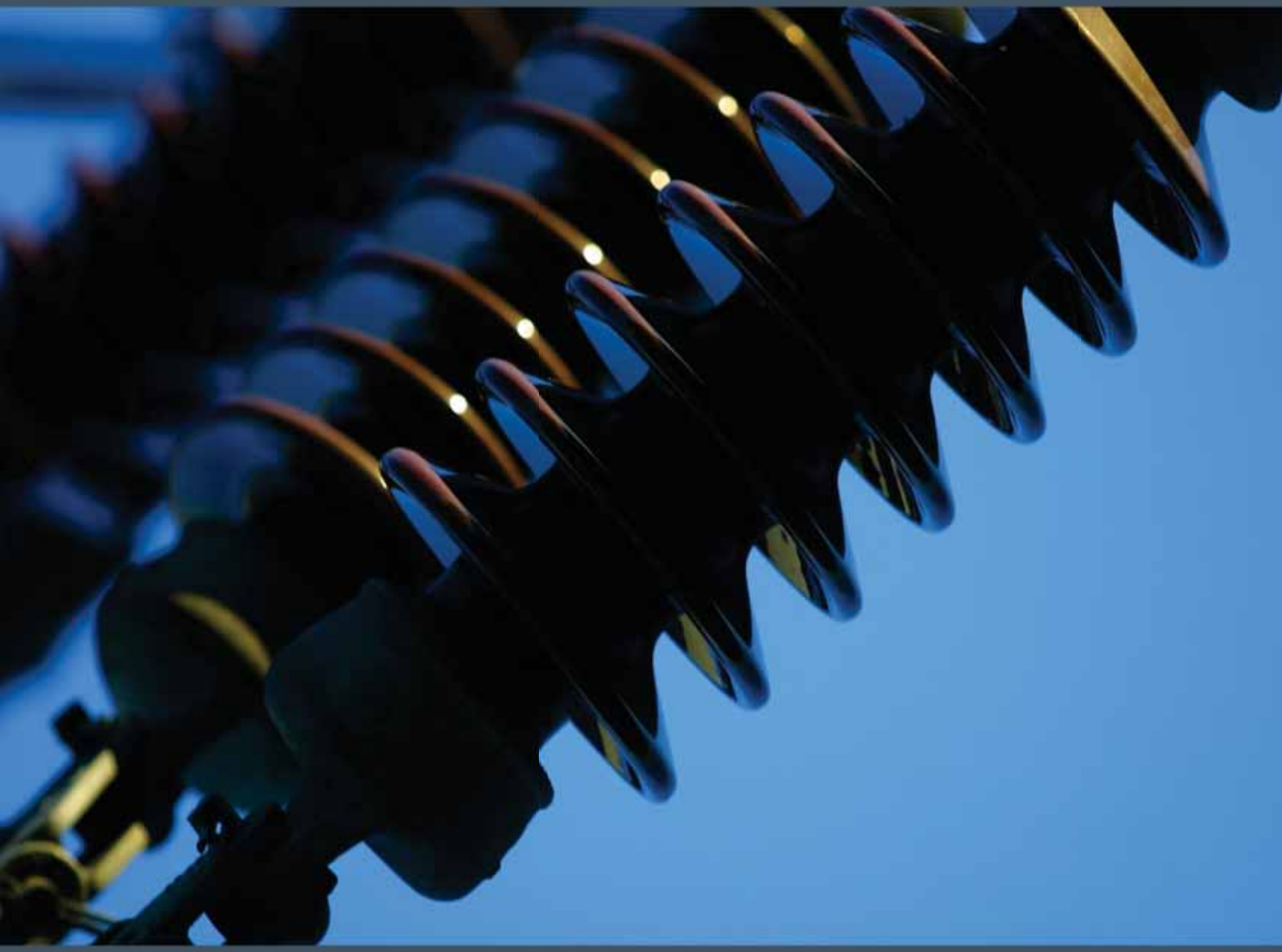
CapX2020

Route Permit Application

Minnesota Public Utilities Commission

Volume 1 of 2



HAMPTON ▪ ROCHESTER ▪ LA CROSSE 345 kV TRANSMISSION PROJECT

Docket # E002/TL-09-1448

January 15, 2010

Xcel Energy • Dairyland Power Cooperative • Rochester Public Utilities • WPPI Energy • Southern Minnesota Municipal Power Agency

Executive Summary

Project Proposal

Northern States Power Company, a Minnesota corporation (Xcel Energy or Applicant), on behalf of itself and other regional utilities involved in the CapX2020 initiative (Dairyland Power Cooperative, Southern Minnesota Municipal Power Agency, Rochester Public Utilities, and WPPI Energy), propose to construct a new 345 kV transmission line, a new 161 kV transmission line , and associated substation facilities in southeastern Minnesota. A Project Overview Map is included as Figure ES-1 at the end of this summary. This Route Permit Application (Application) is the second step in the State of Minnesota regulatory process. In the first step of that process, the Minnesota Public Utilities Commission (Commission) granted a Certificate of Need in May 2009, approving construction of the Project. That first step focused on whether the Project is needed, while this second step will focus on where the transmission line should be located.

The Project consists of the following:

- A new 345 kV double-circuit capable[1] transmission line from the proposed Hampton Substation near Hampton, Minnesota, to a proposed North Rochester Substation to be located between Zumbrota and Pine Island, Minnesota.
- A new double-circuit capable 345 kV transmission line from the proposed North Rochester Substation to the Minnesota border near Kellogg, Minnesota.
- A single circuit 345 kV line would be built in Wisconsin and terminate at a new substation proposed in the La Crosse, Wisconsin, area.
- A new 161 kV transmission line between the proposed North Rochester Substation and the existing Northern Hills Substation, located in northwest Rochester, Minnesota.

A North Rochester – Chester 161 kV line also was approved in the Certificate of Need but is not part of this Route Permit Application. Routing for that line will be permitted separately.

The 345 kV transmission line is proposed to be built on single shaft steel poles to reduce land use impacts. The poles are proposed to have a brown weathering-steel finish and to be placed approximately 700 to 1,000 feet apart. In limited circumstances multiple pole specialty structures may be used. Typically, a 150-foot-wide right-of-way (ROW) will be needed.

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1 Double circuit capable refers to a design that carries one 345 kV circuit initially but can be expanded to carry a second 345 kV circuit at some future date as circumstances warrant. The Commission required the double circuit capable design in its May 2009 Certificate of Need decision. No additional ROW is required for a double circuit or double circuit capable design.

The 161 kV transmission line also is proposed to be built on single shaft steel poles to reduce land use impacts. The poles also are proposed to have a brown weathering-steel finish and to be placed approximately 400 to 700 feet apart on an 80-foot-wide ROW.

A detailed discussion of the Project proposal, engineering, construction, and ROW requirements are located in Chapters 2 and 3.

Project Need

At the Certificate of Need phase, the Commission found the Project is needed to address three major categories of need: local community reliability, regional reliability, and generation outlet support.

The first need is to ensure continued reliable electric service to customers in the local Project area. In several communities, including Rochester, Winona, La Crosse, and neighboring rural areas, the demand for power is approaching the limits of the local transmission system alone to provide service in the event one or more transmission lines or generators is out of service. Those benefiting from these reliability improvements include customers of Rochester Public Utilities, Xcel Energy, and Dairyland Power Cooperative member cooperatives, Peoples Cooperative Services, Tri County Electric Cooperative, and Riverland Electric Cooperative.

The second category of need is to improve the reliability of the bulk electric system serving Minnesota and portions of neighboring states. As regional demand for electricity grows it is necessary to add system elements to assure a robust transmission system capable of serving customer needs.

The third category of need is to facilitate generation development in southeastern Minnesota. Significant wind energy generation development is occurring in the southeastern part of the state and the Project will provide a necessary 345 kV connection to the Twin Cities to help deliver new generation to the major population centers. This also can help utilities comply with renewable energy generation requirements. The Renewable Energy Standard requires Minnesota utilities to use renewable resources to generate 25 percent of their customer's energy requirements by 2025. Xcel Energy must meet a 30 percent goal by 2020.

A copy of the Commission's order approving the need for the Project can be found in Appendix B.

State and Federal Permits Required

A number of federal, state, and local permits are required before the Project can be constructed. In addition to the Minnesota need and route permits, a federal Environmental Impact Statement (EIS) will be prepared in accordance with the National Environmental Policy Act. The utilities also must secure approval for need and routing from the Wisconsin Public Service Commission. The state and federal permitting and EIS processes incorporate significant opportunities for public involvement. A detailed discussion of permitting requirements is provided in Chapter 11.

Route Development Process

Minnesota requires that the Applicant propose at least two routes for transmission lines and to designate one as preferred. The Commission will make the final route determination based on a comprehensive record and public comment that will be developed during the route permit proceedings.

The bulk of this Application describes the designated routes and alternatives that were considered. The Applicant determined the proposed routes after 2 years of careful study and significant public involvement and input. The public involvement process included multiple rounds of informational open houses, routing workshops and federal public scoping meetings. The public was notified of these meetings by direct mail and newspaper notices.

The Applicant also consulted with township, county and city governments; state agencies such as the Minnesota Department of Natural Resources, Minnesota Department of Agriculture, and Minnesota Department of Transportation (Mn/DOT); federal agencies such as the U.S. Fish and Wildlife Service (USFWS), U.S. Army Corps of Engineers and other interested parties. These meetings went beyond state and federal requirements and were conducted to ensure the public and agencies had the opportunity to provide input on routes *before* this Route Permit Application was submitted.

As the Commission considers this Application, the public and agencies will again have the opportunity to provide input during the state permitting process. These opportunities will include participating in stakeholder groups and potential task forces, commenting on the environmental review that will be conducted by the Minnesota Office of Energy Security, and providing statements in the public hearings and contested case proceedings that will be part of the route permit process.

In developing the proposed routes, the Applicant was guided by the routing criteria that are set forth in Minnesota law. These criteria were analyzed to determine routes that minimize overall impacts. The criteria include but are not limited to:

- Sharing existing ROWs such as transmission lines, roads, railroads, and other existing corridors. Minnesota law places a priority on using existing ROWs.
- If existing ROWs were not available or not used, use of property lines and agricultural field boundaries were used to minimize impacts.
- Proximity to homes.
- Potential impacts to agriculture, forestry, tourism, mining, and other land-based economies.
- Potential impacts to the natural environment, including wildlife, flora and fauna, and rare and unique natural resources.
- Designs that maintain electrical system reliability.

The routes presented in this Application seek to balance of all of the relevant criteria across the Project study area. More detail about the route selection process is located in Chapter 4.

Discussion of Preferred and Alternative Routes—345 kV Transmission Line

The 345 kV transmission line is proposed to begin at a new substation near Hampton (Hampton Substation), connect to a new substation north of Pine Island (North Rochester Substation) and terminate at a La Crosse, Wisconsin, area substation.

In developing routes for the 345 kV line, the Applicant focused significant effort on identifying the appropriate crossing of the Mississippi River. The Applicant concluded that the most appropriate crossing was at the Minnesota/Wisconsin border at Alma, Wisconsin (near Kellogg, Minnesota). The Applicant then identified two complete, end to end routes for the 345 kV line from the Hampton Substation to the Mississippi River crossing. The 345 kV routes, including the crossing at the Mississippi River, are described in the following paragraphs by substation and in two discrete geographic sections: Hampton – North Rochester and North Rochester – Mississippi River.

A thorough discussion of the rationale for selection of the proposed routes is provided in Chapter 5. An inventory and discussion of the human and environmental setting is provided in Chapter 7 (Hampton to North Rochester) and Chapter 8 (North Rochester to Mississippi River).

Mississippi River Crossing

Evaluation of the most appropriate river crossing included several rounds of public meetings and consultations with local, state, and federal agencies. The analysis covered an area broader than just the immediate Mississippi River crossing, and included a thorough review of routes in both Minnesota and Wisconsin near the Mississippi River and an examination of potential impacts to the Upper Mississippi River Wildlife and Fish Refuge and the Trempealeau National Wildlife Refuge, both owned and managed by the USFWS. Any crossing of the Mississippi River would require ROW on refuge property and a Special Use Permit from the USFWS.

This extensive analysis led the Applicant to determine that the Mississippi River crossing Alma, Wisconsin, (near Kellogg, Minnesota) where Dairyland Power Cooperative's Alma Generating Plant and existing transmission lines are already located, is the most feasible and prudent point for the 345 kV line to cross the Mississippi River.

Three other possible Mississippi River crossings were studied: Winona, Minnesota; Trempealeau, Wisconsin; and La Crescent, Minnesota. These potential crossings were selected for study because they are all areas where the river is narrow and they all contain an existing infrastructure crossing of the river. Trempealeau has a lock and dam; the others, including Alma, have existing transmission lines.

Early in the evaluation process, the Applicant determined that the Trempealeau crossing should be eliminated for several reasons: it would require establishing a new transmission line crossing; three options with existing transmission lines had been identified; and a field review identified more residences along the Mississippi River on the Wisconsin side of the Trempealeau crossing than were originally expected. In addition, the USFWS advised that it was unlikely a Special Use Permit could be issued because USFWS regulations do not allow new utility corridors when other existing transmission line

corridors provide feasible alternatives. Accordingly, the remainder of the river crossing analysis discussion focuses on the Alma, Winona, and La Crescent crossings.

The key factors that support the Alma crossing are:

- Routes to the Alma crossing on the Minnesota side of the river follow an existing transmission line corridor through the hills along the river where other crossings would require creation of a new 10- to 15-mile transmission corridor.
- In Wisconsin, two feasible route options from the Alma crossing to the La Crosse area follow existing transmission line corridors; the other crossings have the potential for more impacts.
- The Alma crossing would result in the shortest crossing of the Mississippi River floodplain, the shortest crossing of the wildlife refuge and the least wetlands impacts.
- The USFWS prefers the Alma crossing over the other two crossings.
- The La Crescent crossing would require relocation of an existing business to establish an endpoint substation or would require routing the 345 kV line through the La Crosse Marsh wetland.

Appendix E presents detailed design options for the immediate area of the Mississippi River crossing at Alma. These design options demonstrate the tradeoffs between structure height and width of the footprint. Included are designs for which the Applicants believe there would be minimal or no incremental environmental impact to the river area.

Hampton Substation

The Hampton Substation[2] is being permitted by the CapX2020 Brookings County – Hampton 345 kV Project. Two sites have been identified for this substation, both located west of U.S. Highway 52 (US-52) at 215th Street. The Brookings County – Hampton Project seeks to acquire a parcel of approximately 40 acres to provide buffer area. The fenced and graded area will be approximately 4 acres.

Hampton to North Rochester 345 kV Transmission Line Section

Preferred Route: The Preferred Route follows US-52 from the Hampton Substation siting area and continues along US-52 to Goodhue County 7 Boulevard approximately 2 miles northwest of Zumbrota. The Preferred Route then turns south and primarily follows property lines along agricultural fields west of Zumbrota before turning east to the North Rochester Substation siting area. The route west of Zumbrota was selected to avoid heavy concentrations of homes located in close proximity to US-52 in Zumbrota.

The US-52 route is preferred because it follows the roadway for the majority of the route; approximately 16 miles of this route shares both roadway and existing transmission line corridor. As discussed, Minnesota transmission line routing rules give preference to building new transmission lines along

2 Information regarding the Brookings County – Hampton Project can be found at www.capx2020.com/Projects.

existing infrastructure such as roads and transmission lines. Sharing ROW between the proposed transmission line and the road can reduce impacts to landowners and agricultural operations. The route also is considerably shorter than the Alternative Route; shorter routes often have fewer impacts because they cross fewer properties.

The Applicant proposes to maximize corridor sharing along US-52 by proposing that the poles be located as close as possible to the road ROW. However, any alignment that shares highway ROW must be approved and permitted by Mn/DOT. Ultimately, the final alignment will need to include consideration of Mn/DOT's rules, policies, and interests. The Applicant will continue to work with Mn/DOT to address its concerns to the extent possible in this proceeding in an effort to achieve a satisfactory outcome for all stakeholders. It is important for property owners to be closely involved in the route permit process to provide input on the appropriate alignment.

Alternative Route: The northern end of the Alternative Route is approximately one mile east of US-52 until crossing US-52 near 250th Street south of Hampton. The route then follows property lines and railroad corridors to the north corporate limits of Randolph. The route crosses the Zumbro River west of Randolph and then follows mid-section property lines approximately 15 miles, then turns easterly north of Kenyon and runs approximately 18 miles to the North Rochester Substation siting area.

There are no other existing transmission corridors available for routing between Hampton and North Rochester. Therefore, the Applicant's analysis focused on roads and property lines. In the end, the Applicant selected an Alternative Route that primarily follows mid-section property lines because homes are located very close to the roads in this area. Public comment also suggested routes that avoided homes and helped identify an alignment that followed the highest percentage of property lines.

A key differentiating factor between the Preferred Route and Alternate Route in this section is the amount of corridor sharing opportunities. Table ES-1 compares key data for the Preferred and Alternative Routes in this section.

Table ES-1:
Corridor Sharing and Property Lines, Hampton–North Rochester 345 kV Section

Resource	*Preferred Route*	*Alternative Route*
Route Types		
Percent (miles) following existing transmission line	42% (15.1)	1% (0.7)
Percent (miles) following road or rail but not transmission line	40% (14.6)	7% (3.5)
Percent (miles) following property line but not transmission line, roads or rail	14% (5.0)	69% (32.3)
Percent (miles) not following existing linear feature	4% (1.4)	23% (10.7)
Total length of route (miles)	36.1	47.1

Additional data comparing the Preferred and Alternative Routes is available in Table 7.6-1 of the Application.

North Rochester Substation

The North Rochester Substation would include a fenced and graded area of approximately eight acres. The Applicant desires to acquire a parcel of approximately 40 acres to provide a buffer area and to locate where the transmission lines will connect to the substation.

A 3.5-square-mile siting area is currently proposed for this substation. This area lies west of US-52 and along the existing Prairie Island – Byron 345 kV transmission line. The substation must connect to the proposed Hampton – Rochester – La Crosse 345 kV line, the proposed North Rochester – Northern Hills 161 kV line, the proposed North Rochester – Chester 161 kV line and the existing Prairie Island – Byron 345 kV line. The route selected to cross the Zumbro River will be a key factor in determining the final substation location.

North Rochester – Mississippi River 345 kV Transmission Line Section

Zumbro River Crossing

Three routes are proposed to cross the Zumbro River.

White Bridge Road (Preferred Route): The Preferred Route crosses US-52 from the southern end of the North Rochester Substation siting area, primarily following property lines for approximately five miles before turning southeast along Ash Road toward the City of Oronoco. The route then turns east and lies within 0.25 mile of White Bridge Road and crosses the Zumbro River on the north side of the bridge. The route continues, crossing US Highway 63 (US-63)-connecting with the Preferred Route to Alma.

North Route (Alternative Route): The Alternative Route exits the north end of the North Rochester Substation siting area and travels easterly following agricultural fields and property lines, crossing the Zumbro River approximately 0.75 mile north of the intersection of Wabasha County Road 7 and County Road 21. The route crosses US-63 and heads southwesterly, connecting with both the Alternative and Preferred Routes to Alma.

Zumbro Dam Option: The Zumbro Dam Option connects to the Preferred Route approximately 3.5 miles due west of the Zumbro Dam and continues straight east, crossing at the dam and then US-63, connecting with both the Preferred and Alternative Routes to Alma.

Although the Preferred Route is slightly longer, on balance, it has fewer impacts to land use and the natural environment. The Preferred Route follows the highest combination of roads, transmission, and property lines. It also crosses the Zumbro River at an existing road crossing and has fewer impacts to forested areas. The North (Alternative) Route would result in the creation of a new corridor across the Zumbro River. The Zumbro Dam Option would result in impacts to a high biodiversity forest area.

Table ES-2 compares key data for the routes in this section.

Table ES-2:
Corridor Sharing and Property Lines, North Rochester – Zumbro River

	Preferred Route	Alternative Route	Route Option
Resource	*White Bridge Road*	*North Route*	*Zumbro Dam*
Route Types			
Percent (miles) following existing transmission line	13% (2.6)	6% (1.1)	18% (3.4)
Percent (miles) following road or rail but not transmission line	30% (6.2)	25% (4.5)	22% (4.2)
Percent (miles) following property line but not transmission line, roads or rail	38% (8.0)	45% (8.5)	33% (6.2)
Percent (miles) not following existing linear feature	19% (4)	24% (4.5)	27% (5.2)
Total length of route (miles)	20.8	18.6	19.0
Context/Setting			
Existing infrastructure at river	Road	None	Dam

Additional data comparing the routes at the Zumbro River is available in Table 5.1-3 of the Application. Data for the entire North Rochester – Mississippi River Section is available in Table 8.6-1

Zumbro River – Mississippi River

Both the Preferred and Alternative Routes cross primarily agricultural fields for approximately 15 to 16 miles until they intersect an existing 161 kV transmission line corridor northeast of Plainview. In this area, the Preferred Route, which is the southern most of the two routes, minimizes land use impacts by following a higher percentage of property lines than the Alternative Route. The Preferred Route also crosses fewer forested areas.

Northeast of Plainview, the Preferred and Alternative Routes share a segment of approximately 5.5 miles that continues to US-61. This segment would replace an existing 161 kV transmission line owned by Dairyland Power Cooperative, which is an existing line in an established corridor through the hilly, forested bluff region. The Applicant determined that the existing transmission corridor is the most appropriate location for the 345 kV line.

East of US-61, the Preferred Route continues to follow the existing 161 kV line across the Minnesota Department of Natural Resources managed McCarthy Lake Wildlife Management Area (WMA). The McCarthy Lake Route Option, which is longer and bypasses the McCarthy Lake WMA, is offered for

consideration. However the Applicant determined that constructing the proposed line on double circuit structures with the existing transmission through the McCarthy WMA would pose the least impacts.

Table ES-3 compares key data for the routes in this section.

Table ES-3:
Corridor Sharing and Property Lines, North Rochester – Mississippi River Section

Resource	Preferred Route	Alternative Route
Route Types		
Percent (miles) following existing transmission line	32% (14.4)	22% (9.2)
Percent (miles) following road or rail but not transmission line	7% (2.8)	4% (1.6)
Percent (miles) following property line but not transmission line, roads or rail	41% (18.5)	29% (12.4)
Percent (miles) not following existing linear feature	20% (9.0)	45% (18.7)
Total length of route (miles)	44.8	41.9

Additional data comparing the North Rochester – Mississippi River Section is available in Table 5.1-4 of the Application. Data for the entire North Rochester – Mississippi River Section is available in Table 8.6-1

Discussion of Preferred and Alternate Route – 161 kV Transmission Line

Two routes were identified for the 161 kV transmission line between the North Rochester Substation siting area and the Northern Hills Substation. The rationale for selection of the Preferred Route and Alternate route is detailed in Chapter 5 of this Application. An inventory and discussion of the human and environmental setting for the 161 kV line is in Chapter 9.

The Preferred 161 kV Route begins at the south end of the North Rochester Substation siting area, crosses US-52 and travels west approximately 3.4 miles. Then the route turns south for approximately 1.5 miles, then parallels US-52 for 1.4 miles, then turns south and follows primarily county roads to the North Rochester Substation. The Preferred 161 kV Route was selected because 99 percent of the route follows existing linear infrastructure (roads or trails) or property lines.

The Alternative 161 kV Route begins at the south end of the North Rochester Substation siting area and turns to the south, paralleling the existing Prairie Island – Byron 345 kV line west of Pine Island. South of County Road 13, the route turns west for approximately 2.75 miles. The route then follows a combination of the Douglas Trail, property lines, and roads to the North Rochester Substation. While the Douglas Trail is an existing linear corridor that is seen as a routing opportunity, the potential impact to forested areas along the trail is a disadvantage for the Alternative 161 kV Route.

Table ES-4 summarizes key data for the Preferred and Alternate 161 kV Routes.

Table ES-4:
Corridor Sharing and Property Lines, 161 kV Routes

Resource	Preferred Route	Alternative Route
Route Types		
Percent (miles) following existing transmission line	3% (0.5)	32% (5.8)
Percent (miles) following road or rail but not transmission line	86% (13.3)	45% (8.1)
Percent (miles) following property line but not transmission line, roads or rail	10% (1.6)	12% (2.2)
Percent (miles) not following existing linear feature	1% (0.1)	11% (1.9)
Total length of route (miles)	15.4	18
Context/Setting		
Douglas Trail	1.25 miles	3.5 miles

Additional data is available in Tables 5.2-1 and 5.2-2 of the Application.

Project Cost and Schedule

The Project will cost $229 million to $253 million (in 2009 dollars), depending on the route selected.

This schedule below is estimated based on information known as of the date of the Application filing. This schedule may be subject to adjustments and revision as further information develops.

Minnesota Certificate of Need ..... Completed-May 22, 2009
Minnesota Route Permit .....Spring 2011
Wisconsin Certificate of Public Convenience and Necessity ..... Summer 2011
Federal Environmental Impact Statement .....Spring 2011
Pre-Construction Activities ..... First Quarter 2011 to Third Quarter 2011
Construction .....Fourth Quarter 2011 to Second Quarter 2015
Project Completion ..... Second Quarter 2015

Next Steps

The Commission will determine whether this Route Permit Application is complete and, if so, refer the matter to the Office of Administrative Hearings. An administrative law judge will preside at a contested case hearing and make a recommendation to the Commission regarding what route should be approved. The Commission determines the final route.

As part of the routing proceeding, the Minnesota Office of Energy Security will conduct an environmental review and prepare a state Environmental Impact Statement. The judge's recommendation and the state Environmental Impact Statement will be forwarded to the Commission for consideration in making its decision. Public participation is encouraged during all of these proceedings.

An application for a Wisconsin Certificate of Public Convenience and Necessity for the Project is expected to be filed in the summer of 2010.

Summary Route Permit Application Table of Contents

These chapters and appendices also are available online at www.capx2020.com/HRL-mn-route-permit or by contacting:

Xcel Energy
CapX Hampton – Rochester – La Crosse Project
P.O. Box 9437
800-238-7968
lacrosseinfo@capx2020.com

Chapter 1 Introduction

Statement of Applicant, Project ownership, permittees

Chapter 2 Project Information

Proposed facilities and location; route widths and alignments; schedule and costs

Chapter 3 Engineering, Design, Construction, and Operational Characteristics

Transmission design, substation technical description, ROW and land acquisition, construction and restoration procedures, electric and magnetic fields, stray voltage

Chapter 4 Route Selection Process

Discussion of route selection and guiding factors; regulatory guidance; reliability considerations; data collection and analysis; stakeholder involvement; chronology of route development

Chapter 5 **Rationale for the Preferred Route Selection**

Chapter 6 **Description of Project Components**

Chapter 7 **Hampton to North Rochester 345 kV Section**

Inventory of human and environmental setting; potential impacts and mitigation

Chapter 8 **North Rochester to Mississippi River 345 kV Section**

Inventory of human and environmental setting; potential impacts and mitigation

Chapter 9 **North Rochester to Northern Hills 161 kV Transmission Line**

Inventory of human and environmental setting; potential impacts and mitigation

Chapter 10 **Associated Facilities (Substations)**

Inventory of human and environmental setting; potential impacts and mitigation

Chapter 11 **Permits and Approvals**

Chapter 12 **Federal and State Agency, Local Government and Public Involvement**

Pre-application agency consultation, public involvement

Appendices

Appendix A **Project Development Agreement**

Contract among the utilities as to Project development, permitting, and ownership

Appendix B **Certificate of Need**

Administrative law judge's findings of fact; Minnesota Public Utility Commission Order approving need

Appendix C **Public and Agency Outreach**

Agency, local government, and tribal government mailing lists; names of individuals on proposed routes; public meeting, and comment summary

Appendix D **Mn/DOT U.S. Highway 52 Corridor Management Plan**

Appendix E **Mississippi River Crossing Design Options, Photos and Underground Analysis**

Appendix F **Substation Drawings**

Appendix G **Agricultural Impacts Mitigation Plan**

Appendix H **Minnesota Route Matrix**

Table of data analysis for each route segment

Appendix I **Information Related to Preferred, Alternative, and Considered but Eliminated Segments**

Appendix J **Segment Line Maps**

Appendix K **Considered but Eliminated La Crescent and Winona Routes**

Appendix L **Preferred and Alternative Route Segment List**

Appendix M **Sheetmaps**

Appendix N **Land Use/Zoning Maps**

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Appendix P **Agriculture and Prime Farmland Impacts**

Appendix Q **Archaeological and Architectural Occurrence Tables**

Appendix R **List of Mammals, Reptiles, Amphibians, and Fish Likely to Occur in the Project Area**

Route Permit Application Completion Checklist

The content requirements for an application with the Commission under the Full Permitting Process are identified in Minnesota Rules 7849.5220, Subparts 2 and 3. The rule requirements are listed in Table ES-5 with references indicating where the information can be found in this Application.

Table ES-5:
Route Permit Application Completeness Checklist

Authority	Required Information	Location
Minn. R. 7849.5220, Subp. 2	Route Permit for HVTL	
A.	A statement of proposed ownership of the facility at the time of filing the application and after commercial operation	Chapter 1
B.	The precise name of any person or organization to be initially named as permittee or permittees and the name of any other person to whom the permit may be transferred if transfer of the permit is contemplated	Chapter 1
C.	At least two proposed routes for the proposed high-voltage transmission line and identification of the Applicant's preferred route and the reasons for the preference	Chapters 2.1, 5.1
D.	A description of the proposed high-voltage transmission line and all associated facilities including the size and type of the high-voltage transmission line	Chapters 2.1, 3
E.	The environmental information required under Minn. R. 7849.5220, Subp. 3	See Minn. R. 7849.5220, Subp.3 (A)-(H) below.
F.	Identification of land uses and environmental conditions along the proposed routes	Chapters 7, 8, 9, 10
G.	The names of each owner whose property is within any of the proposed routes for the high-voltage transmission line	Appendix C-4
H.	United States Geological Survey topographical maps or other maps acceptable to the commission showing the entire length of the high-voltage transmission line on all proposed routes	Chapters 1, 7, 8, 9, 10; Appendix M
I.	Identification of existing utility and public ROWs along or parallel to the proposed routes that have the potential to share ROW with the proposed line	Chapters 6, 7, 8, 9
J.	The engineering and operational design concepts for the proposed high-voltage transmission line, including information on the electric and magnetic fields of the transmission line	Chapters 3.1, 3.2, 3.6
K.	Cost analysis of each route, including the costs of constructing, operating, and maintaining the high-voltage transmission line that are dependent on design and route	Chapter 2.5
L.	A description of possible design options to accommodate expansion of the high-voltage transmission line in the future	Chapter 3.3

Table ES-5:
Route Permit Application Completeness Checklist

Authority	Required Information	Location
M.	The procedures and practices proposed for the acquisition and restoration of the ROW, construction, and maintenance of the high-voltage transmission line	Chapters 3.4, 3.5
N.	A listing and brief description of federal, state, and local permits that may be required for the proposed high-voltage transmission line	Chapter 11
O.	A copy of the Certificate of Need or the certified HVTL list containing the proposed high-voltage transmission line or documentation that an application for a Certificate of Need has been submitted or is not required.	Appendix B
Minn. R. 7849.5220, Subdivision 3	Environmental Information	
A.	A description of the environmental setting for each site or route	Chapters 6, 7, 8, 9, 10
B.	A description of the effects of construction and operation of the facility on human settlement, including, but not limited to, public health and safety, displacement, noise, aesthetics, socioeconomic impacts, cultural values, recreation, and public services	Chapters 7.2, 8.2, 8.7, 8.8, 9.2, 10.1, 10.2
C.	A description of the effects of the facility on land-based economies, including, but not limited to, agriculture, forestry, tourism, and mining	Chapters 7.3, 8.3, 8.7, 8.8, 9.3, 10.1, 10.2
D.	A description of the effects of the facility on archaeological and historic resources	Chapters 7.4, 8.4, 8.7,8.8, 9.4, 10.1, 10.2
E.	A description of the effects of the facility on the natural environment, including effects on air and water quality resources and flora and fauna	Chapters 7.5, 8.5, 8.7, 8.8, 9.5, 10.1, 10.2
F.	A description of the effects of the facility on rare and unique natural resources	Chapters 7.5, 8.5, 8.7, 8.8, 9.5, 10.1, 10.2
G.	Identification of human and natural environmental effects that cannot be avoided if the facility is approved at a specific site or route	Impacts and Mitigation, Chapters 7, 8, 9, 10
H.	A description of measures that might be implemented to mitigate the potential human and environmental impacts identified in items A to G and the estimated costs of such mitigative measures	Impacts and Mitigation, Chapters 7, 8, 9, 10

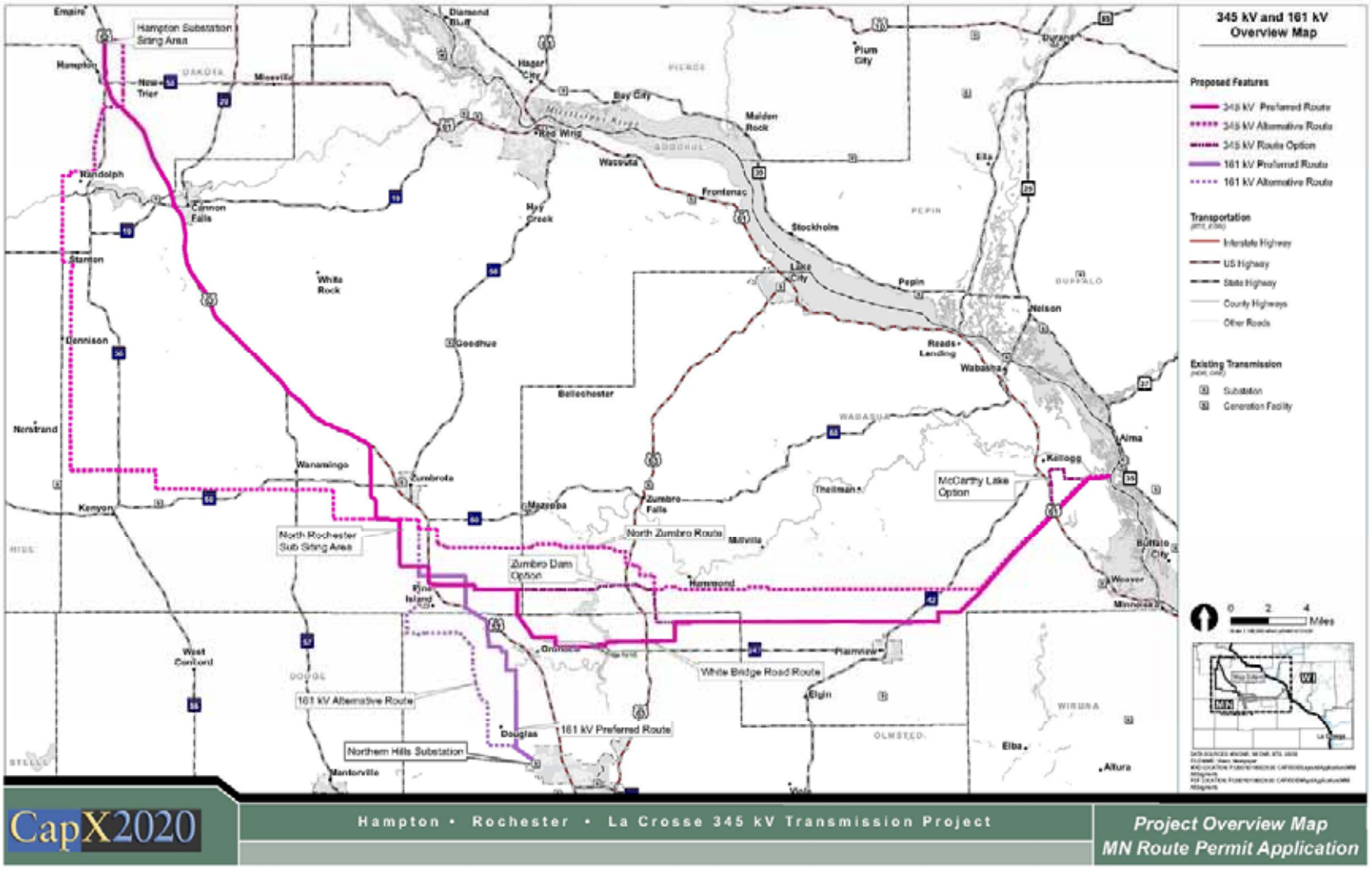

Figure ES-1: Project Overview Map

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Minnesota Route Permit Application

January 2010

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Acronyms and Abbreviations

AADT	Annual Average Daily Traffic
AC	Alternating Current
AES	Alternative Evaluation Study
AHP	Annual Timber Harvest Plan
AIMP	Agricultural Impact Mitigation Plan
AMA	Aquatic Management Area
APE	Area of Potential Effect
APLIC	Avian Power Line Interaction Committee
APP	Avian Protection Plan
Applicant	Xcel Energy
Application	This Application for a Route Permit to construct the Minnesota portion of the Hampton to Rochester to La Crosse 345 kV Transmission Project (Hampton–Rochester–La Crosse 345 kV Project)
ASNRI	Area of Special Natural Resource Interest
BCC	Birds of Conservation Concern
BTS	Bureau of Transportation Statistics
BWSR	Board of Water and Soil Resources
CFR	Code of Federal Regulations
CapX2020	CapX2020 Transmission Expansion Initiative
Commission	Minnesota Public Utilities Commission
CON	Certificate of Need
CPCN	Certificate of Public Convenience and Necessity
CR	County Road
CREP	Conservation Reserve Enhancement Program
CRP	Conservation Reserve Program
CWA	Clean Water Act
Dairyland	Dairyland Power Cooperative
DATCP	Department of Agriculture, Trade & Consumer Protection
EBF	Eastern Broadleaf Forest
ECS	Ecological Classification System
EIS	Environmental Impact Statement
EPA	Environmental Protection Agency
FAA	Federal Aviation Administration
FAR	Federal Aviation Regulations
FCC	Federal Communications Commission
FEMA	Federal Emergency Management Agency
FERC	Federal Energy Regulatory Commission
FHWA	Federal Highway Administration
FNAP	Farmland Natural Areas Program
GBCA	Grassland Bird Conservation Area

GIS	Geographic Information System
I-35	Interstate Highway 35
I-90	Interstate Highway 90
IBA	Important Bird Area
kV	Kilovolt
kV/m	Kilovolts per meter (measurement for electric fields)
LGU	Local Government Units
LOP	Letter of Permission
mA	Milliamperes
MAPP	Mid-Continent Area Power Pool
MBTA	Migratory Bird Treaty Act
MCBS	Minnesota County Biological Survey
MDA	Minnesota Department of Agriculture
MDNR	Minnesota Department of Natural Resources
mG	milliGauss (measurement for magnetic fields)
MGS	Minnesota Geological Survey
MISO	Midwest Independent Transmission System Operator, Inc.
MN-##	Minnesota State Highway (followed by the highway number)
Mn/DOT	Minnesota Department of Transportation
MNGAP	Minnesota Gap Analysis Program
MPCA	Minnesota Pollution Control Agency
MRO	Midwest Reliability Organization
MVA	Megavolt-Amperes
MW	Megawatt
NAC	Noise Area Classifications
NEPA	National Environmental Policy Act
NERC	North American Electric Reliability Corporation
NESC	National Electrical Safety Code
NHIS	Natural Heritage Information System
NIEHS	National Institute of Environmental Health Sciences
NPDES	National Pollutant Discharge Elimination System
NRCS	Natural Resource Conservation Service
NRHP	National Register of Historic Places
NWI	National Wetland Inventory
NWR	National Wildlife Refuge
OES	Minnesota Department of Commerce Office of Energy Security
PDA	Project Development Agreement for the Hampton–Rochester–La Crosse 345 kV Transmission System Improvement Project
PLSS	Public Land Survey System
ppm	Parts per million
PPSA	Power Plant Siting Act

Project	Hampton–Rochester–La Crosse 345 kV Transmission Project
PSCW	Public Service Commission of Wisconsin
PWI	Public Water Inventory
PWP	Permanent Wetland Preserve
RIM	Re-invest in Minnesota
RJD State Forest	Richard J. Dorer Memorial Hardwood Forest
ROC	Region of Comparison
ROW	Right-of-Way
RPU	Rochester Public Utilities
RUS	Rural Utilities Service
SHPO	State Historic Preservation Office
SMMPA	Southern Minnesota Municipal Power Agency
SWPPP	Storm Water Pollution Prevention Plan
TCP	Traditional Cultural Property
USC	United States Code
US-##	U.S. Highway (followed by highway number)
USACE	U.S. Army Corps of Engineers
USDA	U.S. Department of Agriculture
USFWS	U.S. Fish and Wildlife Service
USGS	U.S. Geological Survey
VOR	Very-High-Frequency Omni-Directional Range
WCA	Wetland Conservation Act
WDNR	Wisconsin Department of Natural Resources
WHO	World Health Organization
WI-##	Wisconsin State Highway (followed by number)
WisDOT	Wisconsin Department of Transportation
WMA	Wildlife Management Area
WPA	Wildlife Protection Area
WRP	Wetland Reserve Program