ENVIRONMENTAL ASSESSMENT

In the Matter of a Northern States Power, d/b/a Xcel Energy, Application for a Route Permit for the Eastwood 115 kV/115 kV Transmission Line Project in Blue Earth County

PUC Docket No. E002/TR-05-1192
EQB Docket No. 05-95-TR-Eastwood

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List of Acronyms and Abbreviations Used in this Document

BMP	best management practice
CON	Certificate of Need
dB	Decibels
dBA	A-weighted sound level recorded in units of decibels
d/b/a	doing business as
DNR	Minnesota Department of Natural Resources
EA	Environmental Assessment
EMF	electromagnetic field
EFP	Energy Facility Permitting
EQB	Minnesota Environmental Quality Board
FAA	Federal Aviation Administration
HVTL	high voltage transmission line
Hz	Hertz
kV	Kilovolt
MDH	Minnesota Department of Health
MNDOC	Minnesota Department of Commerce
MNDOT	Minnesota Department of Transportation
MPCA	Minnesota Pollution Control Agency
MW	megawatt
NAC	noise area classification
NESC	National Electrical Safety Code
NIEHS	National Institute of Environmental Health Sciences
NPDES	National Pollution Discharge Elimination System
NWI	National Wetlands Inventory
ppm	parts per million
PUC	Minnesota Public Utilities Commission
ROW	Right-of-Way
SHPO	State Historic Preservation Office
SWPPP	Storm water pollution prevention plan
TH	Trunk Highway
USFWS	United States Fish and Wildlife Service
USGS	United States Geological Survey

1.0 Introduction

On June 14, 2005, Northern States Power, d/b/a Xcel Energy, submitted a permit application to the EQB for a double-circuit 115 kV/115 kV high voltage transmission line connecting the Summit to Loon Lake 115 kV transmission line south to the Eastwood substation east of Mankato, pursuant to Minnesota Rules Chapter 4400 and Minnesota Statute Chapter 116C. On July 1, 2005, the Minnesota Legislature transferred permitting authority to the Minnesota Public Utilities Commission, so the application was transferred to the PUC.

1.1 Project Description

This project involves construction of a new double-circuit 115 kV/115 kV transmission line between the Eastwood Substation and the existing Summit to Loon Lake transmission line (See Project Vicinity Map, Figure 1). The line will be approximately 3.5 miles long and will begin as a tap off of the Summit to Loon Lake 115 kV transmission line near the intersection of 232nd Street and County Road 12. It will continue south along the east side of County Road 12 for approximately 0.75 miles.

At the junction of County Road 12 and 589th Avenue, the line will cross to the west side of the road and continue south paralleling the railroad for approximately one mile. Where the line crosses the railroad as it turns southeast, the line will run on the east side of County Road 12 to the intersection of 589th Avenue and Thompson Ravine Road. Due to potential development in the area and landowner concerns, the line will continue west on the north side of Thompson Ravine Road for up to 0.5 miles before turning south for about 0.5 miles and crossing T.H. 14. Xcel Energy has continued working with the interested parties to identify the best location for the new 115 kV/115 kV transmission line between Thompson Ravine Road and T.H. 14.

Upon crossing T.H. 14, the new 115 kV/115 kV line will continue south approximately 0.25 miles until it enters the Eastwood Substation, paralleling the existing Wilmarth-to-Eastwood 69 kV transmission line that enters the northwestern edge of the substation (see Project Location Map, Figure 2).

The new 115 kV transmission line will parallel existing roadway ROW for 77 percent of the proposed route. Xcel Energy will acquire a 45-foot ROW adjacent to roadways. Approximately one mile of the new route will go cross-country and will require an 80-foot ROW. Below is a summary of the dimensions and requirements of the project.

Project Component	Length	Structure Type	Average Structure Height	Average Span Length	ROW
Eastwood to Summit to Loon Lake	3.5 mi.	Single Pole, Steel Davit Arm	85-90 ft.	650 ft.	45 / 80 ft.

Table 1. Right-of-Way Requirements

1.2 Project Location

The Project is located in Blue Earth County in Sections 34 and 35 of Lime Township (109N, Range 26W) and Sections 2, 3, and 10 of Mankato Township (108N, Range 26W). See the project vicinity map in Figure 1 and the project location map in Figure 2.

Figure 1. Project Vicinity Map

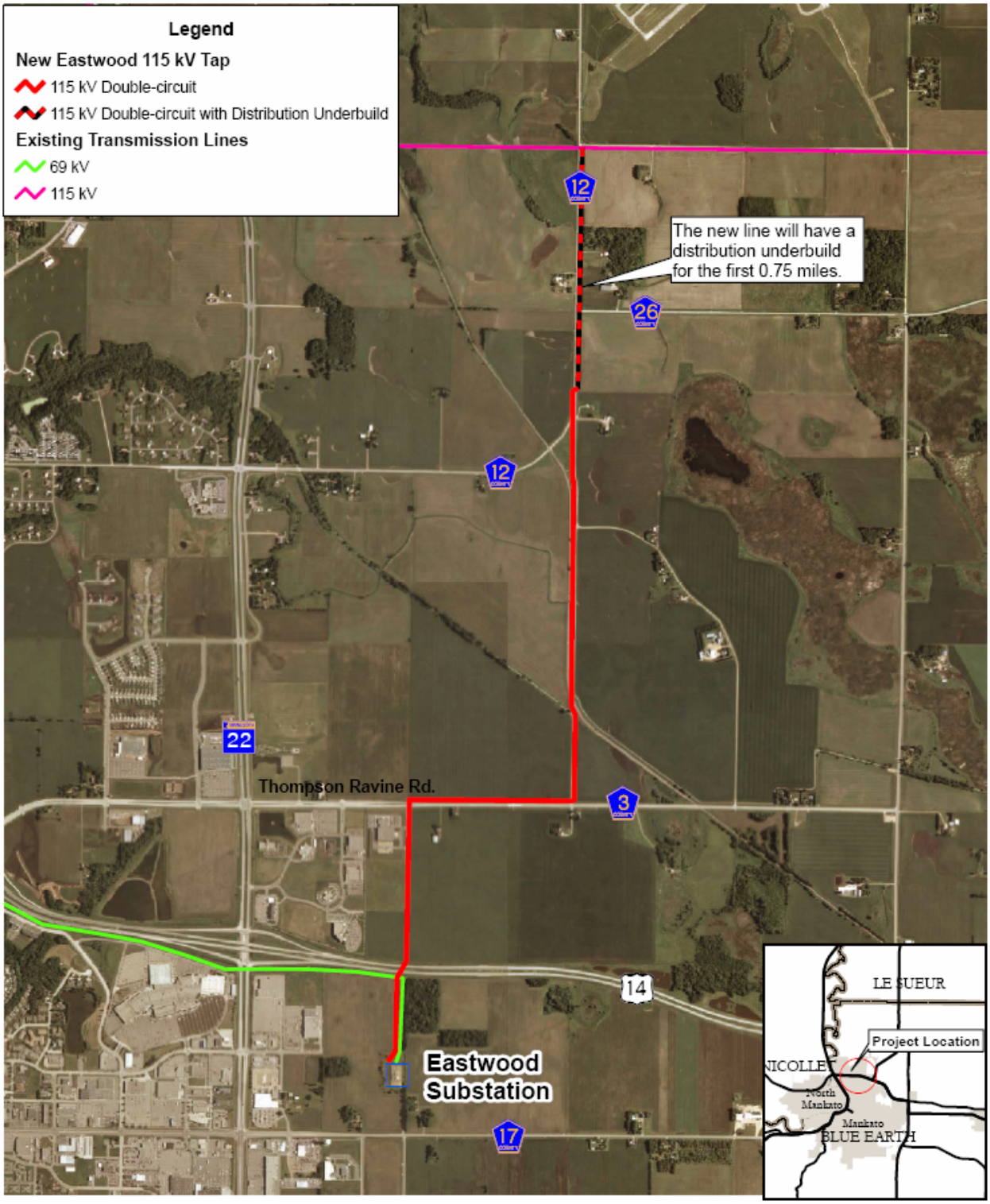

Figure 2. Project Location Map

1.3 Project Purpose

The project is part of a series of transmission projects that will allow the electrical system to support the interconnection of the Mankato Energy Center into the Wilmarth Substation. The Mankato Energy Center is a natural gas and fuel-oil-fired power plant that will be capable of generating approximately 655 MW of electric power. The EQB issued a site permit for the plant on September 16, 2004. The Center is scheduled to be operational by mid-2006.

As part of this series, Xcel Energy is also converting the existing Wilmarth-Eastwood-Rapidan 69 kV transmission line to 115 kV between Wilmarth Substation and Eastwood Substation. On July 18, 2005, the PUC authorized a Minor Alteration permit for that conversion and an upgrade to the Eastwood Substation.

1.4 Project Alternatives

Xcel Energy originally proposed a segment of the line imprecisely, including the entire Northeast quadrant of Section 10 in Mankato Township in its proposed route. This area is within the boundaries of Thompson Ravine Road (County Road 3) on the north, T.H. 14 (State Hwy 60) on the south, the section line on the east and the half section line on the west. This was intended by Xcel Energy to allow for further discussion among interested parties on the final location of the line. As the line could have traversed any space within that area, the application included the entire quadrant as being within the scope of the proposed line.

No other alternatives were suggested by the applicant or any other party, except for expressing preferences for the route on a particular side of the road. Those areas will be addressed as within the scope of the proposed line. The public comments can be reviewed at:

http://energyfacilities.puc.state.mn.us/Docket.html?Id=17001

1.5 Sources of Information

Much of the information contained within this document was provided by the applicant in the "*Xcel Energy Application to the Minnesota Environmental Quality Board for a Route Permit: Eastwood 115 kV/115 kV Transmission Line & Substation Project*." ("Application") First hand information was gathered by site visits along the route. Additional sources of information are listed below:

- Minnesota Pollution Control Agency (http://www.pca.state.mn.us/)
- Minnesota Department of Natural Resources (http://www.dnr.state.mn.us/index.html)
- Minnesota Department of Health (http://www.health.state.mn.us/)
- Minnesota Department of Administration, State Demographic Center (http://www.demography.state.mn.us/)
- EQB Docket No. 05-93-TR-Minnkota (http://www.eqb.state.mn.us/Docket.html?Id=16584)

2.0 Regulatory Framework

The authority for high voltage transmission line permits was transferred from the EQB to the PUC by the Minnesota Legislature on July 1, 2005 (see S.F. 1368). EQB Energy Facility Permitting staff was transferred to the Minnesota Department of Commerce, where they continue to coordinate the routing process through to the PUC final decision.

2.1 PUC Permit Requirement

No person may construct a high voltage transmission line without a route permit from the PUC, and a high voltage transmission line may be constructed only along a route approved by the PUC (Minnesota Statue 116C.57 Subd. 2). A high voltage transmission line is defined as any transmission line capable of operating at a voltage of 100 kV or greater. (Minnesota Statue 116C.52 Subd. 4)

2.2 Environmental Assessment Requirement

The MNDOC is required to prepare an environmental assessment of the project. The environmental assessment contains information on the human and environmental impacts of the proposed route and addresses any mitigating measures of any impacts of the HVTL. According to Minnesota Statues 116C.576 Subd.5, this environmental assessment is the only state environmental review document required to be prepared on the project.

2.3 Scoping Environmental Impacts and Alternative Routes

In accordance with Minnesota Rule 4400.2750 Subp. 2, EFP held a public meeting in Mankato on August 25, 2005. This meeting offered the public the opportunity to learn about the project, to suggest alternative routes and to contribute to the scope of the EA by identifying issues that need to be addressed in the EA. Public comments were accepted until September 9, 2005. Commissioner Glenn Wilson of the Minnesota Department of Commerce issued the Scoping Order for the project on September 21, 2005 (appended to this document). No member of the public raised environmental concerns in their comments or recommended alternatives not already covered in the application. The issues addressed in the EA are based on research by the applicant and by the research and field observations of EFP staff.

2.4 Certificate of Need

No Certificate of Need is required for this project. As it is under 200 kV and under ten miles in length, the project is exempt under Minnesota Statute 216B.2421 Subd. 2 (3).

3.0 Assessment of Impacts and Mitigation

Regardless of the route, there are a number of potential impacts associated with an HVTL that must be taken into account on any project. Minnesota Rule 4400.3150 designates certain factors that must always be considered when examining a high voltage transmission line. These and other factors are addressed below.

3.1 Description of Environmental Setting

The proposed site is located just northeast and east of the city of Mankato in Lime and Mankato Townships, Blue Earth County. The area between the Summit Loon Lake Transmission line and the Eastwood Substation is primarily agricultural. The area to the west is rapidly developing. Several commercial, industrial, and residential developments are being constructed or planned along T.H. 22, County Road 12, and Thompson Ravine Road. The Mankato Airport is directly north of the project area.

3.2 Impacts on Human Settlement

3.2.1 Socioeconomic

According to the 2000 Census race demographics, Blue Earth County is 95 percent white. Lime Township is 98.6 percent white, whereas Mankato Township is 99.6 percent white. Minority groups in the area constitute a very small percentage of the total population. The 2000 Census shows that the primary minority group in Lime Township is "American Indian and Alaska Native," whereas Mankato Township's only minority population is "Asian." The Project area does not contain disproportionately high minority populations or low-income populations. No impacts are anticipated to minority or low-income populations.

Location	Population	Per Capita Income	Percentage of Population Below Poverty Level
Blue Earth County	55,941	$18,712	12.9
Lime Township	1,304	$26,615	2.1
Mankato Township	1,869	$27,189	3.7

Table 2. Population and Income

A maximum of approximately 15 workers will be required by Xcel Energy for transmission line construction and 15 workers for the substation modifications. The transmission crews are expected to spend approximately six weeks constructing the transmission line. During construction, there will be a small positive impact on the community due to the expenditures of the construction crews in the local community.

3.2.2 Displacement

This project will not displace any residential homes or businesses.

3.2.3 Noise

Transmission conductors and transformers at substations produce noise under certain conditions. The level of noise or its loudness depends on conductor conditions, voltage level, and weather conditions. In foggy, damp, or rainy weather conditions, power lines can create a subtle crackling sound due to the small amount of the electricity ionizing the moist air near the wires. During heavy rain the general background noise level is usually greater than the noise from a transmission line. During light rain, dense fog, snow, and other times when there is moisture in the air, the proposed transmission lines will produce audible noise higher than rural background levels but similar to household background levels. During dry weather, audible noise from transmission lines is a nearly imperceptible, sporadic crackling sound.

The Minnesota Pollution Control Agency noise regulations (Minnesota Rule 7030.0050) list various activity categories by Noise Area Classification. The table below identifies the established noise standards for daytime and nighttime by NAC. The standards are expressed as a range of dBA within a one hour period; L_{50} is the dBA that is exceeded 50 percent of the time within an hour, while L_{10} is the dBA that is exceeded ten percent of the time within the hour.

Noise Area Classification	Daytime		Nighttime	
	L_{50}	L_{10}	L_{50}	L_{10}
1	60	65	50	55
2	65	70	65	70
3	75	80	75	80

Table 3. MPCA Noise Standards

Residences fall within NAC 1. There are eight homes along the Eastwood transmission line project. The nearest noise receptor is approximately 200 feet from the proposed 115 kV/115 kV transmission line. The audible noise generated from the transmission line is not expected to exceed the Minnesota noise standards.

Another source of noise associated with transmission lines is an electromagnetic generated noise termed Corona. Corona on transmission line conductors can cause interference with radio waves, primarily with AM radio stations and the video portion of TV signals, depending on the frequency and strength of the radio and television signal. Although radio and television interference sometimes occurs, Xcel Energy will investigate all such problems and corrects those problems caused by Xcel Energy facilities. Xcel Energy does not expect that there will be any impacts from the operation of the new line.

3.2.4 Aesthetics

The 115 kV/115 kV transmission line will stand out against other land use along the route, especially in the north. The transmission line poles will be in contrast to the primarily agricultural land. The area to the west, however, is rapidly developing and includes a mixture of residential, commercial, and industrial land uses. As the line approaches Eastwood Substation, the contrast will be lessened due to that development.

Figure 3. 115 kV Steel Double-circuit Davit Arm Structure

Although the transmission line and structures will be a contrast to surrounding land uses, the proposed route utilizes existing corridors and avoids homes to the greatest extent practicable. Xcel Energy will work with landowners to identify concerns related to the transmission line and aesthetics.

3.2.5 Human Health and Safety

The Project will be designed in compliance with local, state, NESC, and Xcel Energy standards regarding clearance to ground, clearance to crossing utilities, clearance to buildings, strength of materials, and ROW widths. Xcel Energy construction crews and/or contract crews will comply with local, state, NESC, and Xcel Energy standards regarding installation of facilities and standard construction practices. Established Xcel Energy and industry safety procedures will be followed during and after installation of the transmission line. This will include clear signage during all construction activities.

The proposed transmission line will be equipped with protective devices to safeguard the public from the transmission line if an accident occurs, such as a structure or conductor falls to the ground. The protective devices are breakers and relays located where the line connects to the substation. The protective equipment will de-energize the line should such an event occur. In addition, the substation facility will be fenced and access limited to authorized personnel. Proper signage will be posted warning the public of the risk of coming into contact with the energized equipment.

Electric and Magnetic Fields

Electric and magnetic fields (EMF) arise from the flow of electricity and the voltage of a line. The intensity of the electric field is related to the voltage of the line and the intensity of the magnetic field is related to the current flow through the conductors.

Many years of research on the biological effects of electromagnetic fields have been conducted on animals and humans, and no association has been found between exposure to EMF and human disease. While the consensus is that EMF poses no risk to humans, the question of whether exposure to EMF can cause biological responses or even health effects continues to be the subject of medical research and public debate.

In 2002, Minnesota formed an Interagency Working Group to evaluate the body of research and develop policy recommendations to protect the public health from any potential problems resulting from HVTL EMF effects. The Working Group consisted of staff from the Minnesota Department of Health, the Minnesota Department of Commerce, the Minnesota Public Utilities Commission, the Minnesota Pollution Control Agency, and the Minnesota Environmental Quality Board. The MDH coordinated the activities of the Working Group.

In September 2002, the Working Group published its findings in a White Paper on Electric and Magnetic Field (EMF) Policy and Mitigation Options (hereinafter “White Paper”). The Minnesota Department of Health made the following statement in the White Paper:

> "The Minnesota Department of Health concludes that the current body of evidence is insufficient to establish a cause and effect relationship between EMF and adverse health effects. However, as with many other environmental health issues, the possibility of a health risk from EMF cannot be completely dismissed. The uncertainty surrounding EMF health effects presents a difficult context in which to make regulatory decisions. This approach suggests that one should avoid any activity or exposure about which there are questions of safety or health, at least to the extent that an activity can be avoided easily or cheaply."

Additional discussion of EMF can be found in the MDH White Paper and in other environmental reviews prepared by the EQB on proposed transmission lines. See, for example, EQB Dockets 03-64-TR-Xcel (161 kV line in Jackson and Martin Counties), 03-73-TR-Xcel (345 kV line in southwest Minnesota, and 04-81-TR-Air Lake (a 115 kV line in Dakota County). These documents are all available on the PUC Energy Facilities website.

There is no state or federal standard for transmission line electric fields. However, in previous transmission line permits, the EQB has imposed a maximum electric field limit of eight kV per meter measured one meter above the ground. The restriction was designed to prevent serious hazard from shocks when touching large objects like a bus or combine parked under high voltage transmission lines.

Minnesota does not have a standard for magnetic fields. The EQB has recognized in other transmission line proceedings that other states have established standards for magnetic fields, e.g., Florida (150 milligauss limit) and New York (200 milligauss limit).

Xcel Energy has modeled the electric and magnetic fields that might be found with the proposed 115 kV/115 kV transmission line. The results of this modeling are shown below. The maximum electric field expected immediately below the line is 2.52 kV per meter, well within the eight kV per meter allowance. The maximum magnetic field immediately beneath the line at peak conditions is 149 milligauss.

Type	Voltage	Distance to Proposed Centerline								
		-300'	-200'	-100'	-50'	0'	50'	100'	200'	300'
115/115 kV Double-circuit Single Steel Pole Davit Arm	121/121 kV	0.020	0.041	0.083	0.218	2.518	0.225	0.077	0.040	0.020

Table 4. Calculated Electric Fields (kV/m) at One Meter above Ground

Type	Condition	Amps	Distance to Proposed Centerline								
			-300'	-200'	-100'	-50'	0'	50'	100'	200'	300'
115/115 kV Double-circuit, Single Steel Pole Davit Arm	Average	375/800	2.69	5.87	20.96	58.78	133	50.0	18.5	5.4	2.51
	Peak	614/1276	1.99	4.57	18.4	59.32	149	22.4	7.72	2.64	1.32

Table 5. Calculated Magnetic Field (milligauss) at One Meter above Ground

3.3 Impacts on Land-based Economics

3.3.1 Recreation

Recreational opportunities near the site include Eagle Lake, Hodapp Marsh, Sakatah Singing Hills State Trail, and several local city of Mankato parks. Sakatah Singing Hills State Trail is a 39-mile trail that connects Mankato and Faribault and is part of the Mankato trail system. The new transmission line will cross the trail at the junction of the Dakota, Minnesota and Eastern (DM&E) railroad and 589th Avenue.

There are several recreation facilities near the Project, but the construction and operation of the facilities will not directly impact these resources. The new transmission line structures along County Road 12 and 589th Avenue will contrast with the surrounding landscape; however, there will be no direct impacts to the recreational resources in the area. To the extent practicable, Xcel Energy has proposed that the line be located near existing corridors such as county and township roads and railroad corridors. This will minimize the visual impact to the surrounding areas.

3.3.2 Prime Farmland

Approximately 1,421 square feet (0.03 acres) of agricultural land will be permanently impacted by the proposed project. Permanent impacts will occur due to the placement of the transmission line poles. Temporary impacts may include soil compaction and crop damages within the ROW.

To minimize loss of farmland and to ensure reasonable access to the land near the poles, Xcel Energy intends to place the poles approximately five feet from the roadway and highway ROW. When possible, Xcel Energy will attempt to construct the transmission line before crops are planted or following harvest. The Company will compensate landowners for crop damage and soil compaction that occurs as a result of the Project. Soil compaction will be addressed by compensating the farmer to repair the ground or by using contractors to chisel plow the site. Normally, a declining scale of payments is set up over a period of a few years.

3.3.3 Transportation

The Mankato Regional Airport is located northeast of where the new 115 kV/115 kV line will tap the existing Summit-Loon Lake transmission line. Xcel Energy has consulted with the airport engineer to assure there are no conflicts with the airport's requirements. The Mankato Airport Engineer verified that the proposed structure nearest to the existing runway provides approximately 20 feet of clearance from the top to the structure to the bottom of the 7:1 transition airspace surface. This distance meets the appropriate clearances required by the airport. (See the Application, Appendix C.3)

The line will parallel existing roadways and railroad rights-of-way for 77 percent of the line. However, the transmission line will not affect transportation systems except for minor impacts during the construction period.

3.3.4 Mining and Forestry

Lime Township was named after the abundance of limestone outcrops in the area, many of which have been mined. However, the project will not impact any active mining operations. There is no forested land-based industry within the project vicinity. For potential vegetation impacts, see 3.4.5 below.

3.3.5 Economic Development

The area to the west of the project is rapidly being developed, as commerce and industry move eastward from the city of Mankato. Several commercial, industrial, and residential developments are being constructed or planned along T.H. 22, County Road 12, and Thompson Ravine Road. The new line will also cross T.H. 14, which is zoned Transition District.

The alternative segment of the route proposal took this development potential into account. In the original application, the entire Northeast quadrant of Section 10 in Mankato Township was included in the route. This was left undecided in order to accommodate future economic development projects planned for the area. In agreement with the city of Mankato, the final proposal for the line was determined to go along the northernmost and westernmost portions of the area.

3.3.6 Archeological and Historic Resources

The State Historical Preservation Office informs that there are no properties listed on the National or State Registers of Historic Places and no known or suspected archaeological properties in the area that will be affected by the project. (See the Application, Appendix C.2.) No previously unidentified historic properties are likely to be found in the project area. However, if any archeological resource is discovered, construction would wait in that area pending an investigation.

3.4 Impacts on Natural Environment

3.4.1 Air Quality

During project construction, there will be emissions from vehicles and construction equipment and fugitive dust from right-of-way clearing. Temporary air quality impacts caused by the proposed construction-related emissions are expected to occur. Fugitive dust may result from any right-of-way clearing required. The magnitude of these emissions is influenced heavily by weather conditions and the specific construction activity taking place. Exhaust emissions from diesel equipment will vary during construction, but will be minimal and temporary.

The only potential air emissions from a 115 kV transmission line result from corona and are limited. Corona can produce ozone and oxides of nitrogen in the air surrounding the conductor, especially in humid conditions. Corona consists of the ionization of air within a few centimeters immediately surrounding conductors. Ozone is a very reactive form of oxygen and combines readily with other elements and compounds in the atmosphere. Because of its reactivity, it is relatively short-lived. The Project area will meet all federal and state air quality standards.

3.4.2 Water Quality, Soils and Geology

During construction there is the possibility of sediment reaching surface waters as the ground is disturbed by excavation, grading, and construction traffic. The surface water resources that could be affected by the construction of the transmission line are Hodapp Marsh (76W) and Eagle Lake (60P), which are DNR Public Waters and Public Water Wetlands.

Xcel Energy will follow standard erosion control measures identified in the Minnesota Pollution Control Agency's Stormwater Best Management Practices Manual, such as using silt fencing to prevent impacts to adjacent water resources. Once the project is complete it will have no impact on surface water quality.

3.4.3 Groundwater and Wetlands

In practice, Xcel Energy attempts to avoid placing poles in wetlands. If placement of poles in wetlands is necessary, Xcel Energy will minimize impacts by using special construction mats to limit disturbance and compaction. If areas of the wetland are disturbed, Xcel Energy will restore the area to preconstruction contours and will allow the existing seed bank to revegetate the area. Any soil removed from the wetlands will not be placed back into the wetland. However, the line as proposed does not intersect any designated wetlands.

3.4.4 Fish and Wildlife Resources

There is a potential for temporary displacement of wildlife during construction and loss of small amounts of habitat from the Project. Wildlife that inhabits the trees that will be removed for the transmission lines will likely be displaced. Comparable habitat is adjacent to the route, and it is likely that these organisms would only be displaced a short distance.

Raptors, waterfowl and other bird species may also be affected by the construction and placement of the transmission lines. Avian collisions are a possibility after the completion of the transmission line. Waterfowl are typically more susceptible to transmission line collision, especially if the line is placed between agricultural fields that serve as feeding areas, or between wetlands and open water, which serve as resting areas.

Additionally, electrocution of large birds, such as raptors, is a concern related to distribution lines. Electrocution occurs when birds with large wingspans come in contact with either two conductors or a conductor and a grounding device. Xcel Energy transmission line design standards provide adequate spacing to eliminate the risk of raptor electrocution. As such, electrocution should not be a concern related to the proposed Project.

3.4.5 Vegetation

Impacts to trees may occur where the new transmission line parallels County Road 12 and as the line enters the Eastwood Substation. The area of trees that will be impacted by the proposed project due to the routing of these transmission lines is expected to be approximately 0.09 acres (4,050 ft^2). A width of 80 feet will be cleared for the 115 kV transmission line ROW.

A majority of the eastern part of the project is agricultural land. Row crops such as corn and soybean dominate the area. For a discussion on impacts to agriculture, please see Section 3.3.2.

To minimize impacts to trees in the project corridor, Xcel Energy will only remove trees located in the right-of-way for the transmission lines, or that would impact the safe operation of the facility. The groves of trees in the vicinity of the Eastwood Substation will not be affected.

3.5 Rare and Unique Natural Resources

Nine known occurrences of rare species or special communities have been identified within the vicinity of the proposed route, according to the DNR Natural Heritage Database. Identified were Racers, Mucket Mussels, Paddlefish and Bald Eagles. Also identified were Mesic Prairie and Floodplain Forest Silver Maples. However, based on the nature and location of the proposed project, the DNR did not believe any of these known occurrences of rare and unique resources would be affected by the proposed project.

4.0 Feasibility of Alternatives

Since no alternatives to the utility's proposed route have been proposed, no discussion of the feasibility of alternatives is necessary. The following sections address why the conditions discussed are not alternative route proposals.

4.1 Section 10 in Mankato Township

Xcel Energy originally proposed a section of the route as any line within the northeast quadrant of Section 10 in Mankato Township. (See Project Alternatives, 1.4) At the time of the proposal, there were several variables remaining that precluded a final decision on a particular route. Economic development and the possibility of road improvements and extensions in the general area were still fluid concepts at the time. In its Application, Xcel Energy expressed they would work with the pertinent entities to determine the final route proposal within the general area outlined.

Xcel Energy has since finalized their route proposal. The line would run north of Thompson Ravine Road westward from County Road 12. At the mid-section line, one-half mile west, the line would turn south and maintain that heading straight and through Highway 14, continuing on to the Eastwood Substation. This routing takes into consideration the city of Mankato's economic development interests, as well as a planned extension of County Road 12 to the southeast. The selected route also minimizes, to the extent possible, the impact on arable lands.

Since Xcel Energy is now proposing this segment of the route as their final proposal, and since Xcel Energy has cooperated in discussions with development partners and local governments in making this determination, this Assessment does not consider the remainder of the quadrant included as originally proposed as being an alternative route proposal. Therefore, as the remainder of that area has been eliminated from consideration, the feasibility of variant route alignments throughout the area need not be discussed herein.

4.2 County Road 12

Along some portions of the route, and in particular along County Road 12, some persons have commented as to which side of the road they preferred for the transmission line. Commonly in a route permit, a utility is awarded a corridor that gives them flexibility to determine as to which side of a road or highway is preferred for placement. This Assessment has considered both sides of all roads and highways in its discussions of impacts and mitigations.

Preferences as to actual placement on a particular side of the road are not considered alternatives to the proposed route in this discussion, so no separate assessment of feasibility for those conditions is considered herein. However, Xcel has continued to express its interest in working with land owners to minimize and mitigate local impacts.

5.0 Permits and Approvals Required

Permit	Jurisdiction
State of Minnesota Approvals	
Route Permit Application (Alternative Process)	PUC
NPDES Permit	MPCA
Federal Approvals	
Form 7460-1, Notice of Proposed Construction	FAA
Form 7460-2, Part 1, Notice of Actual Construction or Alteration	FAA

Table 6. Federal and State Requirements

No local approvals are required for the Project.

5.1 State Permits Required

The Project requires a Route Permit (Alternative Process), from the Public Utilities Commission. A HVTL cannot be constructed in Minnesota without a route permit approved by the PUC. A route permit under the Alternative Process requires the applicant to be eligible as outlined in Minnesota Rule 4400.2000.

A National Pollutant Discharge Elimination System (NPDES) permit is required for storm-water discharges associated with construction activities disturbing soil equal to or greater than one acre in area. A requirement of the permit is to develop and implement a Storm-Water Pollution Prevention Plan (SWPPP), which includes Best Management Practices (BMP) to minimize discharge of pollutants from the site. This permit will be required since the project work impacts more than one acre.

5.2 Federal Approval Required

A Notice of Proposed Construction and Notice of Actual Construction or Alteration, using Forms 7460-1 and 7460-2, must be submitted to the Federal Aviation Administration since the proposed structures are within 20,000 feet of an airport with a runway greater than 3,200 feet in length, and the object exceeds a slope of 100:1 horizontally.

Appendix: Scoping Decision

In the Matter of a Northern States Power, d/b/a Xcel Energy, Application for a Route Permit for the Eastwood 115 kV/115 kV Transmission Line and Substation Project in Blue Earth County

ENVIRONMENTAL ASSESSMENT SCOPING DECISION

PUC Docket No. E002/TR-05-1192
EQB Docket No. 05-95-TR-Eastwood

The above matter has come before the Commissioner of the Department of Commerce (the Department) for a decision on the Scope of the Environmental Assessment (EA) to be prepared on the proposed HVTL project in Mankato and Lime Townships in Blue Earth County.

The Energy Facilities Permitting (EFP) Unit of the Department held a public meeting on August 25, 2005, in Mankato, Minnesota to discuss the project with the public and to solicit input into the scope of the EA to be prepared. The public was given until September 9, 2005, to submit written comments regarding the scope of the EA.

Having reviewed the matter, and having consulted with the EFP staff, I hereby make the following Scoping Order:

MATTERS TO BE ADDRESSED

The Environmental Assessment will address the following matters:

1.0 INTRODUCTION
- 1.1 Project Description
- 1.2 Project Location
- 1.3 Project Purpose
- 1.4 Project Alternatives
- 1.5 Sources of Information

2.0 REGULATORY FRAMEWORK
- 2.1 PUC Permit Requirement
- 2.2 Environmental Assessment Requirement
- 2.3 Scoping of Environmental Impacts and Alternative Routes
- 2.4 Certificate of Need

3.0 ASSESSMENT OF IMPACTS AND MITIGATION
- 3.1 Description of Environmental Setting
- 3.2 Impacts on Human Settlement
  - 3.2.1 Socioeconomic
  - 3.2.2 Displacement

3.2.3 Noise
3.2.4 Aesthetics
3.2.5 Human Health and Safety

3.3 Impacts on Land-based Economics
3.3.1 Recreation
3.3.2 Prime Farmland
3.3.3 Transportation
3.3.4 Mining and Forestry
3.3.5 Economic Development
3.3.5 Archeological and Historic Resources

3.4 Impacts on Natural Environment
3.4.1 Air Quality
3.4.2. Water Quality, Soils and Geology
3.4.3 Groundwater and Wetlands
3.4.4 Fish and Wildlife Resources
3.4.5 Vegetation

3.5 Rare and Unique Natural Resources

4.0 FEASIBILITY OF ALTERNATIVES

5.0 PERMITS AND APPROVALS REQUIRED

ISSUES OUTSIDE THE SCOPE OF THE EA

The Environment Assessment will not consider the following matters:

1. Whether a different size or type of transmission line should be built.
2. The no-build option.
3. Any alternative sites for the Eastwood Substation

SCHEDULE

The EA shall be completed by October 17, 2005.

Signed this ____ day of _____, 2005

STATE OF MINNESOTA
DEPARTMENT OF COMMERCE

_____
Glenn Wilson, Commissioner