No aerial crossing or transmission at Zumbro Dam:

FOF 464. Two of the proposed Zumbro river crossings, White Bridge Road and the Zumbro Dam, utilize existing infrastructure crossings of the river, while the north crossing would require creation of a new corridor across the Zumbro River. There is a bridge, but no existing aerial crossing at White Bridge Road; this crossing would be 845 feet in length. There is an ~~no~~ existing aerial crossing at the dam.[fn.] ~~.and its~~ The length of the crossing at the dam would be 620 feet.

Fn. 548 Ex. 113, FEIS, at 174, 176.
Fn. 549 Ex. 113, FEIS, at 60.
Fn. __, Application, p. 8-53, 8.7.1.3; 8-55, 8.7.1.9 paragraph 2.

Other Findings are incorrect:

FOF 436. ~~Alternatives 3P-Zumbro-N and 3P-Zumbro-S would follow an existing transmission line that crosses the Zumbro River at the Zumbro Dam and Hydroelectric Generation facility.521 Either of these two options could minimize impacts to the Zumbro River, because of the existing high-voltage transmission line already in place at this location.522~~

fn. 521 FEIS at 174. fn. 522 FEIS at 176.

FOF 488. 3P-Zumbro-S is shorter and more direct, and it is the least expensive option. It would impact slightly fewer residences (24 homes, versus 26 on 3P). ~~It would follow an existing transmission line at the dam crossing~~, and it would not involve a crossing of Lake Zumbro. The 3P-004 option would not make the route longer but would minimize impacts to a farm in the area where the line turns north.

8.7.1.9 Natural Resources

The Zumbro Dam Route Option would result in permanent tree clearing in 1.2 acres of forested wetlands, but would not permanently impact other types of wetlands or FEMA floodplains. The Preferred White Bridge Road Route would not result in any permanent impacts to wetlands, forested wetlands, or FEMA floodplains. Wetlands, FEMA Floodplains, and streams crossed by each route option are identified on Figure 8.5-1.

The Zumbro Dam Route Option crosses the Zumbro River in a location without existing aerial infrastructure and where impacts to a high quality Maple Basswood forest (Maple Basswood) would occur on the east bank of the river. Similarly to the Preferred White Bridge Road Route, no NWRs, WPAs, GBCAs, SNAs, or IBAs are located in the vicinity of this crossing. However, the Isaak Walton League WMA is within 1 mile and south of the Zumbro Dam Route Option. This WMA is comprised of an oak forest located on steep terrain and it is managed to promote forest wildlife. When comparing conservation easement lands between the two Zumbro River crossings, the Preferred White Bridge Road Route has 25 more CRP lands than the Zumbro Dam Route Option. Conservation easements are identified on Figure 8.5-2.

Rare and unique species and MDNR rare native plant communities located within 1 mile of the Preferred Route and Route Option are summarized in Tables 8.7-3 and 8.7-4 respectively. A greater number of MDNR rare native plant communities occur within 1 mile of the Zumbro Dam Route Option centerline compared to the Preferred White Bridge Road Route. In addition, more state special concern species occurrences exist within 1 mile of the Zumbro Dam Route Option centerline compared to the Preferred Route. Both route options have an equal number state threatened species occurrences within 1 mile of the route centerline.

Each route crosses areas that have been identified as having biodiversity significance. The Zumbro Dam Route Option crosses an area having high biodiversity significance for 0.6 mile. This area is comprised of Sugar Maple-Basswood Forest and Red Oak-White Oak Forest. MDNR NHIS data document occurrences of three state special concern plant species in this area, as well as a state threatened mussel at the river crossing. The Preferred White Bridge Road Route crosses an area having moderate biodiversity for 0.9 mile. This area is the Red Oak-White Oak Forest described above in the Preferred Route section. Both areas are located adjacent to the Zumbro River on the east side (Figure 8.5-3).

8.7.2 Summary of Potential Impacts

Table 8.7-5 provides a summary comparison of the potential resource impacts of the Zumbro Dam Route Option and the Preferred White Bridge Road Route, based on the factors set forth in Minn. R. 7850.4100. Using this comparison, the Applicant concluded that the Preferred White Bridge Road route best conserves natural resources, minimizes potential environmental and human settlement impacts, as well as minimizing other land use conflicts, and would be the most cost-efficient option.

Table 8.7-2:
Residences in Proximity to the Preferred Route and Zumbro Dam Route Option Centerlines

Proximity (feet)	Preferred White Bridge Road Route	Zumbro Dam Route Option
0–75 (within ROW)[1]	0	0
75–150	0	0
150–300	2	5
Density (residences/linear mile)	0.2	0.5

[1] The ROW required is 150 feet, or 75 feet on either side of the centerline.

8.7.1.3 Aesthetics

The Zumbro Dam Route Option parallels existing transmission lines for 8 percent of its length for approximately 0.8 mile west of the Zumbro Dam. The Zumbro Dam Route Option crosses mostly gently rolling agricultural lands east and west of the Zumbro River, but terrain is hillier with more forested areas near the Zumbro River compared to the Preferred Route, and tree clearing would likely be required on the east and west banks of the river.

Aesthetic values crossing forested areas, including bluffs near the Zumbro River, would be impacted by the Zumbro Dam Route Option where tree removal within the 150-foot ROW would create new or expanded openings and increase the visibility of the transmission line. The 345 kV transmission line would be visible 50 to 95 feet above tree canopies, which is estimated to be an average of 80 feet high. The Zumbro Dam Route Option would likely be visible from campgrounds and residential areas on the shoreline of the Zumbro River, as well as to water-based recreationists in both the Zumbro River downstream and on Lake Zumbro upstream. The transmission line constructed along the Route Option extends over the existing tree canopy, and the expanded ROW would require removal of trees near the Zumbro River. Due to the width of Zumbro Lake, the Zumbro Dam Route Option would be visible to boaters and anglers near the Zumbro Dam, and for over 0.5 mile from the surface and shoreline of Lake Zumbro.

Because both the Route Option and the Preferred White Bridge Road Route would require some tree clearing in an area characterized by residential and recreational land use, and no existing transmission line crosses the river at these locations, impacts to aesthetics would be similar for both routes.

8.7.1.4 Recreation and Tourism

Most of the land surrounding both of the routes is private and does not provide for public recreation or tourism opportunities. Recreational resources in proximity to the routes are shown in Figure 8.2-3. Both routes cross and/or parallel snowmobile trails identified on Figure 8.2-3. The Zumbro Dam Route Option

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April 29, 2011

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

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 if you have any questions.

Sincerely,

/s/ *Tom Hillstrom*_____
Tom Hillstrom

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