

Staff Briefing Papers

Meeting Date June 27, 2019

Agenda Item *1


Company Xcel Energy / ITC Midwest

Docket No. **E002 and ET6675/CN-17-184 and TL-17-185**

In the Matter of the Application of Xcel Energy and ITC Midwest LLC for a Certificate of Need and Route Permit for the Huntley-Wilmarth 345 kV Transmission Line Project

- Issues
1. Should the Commission find that the environmental impact statement is adequate?
 2. Should the Commission adopt the Administrative Law Judge's Findings of Fact, Conclusion of Law, and Recommendations?
 3. Should the Commission grant a Certificate of Need for the Huntley-Wilmarth Transmission Line Project?
 4. Should the Commission issue a route permit identifying a specific route and permit conditions for the Huntley-Wilmarth Transmission Line Project?

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 Relevant Documents <i>(If not specified, document filed in both dockets)</i>	Date
17-184: Xcel/ITC – Application for a Certificate of Need	January 17, 2018
17-185: Xcel/ITC – Application for a Route Permit	January 22, 2018
PUC - Notice and Order for Hearing	March 28, 2018
DOC EERA – Final EIS	April 3, 2019
OAH – ALJ Report	May 22, 2019
DOC EERA – Exceptions	June 4, 2019

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Relevant Documents *(If not specified, document filed in both dockets)*

Date

17-184: DOC DER – Exceptions (20196-153399-01)

June 6, 2019

North Mankato – Exceptions

June 6, 2019

Xcel/ITC – Exceptions

June 6, 2019

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I. Statement of Issue

1. Should the Commission find that the environmental impact statement is adequate?
2. Should the Commission adopt the Administrative Law Judge's Findings of Fact, Conclusion of Law, and Recommendations?
3. Should the Commission grant a Certificate of Need for the Huntley-Wilmarth Transmission Line Project?
4. Should the Commission issue a route permit identifying a specific route and permit conditions for the Huntley-Wilmarth Transmission Line Project?

II. Project Overview

Xcel Energy and ITC Midwest LLC (the Companies) intend to construct a 40- to 50-mile 345 kV transmission line between Xcel's existing Wilmarth substation north of Mankato, Minnesota and ITC Midwest LLC's (ITCM) Huntley substation, south of Winnebago, Minnesota (Project or Huntley-Wilmarth Project). The Project includes modifications to the existing Wilmarth and Huntley substations to accommodate the new 345 kV transmission line.

As characterized by Xcel, the project is necessary to address system congestion and price concerns in the southern Minnesota transmission system. Xcel argued that the transmission system along the Minnesota-Iowa border is one of the most congested areas in the region's electric transmission system and the Huntley-Wilmarth Project provides the highest level of economic benefits while resolving all identified congestion throughout the study period.¹ The filings state the Project was studied, reviewed, and approved by the Midcontinent Independent System Operator, Inc.'s (MISO) Board of Directors as a Market Efficiency Project (MEP) in December 2016 as part of the annual *MISO Transmission Expansion Plan* (MTEP) report and the applicants confirmed the projected economic benefits by analyzing the Huntley-Wilmarth Project under MISO's more recent MTEP17 and MTEP18 models.² Xcel and ITCM:

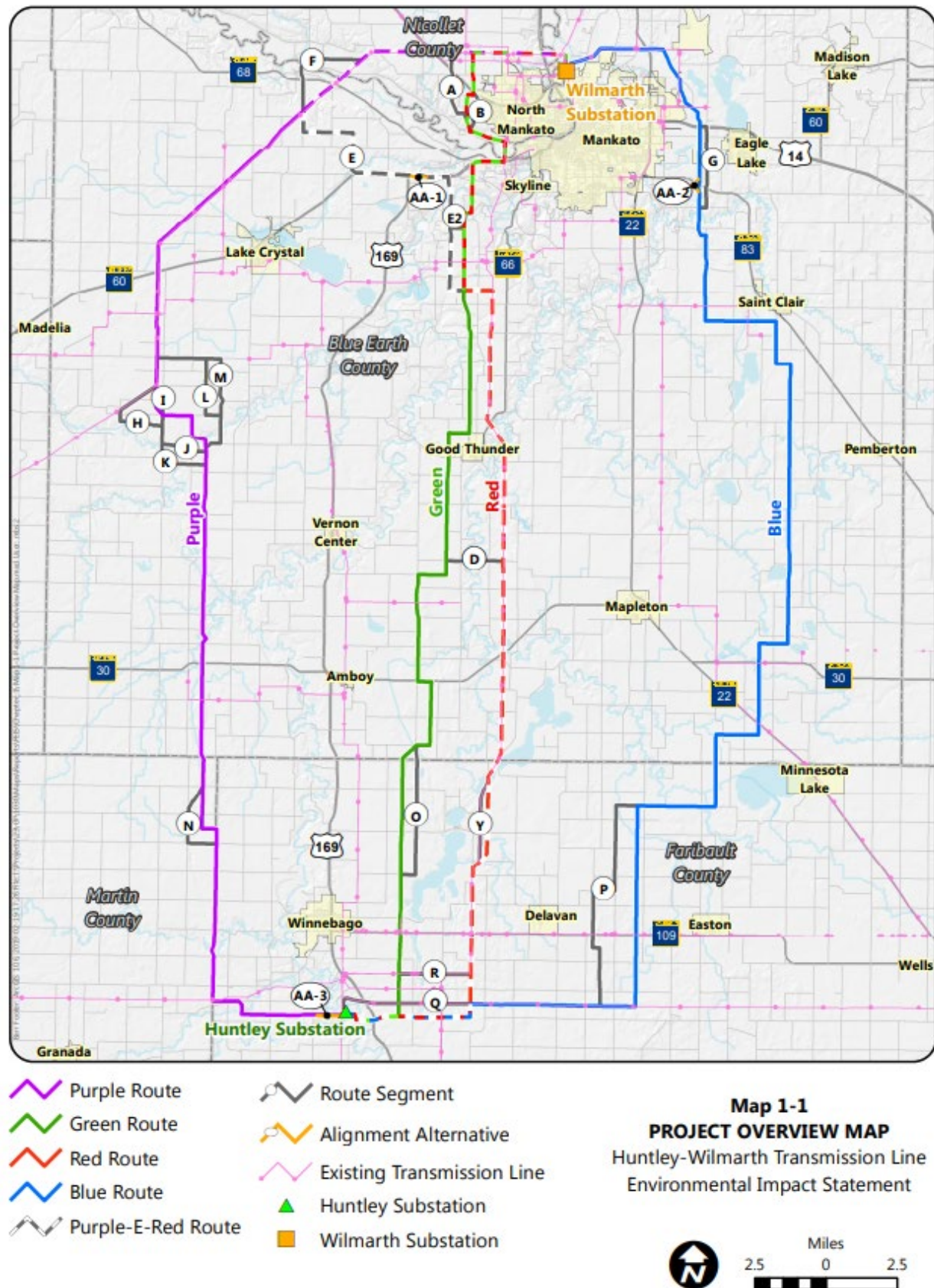
The Huntley-Wilmarth Project will also reduce wind generation curtailments, thereby enhancing energy delivery, reducing system generation costs, and providing environmental benefits in the form of lower emissions. Additionally, the Project will improve the robustness of the regional transmission system such that it is able to better withstand system contingencies and more efficiently deliver energy from a diverse mix of generation resources.³

¹ Xcel Brief, p. 2-3.

² Id, p. 3.

³ Id. p. 3-4.

Figure 1: Project Overview Map (Map 1-1 From FEIS)⁴



III. STATUTES AND RULES

A. Certificates of Need

Under Minn. Stat. § 216B.243, subd. 2, no large energy facility shall be sited or constructed in Minnesota without the issuance of a certificate of need by the Minnesota Public Utilities Commission (Commission). The Project is a large energy facility as defined by Minn. Stat. § 216B.2421, subd. 2(3), because it is a high-voltage transmission line with a capacity of 100 kV or more with more than 10 miles of its length in Minnesota or that crosses a state line.

In assessing the need for a proposed large energy facility the Commission must consider the factors listed under each of the criteria set forth in Minn. Stat. § 216B.243, subd. 3 and Minn. R. 7849.0120.

B. Route Permit

Under Minn. Stat. § 216E.03, subd. 1, no person may construct a high-voltage transmission line without a route permit from the Commission. A high-voltage transmission line may be constructed only along a route approved by the Commission.

Under Minn. Stat. § 216E.01, subd. 4, a high-voltage transmission line is defined as a conductor of electric energy and associated facilities designed for and capable of operation at a nominal voltage of 100 kilovolts or more and is greater than 1,500 feet in length. The Project would consist of approximately 40-50 miles of new 345 kV transmission line and, therefore, requires a route permit from the Commission.

The Project is subject to Minn. Stat. § 216E.03, subd. 7, which requires that high-voltage transmission lines be routed consistent with state policy and in a manner that minimizes adverse human and environmental impact while insuring continuing electric power system reliability and integrity and insuring that electric energy needs are met and fulfilled in an orderly and timely fashion. In determining whether to issue a permit for a high-voltage transmission line the Commission must consider the factors contained under Minn. R. 7850.1400. A route permit issued by the Commission must specify the design, routing, right-of-way preparation, facility construction, and any other conditions it deems appropriate.

IV. PROCEDURAL HISTORY

A. Certificate of Need and Route Permit Applications

On June 30, 2017, Xcel and ITCM filed a notice plan petition for the Huntley-Wilmarth Transmission Line Project. On July 14, 2017, the Applicants filed an exemption request from certain certificate of need filing requirements. The Commission approved the notice plan and granted the requested exemptions in an order issued on September 1, 2017.⁵

⁴ FEIS, p. 1-3.

⁵ Commission Order, Doc. ID: [20179-135212-01](#)

On January 17, 2018, Xcel and ITCM filed a certificate of need application for the Huntley-Wilmarth Transmission Line Project.

On January 22, 2018 Xcel and ITCM filed a route permit application for the Huntley-Wilmarth Transmission Line Project under the Full Permitting Process set forth by Minn. Stat. § 216E.03 and Minn. R. 7850.1700 to 7850.2700 and 7850.4000 to 7850.4400.

On March 28, 2018, the Commission issued an Order Finding Applications Complete and Notice of and Order for Hearing. The order authorized joint proceedings, a combined environmental review document, authorized an advisory task force, granted variances, and referred the case to the Office of Administrative Hearings (OAH) for a contested case hearing on both the certificate of need and route permit applications.

B. Environmental Impact Statement

Under Minn. Stat. § 216E.03, subd. 5, and Minn. R. 7850.2500, the commissioner of the Department of Commerce is required to prepare an environmental impact statement (EIS) on proposed high-voltage transmission lines. The EIS must contain information on the potential human and environmental impacts of a proposed project and of alternative sites or routes considered and must address mitigation measures for identified impacts.

Under Minn. R. 7849.1900, subp. 2, the Department of Commerce (Department or DOC) may elect to prepare an EIS in lieu of the required environmental report in the event an applicant for a Certificate of Need applies to the Commission for a route permit prior to the time the Department completes the environmental report. If the documents are combined, the Department must include the analysis of alternatives required by Minn. R. 7849.1500, in the EIS, but is not required to prepare an environmental report. In its March 28, 2018 Order, the Commission ordered joint environmental review of the certificate of need and route permit applications in this matter.

On March 29, 2018, the Commission issued a Notice of Public Information and Environmental Impact Statement Scoping Meetings in accordance with Minn. R. 7850.2300. Four public meetings were held in the cities of Mankato, Winnebago, and Mapleton, to provide project information and to identify issues and route alternatives to be addressed in the EIS. Public comments on issues and alternative routes to be considered in the scope of the EIS were accepted until May 28, 2018.

In accordance with Minn. Stat. § 216E.08 and Minn. R. 7850.2400, the Department of Commerce Energy and Environmental Analysis Unit (EERA) established an advisory task force and conducted task force meetings on April 12, April 20, and May 2, 2018. The task force was established to assist in determining the scope of the EIS by identifying specific impacts and issues of local concern, and potential site and route alternatives to be assessed. EERA filed the Advisory Task Force Report on June 1, 2018.⁶

⁶ Advisory Task Force Report, Doc. ID: [20186-143530-01](#)

On July 17, 2018, the deputy commissioner of the Department of Commerce issued the EIS Scoping Decision in accordance with Minn. R. 7850.3700, subp. 2.⁷ The scoping decision identified the issues to be addressed in the EIS including potential human and environmental impacts, alternative sites or routes, and a schedule for completion of the EIS.

On December 7, 2018, EERA filed the Draft EIS on the proposed Project in accordance with Minn. R. 7850.2500.⁸ The Draft EIS contained a comprehensive description of the Project and alternatives to the Project; a discussion of alternatives required under Minn. R. 7849.1500, a discussion of potential impacts of the Project and any alternatives on the human and natural environment; reasonable mitigation measures that could be implemented to minimize any identified adverse impacts; and required permits and approvals.

On December 10, 2018, the EERA issued a Notice of Availability of Draft EIS and Public Information Meetings in accordance with Minn. R. 7850.2500, subd. 8.⁹ EERA staff held four public meetings in the cities of Mankato, Delavan, and Mapleton, to provide an opportunity for the public to comment on the Draft EIS. A comment period for submission of written comments was open until January 28, 2019.

On April 3, 2019, the EERA filed the Final EIS for the Project. The Final EIS was an amended version of the Draft EIS that incorporated and identified the necessary changes in the appropriate places. The Final EIS responded to the timely substantive comments received on the Draft EIS consistent with the scoping decision. Written comments on the Draft EIS and responses to those comments were included as Appendix L of the Final EIS. EERA issued the required notices of availability of the Final EIS pursuant to Minn. R. 7850.2500, subp. 9.

C. Public Hearing

On February 27 and 28, 2019, Administrative Law Judge, Barbara J. Case with the OAH presided over public hearings in the cities of Mankato, Delavan and Mapleton. A comment period for submission of written comments into the record for the certificate of need and route permit applications was open until March 15, 2019.¹⁰ Due to inclement weather, the public hearings were cancelled for both the originally planned dates of January 30 and 31, 2019 and the first rescheduled dates of February 6 and 7, 2019.

The hearing procedures included a brief presentation of the proposed Project; an explanation of the process to be followed; introduction of documents to be included in the record; and an opportunity for any person to present and to ask questions of the applicant, EERA staff, and Commission staff. The hearings continued until all persons had the opportunity to offer testimony and ask questions. A court reporter was present to transcribe the public hearings.

⁷ Draft EIS Scoping Decision, Doc. ID: [20187-144971-01](#)

⁸ Draft EIS, Doc. ID: [201812-148307-01](#)

⁹ Notice of Availability and Draft EIS, Doc. ID: [201812-148337-02](#)

¹⁰ Notice of Public Hearings, Doc. ID: [20192-150242-01](#)

V. REPORT OF THE ADMINISTRATIVE LAW JUDGE

On May 22, 2019, the Administrative Law Judge (ALJ) filed her Findings of Fact, Conclusions of Law and Recommendations (ALJ Report). The ALJ Report addressed the certificate of need and transmission line routing for the Huntley-Wilmarth Transmission Line Project.

The ALJ recommended the Commission issue a certificate of need and route permit (with conditions she specified) for the Purple-BB-L-AA3b Route.

The ALJ Report included findings of fact on the certificate of need and route permit, including a summary of public comments and government agency participation (Findings 84-209); 13 conclusions of law on the certificate of need; 28 conclusions of law on the route permit; and 11 recommendations.

The ALJ Report documented that the procedural requirements were followed, and presented findings of each of the decision criteria under Minn. R. 7849.0120 and 7850.4100. The finding of facts included identification of the applicant and other parties to the proceeding; procedural requirements that were conducted; description of the proposed Project; position of the parties; facts related to the certificate of need proceeding; facts related to the route permit proceeding including alternative routes considered; identification of public and government agency participation in the proceedings; and facts related to the adequacy of the EIS.

ALJ Certificate of Need Recommendation

The ALJ recommended the Commission issue a Certificate of Need for the Project and find that all the relevant criteria set forth in Minnesota law for a Certificate of Need have been met. She concluded that there are no statutory or other requirements that preclude granting a Certificate of Need on the record and no more reasonable and prudent alternative has been identified to alleviate current and potential future transmission congestion in Southern Minnesota. Additionally, she concluded that the Project will enhance the reliability and robustness of the transmission system while providing Minnesota consumers with more access to low cost energy and the Project will reduce harmful emissions of CO₂, SO₂, and NO_x by accommodating the retirement of coal generators and their replacement by renewable generation.

ALJ Route Permit Recommendation

The ALJ recommended that based on the Findings of Fact and Conclusions: 1) all relevant criteria set forth in Minnesota law for a route permit for the Huntley-Wilmarth Project have been satisfied; and 2) there are no statutory or other requirements that preclude granting a route permit based on the record. The ALJ made the following additional route permit related recommendations:

1. The Commission conclude that all relevant statutory and rule criteria necessary to obtain a Route Permit for the Purple-BB-L Route have been satisfied and that there are

no statutory or other requirements that preclude granting a Route Permit based on the record.

2. The Commission should grant a Route Permit for the Purple-BB-L-AA3b Route, double-circuit, monopole design.
3. The Commission's Standard Route Permit Conditions should be incorporated into the Route Permit, unless modified herein.
4. The Route Permit should include a special permit condition requiring the Applicants to work with the Minnesota Department of Natural Resources (MnDNR) and US Fish and Wildlife Service (USFWS) regarding strategies to avoid and mitigate impacts to avian species, including determining appropriate locations for avian flight diverters:

The Permittees shall consult with the MnDNR and USFWS regarding strategies to avoid and mitigate impacts to avian species, including the use of avian flight diverters. The Permittees shall document and file with the Commission their consultations with MnDNR and USFWS and the resulting mitigation strategies.

5. The Route Permit should include a special permit condition requiring the Applicants to coordinate with the MnDNR and any other appropriate agencies regarding potential impacts to rare native plant communities and state-listed species, including the potential need for surveys:

The Permittees shall consult with the MnDNR and other appropriate agencies regarding mitigation strategies for potential impacts to rare native plant communities and state-listed species including, but not limited to, surveys. The Permittees shall document and file with the Commission their consultations and the resulting mitigation strategies.

6. The Route Permit should include a condition requiring the Applicants to develop a Vegetation Management Plan in coordination with the MnDNR for the right-of-way in Minneopa State Park:

In coordination with the MnDNR, the Permittees shall develop a Vegetation VMP Management Plan for the right-of-way across Minneopa State Park. The purpose of the plan shall be to mitigate potential impacts to Minneopa State Park and related flora and fauna including, but not limited to, the control of invasive species. The Permittees shall document and file with the Commission their consultations with the MnDNR and the resulting VMP Vegetation management Plan.

7. The Route Permit should include a special permit condition requiring the Applicants to comply with the Agricultural Impact Mitigation Plan (AIMP) approved by the Minnesota Department of Agriculture for the project.

8. The Route Permit should include a special permit condition requiring the Applicants to confer with the MnDNR regarding tree clearing for the project and requiring the Applicants to conduct winter tree clearing to the extent practicable:

The Permittees shall consult with the MnDNR regarding tree clearing for the project. The Permittees shall develop, with the MnDNR, a prioritized list of areas where winter tree clearing would be most beneficial. The Permittees shall, to the extent practicable, clear trees in the identified priority areas during the winter.

9. The Route Permit should include a special permit condition requiring the Applicants to file with the Commission their consultations with the Minnesota State Historical Preservation Office (SHPO), the results of cultural and archaeological surveys conducted, and resulting mitigation strategies:

The Permittees shall consult with SHPO regarding the appropriate cultural and archaeological resource surveys for the project. The Permittees shall document and file with the Commission their consultations with SHPO, the results of cultural and archaeological resource surveys conducted, and the resulting mitigation strategies.

10. The Route Permit should include a special permit condition requiring the Applicants to shift the alignment of Segment Alternative L at the Watonwan River to avoid the Basswood – Burr Oak native plant community noted by the MnDNR.
11. The Applicants be required to take those actions necessary to implement the Commission's orders in this proceeding.

VI. EXCEPTIONS

Consistent with Minn. R. 7829.2700, exceptions to the ALJ Report were filed by the Department of Commerce Division of Energy Resources (DOC DER), DOC EERA, Xcel and ITCM, and North Mankato within 15 days of the filing of the report.

Exceptions were generally minimal in nature or administrative/clerical. Xcel and ITCM requested that the Commission *not* specify a required alignment alternative for the AA3 segment and instead note the AA-3b is the 'anticipated' alignment. North Mankato requested clarifications or modification to their positions as characterized in the record. DOC EERA requested clarification or correction to findings or footnotes. DOC DER requested that the Commission supplement the ALJ Report with additional findings related to need and forecasting conducted by MISO and the Applicants.

No party disagreed with the ultimate recommendations of the ALJ to issue a certificate of need and route permit to the applications.

A. Xcel and ITC Midwest

Xcel and ITCM submitted exceptions by the deadline on June 6, 2019. The Applicants requested additional flexibility in the final route designation at the segment AA-3(a/b), requested additional clarifying modifications (summarized in Attachment 1 to their filed exceptions), and noted their agreement and recommendation that the Commission approve all of the DOC EERA's suggested modifications (as filed on June 4, 2019, discussed below).

Xcel and ITCM's main suggestion was a modification to Finding (Route Permit) 506; to request that the Commission not designate the AA-3**b** alignment as the final alignment, but instead note that the AA-3b segment is the 'anticipated' alignment. The Applicants argue that this language change would allow flexibility for Xcel and ITCM to "work with impacted landowners and the MnDNR within the 1,000 foot route width to determine the final alignment" within the one-mile segment of the AA3 route.¹¹

The Applicants note there were three routes under consideration for the one-mile segment of the AA-3 (Purple Route) Alignment Alternative (as depicted on the map below): the original (Purple) route, the AA-3a alignment, and the AA-3b alignment, as noted on the map below. All fall within the requested 1,000-foot route width, shown by the yellow corridor in the map below.

The map depicts a seasonal trailer (red diamond) that may be displaced if the Purple Route is utilized, however, the Applicants noted that this may be avoided with pole placement or a 'slight adjustment in location of the trailer' during the final alignment.¹² The landowner is opposed to both the original Purple Route and the AA-3a routes.¹³

The MnDNR opposes both the original route and the AA-3a routes, which would impact the forested habitat. The Applicants note that the AA-3a route would require a triple circuit and the AA-3b route would require two crossing of other transmission lines, both adding to the aesthetic impacts in a congested area (and increased project costs of between \$700, 000 to \$2.6 million).¹⁴

[Continued below]

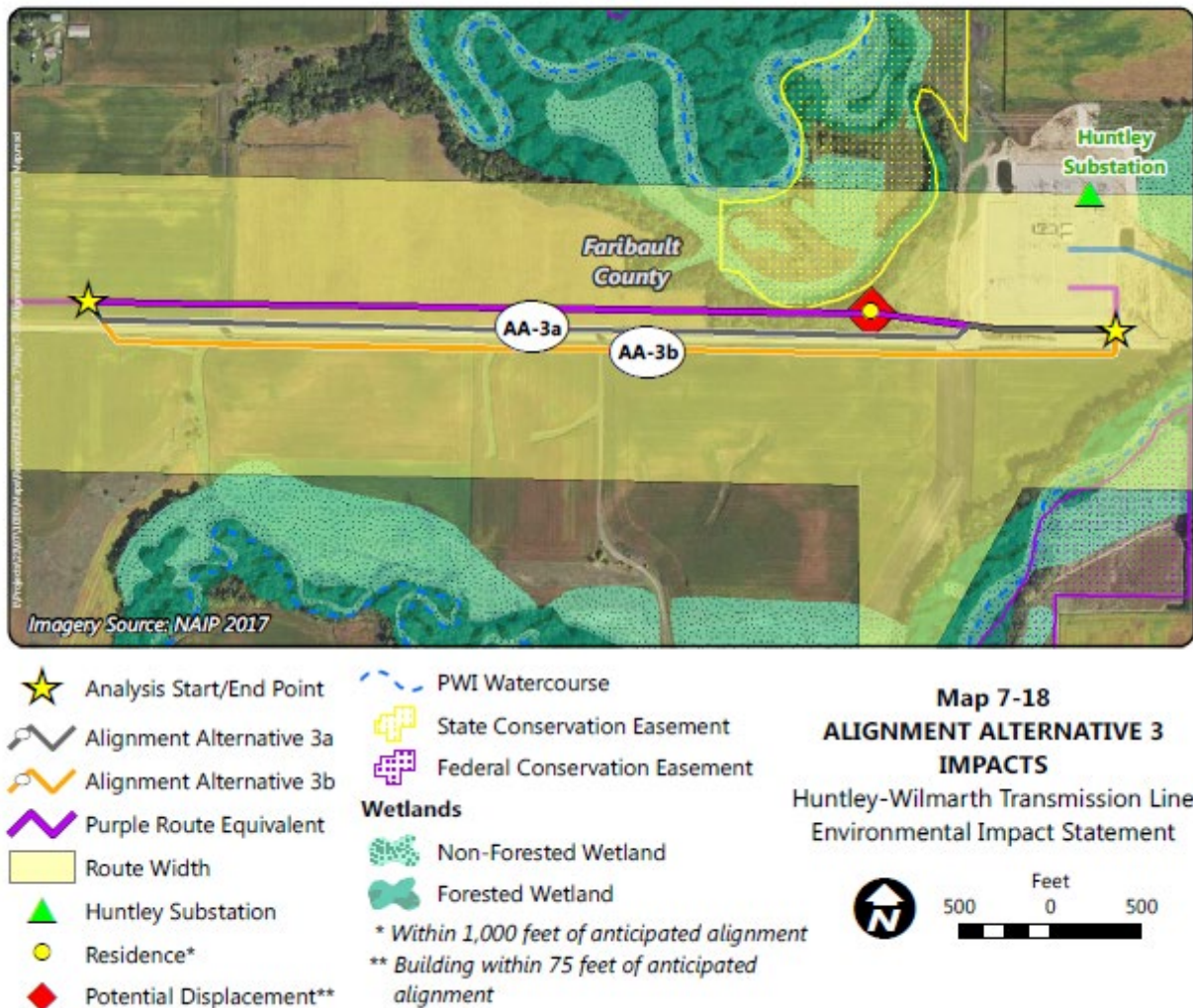
¹¹ Xcel Exceptions, p. 2

¹² Xcel and ITC Exceptions, p. 7

¹³ See ALJ Report: Finding 267, p. 133; Finding 288, p. 137

¹⁴ Xcel and ITC Exceptions, p. 6

Figure 2: Map 7-18 Alignment Alternative 3 Impacts¹⁵



Following further discussions with interested parties (MnDNR and the impacted landowner) the Applicants noted it would file their final alignment via the Plan and Profile compliance filing that will explain and document the basis for the final alignment.¹⁶ The Applicants acknowledge that the Plan and Profile would be reviewed by Commission staff. Staff agrees with this assessment, and notes that all Plan and Profile reviews are first evaluated by the DOC EERA, then the Commission staff, and last, signed off by the Commission's Executive Secretary. It is rare (and has potentially never occurred) where staff flags an alignment for a full Commission consideration.

Staff believes the Applicants' concern of designating the AA-3b alignment as the ordered 'route', may call into question whether a route permit amendment or minor alteration is required to utilize a different alignment within the route width (yellow corridor) – due to the specificity of the route designation.

¹⁵ Final EIS, p. 7-62

¹⁶ Xcel Exceptions, p. 7

Staff Discussion

Staff has reviewed the Applicants' proposed modifications, and has made all the modifications with the exceptions of the modification to Finding 506. Staff believes, all of the findings (absent Finding 506) provide clarification or administrative corrections; staff has reviewed each and found them to be an accurate representation of the record and reasonable modification and has included them in the proposed finding attachment, *Proposed Findings, as Modified by Staff*.

As for Finding 506, staff believes the Commission should consider what level of process or oversight, and specificity, it would like over this one-mile segment of the route. Staff recommends seeking additional input from the DOC EERA or the MnDNR prior to making a determination on the Applicants' proposed modification (to 'anticipated alignment') to Finding 506. Staff has flagged this finding in the attached document, *Proposed Findings, as Modified by Staff* and in the Commission decision options.

B. DOC DER

On June 6, 2019, DOC DER filed exceptions to the ALJ Report related to the certificate of need proceedings in this matter. DOC DER focused on three recommendations, the Commission should: 1) clarify findings regarding the Applicants' forecasted demand; 2) address how the Applicants considered the natural environment in its evaluation of a 161 kV line versus a 345 kV line (as required by a prior Commission Order); and 3) require that a cost cap on the project be based on 2016 dollars. Additionally, the DOC DER provided administrative or clarifying modifications (that are not called out below but have been verified by staff and included in the *Proposed Findings, as Modified by Staff*).

1. Forecast of Demand and Relation to the Wind Capacity Forecast

The DOC DER suggested modification (clarification) to several findings and addition of new findings to support the basis for the certificate of need criteria listed in 7849.0120 (A) (1) regarding an applicant's forecasted demand.¹⁷ The DOC DER argued that the ALJ's findings related to this issue are insufficient to support the report's conclusion as they do not discuss the forecast of demand (or accuracy thereof) which DOC DER argued was included in the MISO MTEP16 and the Applicants' certificate of need application. The DOC DER also sought to clarify in the findings the purpose of the project (congestion relief) as discussed in the testimony of Dr. Steve Rakow and the relationship of the purpose of the transmission line to wind energy growth forecasts (see modifications to Finding 227, below).

DOC DER recommended the inclusion of the following findings (before Finding 227) or modifications to other findings as follows:

¹⁷ **7849.0120 CRITERIA.** A certificate of need must be granted to the applicant on determining that: A. the probable result of denial would be an adverse effect upon the future adequacy, reliability, or efficiency of energy supply to the applicant, to the applicant's customers, or to the people of Minnesota and neighboring states, considering: (1) the accuracy of the applicant's forecast of demand for the type of energy that would be supplied by the proposed facility...

[NEW] MISO's MTEP models include multiple future scenarios to study transmission needs under a variety of policy, economic, and social futures. Each future contains assumptions about demand and energy forecasts as well as assumptions for future fuel costs, environmental regulations, demand and energy levels, and available technology.¹⁸

[NEW] The demand and energy growth included in the MTEP Futures assumptions represent an aggregated average of the Local Balancing Areas (LBA) within MISO, meaning that the load growth input into the Futures models are based on local growth projections instead of a footprint-wide average being applied across the board.¹⁹ This is intended to capture the local growth and area trends to better capture subregional differences and typically include both positive and negative growth rates.²⁰ These LBA values are aggregated into a Local Resource Zone level, then aggregated again to a MISO footprint level and represent a 10-year compound annual growth rate.²¹

[NEW] The demand and energy growth forecasts utilized by MISO are based on historical data, subject to stakeholder review,²² and no party to this proceeding has challenged the accuracy of these forecasts. In addition, the demand and energy growth levels provide a reasonable range of outlooks in order to determine whether the Project is justified.

227. The "type of energy" that will be supplied by the Project is, according to DOC-DER economist and fact witness Dr. Steve Rakow, "congestion relief:" and concluded that it would be most useful in this case to evaluate whether MISO's wind energy growth forecasts were appropriate. He distinguishes congestion relief by explaining that if customers' needs cannot be met, reliability issues exist; if customers' needs can be met, but only "in an uneconomic manner, an economic or congestion issue exists."

231. The Administrative Law Judge finds that the Applicants' forecast of demand for electricity as used in the MTEP process and incorporated into the MTEP16 Futures for the type of energy that would be supplied by the proposed facility is sufficiently accurate to satisfy the rule criterion. ~~reasonable and~~ Moreover, the MTEP16 Futures levels of wind generation are likely conservative because the increase in wind generation projects in the area to be served by the Project has been significantly larger than MISO anticipated in every MTEP16 future scenario but one. The Administrative Law Judge recommends that the Commission find that Applicants' energy demand forecast is sufficiently accurate to demonstrate the need for the Project as required by Minn. R. 7849.0120(A)(1); Minn. Stat. § 216B.243, subd. 3(1).

¹⁸ DOC Footnote: *Ex. XC-6 at 72-73 (Certificate of Need Application) (eDocket No. 20181-139030-01)*.

¹⁹ DOC Footnote: *Id.* at 74.

²⁰ DOC Footnote: *Id.* at 74-75.

²¹ DOC Footnote: *Ex. XC-6 at 75.*

²² *Id.* at 74.

232. Although MISO necessarily had to forecast demand to confirm the need for the Project, the cause of the significantly positive Project's benefit-to-cost ratio of the Project is significantly positive is because the impetus to build the 345 kV line is to relieve congestion rather than to meet increased future load. Adding to the need for the Project is the retirement of significant coal generation. MTEP16 assumes retirement of at least 12.6 GW in all in two of the five future scenarios. Beyond relieving congestion, the Project will reduce curtailments of wind generation and so give end users greater access to low-cost energy while improving the robustness of the regional transmission system.^[1]

Staff Discussion

Staff has reviewed the DOC DER's recommendations pertaining to clarifications surrounding the demand forecast, the MTEP16 Report, and clarification surrounding Dr. Rakow's testimony. Staff believes all of the DOC DER modification and additional are reasonable and has included those findings in the *Proposed Findings, as Modified by Staff*. Staff is not aware of any objections to the DOC DER's proposed modification in this section (and does not anticipate any).

2. Findings Relating to Applicants' Externalities Analysis - 161 kV v. 345 kV

The DOC DER noted the ALJ provided findings which addressed the effects of the project on the natural and socioeconomic environments compared to alternatives, however, the report focused on routing alternatives and not voltage alternatives and only briefly mentioned the Externalities Analysis conducted by the Applicants. DOC DER recommended that the Commission include explicit findings relating to the Applicants' Externalities Analysis, which found that the 161 kV alternatives was not a more reasonable and prudent alternative to the proposed 345 kV HVTL. DOC DER recommended the following clarification to Finding 271 and a new Finding.

271. None of the feasible alternatives completely relieve the problem of grid congestion in southern Minnesota and northern Iowa, and a 161 kV line instead of the 345 kV line has largely the same negative environmental impacts arising from the physical construction and operation of a large high-voltage transmission line.

[NEW] The Applicants presented an analysis of socioeconomic costs and benefits (externalities analysis), which included the environmental impact of changes to electricity generation resulting from the Project and from the 161 kV alternative. This environmental impact compares the changes in the emissions of CO₂, SO₂, and NO_x, which result from changes in electricity generation from electrical generating units (EGUs) in MISO Local Resource Zones 1, 2, and 3 that are induced by the Project and the 161 kV alternative. The Applicants concluded, and the DOC-

DER concurred, that the Project provides greater reductions in both CO₂ and NO_x emission costs compared to the 161 kV alternative.²³

Staff Discussion

Staff has verified the information provided by the DOC DER and agrees these findings are reasonable to modify and include. Staff has included the changes in the attached document, *Proposed Findings, as Modified by Staff*. Staff is not aware of any objection to these modification and does not anticipate any.

3. *Project Cost Cap*

While DOC DER argues that the ALJ agreed with its recommendation “that the Commission should approve costs as stated in 2016 dollars” at Finding 167, Finding 165 causes confusion due to the ALJ’s citation to the Applicants’ escalated cost estimate column (where costs are escalated to the year in which the dollars would be spent). The DOC DER argued that transmission cost recovery (TCR) rider requests are capped at a cost estimate approved in a proceeding, then, during the TCR eligibility determination, the costs are escalated by an approved inflation index (based on what is known at the future time about inflation and the actual in-service date).²⁴ Therefore, the DOC DER recommended deletion of the column in Finding 165 which indicates escalated costs, as well as a correction to the total in the last line (from \$159.7m to \$160.2m).

Staff Discussion

Staff has reviewed this item and finds the suggested modification (to reduce confusion at the time of the TCR consideration) is reasonable. Staff has verified the practice outlined by DOC DER (escalation factors applied at the time of the TCR request/approval) and has included the proposed modification in the attached proposed findings consistent with the recommendations of the DOC DER, see *Proposed Findings, as Modified by Staff*. Staff is not aware of opposition to the modification of this finding as it clarifies the typical practice of cost escalators in the TCR proceedings (and reduces the potential for future confusion).

C. DOC EERA

Staff has reviewed all the DOC EERA proposed modifications to the ALJ Report and finds them reasonable. As noted by the Applicants in their exceptions, since the DOC EERA’s exceptions were filed early, the Applicants had time to review each of the proposed modifications and noted it found them reasonable and recommended the Commission adopt them.²⁵

Staff has included all of the DOC EERA’s proposed modifications in the attachment, *Proposed Findings, as Modified by Staff*.

²³ Ex. XC-18 at 6 (Abing Direct); Ex. DER-3 at 40–41 (Landi Direct).

²⁴ DOC Exceptions, p. 8 and Exhibit DER-3 at 40-41.

²⁵ Xcel Exception, p. 3.

D. North Mankato

North Mankato filed exceptions by June 6, 2019. Largely the suggested modifications were clarifications or administrative corrections. Staff has included all the proposed modification by North Mankato in the attached **Proposed Findings, as Modified by Staff** with the exception of North Mankato's second proposed modification to Finding (CN) 60 (staff has included the first proposed modification to delete the word 'the').

60. On November 7, 2018, North Mankato filed the Direct Testimony and Schedules of Michael Fischer, stating that the Red and Green Route Alternatives and Segment Alternatives A and B would place a new, above ground EHV transmission line directly through or in close proximity to planned development, existing and planned infrastructure, and existing homes.[Footnote 104]

Staff Discussion

Staff has reviewed this modification and found that the findings surrounding Finding 60 do not provide the basis of each witness' testimony (see Findings 55-61), while the additional information provided by North Mankato in exceptions is factual, and consistent with the record, staff finds that the arguments made by the direct testimony of Michael Fischer are reflected in Findings 197, 198, and 304.

VII. STAFF SUMMARY

Based on information in the Applicants' certificate of need and route permit applications; the analysis provided in the EIS; public comments, testimony, briefs, and exceptions received in this matter; the ALJ Report; and other evidence in the record, staff provides the following discussion and recommendations.

A. Adequacy of the Environmental Impact Statement

Staff has/ reviewed the EIS and agrees with the ALJ that EERA: (1) conducted an appropriate environmental analysis of the Project for purposes of the proceedings; (2) addressed the issues and alternatives raised in scoping; (3) provided responses to the timely and substantive comments received during the Draft EIS review process; and (4) prepared the EIS in compliance with the procedures in Minn. R. 7850.1000 to 7850.5600. Therefore, staff recommends that the Commission find that the EIS is adequate pursuant to Minn. R. 7850.2500, subp. 10.

B. Administrative Law Judge Report

Based on its review, staff recommends that the Commission adopt the ALJ Report as modified in the attached *Proposed Findings, as Modified by Staff*. Each exception proposed by a party is listed, and staff notes (consistent with the discussion above) whether the suggested exception was incorporated. Staff has highlighted two exceptions that are *not* incorporated that relate to the route decision (also, discussed above). All other exceptions appear to be non-contested.

Staff believes the ALJ Report is well reasoned, comprehensive, and thorough. The report documented that the procedural requirements were followed, and presented findings of fact for each of the decision criteria that must be considered for a certificate of need and route permit. Staff agrees with the ALJ that the Commission should grant Xcel and ITCM a certificate of need and route permit for Huntley-Wilmarth 345 kV Transmission Line Project as attached, and the Commission should consider whether include specificity around route segment AA3 and route alignment AA-3a and AA-3b.

***Blue/Grey Rows are Flagged for Commission Consideration*

ALJ Finding No. (New)	Proposed or Supported By	Proposed Language	Incrpt'd by Staff	Staff's Reason for Including or Rejecting
CN-26	N. Mankato	26. On February 6, 2018, North Mankato submitted Comments on the Completeness of the Certificate of Need and Route Permit Applications, stating North Mankato's objection to all portions of the Red and Green routes that conflict with <u>existing, short-term, and long-term development as identified in</u> North Mankato's Comprehensive Development Plan. ⁵⁷	Yes	Staff Verified Correction
CN-49	DOC EERA / Xcel, ITC	49. On August 2, 2018, the DOC EERA Commission submitted a template of a Route Permit for a High-Voltage Transmission Line and Associated Facilities.	Yes	Staff Verified Correction
CN-60	N. Mankato	60. On November 7, 2018, North Mankato filed the Direct Testimony and Schedules of Michael Fischer, stating that the Red and Green Route Alternatives and <u>Segment Alternatives A and B would place a new, above ground EHV transmission line directly through or in close proximity to planned development, existing and planned infrastructure, and existing homes.</u> ¹⁰⁴	No	Additional language is not consistent with findings 55-61. New language is covered by FOF 197, 198, (p.126-127) and 304 (p. 140-141).
CN-82	N. Mankato	82. On January 28, 2019, North Mankato filed the Surrebuttal Testimony of Michael Fischer, restating that the Red and Green routes, including Segment Alternatives A and B, are incompatible with the City's <u>existing residences and growth-planned developments as</u> outlined in the Comprehensive Development Plan. ¹²⁹	Yes	Staff Verified Correction
CN-120	Xcel, ITC	120. Ideally, an Xcel Energy or ITC Midwest customer would always be supplied electricity produced at the lowest cost possible at the time. For this to occur, the output of the lowest cost generator, which may not be one of Xcel Energy's generators, must be transmitted to Xcel Energy substations and from there to its customers. Transmission lines have finite capacities to deliver electricity. As new generators are constructed and as economic development and growth change the quantities and locations where electricity is consumed, the existing transmission system may be unable to deliver all of the low-cost power available; that is, the transmission system is congested. ¹	Yes	Clarification

¹ Ex. CEOs-1 at 4 (Goggin Direct); Ex. XC-6 at 6 (Certificate of Need Application).

CN-124	DOC DER	<p>[Footnote to Finding 124] <i>Id.</i> at 4, 27-29. MISO notes “the large amount of wind capacity and low-cost coal generation in northern Iowa.” Ex. MISO-1 at Schedule 1 at 100 (Zhou Direct). Because some of the generation in northern Iowa is coal, it seems reasonable to assume that the Project will enhance the deliverability of this nonrenewable generation as well as new wind generation. The Commission may query whether some of the environmental benefits from expanded wind generation enabled by the Project are not offset as a result of the stimulus the Project will also afford to coal generation. However, there is no evidence in the record of generation interconnection agreements being sought by new coal generators in the Project area in contrast to the large numbers of wind generation projects by the Applicants, Dr. Rakow, and Mr. Goggin. DOC-EERA documents the very low cost of wind generation relative to coal generation. Ex. EERA-13 at Table 4-1 (Draft EIS) (showing coal at an average cost of \$119.1 per MW is a much more expensive generation source than wind at an average cost of \$48 per MW). Instead of increased coal generation, each of the future scenarios developed by MISO in MTEP16 assumes at least 12.6 GW in coal generation retirements. Ex. MISO-1 at Schedule 1 at 88-89 (Zhou Direct). As of August 1, 2018, the MISO interconnection queue contained 536 interconnection requests, with over 85 percent of the requests being for renewable generation. Ex. DER-5 at 20 (Rakow Direct). Ex. XC-24 at 7 (Siebenaler Direct). The Administrative Law Judge concludes that the Project will facilitate much larger increases in wind generation than in coal generation, but to the extent the Project permits increases in coal generation, a portion of the Project’s environmental benefits may be thereby offset.</p>	Yes	Staff Verified Correction
CN-125	Xcel, ITC	<p>Transmission system congestion <u>affects both the cost of energy, deliverability of energy, and the efficiency of the electrical system.</u> also reduces the reliability of the electric system.² The Applicants, as well as MISO and the CEOs, assert that the Project will “relieve congestion on the electrical transmission grid in southern Minnesota and northern Iowa” and “increase market access to lower-cost energy, provide economic benefits, strengthen the regional grid, and reduce curtailments of wind generators in the region.”³</p>	Yes	Staff Verified Correction

² Ex. XC-6 at Appendix G at 1 (Applicants Summary of MISO Study Process).

³ Ex. EERA-13 at 4-1 (Draft EIS); see also Ex. XC-6 at 1-2 (Certificate of Need Application); CEOs-1 at 2-4, 11-12 (Goggin Direct).

CN-165	DOC EERA / Xcel, ITC	165. The Applicants also developed cost estimates for the new route alternative, segment alternatives, and alignment alternatives proposed during scoping and included in the Draft EIS. ²⁷² 272 Ex. XC-25 at 11, Schedule 2 (Stevenson Direct) Id. At 11, Schedule 2.	Yes	Staff Verified Correction																		
CN-165	DOC DER, Xcel and ITC support the correction to \$160.2.	<table><tr><th>Route Alternative</th><th>Cost (Millions) (2016\$)²⁷⁷</th><th>Cost (Millions) (Escalated to anticipated year spend \$)²⁷⁸</th></tr><tr><td>Purple-BB-L Route <i>Purple Route Modified to Use Segment Alternatives BB and L Double-Circuit Monopole Design</i></td><td>\$140.1</td><td>\$155.8</td></tr><tr><td>Green Route <i>Single-Circuit Monopole Design</i></td><td>\$121.3</td><td>\$134.9</td></tr><tr><td>Red-Q Route <i>Red Route Modified to Use Segment Alternative Q Double-Circuit Monopole Design</i></td><td>\$141.2</td><td>\$157.1</td></tr><tr><td>Blue-CC-Q Route <i>Blue Route Modified to Use Segment Alternative Q Double- Circuit Monopole Design</i></td><td>\$138.6</td><td>\$154.1</td></tr><tr><td>Purple-E-AA1-Red-Q Route <i>Purple-E-Red Route Modified to Use Segment Alternative Q and Alignment Alternative AA1 Double-Circuit Monopole Design</i></td><td>\$159.7<u>\$160.2⁴</u></td><td>\$178.2</td></tr></table>	Route Alternative	Cost (Millions) (2016\$) ²⁷⁷	Cost (Millions) (Escalated to anticipated year spend \$) ²⁷⁸	Purple-BB-L Route <i>Purple Route Modified to Use Segment Alternatives BB and L Double-Circuit Monopole Design</i>	\$140.1	\$155.8	Green Route <i>Single-Circuit Monopole Design</i>	\$121.3	\$134.9	Red-Q Route <i>Red Route Modified to Use Segment Alternative Q Double-Circuit Monopole Design</i>	\$141.2	\$157.1	Blue-CC-Q Route <i>Blue Route Modified to Use Segment Alternative Q Double- Circuit Monopole Design</i>	\$138.6	\$154.1	Purple-E-AA1-Red-Q Route <i>Purple-E-Red Route Modified to Use Segment Alternative Q and Alignment Alternative AA1 Double-Circuit Monopole Design</i>	\$159.7 <u>\$160.2⁴</u>	\$178.2	Yes	Clarification and correction, discussed in brief.
Route Alternative	Cost (Millions) (2016\$) ²⁷⁷	Cost (Millions) (Escalated to anticipated year spend \$) ²⁷⁸																				
Purple-BB-L Route <i>Purple Route Modified to Use Segment Alternatives BB and L Double-Circuit Monopole Design</i>	\$140.1	\$155.8																				
Green Route <i>Single-Circuit Monopole Design</i>	\$121.3	\$134.9																				
Red-Q Route <i>Red Route Modified to Use Segment Alternative Q Double-Circuit Monopole Design</i>	\$141.2	\$157.1																				
Blue-CC-Q Route <i>Blue Route Modified to Use Segment Alternative Q Double- Circuit Monopole Design</i>	\$138.6	\$154.1																				
Purple-E-AA1-Red-Q Route <i>Purple-E-Red Route Modified to Use Segment Alternative Q and Alignment Alternative AA1 Double-Circuit Monopole Design</i>	\$159.7 <u>\$160.2⁴</u>	\$178.2																				
CN-194	Xcel, ITC	As a MEP, the Project’s <u>revenue requirements</u> costs will ultimately be shared within the region such that Xcel Energy’s NSP Companies’ load will pay 16.96 percent of the year one revenue requirement. total monetary costs. ⁵ Customers from outside of	Yes	Clarification.																		

⁴ The Applicants made this correction to the cost for the Purple-E-AA1-Red-Q Route following the submission of their initial brief and proposed findings. See Filing Letter and Errata for the Applicants Post-Hearing Briefs and Findings of Fact (Apr. 3, 2019) (eDocket No. 20194-151666-02).

⁵ Ex. XC-6 at Appendix J (Cost Allocation Information).

		Xcel's service territory in Minnesota will benefit from the Project and absorb, through their serving utilities, some of the Project's <u>revenue requirements</u> costs . The Applicants calculate that, depending on the route and segment and design alternatives chosen, that the <u>allocation of the MISO Attachment GG year one revenue requirement for the Project to the state of Minnesota</u> load would be <u>jurisdiction will ultimately pay</u> between \$4.1 and \$5.3 million, of the Project's cost . ⁶ However, because ITC Midwest does not have any load in the region, it will not be allocated any of the Project's costs. ⁷		
CN-226A (New)	DOC DER	[New Finding] <u>MISO's MTEP models include multiple future scenarios to study transmission needs under a variety of policy, economic, and social futures. Each future contains assumptions about demand and energy forecasts as well as assumptions for future fuel costs, environmental regulations, demand and energy levels, and available technology.</u> ⁸	Yes	Clarification.
CN-226B (New)	DOC DER	[New Finding] <u>The demand and energy growth forecasts utilized by MISO are based on historical data, subject to stakeholder review,</u> ⁹ <u>and no party to this proceeding has challenged the accuracy of these forecasts. In addition, the demand and energy growth levels provide a reasonable range of outlooks in order to determine whether the Project is justified.</u>	Yes	Clarification.
CN-227	DOC DER	227. The "type of energy" that will be supplied by the Project is, according to DOC- DER economist <u>and fact witness</u> Dr. Steve Rakow, "congestion relief:" <u>and concluded that it would be most useful in this case to evaluate whether MISO's wind energy growth forecasts were appropriate.</u> He distinguishes congestion relief by explaining that if customers' needs cannot be met, reliability issues exist; if customers' needs can be met, but only "in an uneconomic manner, an economic or congestion issue exists." ¹⁰	Yes	Clarification/correction.
CN-231	DOC DER	231. The Administrative Law Judge finds that the Applicants' forecast of demand <u>for electricity as used in the MTEP process and incorporated into the MTEP16 Futures</u> for the type of energy that would be supplied by the proposed facility <u>is sufficiently accurate to satisfy the rule criterion.</u> reasonable and <u>Moreover,</u> <u>the MTEP16 Futures levels of wind generation are likely conservative because the</u>	Yes	Correction/Clarification

⁶ Ex. XC-6 at Appendix J (Cost Allocation Information).

⁷ Ex. DER-1 at 7 (Johnson Direct).

⁸ Ex. XC-6 at 72–73 (Certificate of Need Application) (eDocket No. 20181-139030-01).

⁹ *Id.* at 74.

		increase in wind generation projects in the area to be served by the Project has been significantly larger than MISO anticipated in every MTEP16 future scenario but one. ¹ The Administrative Law Judge recommends that the Commission find that Applicants' energy demand forecast is sufficiently accurate to demonstrate the need for the Project as required by Minn. R. 7849.0120(A)(1); Minn. Stat. § 216B.243, subd. 3(1).		
CN-232	DOC DER	232. Although MISO necessarily had to forecast demand to confirm the need for the Project, the <u>cause of the significantly positive Project's benefit-to-cost ratio of the Project is significantly positive is</u> because the impetus to build the 345 kV line is to relieve congestion rather than to meet increased future load. Adding to the need for the Project is the retirement of significant coal generation. MTEP16 assumes <u>retirement of at least 12.6 GW in all in two of the five future scenarios.</u> ¹ Beyond relieving congestion, the Project will reduce curtailments of wind generation and so give end users greater access to low- cost energy while improving the robustness of the regional transmission system. ¹	Yes	Clarification
CN-232	DOC DER	[Footnote to Finding 232] <u>Ex. DER 5 at 9 (Rakow Direct). Ex. XC-6 at Appendix F at 99-100 (MISO Transmission Expansion Plan 2016).</u>	Yes	Staff Verified Correction
CN-244	DOC DER	244. One way the DOC-DER measures the benefits of the Project to electric consumers in Minnesota is by considering the incidence of the adjusted production cost (APC) savings: 65 percent of the APC Savings occur in local resource zone 3, 34.5 percent in local resource zone 1, and 0.5 percent in local resource zone 4. ¹ Most of Minnesota's electric utilities are in local resource zone 3 <u>1</u> , with the remainder in local resource zone 13 <u>1</u> . ¹	Yes	Staff Verified Correction
CN-265	DOC EERA / Xcel, ITC	265. The Administrative Law Judge agrees with DOC-DER's and DOC-EERA's conclusions that the Applicants reasonably considered, and rejected as either insufficient or not cost-effective or both, distributed generation and larger generation alternatives to the Project. ⁴⁴⁶	Yes	Staff Verified Correction
CN-271	DOC DER	271. None of the feasible alternatives completely relieve the problem of grid congestion in southern Minnesota and northern Iowa, and a 161 kV line instead of the 345 kV line has largely the same negative environmental impacts <u>arising from the physical construction and operation of a large high-voltage transmission line.</u> ¹	Yes	Clarification

CN-271A (New)	DOC DER	<u>[New Finding] The Applicants presented an analysis of socioeconomic costs and benefits (externalities analysis), which included the environmental impact of changes to electricity generation resulting from the Project and from the 161 kV alternative. This environmental impact compares the changes in the emissions of CO₂, SO₂, and NO_x, which result from changes in electricity generation from electrical generating units (EGUs) in MISO Local Resource Zones 1, 2, and 3 that are induced by the Project and the 161 kV alternative. The Applicants concluded, and the DOC-DER concurred, that the Project provides greater reductions in both CO₂ and NO_x emission costs compared to the 161 kV alternative.¹⁰</u>	Yes	Addition/Clarification
RP-8	DOC EERA / Xcel, ITC	Figure 1: Routes and Segment Alternatives Included in the EIS ⁵⁰⁷ ⁵⁰⁷ Ex. EERA-21 at 1-3, Map 1-1 <u>and Appendix L at L-102 and L-108 (Final EIS) (drawn by the applicants in their post-hearing brief; see Applicant’s Route Permit Brief at 19, Mar. 22, 2019).</u>	Yes	Staff Verified Correction
RP-43	DOC EERA / Xcel, ITC	43. Segment Alternative Q relates to the Green, Red, and Blue routes and was proposed by the Applicants during scoping for the EIS to provide an alternative option to connect to the Huntley Substation through existing transmission corridors. ⁵⁸⁴ Segment Alternative Q is approximately 4.8 miles long; it is double-circuited with an existing 161 kV line through the Prescott WPA. ⁵⁸⁵ USFWS staff has informally indicated that they do not prefer this Segment Alternative. ⁵⁸⁶ ⁵⁸⁶ Id. at 3-16 to 3-17; Ex. XC-19 at 28-29 (Hillstrom Direct).	Yes	Staff Verified Correction
RP-89	DOC EERA / Xcel, ITC	89. The Commission authorized advisory task force consisted of 10 <u>eight</u> members representing 10 <u>eight</u> local units of government. The advisory task force met three times in <u>in</u> April and May, 2018. The task force identified and prioritized impacts, issues, mitigation measures and route alternatives to be analyzed in the EIS. The areas of concern identified by the task force, such as impacts on farmland, communities, natural resources and cost were echoed by the public throughout the scoping process and development of the EIS. Further, the DOC-EERA’s EIS and the Applicants’ proposals thoroughly considered and carefully responded to the concerns and suggestions raised by the advisory task force. ⁶⁶²	Yes	Staff Verified Correction
RP-125	DOC EERA / Xcel, ITC	125. Linda Johnson commented that the proposed Project affects her son’s property. She asked whether the Administrative Law Judge intends to read all of the comments submitted as part of the scoping process. Ms. Johnson also expressed general concerns about the Project. She questioned how lower energy costs will be	Yes	Staff Verified Correction

¹⁰ Ex. XC-18 at 6 (Abing Direct); Ex. DER-3 at 40–41 (Landi Direct).

		measured. Ms. Johnson commented that energy costs “could easily increase if those turbines become more expensive to operate or repair, plus the source of this power is variable and unreliable.” She disputes the benefits of the proposed line and asserted that the proposal will only benefit owners of wind farms. Ms. Johnson raised concerns about the Project’s effect on health and livelihoods. She feels, based on her review of online comments, that the consensus is that “no one wants this transmission line.” Ms. Johnson also criticized the eminent domain process as “a very intrusive process.” Ms. Johnson feels that the Applicants “are minimizing the impact of their proposed easement.” She also expressed concern about how comments from the public will be weighed and considered. The Administrative Law Judge accepted Ms. Johnson’s written statement into the record and indicated she will consider all comments in the record. ⁶⁹⁸ Ray Kirsch explained that the Department received approximately 75 comments <u>on the draft EIS, from the scoping process</u> . He stated that the Department will respond to each of the comments in the final EIS. ⁶⁹⁹		
RP-190	Xcel, ITC	The Applicants again met with MnDNR staff on May 23, 2017, to discuss potential crossing of Minneopa State Park. The MnDNR requested additional descriptions of park impacts, and the Applicants followed up with a preliminary design for <u>Segment Alternative C</u> that showed that no poles would be placed in parkland and that structures could be designed to keep energized lines above existing tree height to minimize tree clearing in the park. ¹¹	Yes	Correction/Clarification
RP-291	DOC EERA / Xcel, ITC	291. The Applicants’ recommended Route configurations do not change any Route’s overall proximity to residences. Table 6, below, shows proximity to residences for the Purple-BB-L Route, Green Route, Red-Q Route, Blue-CC-Q Route, and Purple-E-AA1-Red-Q Route. ^{883B} ^{883B} <u>Ex. EERA-13 at Appendix J Route Analysis Tables (Draft EIS) (table constructed by the applicants in their post-hearing brief; see Applicant’s Route Permit Brief at 43, Mar. 22, 2019).</u>	Yes	Staff Verified Correction
RP-293	DOC EERA / Xcel, ITC	293. The Applicants’ recommended route configurations increase the amount of corridor sharing for each of the Routes but the Purple-E-AA1-Red-Q, Red-Q, and Purple-BB-L Routes make the greatest use of existing infrastructure right-of-way. The Green and Blue-CC-Q Routes share the least amount of right-of-way with existing infrastructure (Table 7). ⁸⁸⁵	Yes	Staff Verified Correction
RP-304	N. Mankato	304. North Mankato opposes those portions of the Red and Green Routes that begin where the Routes turn south from the existing transmission line at Belgrade	Yes	Staff Verified Correction

¹¹ Ex. XC-7 at 177 (Route Permit Application).

		Township and end where the Red and Green Routes meet Segment Alternative E. The City states that these route options <u>would come in close proximity to existing homes and would also</u> interfere with the its near- and long-term growth plans described in the Comprehensive Development Plan adopted in 2015. The Red and Green Routes and Segment Alternatives A and B traverse through the planned North Ridge Residential Development Area and North Mankato South Boundary Residential Area. ⁸⁹⁶ According to North Mankato, 183 new homes will be added within 500 feet of the proposed Red and Green Routes. ⁸⁹⁷ ⁹⁶ Ex. NM-1 (Fischer Direct); <u>Ex. NM-14.</u>		
RP-307	DOC EERA / Xcel, ITC, N. Mankato	307. The City of Mankato submitted comments on the Draft EIS, stating that the Blue Route conflicts with the its adopted land use and growth plans, future expansion of the Mankato Regional Airport, and maintenance of the forested wetland areas located between Mankato and the City of Eagle Lake. ⁹⁰⁶ The City of Mankato noted that the area between the cities of Mankato and Eagle Lake has, and will have in the near future, the fastest growing population in the Project area. ⁹⁰⁷ This area has already experienced significant public and private infrastructure investment reflecting the urban development. The City of North Mankato requested that the Draft EIS be amended to state that the Blue Route's impacts on aesthetics, displacement, zoning and land use, public services, and flora are "moderate to significant and likely unable to be mitigated." ⁹⁰⁸	Yes	Staff Verified Correction
RP-352	DOC EERA / Xcel, ITC	352. Induced voltage is the electric field from a transmission line extending to a conductive object in close proximity to the line. The commission requires an electric field limit to prevent serious hazard from <u>shocks</u> due to induced voltage. ⁹⁶⁶	Yes	Staff Verified Correction
RP-366	DOC EERA / Xcel, ITC	366. The Red Route and the Purple-E-Red Route with monopole structures reduce the number of structures in fields. ⁹⁸³ The Red Route results in a net reduction of 25 structures in fields. ⁹⁸⁴ The Purple-E-Red route results in a reduction of <u>2816</u> structures in fields. ⁹⁸⁵	Yes	Staff Verified Correction
RP-370, 371	DOC EERA / Xcel, ITC	370. The Red Route and the Purple E-Red Route with monopole structures reduce the number of structures in fields.⁹⁹² The Red Route results in a net reduction of 25 structures in fields.⁹⁹³ The Purple E-Red route results in a reduction of 28 structures in fields.⁹⁹⁴ 371. The Purple Route would have moderate impacts on agriculture with a monopole, double circuit design; this route and design would increase the number of structures in fields by 75.⁹⁹⁵	Yes	Staff Verified Correction

RP-390B	DOC EERA / Xcel, ITC	390B-338 . The Project's air quality impacts are anticipated to be minimal and they do not vary notably by route or segment alternative. ¹⁰²⁷	Yes	Staff Verified Correction
RP-403	DOC EERA / Xcel, ITC	403. The Purple-E-AA1-Red-Q Route has the greatest amount of non-forested wetland within the right-of-way (67.1 acres), followed by the Red-Q Route (52 acres), the Purple-BB-L Route (48.6 acres), the Blue-CC-Q Route (41.4 acres), and the Green Route (38.2 acres). ^{1045B} ^{1045B} <u>Ex. EERA-13 at Appendix J Route Analysis Tables (Draft EIS).</u>	Yes	Staff Verified Correction
		404. The Blue-CC-Q Route has the largest amount of forested wetland within its right-of-way (19 acres), followed by the Red-Q Route (14.1 acres), the Purple-E-AA1-Red-Q (12.2 acres), the Green Route (7 acres), and the Purple-BB-L Route (5.3 acres). None of the rights-of-way for the route alternatives contain PWI wetlands. ¹⁰⁴⁶ ¹⁰⁴⁶ <u>Ex. EERA-13 at Appendix J Route Analysis Tables (Draft EIS).</u> Ex. EERA-13 at 6-24 (Draft EIS); see also Ex. XC 7 at 135 (Route Permit Application).	Yes	Staff Verified Correction
RP-429	DOC EERA / Xcel, ITC	419. The Project's impacts on fauna are primarily assessed by evaluating wildlife habitat and wildlife management and conservation areas near the route alternatives. ¹⁰⁶⁸	Yes	Staff Verified Correction
RP-423	DOC EERA / Xcel, ITC	423. The MnDNR did not endorse a particular proposed route. Rather, the agency addressed specific concerns about each proposed route and "supported" certain alternatives that addressed some of the concerns of the MnDNR. The MnDNR supported the new new Purple Route segment BB and Blue Route segment alternative CC in order to minimize impacts to natural resources.	Yes	Staff Verified Correction
RP-464	DOC EERA / Xcel, ITC	464. An examination of both infrastructure corridor sharing and field, parcel, and section lines shows that the Purple-E-Red Route follows existing infrastructure or field, parcel, and section lines for 95 percent of its length and the Red Route follows these same corridors for 89 percent of its length. ¹¹²⁸ The Purple Route also follows existing infrastructure (66 percent) and field lines (64 percent), for a high percentage of its length, a total of 95 percent. ¹¹²⁹ The amount of right of way sharing for all routes is shown in Table 6-11 below from the Final EIS.	Yes	Staff Verified Correction
RP-465	DOC EERA / Xcel, ITC	Table 6-11: Sharing of Existing Infrastructure for Applicants' Recommended Route Configurations ¹¹³⁰ ¹¹³⁰ <u>Ex. EERA-13 at Appendix J Route Analysis Tables (Draft EIS) (table constructed by the applicants in their post-hearing brief; see Applicant's Route Permit Brief at 61, Mar. 22, 2019).</u> Id. The EIS notes that "[p]ortions may share or parallel more than	Yes	Staff Verified Correction

		one type of infrastructure ROW or division/boundary line and, therefore, the sum may be greater than 100 percent.” Id.		
RP-474	DOC EERA / Xcel, ITC	474. Table 910 shows the estimated costs for the Applicants’ five recommended route configurations as well as the benefit-to-cost ratios estimated by the Applicants under the MTEP17 and MTEP18 models. ^{1134B} ^{1134B} <u>Ex. XC-25 at 11, Schedule 2 (Stevenson Direct); Ex. XC-27 (Applicants’ Letter Proposing Purple and Blue Route Segment Alternatives) (table constructed by the applicants in their post-hearing brief; see Applicant’s Route Permit Brief at 66, Mar. 22, 2019).</u>	Yes	Staff Verified Correction
RP-506	Xcel, ITC	506. The record evidence supports the addition of Alignment Alternative AA-3b <u>as the anticipated alignment for</u> the Purple-BB-L Route. Alignment Alternative AA-3b avoids the displacement of a seasonal residence near the Huntley substation and minimizes impacts to forest habitat associated with the Blue Earth River. ¹²	No	Depends on Route Selected and Specification of AA3 Alignment (see paper discussion)
RP-508	Xcel, ITC	508. The Purple-BB-L-AA3b Route also is among the higher cost (\$140.8 million (2016\$)) routes and has a benefit-to-cost ratio well above 1.0 (about 1.63 1.62 under MTEP17 and 1.28 1.27 under MTEP18). As the estimated costs for the Purple-BB-L-AA3b Route are more than 25 percent greater than the MISO baseline cost estimate, selection of the Purple-BB-L-AA3b Route would trigger the MISO variance process.	Yes	Correction.
Concl. 15-28	DOC EERA / Xcel, ITC	[Removal of route permit Conclusions 15 to 28].	Yes	Correction
Concl. 1	DOC EERA	1. The Commission concludes that all relevant statutory and rule criteria necessary to obtain a Route Permit for the Purple-BB-L-AA3b Route have been satisfied and that there are no statutory or other requirements that preclude granting a Route Permit based on the record.	No	Depends on Route Selected
Concl. 6	DOC EERA / Xcel, ITC	6. The Route Permit should include a condition requiring the Applicants to develop a Vegetation Management Plan in coordination with the MnDNR for the right-of-way in Minneopa State Park: In coordination with the MnDNR, the Permittees shall develop a Vegetation VMP Management Plan for the right-of-way across Minneopa State Park. The purpose of the plan shall be to mitigate potential impacts to Minneopa State Park and related flora and fauna including, but not limited to, the control of invasive species. The	Yes	Staff Verified Correction

¹² Ex. EERA-21 at 7-72 to 7-65 (Final EIS)(eDocket No. 20194-151655-18); MnDNR Comments (Mar. 14, 2019) (eDocket No. 20193-151077-01).

		Permittees shall document and file with the Commission their consultations with the MnDNR and the resulting VMP <u>Vegetation Management</u> Plan.		
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VIII. COMMISSION DECISION ALTERNATIVES

Environmental Impact Statement

1. *Find that the EIS meets the requirements of Minn. R. 7849.1800, subp. 2 and 7850.1500, subp. 10 in that it:*
 - A) Addresses the issues and alternatives raised in scoping to a reasonable extent considering the availability of information and the time limitations for considering the permit application
 - B) Provides responses to the timely substantive comments received during the draft environmental impact statement review process
 - C) Was prepared in compliance with the procedures in parts 7850.1000 to 7850.5600.
2. *Take some other action*

Findings of Fact, Conclusions of Law and Recommendation

3. *Approve and adopt the ALJ's Findings of Fact, Conclusions of Law and Recommendation for the Huntley-Wilmarth 345 kV Transmission Line Project*
4. *Approve and adopt the ALJ's Findings of Fact, Conclusions of Law and Recommendation for the Huntley-Wilmarth 345 kV Transmission Line Project as modified by staff (see attached Proposed Findings), consistent with the Commission's decision in these dockets and as further modified by the Commission. (ex. Finding CN-60; Finding RP-506; Route Permit Conclusion 1)*
5. *Take some other action*

Certificate of Need

6. *Grant a certificate of need for the Huntley-Wilmarth 345 kV Transmission Line Project*
7. *Take some other action deemed appropriate.*

High-Voltage Transmission Line Route Permit

8. *Issue a high-voltage transmission line route permit to Xcel Energy and ITCM, approving the **Purple-BB-L Route**, and requiring inclusion of the permit conditions as recommended by the ALJ Report*
9. *Issue a high-voltage transmission line route permit to Xcel Energy and ITC Midwest, approving the **Purple-BB-L-AA3b Route**, and requiring inclusion of the permit conditions as recommended by the ALJ Report*
10. *Authorize Commission staff to make further refinements to the findings of fact and permit conditions as necessary to ensure consistency with the record, the language of recently issued permits, and the Commission's decision on this matter*
11. *Take some other action deemed appropriate.*

Staff Recommendation: 1, 4, 6, (8 or 9), and 10

STATE OF MINNESOTA PUBLIC UTILITIES COMMISSION

ROUTE PERMIT FOR A

HIGH-VOLTAGE TRANSMISSION LINE AND ASSOCIATED FACILITIES

IN

BLUE EARTH, FARIBAUT, MARTIN AND NICOLLET COUNTIES

ISSUED TO

XCEL ENERGY AND ITC MIDWEST

PUC DOCKET NO. E002, ET6675/ TL-17-185

In accordance with the requirements of Minnesota Statutes Chapter 216E and Minnesota Rules Chapter 7850 this route permit is hereby issued to:

XCEL ENERGY AND ITC MIDWEST

Xcel Energy and ITC Midwest (the Permittees) are authorized by this route permit to construct and operate a double-circuit, 345-kilovolt alternating current High Voltage Transmission Line and associated facilities from the Huntley Substation to the Wilmarth Substation.

The high-voltage transmission line and associated facilities shall be built within the route identified in this permit and as portrayed on the route maps and in compliance with the conditions specified in this permit.

Approved and adopted this ____ day of _____

BY ORDER OF THE COMMISSION

Daniel P. Wolf,
Executive Secretary

To request this document in another format such as large print or audio, call 651.296.0406 (voice). Persons with a hearing or speech impairment may call using their preferred Telecommunications Relay Service or email consumer.puc@state.mn.us for assistance.

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ATTACHMENTS

Attachment 1 – Complaint Handling Procedures for Permitted Energy Facilities

Attachment 2 – Compliance Filing Procedure for Permitted Energy Facilities

Attachment 3 – Route Maps

1 ROUTE PERMIT

The Minnesota Public Utilities Commission (Commission) hereby issues this route permit to Xcel Energy and ITC Midwest (Permittees) pursuant to Minnesota Statutes Chapter 216E and Minnesota Rules Chapter 7850. This permit authorizes Xcel Energy and ITC Midwest to construct and operate a double-circuit 345-kilovolt (kV) alternating current High Voltage Transmission Line and associated facilities from the Wilmarth Substation in Blue Earth County to the Wilmarth Substation in Faribault County, and as identified in the attached route maps, hereby incorporated into this document.

1.1 Preemption

Pursuant to Minn. Stat. § 216E.10, this permit shall be the sole route approval required to be obtained by the Permittee for construction of the transmission facilities 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 governments.

2 PROJECT DESCRIPTION

The Project includes the construction and operation of approximately 50 miles of new 345 kV transmission line in Blue Earth, Martin, Nicollet and Faribault counties. The Project also includes potential modifications to the Wilmarth and Huntley substations to accommodate the 345 kV lines and colocation of segments of the existing Lakefield Junction-Wilmarth 345 kV transmission line within the fence lines of both substations.

2.1 Project Location

The 345 kV transmission line would run east from the existing Wilmarth substation near the city of Mankato in Blue Earth County, crossing Nicollet and Martin counties to the Huntley Substation near the city of Winnebago in Faribault County.

2.2 Substations and Associated Facilities

The Project includes new substation equipment at the Wilmarth substation to accommodate the new 345 kV transmission line. The modifications will be within the existing fence line. Potential relocation of existing lines entering the substation may be required to accommodate the project. New substation equipment will be installed at the Huntley substation to accommodate the 345 kV transmission line.

2.3 Transmission Line Reconfiguration

The project will include the reconfiguration of the existing Lakefield Junction-Wilmarth transmission line that runs for the northern portion of the route from the Wilmarth substation for approximately 23 miles to the south. The existing Lakefield Junction-Wilmarth transmission line will be collocated and constructed on a single pole, double-circuit structure with the new Huntley-Wilmarth 345 kV transmission line for the northernmost approximately 23 miles of the route.

2.4 Structures and Conductors

The primary tangent structures authorized for the Project be will single pole galvanized or self-weathering steel davit arm structures capable of supporting two 345 kV circuits. The structures will be 110-170 feet in height with an average span of 1,000 feet between structures and will be supported by an approximately 7-12-foot diameter drilled pier concrete foundation. Specialty structures authorized for the Project may include angle, dead-end, H-frame, multiple pole, and low profile. The table below details specifics on the structure types as presented in the route permit application.

Line Type	Structure Type	Right-of-Way (feet)	Height (feet)	Structure Base (feet diameter)	Foundation (feet diameter)	Span (feet)
345 kV Double-Circuit	Monopole	150	110-170	54-67	7-12	1,000

Each 345 kV phase wire for the Project will consist of double-bundled, twisted pair Dove (2-556.5) aluminum conductor steel reinforced (ACSR) cables, or equivalent 3,000 ampere conductor. Each ACSR cable consists of a core of seven steel conductors surrounded by 26 aluminum strands. The 345 kV twisted pair conductors (two sets for each of the three phases) will have a capacity equivalent to 3,000 amps.

3 DESIGNATED ROUTE

The route designated by the Commission in this permit is the route described below and shown on the route maps attached to this permit. The route is generally described as follows:

Xcel Energy and ITC Midwest are authorized to construct and operate the Huntley Wilmarth Transmission Line, which is an approximately 50-mile, 345 kilovolt (kV) overhead, double-circuit, alternating current (AC) transmission line. The transmission line would start at the Wilmarth substation and follow the existing Lakefield Junction-

Wilmarth transmission line to the west and south for approximately 23 miles. This portion of the route will be constructed on double-circuit structures to allow for collocation of the existing transmission line. The line departs from the Lakefield Junction-Wilmarth transmission line in Lincoln Township, at County State Aid Highway (CSAH) 13 (174th Street) heading east for 1.7 miles before turning south, mostly cross-country for 2.0 miles. The route turns east along County Road (CR) 128 (164th Street) for 0.5 miles and then turns south, cross country, for 1.0 mile, crossing the Watonwan River, before turning west along CR 135 (158th Street) to 502 Avenue, where it proceeds south, generally following 502 Avenue, until it reaches 137 Street, where the route generally follows property divisions and roads to 165th street, where turns to the east (southwest of Winnebago) and follows property divisions and 160th Street for the remaining five miles to the Huntley substation. *Placeholder: Indicate here whether the alignment AA3b is Ordered by the Commission.*

The project also includes associated substation facilities and transmission system modifications at the existing Wilmarth and Huntley substations to accommodate the new 345 kV transmission line.

The final alignment must be located within this designated route. The identified route widths on the attached route maps provide the Permittee with flexibility for minor adjustments of the alignment or right-of-way to accommodate landowner requests and unforeseen conditions. The final alignment (*i.e.*, permanent and maintained rights-of-way) will be located within this designated route unless otherwise authorized by this permit or the Commission.

4 RIGHT-OF-WAY

This Permit authorizes the Permittee to obtain a new permanent right-of-way for the transmission line up to 150-feet in width. The permanent right-of-way is typically 75 feet on both sides of the transmission line measured from its centerline. The approved route widths with anticipated alignments are shown on the attached detailed route maps.

The Project's anticipated alignment is intended to minimize potential impacts relative to criteria identified in Minn. R. 7850.4100. The actual right-of-way will generally conform to the anticipated alignment identified on the Route Maps, unless changes are requested by individual landowners and agreed to by the Permittee or for unforeseen conditions that are encountered or as otherwise provided for by this permit.

Any right-of-way modifications within the designated route shall be located so as to have comparable overall impacts relative to the factors in Minn. R. 7850.4100, as does the right-of-way identified in this permit, and shall be specifically identified and documented in and approved as part of the plan and profile submitted pursuant to Section 9.1 of this permit.

Where the transmission line parallels existing highway and other road rights-of-way, the transmission line right-of-way shall occupy and utilize the existing right-of-way to the maximum extent possible; consistent with the criteria in Minn. R. 7850.4100 and the other requirements of this permit; and for highways under the jurisdiction of the Minnesota Department of Transportation, the procedures for accommodating utilities in trunk highway rights-of-way.

4.1 Route Width Variations

Route width variations may be allowed to accommodate the potential site-specific constraints listed below. These constraints may arise from any of the following:

1. Unforeseen circumstances encountered during the detailed engineering and design process.
2. Federal or state agency requirements.
3. Existing infrastructure within the pipeline route, including but not limited to railroads, natural gas and liquid pipelines, high voltage electric transmission lines, or sewer and water lines.

Any alignment modifications arising from these site-specific constraints that would result in right-of-way placement outside of the designated route shall be specifically reviewed by the Commission under Minn. R. 7850.4900.

5 GENERAL CONDITIONS

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

5.1 Permit Distribution

Within 30 days of permit issuance, the Permittee shall send a copy of the permit and the complaint procedures to any regional development commission, county auditor and environmental office, and city and township clerk in which any part of the site is located.

Within 30 days of permit issuance, the Permittee shall provide all affected landowners with a copy of this permit and the complaint procedures. In no case shall the landowner receive this route permit and complaint procedures less than five days prior to the start of construction on their property. An affected landowner is any landowner or designee that is within or adjacent to the permitted route.

At the time of first contact, the Permittee shall also provide all affected landowners with a copy of the Department of Commerce's *Rights-of-Way and Easements for Energy Facility Construction and Operation Fact Sheet*.¹

5.2 Access to Property

The Permittee shall contact landowners prior to entering the property or conducting maintenance within the route, unless otherwise negotiated with the affected landowner.

5.3 Construction and Operation Practices

The Permittee shall follow those specific construction practices and material specifications described in described in the January 22, 2018 Route Permit Application, and the record of the proceedings unless this permit establishes a different requirement in which case this permit shall prevail.

5.3.1 Field Representative

The Permittee shall designate a field representative responsible for overseeing compliance with the conditions of this permit during construction of the project. This person shall be accessible by telephone or other means during normal business hours throughout site preparation, construction, cleanup, and restoration.

The Permittee shall file with the Commission the name, address, email, phone number, and emergency phone number of the field representative 14 days prior to commencing construction. The Permittee shall provide the field representative's contact information to affected landowners, residents, local government units and other interested persons 14 days prior to commencing construction. The Permittee may change the field representative at any time upon notice to the Commission, affected landowners, residents, local government units and other interested persons.

¹ http://mn.gov/commerce/energyfacilities/documents/Easements%20Fact%20Sheet_08.05.14.pdf

5.3.2 Employee Training and Education of Permit Terms and Conditions

The Permittee shall inform and educate all employees, contractors, and other persons involved in the construction and ongoing operation of the transmission line of the terms and conditions of this permit.

5.3.3 Public Services and Public Utilities

During construction, the Permittee shall minimize any disruption to public services and public utilities. To the extent disruptions to public services or public utilities occur these will be temporary, and the Permittee will restore service promptly. Where any impacts to utilities have the potential to occur the Permittee will work with both landowners and local agencies to determine the most appropriate transmission structure placement.

The Permittee shall consult with landowners, townships, cities, and counties along the route and consider concerns regarding tree clearing, distance from existing structures, drain tiles, pole depth and placement in relationship to existing roads and road expansion plans.

The Permittee shall cooperate with county and city road authorities to develop appropriate signage and traffic management during construction.

5.3.4 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 right-of-way. Temporary space shall be selected to limit the removal and impacts to vegetation. Temporary easements outside of the authorized transmission line right-of-way will be obtained from affected landowners through rental agreements and are not provided for in this permit.

Temporary driveways may be constructed between the roadway and the structures to minimize impact using the shortest route possible. Construction mats should be used to minimize impacts on access paths and construction areas.

5.3.5 Noise

The Permittee shall comply with noise standards established under Minn. R. 7030.0100 to 7030.0080, at all times at all appropriate locations during operation of the facility. Construction

and maintenance activities shall be limited to daytime working hours to the extent practicable to ensure nighttime noise level standards will not be exceeded.

5.3.6 Aesthetics

The Permittee shall consider input pertaining to visual impacts from landowners or land management agencies prior to final location of structures, rights-of-way, and other areas with the potential for visual disturbance. Care shall be used to preserve the natural landscape, minimize tree removal and prevent any unnecessary destruction of the natural surroundings in the vicinity of the project during construction and maintenance. The Permittee shall work with landowners to locate the high-voltage transmission line to minimize the loss of agricultural land, forest, and wetlands, and to avoid homes and farmsteads. Structures shall be placed at a distance, consistent with sound engineering principles and system reliability criteria, from intersecting roads, highways, or trail crossings.

5.3.7 Soil Erosion and Sediment Control

The Permittee shall implement those erosion prevention and sediment control practices recommended by the Minnesota Pollution Control Agency (MPCA) Construction Stormwater Program. If construction of the facility disturbs more than one acre of land, or is sited in an area designated by the MPCA as having potential for impacts to water resources, the Permittee shall obtain a National Pollutant Discharge Elimination System/State Disposal System (NPDES/SDS) Construction Stormwater Permit from the MPCA that provides for the development of a Stormwater Pollution Prevention Plan (SWPPP) that describes methods to control erosion and runoff.

The Permittee shall implement reasonable measures to minimize erosion and sedimentation during construction and shall employ perimeter sediment controls, protect exposed soil by promptly planting, seeding, using erosion control blankets and turf reinforcement mats, stabilizing slopes, protecting storm drain inlets, protecting soil stockpiles, and controlling vehicle tracking. Contours shall be graded as required so that all surfaces provide for proper drainage, blend with the natural terrain, and are left in a condition that will facilitate re-vegetation and prevent erosion. All areas disturbed during construction of the facilities shall be returned to pre-construction conditions.

5.3.8 Wetlands and 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, watercourses, and floodplains. 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 during frozen ground conditions where practicable and shall be according to permit requirements by the applicable permitting authority. When construction during winter is not possible, wooden or composite mats shall be used to protect wetland vegetation. Soil excavated from the wetlands and riparian areas shall be contained and not placed back into the wetland or riparian area. Wetlands and riparian areas shall be accessed using the shortest route possible in order to minimize travel through wetland areas and prevent unnecessary impacts. No staging or stringing set up areas shall be placed within or adjacent to wetlands or water resources, as practicable. Power pole structures shall be assembled on upland areas before they are brought to the site for installation.

Wetland and water resource areas disturbed by construction activities shall be restored to pre-construction conditions in accordance with the requirements of applicable state and federal permits or laws and landowner agreements. All requirements of the U.S. Army Corps of Engineers (USACE), Minnesota Department of Natural Resources (DNR), and local units of government shall be met.

5.3.9 Vegetation Management

The Permittee shall minimize the number of trees to be removed in selecting the right-of-way specifically preserving to the maximum extent practicable windbreaks, shelterbelts, living snow fences, and vegetation in areas such as trail and stream crossings where vegetative screening may minimize aesthetic impacts, to the extent that such actions do not violate sound engineering principles or system reliability criteria.

Tall growing species located within the transmission line right-of-way that endanger the safe and reliable operation of the transmission facility will be removed by the Permittee. The Permittee shall leave undisturbed, to the extent possible, existing low growing species in the right-of-way or replant such species in the right-of-way to blend the difference between the right-of-way and adjacent areas, to the extent that the low growing vegetation that will not pose a threat to the transmission facility or impede construction.

5.3.10 Application of Pesticides

The Permittee shall restrict pesticide use to those pesticides and methods of application approved by the Minnesota Department of Agriculture, DNR, and the U.S. Environmental Protection Agency. Selective foliage or basal application shall be used when practicable. All pesticides shall be applied in a safe and cautious manner so as not to damage adjacent properties including crops, orchards, tree farms, apiaries, or gardens. The Permittee shall contact the landowner or designee to obtain approval for the use of pesticide at least 14 days prior to any application on their property. The landowner may request that there be no application of pesticides on any part of the site within the landowner's property. The Permittee shall provide notice of pesticide application to affected landowners and known beekeepers operating apiaries within three miles of the project site at least 14 days prior to such application.

5.3.11 Invasive Species

The Permittee shall employ best management practices to avoid the potential spread of invasive species on lands disturbed by project construction activities.

5.3.12 Noxious Weeds

The Permittee shall take all reasonable precautions against the spread of noxious weeds during all phases of construction. When utilizing seed to establish temporary and permanent vegetative cover on exposed soil the Permittee shall select site appropriate seed certified to be free of noxious weeds. To the extent possible, the Permittee shall use native seed mixes. The Permittee shall consult with landowners on the selection and use of seed for replanting.

5.3.13 Roads

The Permittee shall advise the appropriate governing bodies having jurisdiction over all state, county, city or township roads that will be used during the construction phase of the project. Where practical, existing roadways shall be used for all activities associated with construction of the facility. Oversize or overweight loads associated with the facility shall not be hauled across public roads without required permits and approvals.

The Permittee shall construct the least number of site access roads it can. Access roads shall not be constructed across streams and drainage ways without the required permits and

approvals. Access roads shall be constructed in accordance with all necessary township, county or state road requirements and permits.

The Permittee shall promptly repair private roads or lanes damaged when moving equipment or when accessing construction workspace, unless otherwise negotiated with the affected landowner.

5.3.14 Archaeological and Historic Resources

The Permittee shall make every effort to avoid impacts to identified archaeological and historic resources when constructing the transmission facility. In the event that a resource is encountered, the Permittee shall contact and consult with the State Historic Preservation Office and the State Archaeologist. Where feasible, avoidance of the resource is required. Where not feasible, mitigation must include an effort to minimize project impacts on the resource consistent with State Historic Preservation Office and State Archaeologist requirements.

Prior to construction, workers shall be trained about the need to avoid cultural properties, how to identify cultural properties, and procedures to follow if undocumented cultural properties, including gravesites, are found during construction. If human remains are encountered during construction, the Permittee shall immediately halt construction and promptly notify local law enforcement and the State Archaeologist. Construction at such location shall not proceed until authorized by local law enforcement or the State Archaeologist.

5.3.15 Avian Protection

The Permittee in cooperation with the DNR shall identify areas of the project where bird flight diverters will be incorporated into the transmission line design to prevent large avian collisions attributed to visibility issues. Standard transmission design shall incorporate adequate spacing of conductors and grounding devices in accordance with Avian Power Line Interaction Committee standards to eliminate the risk of electrocution to raptors with larger wingspans that may simultaneously come in contact with a conductor and grounding devices.

5.3.16 Restoration

The Permittee shall restore the right-of-way, temporary work spaces, access roads, abandoned right-of-way, and other public or private lands affected by construction of the transmission line. Restoration within the right-of-way must be compatible with the safe operation, maintenance, and inspection of the transmission line. Within 60 days after completion of all restoration

activities, the Permittee shall advise the Commission in writing of the completion of such activities.

5.3.17 Cleanup

All waste and scrap that is the product of construction shall be removed from the right-of-way and all premises on which construction activities were conducted 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.

5.3.18 Pollution and Hazardous Wastes

All appropriate precautions to protect against pollution of the environment must be taken by the Permittee. The Permittee shall be responsible for compliance with all laws applicable to the generation, storage, transportation, clean up and disposal of all wastes generated during construction and restoration of the right-of-way.

5.3.19 Damages

The Permittee shall fairly restore or compensate landowners for damage to crops, fences, private roads and lanes, landscaping, drain tile, or other damages sustained during construction.

5.4 Electrical Performance Standards

5.4.1 Grounding

The Permittee shall design, construct, and operate the transmission line in a manner so that the maximum induced steady-state short-circuit current shall be limited to five milliamperes root mean square (rms) alternating current between the ground and any non-stationary object within the right-of-way, including but not limited to large motor vehicles and agricultural equipment. All fixed metallic objects on or off the right-of-way, 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 milliamperes rms under steady state conditions of the transmission line and to comply with the ground fault conditions specified in the National Electric Safety Code (NESC). The Permittee shall address and rectify any induced current problems that arise during transmission line operation.

5.4.2 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 rms.

5.4.3 Interference with Communication Devices

If interference with radio or television, satellite, wireless internet, GPS-based agriculture navigation systems or other communication devices is caused by the presence or operation of the transmission line, the Permittee shall take whatever action is necessary to restore or provide reception equivalent to reception levels in the immediate area just prior to the construction of the line.

5.5 Other Requirements

5.5.1 Safety Codes and Design Requirements

The transmission line and associated facilities shall be designed to meet or exceed all relevant local and state codes, the NESC, and North American Electric Reliability Corporation (NERC) requirements. This includes standards relating to clearances to ground, clearance to crossing utilities, clearance to buildings, strength of materials, clearances over roadways, right-of-way widths, and permit requirements. The transmission line shall be equipped with protective devices to safeguard the public if an accident occurs.

5.5.2 Other Permits and Regulations

The Permittee shall comply with all applicable state rules and statutes. The Permittee shall obtain all required permits for the project and comply with the conditions of those permits unless those permits conflict with or are preempted by federal or state permits and regulations. A list of the permits known to be required is included in the permit application. The Permittee shall submit a copy of such permits to the Commission upon request.

6 SPECIAL CONDITIONS

Special conditions shall take precedence over other conditions of this permit should there be a conflict.

1. The Permittees shall consult with the MnDNR and USFWS regarding strategies to avoid and mitigate impacts to avian species, including the use of avian flight diverters. The Permittees shall document and file with the Commission their consultations with MnDNR and USFWS and the resulting mitigation strategies.
2. The Permittees shall consult with the MnDNR and other appropriate agencies regarding mitigation strategies for potential impacts to rare native plant communities and state-listed species including, but not limited to, surveys. The Permittees shall document and file with the Commission their consultations and the resulting mitigation strategies.
3. In coordination with the MnDNR, the Permittees shall develop a Vegetation Management Plan (VMP) for the right-of-way across Minneopa State Park. The purpose of the plan shall be to mitigate potential impacts to Minneopa State Park and related flora and fauna including, but not limited to, the control of invasive species. The Permittees shall document and file with the Commission their consultations with the MnDNR and the resulting VMP.
4. The Permittees shall consult with the MnDNR regarding tree clearing for the project. The Permittees shall develop, with the MnDNR, a prioritized list of areas where winter tree clearing would be most beneficial. The Permittees shall, to the extent practicable, clear trees in the identified priority areas during the winter.
5. The Permittees shall consult with SHPO regarding the appropriate cultural and archaeological resource surveys for the project. The Permittees shall document and file with the Commission their consultations with SHPO, the results of cultural and archaeological resource surveys conducted, and the resulting mitigation strategies.
6. The Permittees shall shift the alignment of Segment Alternative L at the Watonwan River to avoid the Basswood – Burr Oak native plant community noted by the MnDNR.

7 DELAY IN CONSTRUCTION

If the Permittee has not commenced construction or improvement of the route within four years after the date of issuance of this permit the Permittee shall file a report on the failure to construct and the Commission shall consider suspension of the permit in accordance with Minn. R. 7850.4700.

8 COMPLAINT PROCEDURES

Prior to the start of construction, the Permittee shall submit to the Commission the procedures that will be used to receive and respond to complaints. The procedures shall be in accordance with the requirements of Minn. R. 7829.1500 or Minn. R. 7829.1700, and as set forth in the complaint procedures attached to this permit.

Upon request, the Permittee shall assist the Commission with the disposition of unresolved or longstanding complaints. This assistance shall include, but is not limited to, the submittal of complaint correspondence and complaint resolution efforts.

9 COMPLIANCE REQUIREMENTS

Failure to timely and properly make compliance filings required by this permit is a failure to comply with the conditions of this permit. Compliance filings must be electronically filed with the Commission.

9.1 Plan and Profile

At least 30 days before right-of-way preparation for construction begins on any segment or portion of the project, 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, structure specifications and locations, cleanup, and restoration for the transmission line. The documentation shall include maps depicting the plan and profile including the right-of-way, alignment, and structures in relation to the route and alignment approved per this permit.

The Permittee may not commence construction until the 30 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.

9.2 Status Reports

The Permittee shall report to the Commission on progress during finalization of the route, design of structures, and construction of the transmission line. The Permittee need not report

more frequently than monthly. Reports shall begin with the submittal of the plan and profile for the project and continue until completion of restoration.

9.3 In-Service Date

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

9.4 As-Builts

Within 90 days after completion of construction, the Permittee shall submit copies of all final as-built plans and specifications developed during the project.

9.5 GPS Data

Within 90 days after completion of construction, the Permittee shall submit to the Commission, in the format requested by the Commission, geo-spatial information (e.g., ArcGIS compatible map files, GPS coordinates, associated database of characteristics) for all structures associated with the transmission line and each substation connected.

9.6 Right of Entry

The Permittee shall allow Commission designated representatives to perform the following, upon reasonable notice, upon presentation of credentials and at all times in compliance with the Permittee's site safety standards:

- (a) To enter upon the facilities easement of the property for the purpose of obtaining information, examining records, and conducting surveys or investigations.
- (b) To bring such equipment upon the facilities easement of the property as is necessary to conduct such surveys and investigations.
- (c) To sample and monitor upon the facilities easement of the property.
- (d) To examine and copy any documents pertaining to compliance with the conditions of this permit.

10 PERMIT AMENDMENT

This permit 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.

11 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 to determine 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.

12 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 Minn. R. 7850.5100, to revoke or suspend the permit.