

BEFORE THE MINNESOTA PUBLIC UTILITIES COMMISSION

David Boyd
J. Dennis O'Brien
Phyllis Reha
Thomas Pugh
Betsy Wergin

Chair
Commissioner
Commissioner
Commissioner
Commissioner

In the Matter of the Application of Xcel
Energy for a Route Permit for the Mary
Lake 115 kV Transmission Project

ISSUE DATE: **SEP 17 2008**

DOCKET NO: E-002/TL-07-1365

FINDINGS OF FACT,
CONCLUSIONS OF LAW AND
ORDER ISSUING A ROUTE PERMIT TO
XCEL ENERGY FOR THE
MARY LAKE 115 kV TRANSMISSION
PROJECT

The above-captioned matter came before the Minnesota Public Utilities Commission (Commission) on August 21, 2008, acting on an application by Northern States Power Company, d/b/a Xcel Energy (Xcel Energy or the Company) for a Route Permit to construct a new 115 kilovolt (kV) high voltage transmission line (HVTL) between the Buffalo Power – Maple Lake 69 kV transmission line and the Mary Lake – Dickinson Junction 69 kV transmission line, a total distance of approximately 5 miles.

A public hearing was held on June 9, 2008. The public hearing record closed on June 24, 2008.

STATEMENT OF ISSUE

Should Xcel Energy be issued a Route Permit to construct an approximately 5-mile, 115 kV HVTL between the Buffalo Power – Maple Lake 69 kV transmission line and the Mary Lake – Dickinson Junction 69 kV transmission line?

If so, which route should be approved for the transmission line and what conditions should be imposed?

Based upon all of the proceedings herein, the Commission makes the following:

FINDINGS OF FACT

The Applicant

1. The Applicant is Xcel Energy, a Minnesota investor-owned utility with headquarters in Minneapolis. Xcel Energy provides electricity services to approximately 1.2 million customers and natural gas services to 425,000 residential, commercial and industrial customers. Xcel Energy also provides electricity service to customers in Wisconsin, South Dakota and North Dakota. Xcel Energy will construct, own, and operate the proposed 115 kV transmission line.

The Project

2. Xcel Energy proposes to construct a 115 kV transmission line in Wright County between the Buffalo Power – Maple Lake 69 kV transmission line and the Mary Lake – Dickinson Junction 69 kV transmission line (the “Project”). The permit application, maps, appendices, and other documents were made available to the public through the Commission’s Energy Facility and eDockets websites.¹
3. The Project is intended to improve electric reliability to the Buffalo area by providing additional capacity to the existing Buffalo Power- Maple Lake 69 kV transmission line. After construction of the Project, the Buffalo Power – Maple Lake 69 kV transmission line will have adequate load serving capability to reliably serve the area’s needs in the event of an interruption of service to the Lake Pulaski – Buffalo Power 69 kV transmission line. Xcel Energy anticipates that the Project will address reliability issues related to the transmission system until approximately 2034.²
4. The proposed route begins at a new tap structure along the Buffalo Power – Maple Lake 69 kV transmission line located approximately 240 feet south of the Buffalo Power Substation in Buffalo. From the tap, the Project would run eastward along NE 8th Street/County State Aid Highway (CSAH) 35 for approximately 2 miles to Dague Avenue. The Project would then turn south along Dague Avenue for approximately 2.4 miles to 10th Street SE. At this point the Project would continue south past 10th Street SE, following a property line for approximately 0.5 miles, until turning southwest for approximately 915 feet to meet the existing Wright-Hennepin Cooperative Electric Association distribution line. From this point, Xcel Energy proposes to underbuild the Wright-Hennepin distribution line with the proposed transmission line across Trunk Highway (TH) 55, where the Project will tap the Mary Lake – Dickinson Junction 69 kV Transmission Line at a location no more than 300 feet southeast of the Mary Lake Substation. The Project does not require improvements to any substations. Approximately 90 percent of the proposed route runs parallel to county and township road rights-of-way. The area along the proposed

¹ The Xcel Energy Mary Lake 115 kV Transmission Project information is located on the Commission’s website at: <http://energyfacilities.puc.state.mn.us/Docket.html?Id=19402>

² Exhibit 18 at pp. 1-2

route is a mixture of urban and agricultural land uses. Several distribution lines are present in the area.³

5. The Project would be constructed to 115 kV standards, but would operate at 69 kV until approximately 2014, when it would begin operating at 115 kV.⁴
6. Xcel Energy anticipates using four types of structures for the Project. Structure characteristics are described below and summarized in Table 2 of the Environmental Assessment (Exhibit 18). Photos of the structure types are shown in Figure 4 of Exhibit 18.
 - 6.1. The majority of the route will be constructed using direct-embedded wood or steel single circuit poles with a horizontal line post configuration. In certain areas special structures or concrete foundations may be used to avoid sensitive areas or to accommodate special engineering circumstances, such as poor soil conditions. These structures would be approximately 70 to 95 feet tall, with spans of 275 to 400 feet between structures.
 - 6.2. Portions of the route would use taller structures to allow the existing distribution lines to be placed on the same structures (“underbuilt”) with the new transmission lines. These structures would be wood or steel and be directly embedded in the ground, unless special engineering circumstances indicate the need for a concrete foundation. These structures would be approximately 80 to 95 feet tall, with spans of 200 to 325 feet between structures.
 - 6.3. In situations where the line changes direction, more substantial angle structures are used to provide the necessary support. Xcel Energy anticipates using self-supporting wood or steel angle structures. Locations requiring special structures would be determined once design is complete. These structures would be approximately 70 to 95 feet tall, with spans of 275 to 400 feet between structures.
 - 6.4. The proposed transmission line will not connect into either substation, but will instead tap existing transmission lines directly. These tap structures would be steel structures on concrete foundations. These structures would be approximately 70 to 95 feet tall and be located approximately 240 feet from the Buffalo Power Substation and no more than 300 feet southeast of the Mary Lake Substation.
7. The Project will install three single conductors for the 115 kV line, as well as a shield wire to protect the conductors from lightning. Xcel Energy plans to use 795 aluminum core steel supported conductors for the conductors.⁵
8. For the majority of the route, Xcel Energy requests a route 400 feet wide, 200 feet each side of the centerline of adjacent roads or proposed centerline in cross-country areas. Within the proposed 400-foot route width, Xcel Energy would acquire a much smaller easement for construction, operation, and maintenance of the Project. For the portion of the route between the Maple Lake switch and the Buffalo City limits along

³ Exhibit 18 at p. 22

⁴ Exhibit 18, at p. 2

⁵ Exhibit 18 at page 11

8th Street NE, Xcel Energy requests a route width of 65 feet north from the centerline of 8th Street NE.

9. Right-of-way width depends on conductor blowout and the recommended clearances to obstructions along the proposed route. Xcel Energy anticipates acquiring a right-of-way of 30 - 42.5 feet outside of the existing road right-of-way for portions of the Project adjacent to existing road right-of-way and clear zones and up to 75 feet for portions of the Project not adjacent to existing road right-of-way or clear zones. Xcel Energy would seek a permanent easement from landowners, providing the right to construct, operate, and maintain the transmission line for the full width and length of the right-of-way.⁶

Procedural History

10. On October 19, 2007, Xcel Energy submitted a letter to the Commission providing notice of its intent to submit a Route Permit Application under the Alternative Permitting Process set forth in Minnesota Rules 7849.5500 to 7849.5720.⁷
11. On January 24, 2008, Xcel Energy filed a Route Permit Application for a 115 kV HVTL to be constructed between the Buffalo Power – Maple Lake 69 kV transmission line and the Mary Lake – Dickinson Junction 69 kV transmission line.⁸
12. On January 25, 2008, Xcel Energy filed a corrected version of the landowner list contained in Appendix F of the Route Permit Application.⁹
13. The Commission accepted the Application as complete on February 8, 2008.¹⁰
14. On February 5, 2008, Xcel Energy, or their agents, mailed a Notice of Filing the Route Permit Application to those persons whose name appeared on the Commission's power plant general notification list, local officials and property owners in compliance with Minnesota Rule 7849.5550.¹¹
15. On February 14, 2008, Xcel Energy published a Notice of Filing of Route Permit Application in the *Wright County Journal Press* in compliance with Minnesota Rule 7849.5550 and 7849.5240, subpart 4.¹²

Environmental Assessment

16. On February 20, 2008, OES mailed a Notice of Public Information Meeting to persons on the project contact list in compliance with Minnesota Rules 7849.5260, Subpart 2 and 7849.5570.¹³
17. On February 21, 2008, Xcel Energy, or its agents, published Notice of Public Information Meeting in the *Wright County Journal Press* in compliance with Minnesota Rules 7849.5260, Subpart 2 and 7849.5570.¹⁴

⁶ Exhibit 2, Chapters 4 -5

⁷ Exhibit 1

⁸ Exhibits 2 - 9 and Exhibit 23

⁹ Exhibit 10

¹⁰ Exhibit 13

¹¹ Exhibit 12

¹² Exhibit 12

¹³ Exhibit 14

18. A Public Information and EA Scoping meeting was held on March 11, 2008, at the Bison Creek Event Center in Buffalo, Minnesota, in accordance with Minnesota Rule 7849.5260 and 7849.5570. Approximately 18 people attended the public meeting. EFP staff received comments and questions regarding the Project's affect on property values; aesthetics; concern with electromagnetic fields, particularly the potential for interaction between the Project and implanted medical devices; and the timing of construction for the Project. EFP staff also received several comments expressing a desire to see additional routes evaluated. In particular, there was interest in evaluating a route alternative that followed the Canadian Pacific Railroad. These issues, along with the typical line routing impacts, were incorporated into the EA Scoping Decision and are addressed in the EA prepared for the Project.¹⁵
19. The public comment period on the EA scope closed on March 26, 2008. Six comment letters were received during the scoping comment period concerning the Mary Lake 115 kV Transmission Project.
20. Mr. Patrick Braun submitted two written comments, one at the public information meeting on March 11, 2008, and another e-mail filed on March 12, 2008, expressing support for Xcel Energy's proposed route.¹⁶
21. In comments received on March 20, 2008, Mr. Roger Ledin proposed a route alternative following the Canadian Pacific Railroad between the Mary Lake Substation and Buffalo. This proposal did not indicate a specific route between the railroad and the Buffalo Power Substation. Mr. Ledin's comment also stated his preference for constructing the transmission line underground in the area of the Buffalo Municipal Airport.¹⁷
22. In Comments received on March 21, 2008, Ms. Robin Anderson proposed a route. The route proposed by Ms. Anderson, subsequently referred to as the "Modified Railroad Alternative," parallels both roadways and the Canadian Pacific Railroad between the Maple Lake and Mary Lake Switch locations. This route alternative is described in greater detail at Finding 29. Ms. Anderson also stated her preference that if the line is constructed along Xcel Energy's preferred route, that it be constructed along the existing distribution alignments along 8th Street NE/CSAH 35 and Dague Avenue. In addition to identifying these routes, Ms. Anderson's letter identified issues of the project's effect on property values, the health effects of electromagnetic fields, particularly with respect to implanted pacemakers and defibrillators, and the potential aesthetic impacts of the Project. Ms. Anderson's letter also stated her belief that notification for the public information meeting was not sufficient.¹⁸
23. In comments received on March 26, 2008, John and Cathy Vidmar proposed an alternate route running along the south (west) side of the Canadian Pacific Railroad

¹⁴ Exhibit 14

¹⁵ Exhibit 18 at p. 5

¹⁶ Exhibit 16

¹⁷ Id.

¹⁸ Id.

and then following 6th Avenue NE to the Maple Lake Switch located outside the Buffalo Power Substation.¹⁹

24. In comments received on March 26, 2008, Xcel Energy provided information on routing along Highway 55 or the Canadian Pacific Railroad in response to issues that had been raised at the public information meeting held on March 11, 2008.²⁰ Xcel Energy's concerns with this route alternative were grouped into the following categories:

24.1. Buffalo Municipal Airport: In order to meet the Minnesota Department of Transportation (MnDOT) and Federal Aviation Administration height restrictions, an overhead transmission line would need to have a maximum height of approximately 20 to 40 feet along the railroad. Xcel Energy engineering standards require a minimum ground clearance of 25 feet for 115 kV transmission lines. Xcel Energy believes that the transmission line would need to be placed underground for approximately 1,500 feet to cross the flight approach zone safely. Xcel Energy estimates the additional costs associated with constructing this segment underground would be approximately \$1.7 million, approximately 52 percent of the total estimated Project cost, for approximately six percent of the total Project length.

24.2. Construction and Maintenance Challenges: Xcel Energy believes that the slope of the area around the railroad and the proximity of homes and businesses as the railroad nears Buffalo, would make it difficult to gain access to the transmission line with construction and maintenance equipment. If the structures were located on railroad property, Canadian Pacific would require advance notice of construction and maintenance activities, adding additional levels of coordination. In addition to land use constraints along the railroad, any route along the railroad would require coordination with MnDOT to ensure that poles are placed outside the roadway clear zone.

24.3. Environmental and Land Use Impacts: Xcel Energy believes that a route along the railroad would have greater environmental and land use impacts due to the number of homes located along the railroad, the constraints posed by the proximity of homes and businesses to the railroad, and the presence of a the "H" Eagle Roost Wright County Park Preserve along the railroad.

24.4. Easements: Xcel Energy believes that locating the Project along the railroad would place a majority of the Project within railroad right-of-way, making the Project subject to potential relocation. Xcel Energy believes that private property easements would reduce long-term risks of additional cost of relocation.

25. The EA Scoping Decision was signed by the Director of the Office of Energy Security on April 9, 2008.²¹

¹⁹ Id.

²⁰ Exhibit 15

²¹ Exhibit 17

26. On April 28, 2009, Xcel Energy mailed a *Notice of Additional Routes Under Consideration to the Landowners Adjacent to Potential Routes for the Proposed Xcel Energy, Mary Lake 115 kV Transmission Line Tap Project* to landowners along the Modified Railroad and Calder Avenue alternatives and the proposed route.²²
27. The EA was filed with the Commission and made available on May 22, 2008.²³
28. The EA was prepared in accordance with Minnesota Rule 7849.5700 and contained all of the information required. The EA evaluated Xcel Energy's proposed route, the Modified Railroad Route Alternative proposed by Robin Anderson during the EA scoping period, and the Calder Avenue Route Alternative developed by EFP staff.
29. The Modified Railroad Route Alternative would head south along 6th Avenue NE from the Maple Lake Switch location outside of the Buffalo Power Substation to the Canadian Pacific Railroad. This alternative would then run along the north side of the Canadian Pacific Railroad, crossing to the south side of the tracks at 1st Street NE. This alternative would continue southeast along the railroad to Calder Avenue. At Calder Avenue, this alternative would leave the railroad and continue south along Calder Avenue to 10th Street SE, where it would turn east along 10th Street SE for approximately 0.9 miles to the Mary Lake Switch located east of the Mary Lake Substation.²⁴
30. The Calder Avenue Alternative would follow the same alignment as the first portion of Xcel Energy's proposed route, beginning at the Maple Lake Switch location outside of the Buffalo Power Substation and running eastward along NE 8^{th/} Street to Calder Avenue for approximately one mile. This alternative would then turn south along Calder Avenue NE for approximately 1.8 miles until reaching the Canadian Pacific Railroad Tracks. At this point, this alternative would follow the same alignment as the Modified Railroad Alternative, continuing south for approximately one mile along Calder Avenue SE from the Canadian Pacific railroad tracks to 10th St. SE. This alternative would then turn east along 10th St. SE for approximately 0.9 miles to the Mary Lake Switch located east of the Mary Lake Substation.²⁵
31. Pursuant to Minnesota Rule 7849.5710, the OES published a combined Notice of Availability of the Environmental Assessment and Public Hearing in the *Wright County Journal Press* on May 22, 2008.²⁶
32. On May 23, 2008, the OES mailed a Notice of Public Hearing to those persons on the project mailing list and to those local governmental representatives required to be served with notice in accordance with Minnesota Statute 216E.03 and Minnesota Rule 7849.5710.²⁷

²² Exhibit 24, at Schedule 3

²³ Exhibit 18

²⁴ *Id.*, at pp. 14 - 15

²⁵ *Id.*, at p. 16

²⁶ Exhibit 20

²⁷ Exhibit 19

33. On June 2, 2008, the Notice of Public Hearing and Availability of Environmental Assessment was published in the *EQB Monitor*.²⁸

Public Hearing

34. Administrative Law Judge (ALJ) Manuel Cervantes presided over a public hearing during the evening of June 9, 2008. The public hearing was held at the Buffalo Public Library in Buffalo, Minnesota. The ALJ provided the opportunity for members of the public to air their views regarding the proposed route of the 115 kV HVTL. The comment period closed on June 24, 2008.²⁹
35. Minnesota Office of Energy Security (OES), Energy Facility Permitting project manager Suzanne Steinhauer and Energy Facility Permitting Supervisor Deborah Pile appeared at the Public Hearing on behalf of the OES staff. Pursuant to Minnesota Rule 7849.5710, subpart 3, Ms. Steinhauer provided a presentation describing the Route Permit process, the proposed Project, the EA and introduced documents into the record.³⁰
36. Mr. Darrin Lahr appeared at the Public Hearing on behalf of the Xcel Energy and testified about the Project, the Company's concerns about the Modified Railroad and Calder Avenue alternatives, and other matters related to the Project. Attorneys Catherine Biestek and Lisa Agrimonti, Briggs and Morgan, also appeared on behalf of the Company.³¹ Ms. Agrimonti introduced prefiled written testimony of Darrin Lahr³². Mr. Lahr's testimony contained the Company's evaluation of the proposed route and route alternatives considered in the EA.
37. Eighteen members of the public attended the Public Hearing and signed the hearing roster. All persons who desired to speak were afforded a full opportunity to make a statement on the record.³³
38. The hearing transcript was filed on June 18, 2008.³⁴
39. On July 9, 2008, ALJ Cervantes filed a Summary of Testimony at the Public Hearing.³⁵
40. Oral comments received at the hearing indicated support for both the Xcel Energy Proposed Route and alternate routes. The ALJ report contains a summary of all public comments received at the hearing³⁶. Comments identifying specific concerns with the Project are identified in Findings 41 - 44.

²⁸ Exhibit 21

²⁹ Exhibit 25

³⁰ Exhibit 26 and Exhibit 27

³¹ Id.

³² Exhibit 24

³³ Exhibit 27, at p. 1

³⁴ Exhibit 26

³⁵ Exhibit 27

³⁶ Id. At pp. 5-8

41. Several persons at the hearing questioned why a route following the Canadian Pacific railroad between the Buffalo Power and Mary Lake substations was not evaluated. Ms. Steinhauer responded that the OES did not include this route in its Environmental Assessment because of concerns about the presence of transmission structures in the area of the Buffalo Municipal Airport. Xcel Energy's concerns with a route along the railroad are summarized at Finding 24. Most notably, according to Xcel Energy's analysis, the structure height restrictions in the approach and take-off zones of the airport would require approximately 1,500 feet to be constructed underground at a cost of approximately \$1.7 million over and above Xcel Energy's cost estimate of \$3.3 million for their proposed route. Because of this factor and the availability of other potentially viable route alternatives, including the Modified Railroad Alternative, which would not require underground construction, the OES did not evaluate a route alternative located entirely along the railroad in the Environmental Assessment.³⁷
42. Ms. Judy Weldele, speaking on behalf of the Buffalo Township Board, spoke about concerns with the Dague Avenue portion of Xcel Energy's proposed route. Ms. Weldele noted that Dague Avenue has no shoulders and carries a lot of traffic to the high school. Ms. Weldele expressed the hope that appropriate traffic control be used during construction if this route is selected.³⁸ Ms. Weldele's comments are addressed in Finding 59 and in the route permit at IV.H.4.
43. Mr. Joseph Steffel from the Buffalo Utility Department spoke on behalf of the City of Buffalo. Mr. Steffel corroborated Mr. Lahr's written testimony³⁹ in respect to the City's preference for routes. Mr. Steffel identified Xcel Energy's proposed route as the city's preferred route. The city's preference for Xcel Energy's proposed route is based on a number of factors: Mary Lake (located along the Modified Railroad and Calder Avenue alternative routes) is an environmentally sensitive lake; the city has identified an area immediately south of the Buffalo Power Substation as a gateway area and believes that a HVTL in that area would not be a compatible use; congestion along the Modified Railroad Alternative; and the potential for future development of a new Buffalo Municipal Utility substation along Xcel Energy's proposed route.⁴⁰
44. Ms. Robin Anderson stated her preference that the Project consolidate with the existing distribution lines to the extent possible to reduce visual clutter in the area.⁴¹ Ms. Anderson's comments are addressed in Finding 51 and in the route permit at IV.H.5.
45. Two written comments were received before the close of the comment period on June 24, 2008.
46. On May 30, 2008 Mr. Jim Heberling wrote that bald eagles have been sighted near his home on Calder Avenue and may have a nest near Mary Lake. Mr. Heberling also noted that several neighbors along Calder Avenue raise wildlife like pheasants,

³⁷ Exhibit 26, at pp. 13-14

³⁸ Exhibit 26, at pp. 22 - 25

³⁹ Exhibit 24

⁴⁰ Exhibit 26, at pp. 27 - 31

⁴¹ Exhibit 26, at p. 32 -33

trumpeter swans and ducks. Mr. Heberling stated his concern that a route along Calder Avenue would have an adverse impact on wildlife.⁴² Mr. Heberling's comments are addressed in Findings 68, 69 and 73.

47. In a comment received on June 19, 2008, Mr. Roger Ledin stated his disapproval of the public hearing process and the proposed route. He urged that the entire route of the proposed transmission line follow the railroad between the Mary Lake Substation and the Buffalo Substation. Mr. Ledin stated his belief that Xcel Energy was trying to unnecessarily save money at the expense of property owners affected by the proposed route. Mr. Ledin also stated his dissatisfaction that the notice of the public hearing was provided in the legal section of the newspaper and believed that the hearing should be held again with all property owners notified by mail.⁴³ Mr. Ledin's comments are addressed in Findings 24 and 41.

Potential Impacts to Human Settlement

48. The number of homes potentially affected by the Project is dependent upon the final route approved. For purposes of comparison between the routes, the EA counted the maximum number of homes located within up to 300 feet of the centerline of the roads or the railroad paralleling the route alternatives considered. Up to 63 homes would be located within 300 feet of Xcel Energy's proposed route. Up to 85 homes would be located within 300 feet of the Modified Railroad Alternative. Up to 74 homes would be located within 300 feet of the Calder Avenue Alternative.⁴⁴
49. Neither Xcel Energy's proposed route nor the Calder Avenue Alternative would require displacement of homes or businesses. Along the Modified Railroad Alternative there is one home located on the south or west side of the railroad that appears to be located within the right-of-way that would be required to construct the Project and may require displacement. There are also two commercial structures located on the north side of the railroad that may be within the required right-of-way and may need to be displaced.⁴⁵
50. The Project will create only nominal corona or noise impacts and mitigation measures are not necessary.
51. The Project would introduce a new visual element, wood or steel transmission poles between 70 – 95 feet in height, to existing landscape. Existing distribution poles in the area are wooden poles of 30 – 40 feet in height. In areas where the Project would be on the same side of the road as existing distribution facilities, the Project would "underbuild" the distribution lines, replacing the shorter distribution poles with taller transmission poles carrying both transmission and distribution, but reducing the number of poles in the landscape, unless a distribution facilities owner elects to place its distribution lines underground. See route permit at IV.H.5. Because of the existence of distribution and transmission lines, as well as the roadways and railroad,

⁴² Exhibit 23

⁴³ Exhibit 27

⁴⁴ Exhibit 18, at Table 4

⁴⁵ Exhibit 26, at pp. 79 - 80

the change would be incremental. The Project would also require some tree clearing, which is addressed in Finding 64.

52. Xcel Energy's proposed route and the Calder Avenue Alternative could impact access to Tatanka Elementary School or Phoenix Learning Center, both located along 8th Street NE in Buffalo, during construction. Impacts to school access can be mitigated by scheduling construction at times, such as school holidays, where fewer people would need to access the school.⁴⁶ None of the proposed routes would have a direct effect on Buffalo High School, although traffic generated by the school is discussed in Finding 59 and in condition IV.H. 4 of the permit.
53. All of the routes evaluated pass through areas zoned as agricultural, commercial and residential. All of the routes under consideration also cross portions of Buffalo, Buffalo Township, and Rockford Township. All of the routes also cross areas in Buffalo Township identified by the County as Orderly Annexation Areas.⁴⁷ As the Modified Railroad Alternative approaches the Maple Lake Switch along 6th Avenue NE, it passes just west of an area Buffalo has identified as a "Lifestyle Commercial Development." Buffalo asserts that a 115 kV transmission line in this area would conflict with land use plans in this area.⁴⁸
54. None of the route alternatives evaluated would affect any known archaeological or historic sites.⁴⁹ Xcel Energy has stated its opinion that the proximity of portions of the Modified Railroad and Calder Avenue alternatives to Mary Lake (along Calder Avenue SE between 10th Street SE and TH 55) increase the potential for discovery of archaeological resources in this area.⁵⁰ The State Historic Preservation Office of the Minnesota Historical Society recommends that an archaeological survey along the route be performed prior to construction. The permit, at IV.H.1, requires Xcel Energy to make every effort to avoid impacts to identified archaeological and historic resources when installing the HVTL on the approved route. In the event that an impact would occur, the Applicants will consult with State Historic Preservation Office and invited consulting parties. Where feasible, avoidance of the resource is required. Where not feasible, mitigation for project-related impacts on National Register of Historic Properties (NRHP)-eligible archaeological and historic resources must include an effort to minimize project impacts on the resource.

Potential Impacts to Public Health and Safety

55. The proposed transmission lines will be designed to meet or exceed all requirements of the National Electric Safety Code which is the utility safety standard that applies to all transmission lines. The proposed transmission line will meet the National Electric Reliability Council's reliability standards.
56. The issue of electromagnetic fields (EMF) was discussed in the EA. EMF are present around any electrical device, have been the subject of much discussion regarding potential human health effects. The intensity of the electric field is related to the

⁴⁶ Exhibit 18, at p. 32

⁴⁷ Id. at pp. 32 - 33

⁴⁸ Exhibit 24 at p. 8, Exhibit 26 at pp. 27-28

⁴⁹ Exhibit 18 at pp. 23 – 24, Exhibit 26 at p. 79

⁵⁰ Exhibit 24 at p. 9

voltage of the line and the intensity of the magnetic field is related to the current flow through the conductors. Both magnetic and electric fields decrease in intensity with increasing distance from the source. There is insufficient evidence to demonstrate a causal relationship between EMF exposure and any adverse human health effects. On the basis of the most current information available from the World Health Organization and expert advice of the Minnesota Department of Health, no Minnesota regulations have been established pertaining to magnetic fields from HVTLs.

Potential Impacts to Transportation Resources

57. All three alternatives follow existing roadway for between 55 and 100 percent of their routes. For the most part, portions of the Project located along road ROW would be constructed on easements obtained from private landowners. Depending upon the distance between the edge of road ROW and structures, the easement would be 30 – 42.5 feet wide. Because of the proximity of several structures to road ROW along Calder Avenue just north of TH 55, portions of the Calder Avenue Alternative may need to be constructed within the road ROW, possibly within the ditches located either side of the road. If the transmission structures are located within road ROW, Xcel Energy would bear the cost burden of moving them to accommodate road widening.⁵¹ Xcel Energy has provided testimony that these ditches along Calder Avenue in this area are very wet and may present some construction challenges, although these challenges are surmountable.⁵²
58. All three alternatives cross TH 55. The Minnesota Department of Transportation (MnDOT) plans improvements to the intersection of TH 55 and Wright County Road 134 (Calder Avenue) in the summer of 2008. MnDOT's project would widen both roadways to improve capacity, add medians, turning lanes and a traffic signal to provide safer access to the Buffalo Airport Commercial Park. MnDOT also has long-term plans to expand TH 55 to the east of the existing TH 55 alignment between Annandale and Rockford. There is no budget or approved timeline for the long-term project. Any crossing or parallel installation of the Project along TH 55 would require approval from MnDOT. Poles would need to be placed outside the clear zone. MnDOT's current improvement project at the TH 55 and Calder Avenue intersection constrains the amount of ROW available for pole placement along Calder Avenue to the north of TH 55. The extent and precise location of clear zone along TH 55 in the long-term is somewhat uncertain because MnDOT's plans for re-alignment have not yet been finalized.
59. Traffic levels may be slightly impacted during construction of the Project, with no impacts anticipated during facility operation. Delivery of Project components, such as poles and conductors, may have temporary impacts along certain roadways. Construction crews may use portions of the road shoulder while poles are installed and conductors are strung. The operation of the transmission line will have no impact on traffic patterns or usage. The route permit requires Xcel Energy to cooperate with

⁵¹ Exhibit 18 at pp. 34-35

⁵² Exhibit 26, at p. 17

local units of government on placement of transmission structures in a manner to accommodate planned future road rebuilding and reconstruction plans. The route permit, at condition IV.H.4, also requires Xcel Energy to coordinate with MnDOT, county, township and city road authorities and the school district to develop appropriate signage and traffic management during construction.

60. The Buffalo Municipal Airport is located between County Road 134 (Calder Avenue) and Carling Avenue, north of TH 55 and south of 10th Street NE. The airport has one runway, running north-south. The airport has limitations on land uses and object heights in and surrounding the airport. None of the route alternatives considered in this EA would be located within the airport's safety zone established by MnDOT Division of Aeronautics. The Federal Aviation Administration (FAA) places height restrictions on objects in the runway approach paths. Structures located within the flight approach zones would need to be reviewed by the FAA. Portions of the Modified Railroad and Calder Avenue alternatives in the area of Calder Avenue SE and 10th St. SE may require limits to structure height.⁵³
61. All routes reviewed in the EA must cross the Canadian Pacific Railroad tracks, which would require design approval and coordination of construction timing with the railroad. The Modified Railroad Alternative has a 1.8-mile segment that runs along the railroad. The railroad ROW is estimated to be 50 feet either side of the tracks. Because of the width of the railroad ROW, Xcel Energy anticipates that at least a portion of this segment would need to be constructed within the railroad ROW. The railroad between 1st Street NE and 5th Street South is located along an elevated grade, with steep slopes that present challenges for construction and maintenance. Some private fences may need to be temporarily removed in order to provide access for construction equipment. Although Xcel Energy will not begin detailed design until a route is selected, it is also possible that taller transmission structures may be required along this portion in order to maintain adequate "blowout" distances to ensure safe operation of the line along a railway. Any construction or maintenance along this segment would require advance scheduling coordination with the railroad.⁵⁴

Potential Impacts to Land-based Economics

62. The amount of agricultural land that will be permanently impacted by the Project is essentially the same among all route alternatives, between 7.9 and 10.3 acres in temporary impacts and 0.05 to 0.06 acres in permanent impacts.⁵⁵ Temporary impacts may include soil compaction and crop damage within the transmission line right-of-way. Permanent impacts will occur due to the placement of the transmission line poles. Landowners will be compensated for the use of their land through easement payments. Additionally, to minimize loss of farmland and to ensure reasonable access to the land near the poles, Xcel Energy has stated its intent to place the poles approximately five feet outside of the road ROW for portions of the Project paralleling existing roadway.⁵⁶ When possible, Xcel Energy will attempt to construct

⁵³ Exhibit 18 at pp. 35 and 36 and Figure 5

⁵⁴ Id. at pp. 35 – 36

⁵⁵ Id. at Table 10

⁵⁶ Exhibit 2, at p. 53, Exhibit 26 at pp. 76 – 77

the transmission line before crops are planted or following harvest. Xcel Energy will compensate landowners for crop damage and soil compaction that occur as a result of the Project.⁵⁷

63. The proposed transmission line will not impact active mining or forestry operations.

Potential Impacts to the Natural Environment

64. The amount of tree clearing would depend upon the alignment within the final route approved for the Project. Under a “worst case” scenario, removing all trees within the anticipated right-of-way, Xcel Energy’s proposed route would require removal of up to 5.21 acres of trees, the Modified Railroad Alternative would require removal of up to 6.08 acres, and the Calder Avenue Alternative would require removal of up to 2.71 acres. The majority of clearing along Xcel Energy’s proposed route would be in the large woodlot located on the south side of CSAH 35. Clearing along the Modified Railroad Alternative would be concentrated along the railroad and at the “H” Eagle Roost Park Preserve. Clearing along the Calder Avenue Alternative would be concentrated at the “H” Eagle Roost Park Preserve.⁵⁸ Tree clearing would be minimized by maintaining an alignment near the road. The route permit, at IV.B.4, directs the permittee to minimize tree clearing to the extent possible.

65. There are no Wildlife Management Areas (WMA) along any of the routes evaluated. Xcel Energy’s proposed route would follow bike trails along Dague Avenue and CSAH 35. Depending upon alignment, a route along the Calder Avenue Alternative may cross a portion of the Bentfield-Mills Park, located at the southeast corner of Calder Avenue and 10th Street NE (CSAH 34). The city has identified two parks planned along 8th Street NE.⁵⁹ The primary impact to recreation resources would be tree removal within the “H” Eagle Roost Wright County Preserve, which may be required if either the Modified Railroad Alternative or the Calder Avenue Alternative were selected and is discussed at Finding 64.

66. None of the route alternatives evaluated cross any state or national wilderness areas, state or national parks, or state scientific and natural areas.

67. Construction of the transmission line will result in no disturbances to the bedrock geology beneath the Project route. Soils exposed during construction may be vulnerable to erosion until stabilized. Some compaction of surface soils may result from the use of heavy construction equipment. Xcel Energy will implement best management practices during construction activities to prevent and minimize soil erosion and compaction as stated in the Application and as required by any National Pollutant Discharge Elimination System permit issued by the Minnesota Pollution Control Agency.

68. There is potential for displacement of wildlife during construction of the Project and the loss of small amounts of habitat from the transmission line route. Displacement

⁵⁷ Exhibits 2, 18 at p. 34

⁵⁸ Exhibit 18, at pp. 37-38

⁵⁹ Exhibit 2, at pp. 50 – 51, Exhibit 18 at p. 23, and Exhibit 24 at pp. 8 and 10.

of fauna is anticipated to be temporary in nature. Because no long-term population-level effects are anticipated no mitigation will be required.

69. The construction and placement of the Project may affect raptors, waterfowl and other bird species.
 - 69.1. Avian collisions are a possibility after the completion of the Project in areas where there are agricultural fields that serve as feeding areas, wetlands, or open water. Avian collisions are more likely to occur along the Modified Railroad and Calder Avenue alternative, due to their proximity to Mary Lake along Calder Avenue SE.⁶⁰ The use of swan flight diverters installed along the shield wire has been successful in reducing avian collisions.
 - 69.2. Avian electrocution occurs when birds with large wingspans come into contact with two conductors or a conductor and a grounding wire. The electrocution of large birds, such as raptors, is more commonly associated with distribution lines. Xcel Energy's standard transmission design incorporates adequate spacing of conductors and grounding devices to eliminate the risk of avian electrocution.
70. Impacts to air quality will be minimal, temporary, and associated only with ROW clearing and line construction.
71. Xcel Energy's proposed route crosses one stream. The Modified Railroad and Calder Avenue alternatives both cross two streams. Additionally, a route segment common to both the Modified Railroad and Calder Avenue alternatives is located within several hundred feet of Mary Lake. Construction of the Project will not directly affect surface water resources. However, during construction, there is a possibility of sediment reaching surface waters as the ground is disturbed by excavation, grading and construction traffic. Impacts to water bodies and wetlands can be minimized by using standard erosion control measures and best management practices identified in the Minnesota Pollution Control Agency's *Stormwater Best Practices Manual*. Depending upon the total area of disturbance, a National Pollutant Discharge Elimination System permit from the MPCA and Storm Water Pollution Prevention Plan will be required for the Project. The Project will require a license to cross public waters from the Minnesota Department of Natural Resources. This license will identify construction practices to minimize impacts to surface water.⁶¹ Once the Project is complete it will have no impact on surface water quality.
72. Wetland impacts would vary somewhat depending upon the route selected. Xcel Energy's proposed route would impact approximately 0.55 acres of wetland; the Modified Railroad and Calder Avenue alternatives would each impact approximately 0.35 acres. The route permit, at IV.H.2, identifies wetland avoidance and mitigation techniques to minimize impacts.
73. At the request of Xcel Energy, DNR searched the Minnesota Natural Heritage database for known occurrences of rare species and natural communities within the

⁶⁰ Exhibit 24 (Lahr testimony) at p. 9 and 10

⁶¹ Exhibit 18 at pp. 41 - 42

proposed route. The DNR's search did not identify any known occurrences of rare species or special communities in the Project area. Comments from the DNR identified a Red Shouldered Hawk (as special concern species) nesting location approximately two miles east of Xcel Energy's proposed route, in portions of Sections 25 and 26 of Buffalo Township. DNR comments have indicated a concern with tree clearing along CSAH 35 in the large woodlot located in Section 28 of Buffalo Township, along Xcel Energy's proposed route. Loss or fragmentation of wooded lots may reduce perching opportunities or potential nesting opportunities for the species. DNR has indicated that the wooded area of Wright County's "H" Eagle Roost Park Preserve, located along the Modified Railroad and Calder Avenue alternatives, is probably not large enough to support Red Shouldered Hawk habitat. Tree clearing would be minimized by maintaining an alignment near the road. Xcel Energy has minimized the amount of tree clearing from their initially proposed alignment by avoiding a significant portion of this woodlot by shifting the proposed alignment to the north side of CSAH 35 along the eastern half of the woodlot. Tree clearing would be further minimized by maintaining an alignment near the road along the western portion of the woodlot. The route permit, at IV.B.4, directs the permittee to minimize tree clearing to the extent possible. The route permit, at IV.B.7, also directs Xcel Energy to work with the DNR to restore and maintain the right-of-way to provide useful habitat and minimize habitat segmentation.

Project Cost

74. In its Application, Xcel Energy estimated that the Project will cost approximately \$3.3 million. Based on a cost per mile calculation, excluding any costs associated with displacement, right-of-way acquisitions, or special construction techniques that may be required along route alternatives, Xcel Energy estimates a cost of \$2.7 million for the Modified Railroad Alternative and \$3.1 million for the Calder Avenue Alternative.⁶²

Summary of Human and Environmental Impacts and Commitment of Resources

75. With regard to constructability, the Modified Railroad Alternative and Calder Avenue Alternative both have areas where there are significant constraints on construction. Constraints applicable to the Modified Railroad are identified in Findings 49, 60, 61 and 69.1. Constraints applicable to the Calder Avenue Alternative are identified in Findings 57, 58, 60 and 69.

76. All routes analyzed in the EA have human and environmental impacts, some of which are unavoidable if the Project is permitted and built. None of the routes evaluated is expected to cause an irreversible or irretrievable commitment of resources.

Applicable Statutory Conditions

77. Minnesota Statute 216B.243, subd. 2, states that no large energy facility shall be sited or constructed in Minnesota without the issuance of a Certificate of Need (CON) by

⁶² Exhibit 2 at p. 10 and Exhibit 24 at pp. 13 – 14

the Commission. Minnesota Statute 216B.2421, subd. 2(3) defines a “large energy facility” as any high voltage transmission line with a capacity of 100 kV or more with more than ten miles of length or that crosses a state line. Because the proposed Project is less than 10 miles in length, no CON is required.

78. The Project is eligible for the Alternative Routing Process of the Power Plant Siting Act, Minnesota Statute 216E.04 and Minnesota Rule 7849.5500.
79. Minnesota Statute 216E.03, subdivision 7 and Minnesota Rules 7849.5910 provide considerations in designating sites and routes and determining whether to issue a permit for a large electric power generating plant or a high voltage transmission line.
80. Based on the Findings of Fact, the Commission makes the following:

CONCLUSIONS OF LAW

1. Any of the foregoing Findings more properly designated as Conclusions are hereby adopted as such.
2. The Commission has jurisdiction over the subject matter of this proceeding pursuant to Minnesota Statute 216E.03, subdivision 2.
3. The Project qualifies for review under the Alternative Review Process of Minnesota Statute 216E.04 and Minnesota Rule 7849.5510.
4. The Applicant, the OES and the Commission have complied with all procedural requirements required by law.
5. The OES has completed an Environmental Assessment on this Project as required by Minnesota Statute 216E.04, subdivision 5, Minnesota Rule 7849.5700.
6. The Commission has considered all the pertinent factors relative to its determination of whether a Route Permit should be approved as required by Minnesota Statute 216E.03, subdivision 7 and Minnesota Rule 7849.5910.
7. The conditions included in the Route Permit are reasonable and appropriate.

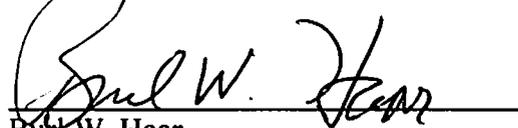
Based on the Findings of Fact and Conclusions contained herein and the entire record of this proceeding, the Commission hereby makes the following:

ORDER

A Route Permit is hereby issued to Xcel Energy to construct approximately 5 miles of 115 kilovolt (kV) transmission line between the Buffalo Power – Maple Lake 69 kV transmission line and the Mary Lake – Dickinson Junction 69 kV transmission line in Wright County, Minnesota. The addition of a switch structure to the Buffalo Power – Maple Lake 69 kV transmission line at a location approximately 240 feet south of the Buffalo Power Substation in Buffalo and another switch structure to the Mary Lake – Dickinson Junction 69 kV Transmission Line at a location no more than 300 feet southeast of the Mary Lake Substation is also authorized. For the portion of the route between the Maple Lake switch and the Buffalo City limits along 8th Street NE, a route width of 65 feet north from the centerline of 8th Street is approved. A route width of 200 feet on either side of the centerline of adjacent roads (400 foot total width) or the proposed centerline in cross-country areas is approved for the remainder of the route. The approved route shall follow the road centerlines as described in Xcel Energy's proposed route.

The Route Permit is hereby issued in the form attached hereto, with a map showing the approved route.

BY ORDER OF THE COMMISSION

A handwritten signature in black ink, appearing to read "Burt W. Haar", is written over a horizontal line.

Burt W. Haar,
Executive Secretary

**In the Matter of the Application for a
Route Permit for the Mary Lake
115kV High Voltage Transmission
Line**

Docket No. E002/TL-07-1365

| DOC Exhibit No. | Exhibit | Date | eDockets Document Number |
|------------------------|---|------------------|---------------------------------|
| 1 | Notice of Intent to File Application Under the Alternative Permitting Process | October 19, 2007 | 4818680 |
| 2 | Route Permit Application | January 24, 2008 | 4905335 |
| 3 | Route Permit Application Appendix A | January 24, 2008 | 4804198 |
| 4 | Route Permit Application Appendix B | January 24, 2008 | 4905337 |
| 5 | Route Permit Application Appendix C1 | January 24, 2008 | 4905338 |
| 6 | Route Permit Application Appendix C2 | January 24, 2008 | 4905372 |
| 7 | Route Permit Application Appendix D | January 24, 2008 | 4905373 |
| 8 | Route Permit Application Appendix E | January 24, 2008 | 4905374 |
| 9 | Route Permit Application Appendix F | January 24, 2008 | 4905375 |
| 10 | Route Permit Application Appendix F (Revised) | January 25, 2008 | 4907648 |
| 11 | Department of Commerce Energy Facilities Permitting Staff Comments and Recommendations to the Commission on Completeness of the Application | January 30, 2008 | 4912875 |

| DOC Exhibit No. | Exhibit | Date | eDockets Document Number |
|------------------------|--|-------------------|---------------------------------|
| 12 | Notice of filing of Route Permit Application – Affidavits of Service and Publication | February 27, 2008 | 4976342 |
| 13 | Order Accepting Application | February 8, 2008 | 4931500 |
| 14 | Notice of Application Acceptance, Public Information and Scoping Meeting – Affidavits of Publication and Service | February 20, 2008 | 5259905 |
| 15 | Xcel Energy Comments pertaining to Environmental Assessment Scope | March 26, 2008 | 5176328 |
| 16 | Public Comments Pertaining To Environmental Assessment Scope | March 26, 2008 | 5259904 |
| 17 | Environmental Assessment Scoping Decision | April 9, 2008 | 5099349 |
| 18 | Environmental Assessment | May 22, 2008 | 5227405 |
| 19 | Notice of Public Hearing and Availability of Environmental Assessment – Affidavit of Service | May 22, 2008 | 5228217 |
| 20 | Notice of Public Hearing and Availability of Environmental Assessment – Affidavit of Publication | May 22, 2008 | 5259903 |
| 21 | Notice of Public Hearing and Availability of Environmental Assessment (<i>EQB Monitor</i>) | June 2, 2008 | 5464524 |
| 22 | Route Permit Application: Appendix G | January 24, 2008 | 4905376 |
| 23 | Comments of Mr. Jim Heberling | June 9, 2008 | 5423572 |
| 24 | Prefiled Testimony of Darrin Lahr | June 5, 2008 | 5266605 |
| 25 | Map Showing Route Alternatives Evaluated in Environmental Assessment | June 9, 2008 | 5437270 |

| DOC Exhibit No. | Exhibit | Date | eDockets Document Number |
|------------------------|------------------------------|---------------|---------------------------------|
| 26 | Transcript of Public Hearing | June 18, 2008 | Available upon request |
| 27 | Comments of Mr. Roger Ledin | June 19, 2008 | 5423570 |
| 28 | ALJ Summary Report | July 8, 2008 | 5423571 |

MINNESOTA PUBLIC UTILITIES COMMISSION

**ROUTE PERMIT FOR CONSTRUCTION OF A HIGH VOLTAGE
TRANSMISSION LINE**

**IN
WRIGHT COUNTY, MINNESOTA**

**ISSUED TO
NORTHERN STATES POWER COMPANY d/b/a XCEL ENERGY**

DOCKET No. E-002/TL-07-1365

In accordance with the requirements of Minnesota Statutes Chapter 216E and Minnesota Rules Chapter 7849, this Route Permit is hereby issued to:

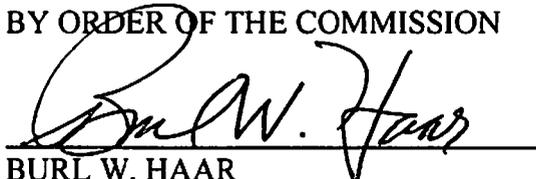
Northern States Power Company d/b/a Xcel Energy

Northern States Power Company, d/b/a Xcel Energy (hereinafter referred to as Xcel Energy), is authorized by this route permit to construct a new 115 kilovolt (kV) high voltage transmission line between a switch to be located along the Buffalo Power – Maple Lake 69 kV transmission line at a point approximately 240 feet south of the Buffalo Power Substation in Buffalo and a switch structure to be located on the Mary Lake – Dickinson Junction 69 kV Transmission Line at a point no more than approximately 300 feet southeast of the Mary Lake Substation, a total distance of approximately 5 miles.

The transmission line shall be built within the route identified in this permit and as portrayed on the attached official route map, and in compliance with the conditions specified in this permit.

Dated: Sept. 17, 2008

BY ORDER OF THE COMMISSION



BURL W. HAAR
Executive Secretary

(S E A L)

This document can be made available in alternative formats (i.e., large print or audio tape) by calling 651-201-2202 (Voice), 651-297-1200 (TTY).

I. ROUTE PERMIT

The Minnesota Public Utilities Commission (Commission) hereby issues this route permit to Xcel Energy (Permittee) pursuant to Minnesota Statutes Chapter 216E and Minnesota Rules Chapter 7849. This permit authorizes Xcel Energy to construct approximately 5 miles of 115 kilovolt (kV) high voltage transmission line (HVTL) and install switch structures outside the Buffalo Power Substation and the Mary Lake Substation to accommodate the new 115 kV transmission line.

II. PROJECT DESCRIPTION

Xcel Energy is authorized to build an approximately 5-mile, 115 kV transmission line in Wright County, Minnesota. Xcel Energy, or their designee, is also authorized to add a switch structure to the Buffalo Power – Maple Lake 69 kV transmission line at a location approximately 240 feet south of the Buffalo Power Substation in Buffalo and another switch structure to the Mary Lake – Dickinson Junction 69 kV Transmission Line at a location no more than 300 feet southeast of the Mary Lake Substation.

The transmission line authorized by this permit will utilize 795 aluminum conductor steel supported (ACSS) conductors for the line. Xcel Energy is authorized to use wood or steel, single circuit transmission line structures with horizontal line post construction designed to carry 115 kV conductor throughout the approved route. In locations where the transmission line will be consolidated with existing distribution lines, Xcel Energy is authorized to use wood or steel underbuild structures with horizontal line post construction designed to carry 115 kV and distribution conductor on the same structure.

Specialty transmission line structures including, but not limited to, steel or laminated wood post structures on concrete foundations are authorized for long spans, road or waterway crossings, and when circumstances require.

III. DESIGNATED ROUTE

The route designated by the Commission in this permit comprises the segments as described in detail below, as analyzed in the Environmental Assessment, and shown on the Official Route Map attached to this permit.

Description of Route (See attached map)

Starting at a new switch structure along the Buffalo Power – Maple Lake 69 kV transmission line located approximately 240 feet south of the Buffalo Power Substation in Buffalo, the transmission line route would run east along NE 8th Street/County State Aid Highway (CSAH) 35 for approximately two miles to Dague Avenue. The route would then turn south along Dague Avenue for approximately 2.4 miles to CSAH 33. The route would continue south past CSAH 33, following a property line for approximately 0.5 miles, until turning southwest for approximately 915 feet to meet the existing Wright-Hennepin Cooperative Electric Association distribution line. The route would cross Trunk Highway (TH) 55, terminating at a switch structure installed on the Mary Lake – Dickinson Junction 69 kV Transmission Line at a point no more than 300 feet

southeast of the Mary Lake Substation. The Project does not require improvements to any substations.

For the portion of the route between the Maple Lake switch and the Buffalo municipal boundary along 8th Street NE, a route width of 65 feet north from the centerline of 8th Street NE is approved. A route width of 200 feet on either side of the centerline of adjacent roads (400 foot total width) or the proposed centerline in cross-country areas is approved for the remainder of the route. This width is provided to give Xcel Energy the flexibility to adjust the specific alignment to accommodate requests by individual landowners to avoid certain areas, allow enough adaptability to deal with unknown conditions, and minimize the impacts of construction of the transmission line on those criteria contained in Minn. Rule 7849.5910.

Xcel Energy has identified an alignment, shown in the attached official route map, within the approved route that minimizes the potential impacts to the criteria identified in Minn. Rule 7849.5910. The proposed alignment was evaluated by OES staff in the Environmental Assessment. As such this permit anticipates that the actual line placement will generally conform to this proposed alignment unless changes are requested by individual landowners or unforeseen conditions are encountered. Any alignment modifications shall have the same or fewer impacts relative to the criteria in 7849.5910 as the alignment noted in this permit.

The approved right-of-way width for which the applicant may obtain an easement is 30 to 42.5 feet where the route is immediately adjacent to existing road right-of-way or clear zones, and up to 75 feet where the route is not immediately adjacent to existing road right-of-way or clear zones.

The proposed transmission lines will be designed to meet or surpass all relevant local and state codes, and North American Electric Reliability Council (NERC) and Xcel Energy standards. Appropriate standards will be met for construction and installation, and all applicable safety procedures will be followed during and after installation.

IV. PERMIT CONDITIONS

The Permittee shall comply with the following conditions during construction of the transmission line and associated facilities and the life of this permit.

A. Plan and Profile. At least 14 calendar days before right-of-way preparation for construction begins, the Permittee shall provide the Commission with a plan and profile of the right-of-way and the specifications and drawings for right-of-way preparation, construction, cleanup, and restoration for the transmission line. The Permittee may not commence construction until the 14 days has expired or until the Commission has advised the Permittee in writing that it has completed its review of the documents and determined that the planned construction is consistent with this permit. If the Permittee intends to make any significant changes in its plan and profile or the specifications and drawings after submission to the Commission, the Permittee shall notify the Commission

at least five days before implementing the changes. No changes shall be made that would be in violation of any of the terms of this permit.

B. Construction Practices.

- 1. Application.** The Permittee shall follow those specific construction practices and material specifications described in the Xcel Energy Application to the Commission for a route permit, dated January 24, 2008, and as described in the Environmental Assessment unless this permit establishes a different requirement, in which case this permit shall prevail.
- 2. Field Representative.** At least 10 days prior to commencing construction, the Permittee shall advise the Commission in writing of the person or persons designated to be the field representative for the Permittee with the responsibility to oversee compliance with the conditions of this Permit during construction. The field representative's address, phone number, and emergency phone number shall be provided to the Commission and shall be made available to affected landowners, residents, public officials and other interested persons. The Permittee may change its field representative at any time upon written notice to the Commission.
- 3. Cleanup.** All waste and scrap that is the product of construction shall be removed from the area and properly disposed of upon completion of each task. Personal litter, including bottles, cans, and paper from construction activities shall be removed on a daily basis.
- 4. Vegetation Removal.** The Permittee shall minimize the number of trees to be removed in selecting the right-of-way (ROW). As part of construction, low growing brush or tree species are allowable at the outer limits of the easement area. To the extent practical, low growing vegetation that will not pose a threat to the transmission facility or impede construction should remain in the easement area.
- 5. Erosion Control.** The Permittee shall implement reasonable measures to minimize runoff during construction and shall plant or seed non-agricultural areas that were disturbed where structures are installed.
- 6. Temporary Work Space.** The Permittee shall limit temporary easements to special construction access needs and additional staging or lay-down areas required outside of the authorized ROW.
- 7. Restoration.** The Permittee shall restore the ROW, temporary work spaces, access roads, abandoned ROW, and other private lands affected by construction of the transmission line. Restoration within the ROW must be compatible with the safe operation, maintenance, and inspection of the transmission line.

Xcel Energy shall work with landowners, the DNR, and local wildlife management programs to restore and maintain the right-of-way to provide useful and functional habitat for plants, nesting birds, small animals and migrating animals and to minimize habitat fragmentation in a manner consistent with inspection and safe maintenance of the right-of-way.

Within 60 days after completion of all restoration activities, the Permittee shall advise the Commission in writing of the completion of such activities.

8. Notice of Permit. The Permittee shall inform all employees, contractors, and other persons involved in the construction of the transmission line of the terms and conditions of this permit.

C. Periodic Status Reports. Upon request, the Permittee shall report to the Commission on progress regarding finalization of the route, design of structures, and construction of the transmission line. The Permittee need not report more frequently than quarterly.

D. Complaint Procedure. Prior to the start of construction, the Permittee shall submit to the Commission the company's procedures to be used to receive and respond to complaints. The procedures shall be in accordance with the requirements set forth in the complaint procedures attached to this permit.

E. Notification to Landowners. The Permittee shall provide all affected landowners with a copy of this permit at the time of the first contact with the landowners after issuance of this permit. Xcel Energy shall contact landowners prior to entering the property or conducting maintenance along the route and avoid maintenance practices, particularly the use of fertilizer or pesticides, inconsistent with the landowner's or tenant's use of the land.

Xcel Energy shall work with landowners to locate the HVTL on their property to minimize the loss of agricultural land, forest, and wetlands, with due regard for proximity to homes and property lines.

F. Completion of Construction.

1. Notification to Commission. At least three days before the line is to be placed into service, the Permittee shall notify the Commission of the date on which the line will be placed into service and the date on which construction was complete.

2. As-Builts. Upon request of the Commission, the Permittee shall submit copies of all the final as-built plans and specifications developed during the project.

3. GPS Data. Within 60 days after completion of construction, the Permittee shall submit to the Commission, in the format requested by the Commission, geo-

spatial information (GIS compatible maps, GPS coordinates, etc.) for all above ground structures associated with the transmission lines, each switch, and each substation connected.

G. Electrical Performance Standards.

- 1. Grounding.** The Permittee shall design, construct, and operate the transmission line in such a manner that the maximum induced steady-state short-circuit current shall be limited to five milliamperes alternating current between the ground and any non-stationary object within the ROW, including but not limited to large motor vehicles and agricultural equipment. All fixed metallic objects on or off the ROW, except electric fences that parallel or cross the right-of-way, shall be grounded to the extent necessary to limit the induced short circuit current between ground and the object so as not to exceed one milliamperere under steady state conditions of the transmission line and to comply with the ground fault conditions specified in the National Electric Safety Code.
- 2. Electric Field.** The transmission line shall be designed, constructed, and operated in such a manner that the electric field measured one meter above ground level immediately below the transmission line shall not exceed 8.0 kV/m.
- 3. Interference with Communication Devices.** If interference with radio or television, satellite or other communication devices is caused by the presence or operation of the transmission line, the Permittee shall take whatever action is prudently feasible to restore or provide reception equivalent to reception levels in the immediate area just prior to the construction of the line.

H. Special Conditions

- 1. Archaeological and Historic Resources.** The Permittee shall make every effort to avoid impacts to identified archaeological and historic resources when installing the HVTL on the approved route. In the event that an impact would occur, the Permittee will consult with State Historic Preservation Office and invited consulting parties. Where feasible, avoidance of the resource is required. Where not feasible, mitigation for project-related impacts on National Register of Historic Properties (NRHP)-eligible archaeological and historic resources must include an effort to minimize project impacts on the resource.
- 2. Wetlands/Water Resources.** Wetland impact avoidance measures that shall be implemented during design and construction of the transmission line will include spacing and placing the power poles at variable distances to span and avoid wetlands. Unavoidable wetland impacts as a result of the placement of poles shall be limited to the immediate area around the poles. To minimize impacts, construction in wetland areas shall occur in the winter when possible. If necessary, wooden or composite mats will be used to protect wetland vegetation. All requirements of the United States Army Corps of Engineers (wetlands under federal jurisdiction), Minnesota Department of Natural Resources (Public

Waters/Wetlands), and local government units (wetlands under the jurisdiction of the Minnesota Wetland Conservation Act) shall be met.

Impacts to floodplains, in particular the placement of power pole structures, shall be avoided to the maximum extent possible by placing these structures above the floodplain contours outside of the designated floodplain, and by spanning the floodplain with the transmission line.

If construction activities will result in the disturbance of one acre or more of soils, a National Pollutant Discharge Elimination System stormwater permit will be required. Erosion control measures and Best Management Practices shall be followed during these activities.

3. Accommodation of Existing and Planned Infrastructure. The Permittee is required to work with the cities, townships, the county and Minnesota Department of Transportation along the route to accommodate their concerns regarding drain tiles, pole depth and placement in relationship to existing roads and road expansion plans.

4. Traffic Management. The Permittee shall comply with all applicable city, township and county road authorities, the Minnesota Department of Transportation and the school district traffic management standards and policies during construction. The Permittee shall provide written notice of construction to applicable city, township and county road authorities, the Minnesota Department of Transportation and the school district. The notice will provide construction dates and information about traffic management.

5. Consolidation of Distribution Infrastructure. The Permittee shall consolidate the permitted line with existing electric distribution lines where the permitted line is constructed on the same side of the road as an existing electric distribution line. In the event that the owner of the distribution facility instead elects to place the distribution underground, the Permittee shall provide a written statement from the owner of the distribution facility stating this fact to the Commission at the time that the Plan and Profile is filed with the Commission.

I. Other Requirements.

1. Applicable Codes. The Permittee shall comply with applicable North American Electric Reliability Council construction standards and requirements of the National Electric Safety Code including clearances to ground, clearance to crossing utilities, clearance to buildings, ROW widths, erecting power poles, and stringing of transmission line conductors.

2. Other Permits. The Permittee shall comply with all applicable state rules and statutes. The Permittee shall obtain all required local, state and federal

permits for the project and comply with the conditions of these permits. A list of the required permits is included in the permit application and the environmental assessment. The Permittee shall submit a copy of such permits to the Commission upon request.

3. **Pre-emption.** Pursuant to Minnesota Statutes 216E.10, subdivisions 1 and 2, this route permit shall be the sole route approval required to be obtained by the Permittee and this permit shall supersede and preempt all zoning, building, or land use rules, regulations, or ordinances promulgated by regional, county, local and special purpose government.

J. Delay in Construction. If the Permittee have not commenced construction or improvement of the route within four years after the date of issuance of this permit, the Commission shall consider suspension of the permit in accordance with Minnesota Rule 7849.5970.

V. PERMIT AMENDMENT

The permit conditions in Section IV may be amended at any time by the Commission. Any person may request an amendment of the conditions of this permit by submitting a request to the Commission in writing describing the amendment sought and the reasons for the amendment. The Commission will mail notice of receipt of the request to the Permittee. The Commission may amend the conditions after affording the Permittee and interested persons such process as is required.

VI. TRANSFER OF PERMIT

The Permittee may request at any time that the Commission transfer this permit to another person or entity. The Permittee shall provide the name and description of the person or entity to whom the permit is requested to be transferred, the reasons for the transfer, a description of the facilities affected, and the proposed effective date of the transfer. The person to whom the permit is to be transferred shall provide the Commission with such information as the Commission shall require in determining whether the new Permittee can comply with the conditions of the permit. The Commission may authorize transfer of the permit after affording the Permittee, the new Permittee, and interested persons such process as is required.

VII. REVOCATION OR SUSPENSION OF THE PERMIT

The Commission may initiate action to revoke or suspend this permit at any time. The Commission shall act in accordance with the requirements of Minnesota Rules part 7849.6010 to revoke or suspend the permit.

**PUBLIC UTILITIES COMMISSION
COMPLAINT REPORT PROCEDURES FOR
HIGH VOLTAGE TRANSMISSION LINES**

1. Purpose

To establish a uniform and timely method of reporting complaints received by the permittee concerning the permit conditions for site preparation, construction, cleanup and restoration, special conditions, other requirements, and resolution of such complaints.

2. Scope

This reporting plan encompasses complaint report procedures and frequency.

3. Applicability

The procedures shall be used for all complaints received by the permittee.

4. Definitions

Complaint – A statement presented by a person expressing dissatisfaction, resentment, or discontent as a direct result of the high voltage transmission line and associated facilities. Complaints do not include requests, inquiries, questions or general comments.

Telephone Complaint – A person presenting a complaint by telephone shall indicate whether the complaint relates to (1) a substantive routing permit matter, (2) a high voltage transmission line location matter, or (3) a compensation matter. All callers must provide the following information when presenting a complaint by telephone: (1) name; (2) date and time of call; (3) phone number; (4) email address (if available); (5) home address; (6) parcel number.

Substantial Complaint – Written complaints alleging a violation of a specific route permit condition that, if substantiated, could result in permit modification or suspension pursuant to the applicable regulations.

Person – An individual, partnership, joint venture, private or public corporation, association, firm, public service company, cooperative, political subdivision, municipal corporation, government agency, public utility district, or any other entity, public or private, however organized.

5. Responsibilities

Everyone involved with any phase of the high voltage transmission line is responsible to ensure expeditious and equitable resolution of all complaints. It is therefore necessary to establish a uniform method for documenting and handling complaints related to this high voltage transmission line project. The following procedures will satisfy this requirement:

- A. The permittee shall document all complaints by maintaining a record of all applicable information concerning the complaint, including the following:
 - 1. Name of the permittee and project.
 - 2. Name of complainant, address and phone number.
 - 3. Precise property description or tract numbers (where applicable).
 - 4. Nature of complaint.
 - 5. Response given.
 - 6. Name of person receiving complaint and date of receipt.
 - 7. Name of person reporting complaint to the Commission and phone number.
 - 8. Final disposition and date.
- B. The permittee shall assign an individual to summarize complaints for transmittal to the Commission.

6. Requirements

The permittee shall report all complaints to the Commission according to the following schedule:

Immediate Reports – All substantial complaints shall be reported to the Commission by phone or by e-mail the same day received or on the following working day for complaints received after working hours. Such reports are to be directed to high voltage transmission line permit compliance at the following: DOC.energypermitcompliance@state.mn.us or 1-800-657-3794. Voice messages are acceptable.

Monthly Reports – By the 15th of each month, a summary of all complaints, including substantial complaints received or resolved during the proceeding month. Such summaries shall be sent to Dr. Burl W. Haar, Executive Secretary, Minnesota Public Utilities Commission, Metro Square Building, 121 7th Place East, Suite 350, St. Paul, MN 55101-2147. A copy of each complaint shall be sent to Permit Compliance, Minnesota Department of Commerce, 85 7th Place East, Suite 500, St. Paul, MN 55101-2198.

Unresolved Complaints – The permittee shall submit all unresolved complaints to the Commission for resolution by the Commission, where appropriate, no later than 45 days after the date of the submission.

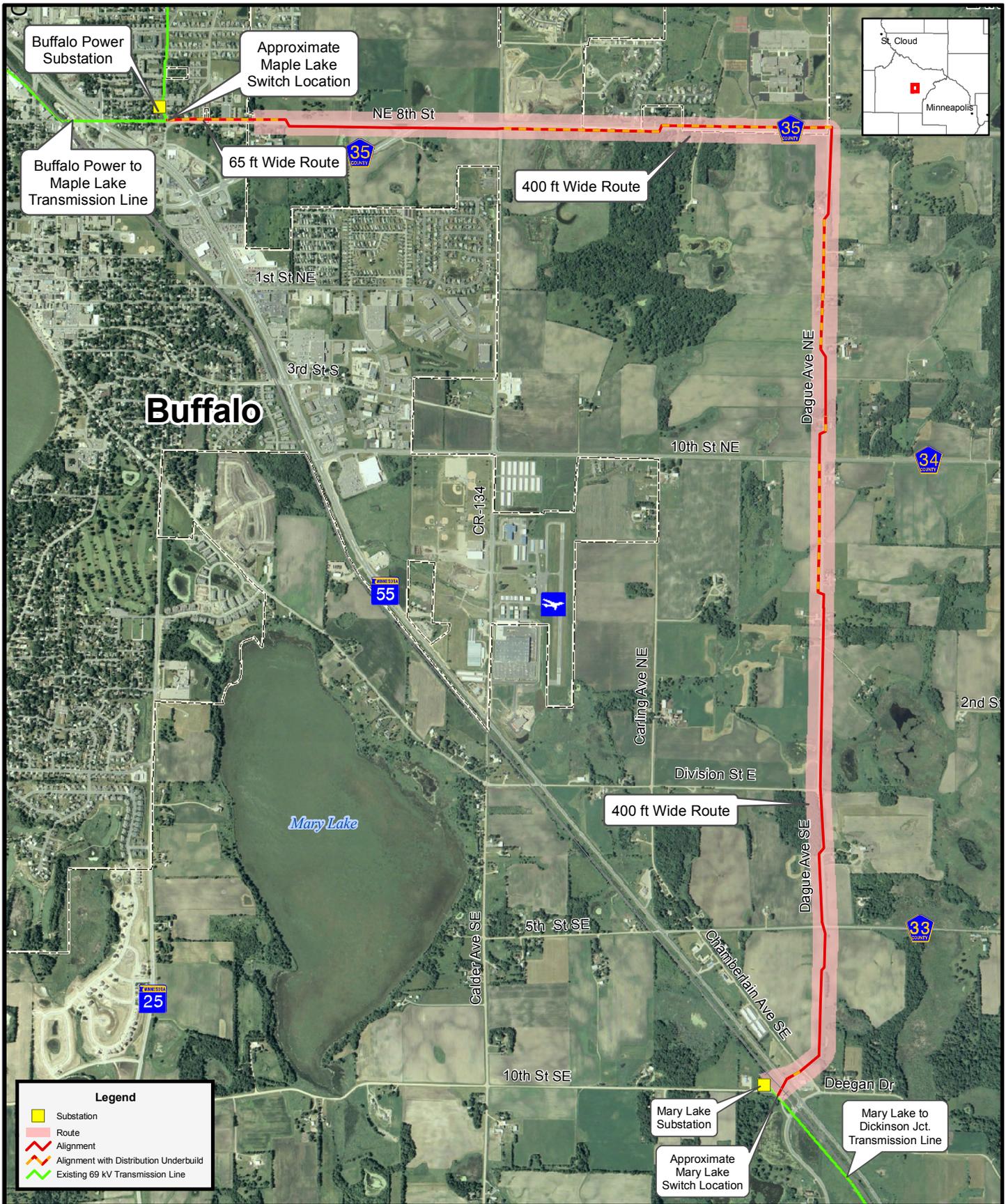
7. Complaints Received by the Commission

Copies of complaints received directly by the Commission from aggrieved persons regarding site preparation, construction, cleanup, restoration, operation and maintenance shall be promptly sent to the permittee.

Initial Screening – Commission staff shall perform an initial evaluation of unresolved complaints submitted to the Commission. Complaints raising substantive routing permit issues shall be processed and resolved by the Commission. Staff shall notify permittee and the complainant if it determines that the complaint is a substantial complaint. With respect to such complaints, each party shall submit a written summary of its position to the Commission no later than ten days after receipt of the staff notification. Staff shall present briefing papers to the Commission, which shall resolve the complaint within twenty days of submission of the briefing papers.

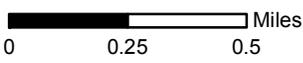
Condemnation/Compensation Issues – If the Commission’s staff initial screening determines that a complaint raises issues concerning the just compensation to be paid to landowners on account of permittee acquisition of high voltage transmission line easements, staff shall recommend to the Executive Secretary that the matter be resolved under the provisions of Minnesota Statutes, Chapter 117. If the Executive Secretary concurs, he shall so report to the Commission and the matter shall be dealt with in the high voltage transmission line condemnation proceedings as an issue of just compensation.

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Legend

- Substation
- Route
- Alignment
- Alignment with Distribution Underbuild
- Existing 69 kV Transmission Line



Route Map
Mary Lake
115 kV Transmission Line Tap Project

