastructure such as roads or highways. This statement should be clarified to state that for the 345 kV transmission line, up to 70 feet of right-of-way can be shared and for the 161 kV line, up to 35 feet of right-of-way can

be shared. In both cases, the poles would be located approximately five feet off of the public right-of-way.

The DEIS also references the overall right-of-way requirements in several places. On pages 7 and 16, it states as follows:

A 150-foot-wide ROW is typically required for 345 kV transmission lines, and an 80-foot-wide ROW is typically required for 161 kV transmission lines. In some limited instances, where specialty structures are required for long spans or in environmentally sensitive areas, up to 180 feet of ROW may be needed for the transmission line.

There is also a discussion on page 19 that does not include references regarding when a right-of-way greater than 150 feet in width may be required. The Company recommends that the discussion on page 19 be revised to conform to the discussion on pages 7 and 16.

#### Avian Impacts at Kellogg/Alma Crossing

Both the Modified Preferred 345 kV Route and Alternative 345 kV Route cross the Mississippi River east of Kellogg, Minnesota across the US Fish and Wildlife Service (“USFWS”) managed Upper Mississippi National Wildlife and Fish Refuge, to a location in Alma, Wisconsin. This stretch of the Mississippi River is one of the four primary bird migration routes in North America.

The DEIS discusses potential avian impacts and mitigation at the Kellogg/Alma crossing of the Mississippi River. *See, e.g.*, DEIS pp. 4 and 48. The Company recommends that the FEIS include information regarding the Company’s on-going coordination with the Minnesota Department of Natural Resources, USFWS and Wisconsin Department of Natural Resources on designing river crossing structures to minimize potential avian impacts. Based on coordination to date, five potential structure designs have been produced, as set forth in Section 8.4 of the DEIS. The Company and agencies have arrived at an informal and general consensus that the preferable configuration is one that minimizes structure height and consolidates crossing wires in the fewest number of horizontal planes. It is the Company’s view that the potential for avian interaction with electrical facilities at the Kellogg Mississippi River crossing area will be reduced because of construction of the Project.

Avian impacts will be reduced by consolidating facilities and placing bird diverter markers on shield wires. Currently, there is a double circuit 161/69 kV transmission line that crosses the river at this location. This existing line has three sets of wires stacked vertically in addition to an unmarked shield wire, thus creating four horizontal planes of wires. Depending on which configuration is selected, the Company’s proposed structures would reduce the number of horizontal planes of wires from four to as few as two over the river. Bird diverter markers would

also be placed on the new shield wires. The reduction in the number of horizontal planes of wires and placing bird diverter markers on shield wires would reduce the likelihood of bird collisions with river crossing wires at this location.

#### Design of 161 kV and 345 kV Into North Rochester Substation

The DEIS, p. 6, incorrectly states that the 161 kV and 345 kV lines would be co-located on the same poles at the east end of the route alternatives to the North Rochester Substation. The Applicants propose to construct the two lines on separate structures, parallel to each other.

#### Overhead/Underground Costs

The Company recommends that further clarification be provided for the cost comparisons of overhead and underground design at the Mississippi River crossing. The DEIS provides information about costs on pages 18 and 25. The Company suggests that the following paragraph on page 18 be modified as follows and that conforming changes be made to the related discussion on page 25:

This is approximately \$70 million per mile for underground ~~double~~ single circuit 345 kV compared to approximately ~~\$2-\$12~~ million per mile for an overhead triple circuit river crossing. The river crossing costs more per mile than conventional overhead construction because of the triple circuit design and more difficult construction access. (see Appendices E-F of the Route Permit Application (RPA) or Appendix D of the draft EIS).

Also on page 25, the Company suggests that the description of the underground river crossing note that the underground alternative would result in increasing the existing 100 feet of cleared right-of-way by an additional 235 feet and that this entire right-of-way would require vegetation control.

#### Pole Foundations

The DEIS references foundation diameters and depth in a call-out box on page 19. The call-out box should be revised to list the diameters provided in Table 4.1-1 of the DEIS. For depth, the 161 kV poles may be placed at a depth of 12 feet or more depending on soil conditions. The 345 kV facilities may be placed at a depth of 25 feet or more.

#### La Crosse Area Substation

The DEIS, p. 23, notes that three substation siting areas were considered for the La Crosse area substation. The Certificate of Public Convenience and Necessity application filed

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in Wisconsin proposes a single substation site for the Briggs Road Substation in Onalaska, Wisconsin, near US 53 and Briggs Road.

Severe weather collapse, 7.1.6, p. 34

The DEIS discussion of severe weather should be clarified to reflect the fact that pole failures are a rare occurrence. The transmission lines proposed for the Project will be designed to withstand extreme weather events including an extreme summer weather event (103 mph wind) and a severe winter ice and wind event (1.5" radial ice build up on the pole and conductor accompanied by a 50 mph wind).

Zumbro River Crossings

The DEIS, at page 171, states that routes 3P-Zumbro-N and 3P-Zumbro-S cross the Zumbro River where there is an existing transmission line crossing. This statement should be corrected to note that there are no existing electrical facilities present at any of the crossings. The north Zumbro River crossing (Alternate Route) crosses the Zumbro River at a location where there is no existing infrastructure. The middle Zumbro River crossing (3P-Zumbro-N and 3P-Zumbro-S) crosses the Zumbro River at an existing dam. The south Zumbro River crossing crosses the Zumbro River at the White Bridge Road bridge.

Page 162, paragraph 4, of the EIS provides a narrative of which routes would cross Lake Zumbro that should be clarified. Lake Zumbro is a reservoir in the Zumbro River formed by water pooled in a former river valley behind a dam. The only routes that would cross Lake Zumbro are those routes that would utilize the southern crossing at White Bridge Road (the Applicant's Preferred Route).

**Closing**

Thank you for considering these comments. Please contact me at (612) 330-6538 or [thomas.g.hillstrom@xcelenergy.com](mailto:thomas.g.hillstrom@xcelenergy.com) if you have any questions.

Sincerely,

/s/ Tom Hillstrom  
Tom Hillstrom

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