Direct Testimony and Schedules
Darrin Lahr

## STATE OF MINNESOTA

## OFFICE OF ADMINISTRATIVE HEARINGS FOR THE PUBLIC UTILITIES COMMISSION

In THE MATTER OF THE AppliCATION for a Route Permit for the

Monticello to St. Cloud 345 KV
Transmission Line Project

PUC Docket No. ET2/TL-09-246
OAH DOcket No. 15-2500-20665-2

TESTIMONY OF

Darrin Lahr
On Behalf of

APPLICANTS
NORTHERN STATES POWER COMPANY, A MINNESOTA CORPORATION and GREAT RIVER ENERGY, A MINNESOTA COOPERATIVE CORPORATION

February 1, 2010

Exhibit $\qquad$

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## I. INTRODUCTION AND QUALIFICATIONS

## Q. STATE YOUR NAME AND YOUR BUSINESS ADDRESS.

A. My name is Darrin Lahr and my business address is 414 Nicollet Mall, MP-8A, Minneapolis, Minnesota 55401.

## Q. BY WHOM ARE YOU EMPLOYED AND WHAT IS YOUR POSITION?

A. I am employed as the Supervisor, Siting and Permitting by Xcel Energy Services Inc., the service company provider for Northern States Power Company, a Minnesota corporation ("Xcel Energy"). In my current position, I am responsible for the permitting of the Monticello to St. Cloud 345 kV Transmission Line Project ("Monticello-St. Cloud Project" or "Project").
Q. Please describe your educational background and professional EXPERIENCE.
A. I received a Bachelor of Science in Industrial Studies (emphasis in Energy and Transportation) from St. Cloud State University in 1988. I attended the University of Minnesota, Carlson School of Management, Minnesota Management Institute in 2000.

Since 1988, I have been employed by Xcel Energy Services Inc. or Northern States Power Company, where I am currently the Supervisor, Siting and Permitting. I am responsible for managing the development of state and federal permit applications to construct major Xcel Energy facilities in a multistate area, the acquisition of land and easements, and the acquisition of other permits to allow construction. I am also the routing lead for the Project.

Prior to this position, I was a Community and Local Government Relations Manager where I worked closely with communities, cities and counties for twelve years.

My resume is attached as Schedule 1.

## Q. FOR WHOM ARE YOU TESTIFYING?

A. I am testifying on behalf of Xcel Energy and Great River Energy, a Minnesota Cooperative corporation, the joint Applicants for a Route Permit in this proceeding.

## Q. What schedules are attached to your testimony?

A. Schedule 1: Darrin Lahr Resume

Schedule 2: Calculated Magnetic Fields
Schedule 3: Map of Applicants' Proposed Quarry Substation Sites 1, 2, and 4
Schedule 4: Detailed Map Series of Applicants' Proposed Routes
Schedule 5: Applicants' September 24, 2009, Comments to Office of Energy Security Regarding Environmental Impact Statement Scope

Schedule 6: Map of Route C, Route D and all Quarry Substation Sites
Schedule 7: Map of Route C Constrained Area
Schedule 8: Minnesota Rules 8810.3100-3600
Schedule 9: Minnesota Department of Transportation Written Comments (July 20, 2009)
Schedule 10: Illustrations of Transmission Line Alignments on Highway Right-of-Way
Schedule 11: Agricultural Impact Mitigation Plan (Approved September 2009)

Schedule 12: James A. Chalmers \& Frank A. Voorvaart, High-Voltage Transmission Lines: Proximity, Visibility, and Encumbrance Effects, The Appraisal Journal, Summer 2009
Schedule 13: Map of Mississippi River Recreational and Scenic River Districts

## Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY IN THIS PROCEEDING?

A. The purpose of my testimony is to provide an overview of the environmental and routing considerations for the proposed Monticello to St. Cloud 345 kV Transmission Line Project ("Project"). I am also providing testimony regarding proposed route and segment alternatives that were suggested in the environmental impact statement ("EIS") scoping process and included in the Minnesota Department of Commerce, Office of Energy Security ("OES"), Scoping Decision, dated October 12, 2009. Additionally, my testimony addresses issues relating to permits required by the Minnesota Department of Transportation and issues raised in the Draft Environmental Impact Statement ("DEIS").
Q. Were you involved in the preparation of the Route Permit Application in this proceeding?
A. Yes. I was primarily responsible for identifying Applicants' proposed routes and overseeing the compilation of the Route Permit Application.
Q. Are you available to provide testimony in support of particular sections of the Route Permit Application?
A. Yes. I am testifying in support of Chapter 1 (Introduction), Chapter 4 (Route Development and Selection Process), Chapter 5 (Description of Proposed Routes), Chapter 6 (Rationale for Selecting Preferred Route), Chapter 7 (Environmental Information), Chapter 8 (Public Participation and Agency -3- PUC Docket No. ET2/TL-09-246

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Involvement), Chapter 9 (Permits and Approvals), and Appendices A-K. I am also supporting those portions of Chapter 3 (Section 3.2 Identification of Existing Corridors and Boundaries, Section 3.3.1 Right-of-Way and Land Acquisition, and Section 3.4 Electric and Magnetic Fields) relating to right-ofway and electric and magnetic fields.

## Q. Please describe the procedural history of the Applicants' Route Permit Application.

A. The Route Permit Application was submitted to the Minnesota Public Utilities Commission (the "Commission") on April 8, 2009. The Commission held a hearing on May 7, 2009, to determine if the Route Permit Application was complete, if the Commission should appoint a public advisor, and if the Commission should authorize an advisory task force. In an order dated May 13, 2009, the Commission accepted the Monticello to St. Cloud 345 kV Transmission line Route Permit Application as complete and authorized the OES to process the Route Permit Application under the full review process, to name a public advisor in this case, and to establish an advisory task force. The OES held public information and EIS Scoping meetings on July 2, 2009, at 2:00 p.m. and 6:00 p.m. at the Clearwater Township Hall. The OES established an Advisory Task Force ("ATF"), which met three times between June and August 2009 and the ATF made several recommendations for consideration in the EIS. In October, the OES issues its EIS Scoping Decision dated October 9, 2009. On January 11, 2010, the OES released its DEIS.
Q. ARE THERE ANY CLARIFICATIONS OR ADDITIONS THAT YOU WOULD LIKE TO MAKE WITH RESPECT TO INFORMATION PROVIDED IN THE ROUTE Permit Application?
A. Yes. There is one correction I would like to make. The Application, at page 38, first full paragraph, erroneously states that when a landowner obtains an appraisal during the right-of-way acquisition process, " $[\mathrm{t}]$ he landowner is reimbursed up to $\$ 500$ toward the appraiser fee as long as the appraisal follows standard and accepted appraisal practices." This section should have stated that the court-appointed Commissioners are authorized to award appraisal fees in the condemnation process. See Minnesota Statutes $\S$ 117.189. In addition, after the Application was filed, the statute governing appraisal reimbursement, Minnesota Statutes § 117.189, was amended to allow Commissioners to award up to $\$ 3,000$ for appraisal fees if the property is being acquired for a high voltage transmission line.

There are also additional calculations I would like to provide for magnetic fields. Figure 3-10 of the Applicants provides information regarding the estimated peak and average loading magnetic fields for estimated 2011 summer operating conditions assuming the entire 345 kV transmission line from Fargo to Monticello would be in service. These calculations were also based on using a "delta" configuration for the Project, which means there would be two conductors on one side of the pole and one conductor on the other. These assumptions were the base assumptions for the CapX2020 345 kV projects during the Certificate of Need process and were used in the associated route permit applications that have been filed to date.

Since the filing of the Application, design engineers have concluded that a "vertical" configuration, where the three conductors are strung on one side of the pole, will be used. Applicants' engineers have completed additional calculations for magnetic fields using this configuration under peak and average current flows based on projections for 2015, the year the Fargo to St. Cloud 345 kV transmission line is expected to be in operation. These calculations are attached to my testimony as Schedule 2. I note that the different configuration and power flows do not impact the level of electrical fields which is primarily dependent on voltage.

## II. PROJECT OVERVIEW

Q. What is the general description of the Monticello to St. Cloud 345 KV Transmission Line Project?
A. This Project consists of approximately 28 miles of 345 kV transmission line and associated facilities between the existing Monticello Substation in Monticello, Minnesota, and a new substation, Quarry Substation, to be located west of St. Cloud, Minnesota, in unincorporated Stearns County. The proposal includes the modification and expansion of the Monticello Substation to include 345 kV equipment (including switches, control panels, and circuit breakers), foundations and structures. Further, the Project includes a connection of the existing St. Cloud to Sauk River 115 kV transmission line, located near, and extending into Quarry Substation Site 1, 2, or 4.

The proposed Quarry Substation will be a $345 / 115 \mathrm{kV}$ Substation. The construction will require a graded, fenced area of approximately six acres for the initial St. Cloud - Monticello Project and to accommodate the Fargo - St. Cloud 345 kV transmission line that is being permitted separately in Docket

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No. E002/TL-09-1056. This area will also be sufficient for connecting a future second 345 kV circuit from the double circuit capable poles. The Applicants intend to acquire at least 40 acres for the Quarry Substation site to create a buffer around the substation and to provide for future expansion.

## Q. How many circuits will be built initially?

A. The Project will consist of construction of a 345 kV single circuit transmission line on double circuit capable poles. The poles will be constructed with six circuit carrying arms, but only one set of conductors on three arms will be installed as part of this Project.
Q. Has the Commission issued a Certificate of Need for the Project?
A. Yes. The Commission determined that the Project is needed in the CapX2020 Certificate of Need proceedings. Order Granting Certificates of Need with Conditions, In the Matter of the Application of Great River Energy, Northern States Power Company ( $\mathrm{d} / \mathrm{b} / \mathrm{a}$ 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 (May 22, 2009 as modified August 9, 2009). The Commission also determined that the double-circuit capable configuration is needed to meet long-term system planning objectives.

## Q. Are there any updates to Applicants' proposal?

A. Yes. In the Route Permit Application, the Applicants proposed two siting area alternatives for Quarry Substation. Quarry Substation Site 1 in the Route Permit Application is located along the east side of Minnesota State Highway 23 approximately 0.5 miles northeast of the I-94 and Highway 23 interchange. Quarry Substation Site 2 in the Route Permit Application is located along the

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north side of State Highway 23 approximately one mile northwest of the I-94 and Highway 23 interchange.

Upon further review and discussions with affected landowners in the two Quarry Substation Sites considered in the Route Permit Application, Applicants determined that an additional Quarry Substation Siting Area, "Quarry Substation Site 4", should be considered. Quarry Substation Site 4 is located north of the intersection of State Highway 23 and 76th Avenue in St. Joseph Township (Township 124N, Range 29E, Section 24). Quarry Substation Site 4 is owned by two of the existing Quarry Substation Site 2 landowners.

Applicants request that the Commission authorize construction of the Quarry substation on any one of Quarry Substation Sites 1, 2, or 4.

A map of Quarry Substation Sites 1, 2, and 4 is attached as Schedule 3.

## III. PROPOSED AND ALTERNATIVE ROUTES

## A. Applicants' Routes

## Q. Briefly describe the Preferred Route for the Project.

A. The Preferred Route is at least 1,000 feet in width. It extends southwest from the existing Monticello Substation, on property currently owned by Xcel Energy, until intersecting with County State Aid Highway ("CSAH") 75 and I94. The Preferred Route then follows CSAH 75 and I-94 until west of Fish Lake where the Preferred Route then follows I-94 to the intersection of I-94 and State Highway 23. The Preferred Route then extends north along State Highway 23 to Quarry Substation Sites 1, 2, and 4.
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A detailed map series is attached to my testimony as Schedule 4.

## Q. Briefly describe Route A.

A. Similar to the Preferred Route, there are existing linear features that occur within Route A of which Applicants intend to parallel.

Route A exits the existing Monticello Substation and extends generally northwest. Route A only parallels I-94 for brief distances and mainly follows CSAHs, State Highways, and city or township roads west of I-94 until Route A terminates at Quarry Substation Sites 1, 2, and 4. There are several places where Route A follows property lines. Route A is shown in detail in Schedule 4.

## Q. Briefly describe Route B.

A. Route B exits the existing Monticello Substation, on property currently owned by Xcel Energy, until intersecting an abandoned railroad corridor and extends generally northwest. Route B generally follows CSAHs, State Highways, and city or township roads west of I-94 until Route B terminates at Quarry Substation Sites 1, 2, and 4. Route B parallels I-94 for less of its length that Route A. There are several places where Route B follows property lines. See Schedule 4.
Q. Why did Applicants identify the Preferred Route as preferred?
A. The Preferred Route was selected because it impacts fewer homes, makes better use of existing rights-of-way, minimizes impacts to agricultural land uses, minimizes impacts to natural resources and archaeological sites and is shorter in length which reduces costs. A summary comparison of Applicants' proposed routes is included in Chapter 6 of the Application.
Q. What route width is proposed for the Preferred Route, Route A, and Route B?
A. The route width proposed for all three routes proposed by the Applicants is at least 1,000 feet in width for the majority of the length of the routes. In some areas, shown on Schedule 4, a wider route width is requested to accommodate site specific concerns.

## B. ATF Route Alternatives

Q. Have the Applicants continued to evaluate routes for the Project after the Route Permit Application was filed?
A. Yes. We have continued to review the proposed route an alternatives put forth in the Route Permit Application as well as proposals and alternatives presented by other stakeholders. The Applicants have analyzed route alternatives for the 345 kV transmission line presented in the OES EIS scoping process and through the ATF, which are described in more detail later in my testimony.
Q. Has this continued analysis prompted Applicants to make any modifications to the Preferred Route as described in the Route Permit Application?
A. No. The Applicants have reviewed the proposals presented by the public and ATF during the EIS scoping process and do not believe any of the alternatives is a more prudent and reasonable alternative than the Preferred Route.
Q. What alternatives have Applicants analyzed since the filing of the Route Permit Application?
A. Applicants reviewed the four alternative routes and route segments identified by the ATF, Route C, Route D, ATF Group 4 Alternate 1, and ATF Group 4 Alternate 2. Details of Applicants' analysis were provided to the OES during the scoping process. Schedule 5.

## Q. Were all four ATF routes included in Scoping Decision?

A. No. Route C and Route D were included in the Scoping Decision. However, the OES did not carry forward ATF Group 4 Alternate 1 and ATF Group 4 Alternate 2. Applicants agree that the alternatives rejected in the Scoping Decision by the OES are not prudent or reasonable alternatives based on the purpose and intent of the project.
Q. DEscribe the ATF alternatives that were included in the Scoping DECISION.
A. The Scoping Decision includes one ATF route alternative and one ATF segment alternative in addition to the routes and segments proposed by Applicants. The DEIS designates the ATF alternatives as Route C and Route D and can be seen on Schedule 6.

Route C is the same as Applicants' proposed Route B with one segment modification. Route C, which is 30 miles long, commences at the Applicants' Route B in Silver Creek Township and travels west for approximately six miles. Route C then turns north for approximately 1.5 miles and reconnects with Route B.

Route D is a route alternative from the Monticello Substation to Quarry Substation Site 1, 2, 3, or 4 and is also 30 miles long. It exits the Monticello Substation adjacent to an existing 115 kV line and crosses the Mississippi River in an area designated as a Recreational River District and extends north. Route D then continues to parallel the existing 115 kV transmission line and road right-of-way for approximately 15 miles where it turns southwesterly and crosses the Mississippi River for a second time in an area designated as a Scenic River District and then generally follows the Preferred Route to any one of the proposed Quarry Substation Sites (1, 2, 3, or 4).

## Q. How does Route C compare to the Preferred Route?

A. A significant difference between Route C and the Preferred Route is the potential impacts to residences, with Route C having greater impacts. As shown in Table 5-7 of the DEIS, there are no more than five residences between 75 and 150 feet of the entire length of Preferred Route, regardless of which of the three alignments is analyzed. In contrast, there are 36 residences within 75 and 150 feet of Route C (this includes the segment identified by the ATF and the remainder of Route B). Where Route C makes a 90 degree turn near the intersection of $127^{\text {th }}$ Street NW and County Road 8 turn, there are several homes within the route width that creates a constrained area for this
route. This section can be seen on Schedule 7. Deviation through this area will be required to avoid displacement of residences.

Additionally, according to Table 5-7 of the DEIS, Route C has more residences and nonresidential structures within the 1,000 -foot route than does the Preferred Route. Route C also requires two more crossings of Public Waters Inventory ("PWI") streams (both crossings of Johnson Creek) than the Proposed Route.

For these reasons, Applicants do not believe that Route C is superior to the Preferred Route.

## Q. How does Route $\mathbf{D}$ compare to the Preferred Route?

A. The impacts of Route D and the Preferred Route differ in several significant ways:

1. Impacts to the Mississippi River would be greater if Route D were selected because of the two crossings. The Preferred Route does not require a crossing of the Mississippi River. One of the Route D crossing locations is within a designated Scenic River District and the other is within a designated Recreational River District. The proposed crossings have existing transmission facilities, but these facilities are 115 kV which are smaller in stature and have a right-of-way of 80 feet. If the new 345 kV line were built on a separate 150 foot right-of-way, the poles would be 130 - to 175 -feet tall. The Applicants would not propose co-locating of this line due to reliability and operation concerns, which were noted in the DEIS. Route D would also require additional state and federal permits. Each of the crossings, at a minimum, would require a license to cross PWI waters and a Utility Permit for crossing
public lands (wild and scenic river district) from the Department of Natural Resources ("Mn/DNR"), and a U.S. Army Corps of Engineers ("USACE") Nationwide Permit to cross a Section 10 Navigable Water. No Section 10 permit would be required for any of the other routes under consideration. It is anticipated that the additional regulatory review required for the two Route D crossings of the Mississippi River may require a minimum of six months to complete and could potentially delay construction of the Project.
2. Route D would traverse the Monticello nuclear plant property to reach the Mississippi River. This route segment poses significant constructability concerns. The existing 115 kV transmission line from the plant to the Mississippi River is double circuit and there is inadequate space between the existing buildings on the south and the dry cask storage on the north to construct a double circuit 345 kV transmission line. If the line were routed to the north, it would require clearing of a wooded area that would reduce the screening of the cask storage area.
3. Route D would have greater impacts on agriculture. Construction on Route D would impact 36 center pivot irrigation fields compared to four on the Preferred Route.
4. Route D also would impact more acres of wooded and forested land than the Preferred Route. Route D has approximately 292 acres of wooded areas within its route width and the Preferred Route has approximately 155 acres of wooded areas within its route width.
5. Electrical Reliability would be adversely impacted by Route D. As described in more detail in the Direct Testimony of Daniel Kline, Route D
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would not provide the same reliability benefits as construction of the facilities along the Preferred Route. Route A or Route B because Route D parallels existing bulk transmission sources serving the St. Cloud area. In contrast, construction along the Preferred Route would better meet the purpose and need approved by the Commission by enhancing the geographic diversity of high voltage transmission lines in the area which reduces the risk that a single event would cause multiple lines to be out of service.
Q. You mentioned co-locating the new 345 kV facilities with Existing 115 kV transmission lines. Do Applicants have a PREFERRED CONSTRUCTION METHOD?
A. For these two crossings, the preferred construction method from a technical perspective would be to build the 345 kV transmission lines on separate right-of-way. By doing so, the pole heights are lower and repair and maintenance activities can be completed with lower risk to workers. And, as noted in Mr. Kline's Direct Testimony, reliability is enhanced. However, should Route D be selected, Applicants would request flexibility with the design to ensure that it addresses any issues and concerns of the MnDNR and USACE.
Q. Was Route D within the initial Certificate of Need Notice Corridors for the Project?
A. No. When the Notice Corridors were developed to provide notice to landowners as part of the Certificate of Need process, this area was not included since it did not serve the electric need of the area. However, I understand that after the Scoping Decision was issued, OES provided notice to potentially affected landowners along routes C and D .

## C. Quarry Substation Sites

Q. Where do Applicants generally propose to locate the Quarry SUbStation?
A. An additional source is needed west of St. Cloud. Therefore, Applicants propose to locate the Quarry Substation west of St. Cloud in an unincorporated area of St. Joseph Township.

## Q. Which Quarry Substation Sites are evaluated in the DEIS?

A. The DEIS evaluates two siting areas identified by Applicants in the Route Permit Application: Quarry Substation Site 1 and Quarry Substation Site 2. Additionally, the DEIS includes a substation site identified by the ATF south of the Quarry Substation Sites proposed by the Applicants. This location is identified as Quarry Substation Site 3 and can be seen on Schedule 6.

## Q. Where is Quarry Substation Site 3?

A. This alternative encompasses approximately 15 acres in the southeast corner of Section 36, T124N, R29W and the northeast corner of Section 1, T124N, R29W in Stearns County.
Q. Do Applicants believe that Quarry Substation Site 3 is a feasible AND PRUDENT ALTERNATIVE?
A. Applicants do not believe Quarry Substation Site 3 is a viable substation site for the Project because it is too small to meet the needs of the Project. Quarry Substation Site 3 has the minimum amount of space required for the Project and would not allow for any future expansion. Also, the narrow shape of the Quarry Substation Site 3 does lend itself to efficient substation layout or design. In addition to having no significant buffer between the Quarry Substation and -16- PUC Docket No. ET2/TL-09-246

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neighboring properties, the approach areas for the transmission lines are limited by the roads that border the property.

Quarry Substation Site 3 is also distant from the St. Cloud to Sauk River 115 kV line that must interconnect. Approximately 3.5 miles of new 115 kV transmission line would be required to connect the existing St. Cloud to Sauk River 115 kV transmission line with the new substation.

## Q. Does the DEIS evaluate Substation Site 4?

A. No. Quarry Substation Site 4 was identified after the filing of the Route Permit Application. Applicants met with the landowners in the initially-identified areas and determined it would be appropriate to incorporate a commercial/industrial area owned by the affected property owners to the north and northeast of Quarry Substation Site 2.
Q. Have Applicants Entered into any agreement for the ACQUISITION OF THE LAND NEEDED FOR THE SUBSTATION?
A. No. Applicants are in discussions with landowners of parcels in all three of the Applicants' proposed Quarry Substation Sites (1, 2, and 4) and anticipate they will be able to enter into an agreement with a landowner for an option for the required property. Applicants will provide additional information about negotiations during the hearing process.

## Q. What is Applicants' assessment of Substation Site 4?

A. Quarry Substation Site 4 appears to be very suitable for the Project. The site has adequate acreage (40-plus acres) available; the zoned use of the parcel and surrounding land is industrial/commercial; the site has good accessibility and the existing 115 kV lines needed for interconnection are within close proximity.
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Additionally, based on initial communications with the landowners, Applicants are optimistic that a voluntary sale can be negotiated for a final site.

## Q. Have Applicants identified a preferred Quarry Substation Siting Area?

A. Applicants believe that Quarry Substation Sites 1, 2, or 4 would meet the needs of the Project. Of those, Quarry Substation Site 4 seems to be most suitable.

## IV. OTHER AGENCY PARTICIPATION

## A. Generally

## Q. Will the Project require other permits prior to construction?

A. Yes. Figure 9-1 of the Route Permit Application lists the agencies and types of approvals that will be required. The Applicants have been meeting with all of these agencies throughout the routing process to discuss the Project and to receive agency input on routes.

## Q. Once a route permit application is filed, what role do State AGENCIES HAVE IN ROUTING PROCEEDINGS?

A. State agencies authorized to issue permits required for construction of high voltage transmission lines, have a statutory obligation to participate in the routing proceedings, including public hearings, and state whether the proposed routes and design under consideration for approval will be in compliance with its standards, rules, or policies. Minn. Stat. § 216E.10, subd. 3(a). The Applicants understand that the purpose of this participation is to enable the Commission to take into account any state agency concern so that a Commission-approved route does not conflict with any other agency's policies.

## B. Minnesota Department of Transportation

Q. If the Commission approves any of the routes presented in the DEIS, will a utility permit from the Minnesota Department of TRANSPORTATION ("MN/DOT") BE REQUIRED BEFORE CONSTRUCTION?
A. Yes. Applicants will need to obtain Utility Permits from Mn/DOT to occupy state highway right-of-way, including interstate roads (also called freeways), for crossings and potentially longitudinal installations. Minn. R. 8810.3300, subp. 1.
Q. Have Applicants discussed potential routes with Mn/DOT DURING ROUTE DEVELOPMENT?
A. Yes. Applicants met with $\mathrm{Mn} / \mathrm{DOT}$ representatives throughout the route development process prior to filing the Route Permit Application to provide information to Mn/DOT and gather feedback and input on the potential route options on the Project. Applicants continue to meet with agency representatives to provide information and gather their feedback on the permitability of potential route and alignment options.

## Q. Has Mn/DOT PRovided input into this route proceeding?

A. Yes. The Applicants have received feedback through meetings with the Applicants, MN/DOT, and OES. Mn/DOT also submitted written comments on the scope of the EIS. Those written comments included general information about $\mathrm{Mn} / \mathrm{DOT}$ rules and policies and raised issues for consideration in the EIS, as well as Mn/DOT's perspective on the requirements to issue a Utility Permit.
Q. Do Applicants believe it is important For Mn/DOT To participate IN THE HEARING?
A. Applicants believe it is important for the Commission and stakeholders to understand Mn/DOT's rules, policies, and concerns as they pertain to permitting the proposed alignments in this proceeding. There is great value in understanding any issues that $\mathrm{Mn} / \mathrm{DOT}$ finds with any of the proposed alignments so that Applicants, the Commission, and other stakeholders fully comprehend potential impediments to the permitting of certain alignments along any of the proposed routes. Applicants welcome Mn/DOT's participation in this proceeding in order to obtain regulatory clarity.

## Q. What policies and rules generally pertain to utility occupancy of Mn/DOT RIGHTS-OF-WAY?

A. Mn/DOT owns or otherwise controls all state trunk highways, including freeways and interstate highways. In addition, when road right-of-way has been acquired by Mn/DOT in part with federal funding (such as I-94), the right-ofway is subject to the oversight of Mn/DOT as well as the Federal Highway Administration ("FHWA"). 23 C.F.R. $\mathbb{6}$ 645.215(a). Mn/DOT's rules governing the use of state trunk highway right-of-way are included in Minnesota Rules Chapter 8810.3100-3600 and the Mn/DOT "Accommodation Policy" that applies when it issues Utility Permits. The Accommodation Policy acknowledges that it is in the public interest for utility facilities to be accommodated on the right-of-way of any highway when such use and occupancy does not interfere with the flow of traffic and the safe operation of vehicles, does not otherwise impair the highway or its visual quality, and does not conflict with provisions of federal, state, or local laws or regulations. The Accommodation Policy was approved by the FHWA. The full name of that -20- PUC Docket No. ET2/TL-09-246

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document is the Mn/DOT Procedures for Accommodation of Utilities on Highway Right of Way, Mn/DOT Position Statement - Highways No. 6.4, July 27, 1990, revised November 8, 2005 ("Accommodation Policy"). A copy of the Accommodation Policy is available in Appendix H to the Route Permit Application and a copy of Minnesota Rules Chapter 8810. is attached as Schedule 8.

Applicants understand that state and federal statutes and rules generally encourage right-of-way sharing. FHWA's rules specifically provide that right-of-way sharing is in the public interest provided the occupancy of highway right-of-way by transmission facilities does not adversely affect traffic safety, impair aesthetic quality or violate other laws. 23 C.F.R. $\int$ 645.205(a). Minnesota state law similarly recognizes that highway right-of-way sharing provides benefits for the public and authorizes utility use of public roads provided such use by utilities does not interfere with public safety and convenience. See Minn. Stat. $\iint 222.37$, subd. 1, 161.45, subd. 1 and Minneapolis Gas Co. v Zimmerman, 91 N.W.2d 642, 649 (Minn. 1958).

## Q. Have Applicants consulted with Mn/DOT and FHWA to

 UNDERSTAND WHAT UTILITY INSTALLATIONS ON STATE TRUNK HIGHWAYS MAY BE PERMITTED BY MN/DOT?A. Yes. Applicants met with FHWA representatives and Mn/DOT representatives numerous times to work through permitting requirements and concerns. We continue to meet with them about the Project and have also engaged them to discuss similar issues that may arise in the other CapX2020 345 kV route permit proceedings including, Brookings to Hampton, Hampton to La Crosse, and Fargo to St. Cloud.

## Q. WILL YOU DESCRIBE YOUR UNDERSTANDING OF SOME OF THE CONCERNS RaISED by Mn/DOT and FHWA?

A. During our meetings, as well as during the EIS scoping process, both $\mathrm{Mn} / \mathrm{DOT}$ and FHWA raised concerns regarding the placement of transmission structures on or near trunk highway rights-of-way.

For example, Mn/DOT provided written comments to the OES on the scope of the EIS. In that document, Mn/DOT expressed concerns about alignments that would be within 75 feet of the road right-of-way. A copy of the written comments are attached as Schedule 9.

Mn/DOT also advised in its written comments that a Utility Permit will be required for occupancy of any portion of Mn/DOT's road right-of-way. This would include any intrusions in the airspace above the right-of-way, or "overhang," including permanent encroachment (where poles are placed outside, but near the road right-of-way and have pole arms overhanging into the right-of-way) and intermittent encroachment (where there is no permanent encroachment of the pole or pole arm, but where the wire may intermittently blow into the right of way under certain weather conditions, also known as "blow out"). Illustrations of various transmission line alignments on highway right-of-way are attached as Schedule 10.

In addition, Mn/DOT also stated: "Mn/DOT does not allow longitudinal installations within freeway right of way. An exception to the Accommodation Policy would require federal action. . .." Id. at p. 7. This position was reiterated by the OES in the DEIS.
Q. WHAT GENERAL PROVISIONS IN THE MN/DOT RULES AND THE Accommodation Policy address longitudinal installations ALONG INTERSTATES?
A. Longitudinal installations are addressed in Minn. R. 8810.3300, subp. 4 which provides that utility poles may be located between the control-of-access line and the right-of-way line.

Mn/DOT's Accommodation Policy provides that longitudinal installations on Interstates may be permitted if a utility demonstrates the following criteria "to Mn/DOT's satisfaction."
a. The accommodation will not adversely affect the safety, design, construction, traffic operations, maintenance, or stability of the freeway.
b. Alternate locations are not available or are cost prohibitive from the standpoint of providing efficient utility services.
c. The accommodation will not interfere with or impair the present use or future expansion of the freeway.
d. The location of the utility facility outside of the right-of-way would result in the loss of productive agricultural land or loss of productivity of agricultural land (in this case, the utility owner must provide information on the direct and indirect environmental and economic effects for evaluation and consideration by the Commissioner of Transportation).
e. Access for constructing and servicing utility facility will not adversely affect safety and traffic operations or damage any highway facility.

Accommodation Policy § VI.C. 3

Mn/DOT has advised the Applicants that it believes to authorize longitudinal installations that encroach on the right-of-way along the freeway, including

Interstates, Mn/DOT may need to grant an exception under the Accommodation Policy and the FHWA may have to approve this exception.

## Q. If FHWA concurrence is required, will concurrence trigger the National Environmental Policy Act?

A. Potentially. However, if NEPA compliance is required, my understanding is that the review can be completed without an environmental assessment or EIS because FHWA regulations classify approval of utility installations along or across a transportation facility as normally being considered a categorical exclusion unless some unusual circumstance is present. According to FHWA documents, these approvals are classified as categorical exclusions because such installations almost never cause significant impacts to the environment. Environmental Impact and Related Procedures, 52 Fed. Reg. 32645, 32651 (1987).
Q. Did Applicants provide specific information in the Route Permit APPLICATION TO ASSESS THE IMPACTS OF DIFFERENT ALIGNMENTS FOR the Preferred Route and Route A along Interstate highways?
A. Yes. Applicants prepared an analysis for the Preferred Route and Route A, both of which parallel the I-94 right-of-way at least in part. Three alignments were reviewed for the portions of the Preferred Route and Route A portions that parallel the I-94 right-of-way: (i) five feet from the I-94 edge of right-ofway to provide data that maximizes corridor sharing with roadways-the arms and conductors at rest would overhand the road right-of-way; (ii) at least 25 feet from the I-94 edge of right-of-way to provide data that minimizes corridor sharing to "blow out" only, ‥e., the occupancy of right-of-way under certain weather conditions that cause the conductors to move; and (iii) at least 75 feet from the I-94 edge of right-of-way that would avoid corridor sharing entirely.

Each of these alignments creates a different set of impacts. This information is included in Appendix E. 1 to our Route Permit Application. The information regarding these potential alignments should provide the Commission, Mn/DOT, FHWA, other agencies, and stakeholders with an array of data to consider impacts of possible alignments along the Interstate highway (I-94) in this proceeding.

## Q. WHY DID Applicants choose to show these three potential ALIGNMENTS IN THE APPLICATION?

A. The Power Plant Siting Act provides that a "route" can be as much as 1.25 miles wide. Minn. Stat. § 216E.01, subd. 8. In this case, Applicants are generally seeking a route that is 1,000 feet wide in most places. This provides us with flexibility to address site-specific issues that may arise during final planning and construction, including working through Mn/DOT's permitting requirements. While final alignments are not necessarily selected during the route permit phase, specific impacts arising out of specific alignments are important considerations for the Commission's review and decision. The information is also helpful for potentially-affected landowners to evaluate the possible impacts of the transmission line on their property.

## Q. How GENERALLY DO THE ALIGNMENTS COMPARE?

A. Different alignments within the 1,000 foot-wide route width have different impacts on the adjacent land use. Generally, the farther away the poles are from the road right-of-way, the larger the easement that must be acquired from the landowner. This increases the amount of vegetation management required and reduces the distance to buildings/structures adjacent to the right-of-way. Placement of poles farther from the road right-of-way also increases the
impacts to agricultural and commercial operations due to the placement of poles farther into adjacent landowners' properties. A detailed comparison of the impacts along I-94 is contained in the Application, Appendix E.4.

## Q. Have Applicants stated a preference among the three potential

## ALIGNMENTS DESCRIBED ABOVE?

A. No. While the impacts differ for each of these alignments, from the Applicants' perspective, any of the three described alignments are feasible alternatives that would meet the needs of the Project. All of the proposed alignments place the poles outside the Mn/DOT right-of-way and any encroachment would be limited to the airspace above the right-of-way. Applicants do not believe that the installation of the transmission facilities along any of the potential alignments would interfere with the safe operation of the road or interfere with the traveling public.

## C. Minnesota Department of Agriculture

Q. The Application states that Applicants are developing an Agricultural Impact Mitigation Plan ("Aimp") for this Project. Is this plan complete?
A. Yes. In collaboration with the Minnesota Department of Agriculture, the Applicants developed an AIMP that identifies the measures the Applicants will take to avoid or mitigate any negative agricultural impacts that may result from transmission line construction. The AIMP addresses mitigation actions, where possible, restoration of damaged tiles, removal of construction debris, and restoration of soil to existing pre-construction conditions. A copy of the AIMP for this Project is attached as Schedule 11 to my testimony.
Q. Has the Minnesota Department of Agriculture Approved Applicants' AIMP for this Project?
A. Yes. The Minnesota Department of Agriculture approved Applicants’ AIMP in September 2009.

## Q. Does the AIMP discuss irrigation systems?

A. Yes.
Q. How ARE IRRIGATION SYSTEMS TREATED ACCORDING TO THE AIMP?
A. If transmission line and/or temporary work areas interest an operational (or soon to be operational) spray irrigation system, Applicants will establish with the landowner or tenant, and acceptable amount of time the irrigation system may be out of service.

If, as a result of the transmission line construction activities, an irrigation system interruption results in crop damages, either on the right-of-way or off the right-of-way, the AIMP provides a method for determining compensation. See AIMP, Section 12.

If feasible and mutually acceptable to the Applicants and the landowner or tenant, temporary measures will be implemented to allow an irrigation system to continue to operate across land on which the transmission line is also being constructed. AIMP at p. 5.

## D. Minnesota Department of Natural Resources

## Q. Have the Applicants also consulted with the Mndne?

A. Yes. Applicants have consulted with the MnDNR to review permitting requirements for the Project. Along all of the routes there are certain public
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waters that require a MnDNR permit to cross. In addition, if Route D were selected, MnDNR would have to issue a license for each crossing of the Mississippi River.

## V. DEIS COMMENTS

## A. Land Values

Q. THE DEIS NOTES THAT LANDOWNERS ARE CONCERNED ABOUT THE POTENTIAL IMPACTS OF THE PROPOSED PROJECT ON PROPERTY VALUES. ARE YOU AWARE OF ANY RECENT STUDIES REGARDING THIS TOPIC?
A. Yes. There was a recent study published in The Appraisal Journal, Summer 2009, regarding the potential effects of 345 kV transmission lines on property values. This study is referenced in the DEIS and attached as Schedule 12 to my testimony.
Q. CAN YOU BRIEFLY SUMMARIZE THE CONCLUSIONS REACHED IN THIS STUDY?
A. The Appraisal Journal study found that that proximity to or visibility of a 345 kV line did not negatively impact property values. The study also found that an encumbrance generally has some negative impact on property values, but the impact is case specific.

## B. Great River Road

Q. One of the potential impacts on the Great River Road identified in the DEIS for Route A is reduced eligibility for certain federal funding. What analysis have Applicants UNDERTAKEN OF THIS POTENTIAL IMPACT?
A. We have reviewed the National Scenic Byway Discretionary Grants program set forth in 23 U.S.C. § 162, as well as the Federal Highway Administration's (FHWA) interim policy adopted in May 1995. National Scenic Byways Program, FHWA Docket No. 95-15, Notice of FHWA Interim Policy, 60 FR 26759 (May 18, 1995). There is also information available at the following website that Applicants have reviewed: http://www.bywaysonline.org/grants.
Q. Have Applicants also reviewed the 2000 "Great River Road Development Study" referenced in the DEIS?
A. Yes. This document is posted on the Mn/DOT and Minnesota Mississippi River Parkway Commission (MN-MRPC) websites and is described there as being the "corridor management plan" for the Great River Road in Minnesota. The Applicants understand that to mean the 2000 Study is the same "corridor management plan" required under section 9 of FHWA's 1995 Interim Policy.
Q. Do the documents Applicants reviewed provide any guidance concerning future federal funding of National Scenic Byway PROJECTS?
A. Yes. But the future of federal funding for National Scenic Byway projects is not clear. In 2005, funding for the National Scenic Byways program was established for a five-year period under section 1101(a)(12) of the Safe,

Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users, Public Law 109-59 (Aug. 10, 2005) (SAFETEA-LU). In December 2009, Congress passed the Consolidated Appropriations Act, 2010, which generally appropriated funds for transportation, but no funds were earmarked for the National Scenic Byways program.
Q. Assuming that there will continue to be federal funding for National Scenic Byway projects, do the documents Applicants REVIEWED INDICATE THAT THE INSTALLATION OF ELECTRIC transmission lines adjacent to the Great River Road would DISQUALIFY THE ROAD FOR FEDERAL FUNDING?
A. No. As noted in the DEIS, the only express prohibition is on the construction of new advertising billboards along the corridor under 23 U.S.C. $\int 131(\mathrm{~s})$.
Q. What is the role of Minnesota state agencies with respect to the Great River Road?
A. The documents indicate is that the "state byway agency," which the Applicants understand to be Mn/DOT and/or the MN-MRPC, must define the "scenic, natural, historic, recreational, cultural, and archaeological" resources of the National Scenic Byway and then implement policies to preserve those resources, which are generally referred to as the "intrinsic qualities" of the roadway. However, FHWA's 1995 Interim Policy also notes that the corridor management plan must contemplate how existing and future development can occur while still preserving these intrinsic qualities.
Q. You referred to the "intrinsic qualities" of the Great River Road. ARE THE INTRINSIC QUALITIES OF THE CSAH 75 SEGMENT OF THE Great River Road defined anywhere?
A. They appear to be defined in the 2000 Great River Road Development Study referenced in the DEIS.
Q. How are the intrinsic qualities defined in that study?
A. One of the objectives of the 2000 Study was to create an inventory of resources along the six "Destination Areas" that make-up the route. The CSAH 75 segment is generally referred to as the "Mississippi State Scenic River Destination Area." Within this segment, the primary resource identified is the Mississippi River and access to the river itself for recreational purposes. Although the 2000 Study also highlighted some historical resources within the local communities, as well as the Oliver H. Kelly Farm, which is located approximately 16 miles away from the Project.
Q. Does the 2000 Study reference any resources directly adjacent TO CSAH 75, OR THE SCENIC QUALITIES OF THE ROADWAY?
A. Not specifically, no. In fact, the road appears to be described primarily as a conduit to provide access to the destination points of the Mississippi River and various communities along the route.
Q. At page 5-42, the DEIS indicates that because the transmission LINE wOULD be located next to the existing highway right-ofways, motorists using the Great River Road would experience the greatest visual impact. Do the Applicants agree?
A. Yes. The Applicants generally agree that visual impacts would be limited to the roadway and the transmission line would not significantly impact users of the -31- PUC Docket No. ET2/TL-09-246

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Mississippi River or the historical sites referenced in the 2000 Study, for example. In addition, at page 5-35, the DEIS confirms that motorists who see transmission lines from a roadway ordinarily experience low visual sensitivity to such utilities. As a result, the Applicants believe locating the transmission line as close to the roadway as possible will help preserve the primary resource in this area, the Mississippi River as a recreational destination.
Q. Earlier you mentioned that FHWA's Interim Policy directs STATE HIGHWAY AGENCIES TO EVALUATE HOW DEVELOPMENT AND THE defined resources along a National Scenic Byway can co-Exist. Is THERE ANYTHING THE APPLICANTS BELIEVE THE STATE BYWAY AGENCY SHOULD EVALUATE IN THIS CASE?
A. Yes. As discussed in the DEIS, there are several design and placement features that could be incorporated into this Project to mitigate visual impacts from the transmission line. These include placement of the line, where possible, on the west/south side of CSAH 75 and the planting of vegetation to soften or screen the facilities.
Q. UNTIL THOSE MITIGATION MEASURES ARE FULLY VETTED, WOULD IT BE REASONABLE TO CONCLUDE THAT INSTALLATION OF TRANSMISSION LINES ALONG CSAH 75 WILL IMPACT FEDERAL FUNDING OF THE ROAD AS A National Scenic Byway?
A. No. That conclusion would be premature. The primary resource identified in this area is the Mississippi River. If the facilities are constructed on CSAH 75, the Applicants believe that visual impacts along the roadway can be substantially mitigated through appropriate mitigation measures.

## C. Potential Conflicts with Road Projects

Q. IN VARIOUS PLACES IN THE DEIS, THERE IS A CONCERN THAT THE PROJECT MAY INTERFERE WITH CERTAIN ROAD PROJECTS, SEE E.G. 5-86. Do APPLICANTS FORESEE SIGNIFICANT IMPACTS WITH ROAD CONSTRUCTION, MAINTENANCE OR EXPANSION PROJECTS?
A. No. For construction projects, like bituminous mill and overlay projects, there are typically no impacts from adjacent transmission lines. Future expansion plans or intersection additions are addressed through coordination with the responsible agency during the detailed design process to minimize any conflicts.
Q. The Beltway Project was one of the projects specifically IDENTIFIED IN THE DEIS. PLEASE DESCRIBE THE POTENTIAL IMPACTS OF the Preferred Route.
A. Stearns County Public Works, in partnership with the St. Cloud Area Planning Organization and the cities of St. Joseph and Waite Park, has prepared a Scoping Document for a proposed minor arterial roadway (Southwest Beltway) that would connect State Highway 15 in Waite Park to County Highway 133 in St. Wendel and Le Sauk townships. The study area extends 33rd Street South from Highway 15 west to Highway 23, and north/northwest to the intersection of County Road 4 and County Road 133. Past studies have identified three potential general corridor alignments: west, central and eastern. Stearns County is scheduled to begin corridor preservation in 2012 in anticipation of funding by 2020. The Preferred Route is generally not near the three corridors, except where the Southwest Beltway's proposed West and Central Corridors cross Bel Clare Drive on the east side of State Highway 23. Applicants do not anticipate any impact on the Beltway Project as the State's routing policies encourage
corridor sharing with linear features such as roads and transmission lines and the applicants will work with the local governments to ensure that the final alignment is compatible.
Q. The DEIS suggests that a planned I-94 and State Highway 10 Interregional Connection ("Interregional Connection") between Clearwater and Clear Lake could be impacted by construction of the Preferred Route or Route D. Where would these Two routes intersect with the connections?
A. This Mn/DOT project is currently scheduled to begin sometime between 2023 and 2028 according to the Interregional Connection website (http://www.dot.state.mn.us/d3/projects/interregionalconnection/index.html)

The Interregional Connection project includes construction of an interchange at I-94 approximately 1.5 miles east of the Clearwater exit northwest of Fish Lake and a highway connection due north to Highway 10. The Preferred Route would cross over the interchange along I-94. Route D would cross over the connector segment 1.2 miles northwest of the current Trunk Highway 24/State Highway 10 intersection.

## Q. How do Applicants propose to mitigate potential impacts?

A. Applicants have reviewed the detailed layouts produced by Mn/DOT and believe that with appropriate pole placements and pole designs, the 345 kV transmission line can be constructed in a manner that would be compatible with the new Interregional Connection.

## D. Impacts on the Mississippi River

Q. Several of the routes considered in the DEIS follow near the Mississippi River. Have Applicants looked at where the routes could impact the Mississippi River's Recreational or Scenic River Districts?
A. Yes. A map depicting the routes and the areas around the Mississippi River that have been designated Recreational or Scenic River districts is attached at Schedule 13.
Q. The DEIS provides that along the portions of the Preferred Route near the Mississippi River where it is designated as scenic, IMPACTS CAN BE AVOIDED IF THE TRANSMISSION FACILITIES ARE CONSTRUCTED WEST OF INTERSTATE 94.
A. Most of the Mississippi River is more than a mile from the Preferred Route. Nearly two miles, however, parallel a portion of the Recreational River District associated with the Mississippi River. There are portions of the Mississippi River that have been designated as a Scenic River District, but depending on the final alignment within the Preferred Route, the Scenic River District boundary would be a quarter of a mile or more away. Additionally, depending on the alignment selected the mitigation measures raised by the OES in the DIES could potentially be met.

## VI. CONCLUSION

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